

When Speaking English Is Not Enough: The Consequences of Language-Based Stigma for Non-native Speakers

Megan E. Birney¹, Anna Rabinovich², Thomas A. Morton^{2,3}, Hannah Heath⁴, & Sam Ashcroft⁴

Abstract

We explored the effects of language-based stigma on the relationship between native and non-native speakers. In two studies we found that stigmatized non-native speakers experienced more negative interpersonal interactions, higher levels of intergroup threat, and reduced performance on an English test compared to non-native speakers who did not experience stigma. These effects were mediated by anxiety and moderated by prevention-related goals. Furthermore, native speakers perceived stigmatized (vs. not-stigmatized) speakers' accents as stronger and their commitment to living in the host country as weaker. Our findings suggest that experiencing language-based stigma can: a) incite a stereotype threat response from non-native speakers, and b) damage their relationship with native speakers on an interpersonal and intergroup level.

Keywords

accent perception, stigma, regulatory focus, stereotype threat, communication

¹University of Chester at University Centre Shrewsbury, Shrewsbury, UK

²University of Exeter, Exeter, UK

³University of Copenhagen, Copenhagen, Denmark

⁴University of Chester, Chester, UK

Corresponding Author:

Megan E. Birney, Applied Psychology Group, University Centre Shrewsbury, Guildhall, SY3 8HQ

Email: m.birney@chester.ac.uk

As immigration and mobility across national boundaries increase, so too have interactions between people of different cultures (Apfelbaum, Phillips, & Richeson, 2014). Most of these take place in English. Thanks in part to globalization and the pervasiveness of American culture, English has become the international language used in a number of spheres, including politics, commerce, defence, academia, the media, technology, and the internet (Phillipson, 2003). As a result, people are learning and communicating in English more than ever before (see Crystal, 2003).

When native and non-native English speakers interact, language patterns become a salient means for social categorization (Gluszek & Dovidio, 2010a; Neuliep & Speten-Hansen, 2013; Pietraszewski & Schwartz, 2014). The presence of a non-native accent can mark the speaker as culturally dissimilar to their audience, or as a member of a potentially threatening out-group (Cosmides, Tooby, & Kurzban, 2003). Hence, for non-native speakers, language-based categorizations often have negative implications (for a review, see Gluszek & Dovidio, 2010a) and discrimination is rife (Flowerdew, 2008; Hosoda, Nguyen, & Stone-Romero, 2012; Zhao, Ondrich, & Yinger, 2006). As a result, non-native speakers are likely to find themselves at a disadvantage within the many settings where communicating in English is required.

Despite this evidence of language-based stigma, accent is rarely considered as a socially-significant devalued attribute in the stigma literature (Gluszek & Dovidio, 2010a). Furthermore, the existing literature on accent perceptions has focused almost exclusively on the perspective of native speakers (for exceptions, see Derwing, 2003; Derwing & Rossiter, 2002; Gluszek & Dovidio, 2010a; Moyer, 2004). To address the gap, we investigate the experience of language-based stigma from the perspective of non-native speakers. First, we establish that accented speech is perceived as a devaluing characteristic with consequences for one's social relationships. Second, we investigate how non-native speakers manage this stigma through their own behavior. Finally, we examine whether – like in other forms of stigma –

coping strategies can be taxing and therefore impair individual and collective outcomes for the stigmatized.

The Emergence of Language-based Stigma

Language-based stigma is likely perpetuated by the widespread, yet erroneous belief that accents are controllable. Various developmental, cognitive, and socio-psychological factors make it nearly impossible to speak a non-native language with native-like pronunciation (Flege, Munro, & MacKay, 1995; Gluszek, Newheiser, & Dovidio, 2011; Moyer, 2004; Purcell & Suter, 1980). Yet, myths about the changeability of accents prevail (see Gluszek & Dovidio, 2010a; Lippi-Green, 1997; Moyer, 2007), potentially fuelling the notion that accents can be modified. At the same time, native English speakers' lack of competency in other languages means they often struggle to empathize with the experience of having a non-native accent (Hansen, Rakic, & Steffens, 2014). The popularity of accent reduction classes (Lippi-Green, 1997) suggests that non-native speakers are not only aware of the negative stereotypes associated with their accent, but also motivated to invest time and money in the hope of eliminating it.

Importantly, negative perceptions about an individual speaker may extend to intergroup stereotypes and attitudes (Harwood & Joyce, 2012). When a non-native accent is first detected, general negative evaluations of the speaker may emerge (Roessel, Schoel, & Stahlberg, 2017). However, presumptions about the speaker's ethnicity and nationality are also routinely made, presumptions that might further perpetuate negative stereotypes about the national or ethnic group (Frumkin, 2007; Hosoda & Stone-Romero, 2010). For instance, a common categorization of non-native speakers is that of an 'immigrant' (see Dovidio & Gluszek, 2012) a group that, in most countries is generally disliked by the native population (Kessler & Freeman, 2005). Hence, between the biases associated with non-native accents generally

(Roessel et al., 2017) and the group membership that these accents often signify, when speaking with a non-native accent there is a strong chance of being negatively categorized (i.e., stigmatized) by perceivers.

These perceptions are overlaid, and reinforced, by status differences between native and non-native accented speakers. When interaction takes place in the native speaker's home country, their higher status position relative to non-native speaking immigrants (Geschke, Mummendey, Kessler, & Funke, 2010) means that the latter may try, and be expected to, imitate the accent of the former (Giles, 2016; Giles, Mulac, Bradac, & Johnson, 1987; see also Gregory & Webster, 1996; Hamers & Blanc, 1989). When non-native speakers, perhaps inevitably, fail at this endeavour, negative feelings, like suspicion or intergroup threat, may ensue (Lev-Ari & Keysar, 2010). This further embeds the stigmatization of non-native accents.

Consequences of Language-Based Stigma

To the extent that non-native speakers are aware of the stigma of their speech, they may experience stereotype threat (Paladino et al., 2009). Steele and Aronson (1995) coined the term after demonstrating that African-American students performed worse on a test when they were told it was diagnostic of their intellectual abilities (making salient the stereotype that "blacks are not intelligent") compared to when the test was presented as a basic problem-solving exercise. Since then, over 300 studies have demonstrated that stereotype threat is relevant for a wide variety of negatively stereotyped groups and performance contexts (e.g., Hess & Hinson, 2006; Spencer, Steele, & Quinn, 1999; Stone, 2002).

Although the processes behind stereotype threat are multiple (Schmader, Johns, & Forbes, 2008), awareness of negative stereotypes is thought to increase the mental and emotional burden on targets in the performance setting. This impedes their ability on the focal task, and potentially discourages engagement in the task-domain in the longer term (see

Aronson & McGlone, 2009 for a review). One focal mediator of stereotype threat effects is feelings of anxiety (Blascovich, Spencer, Quinn, & Steele, 2001; Osborne, 2007). Anxiety has also been linked to (in)effective communication (Greene & Sparks, 1983), increased speech dis-fluency and tentative language in contexts where group stereotypes are relevant (McGlone & Pfiester, 2015), and impaired cross-group interactions (Pettigrew & Tropp, 2008). Moreover, when stigmatized attributes are perceived as being within the person's control – as is generally the case with non-native accents - targets may be especially fearful of social rejection and discrimination (Crandall & Moriarty, 2011; Feldman & Crandall, 2007) and therefore prone to anxiety when interacting with the non-stigmatized.

Therefore, awareness of the negative stereotypes associated with one's accent might trigger processes associated with stereotype threat. When accents become salient in a communicative setting – as they often do when native and non-native speakers interact – non-native speakers might become anxious about eliciting negative evaluations from their communication partner based on their speech. To manage this threat, non-native speakers might attempt to communicate better. However, following the logic of stereotype threat research, and the effort involved in this response, underlying feelings of anxiety might actually interfere with speech, thereby reducing speakers' ability to communicate effectively and clearly in English.

Coping with Language-Based Stigma

To cope with stigma, non-native speakers may attempt to adjust their accent. According to communication accommodation theory (Giles, 2016), speakers who want to distance themselves from their communication partner are likely to diverge their language by accentuating differences between their speech and the speech of their partner (Ball, Gallois, & Callan, 1989; Gallois, Franklyn-Stokes, Giles, & Coupland, 1988; Giles, Coupland, &

Coupland, 1991). Alternatively, speakers who aim to create a shared social identity with their communication partner are likely to converge (or, accommodate) towards their partner's communicative behaviours (Giles, 1973; see also Echterhoff, Lang, Kramer, & Higgins, 2009). This could take the form of aligning one's accent with native pronunciation or imitating phrases that are popular in the native language (Beebe & Giles, 1984).

Accommodated language is associated with positive outcomes for the speaker, including strong social bonds, and effective communication (Fussell & Krauss, 1989; Gallois, Ogay, & Giles, 2005; Echterhoff, Higgins, Kopietz, & Groll, 2008). However, these outcomes depend on the speech being seen as authentic rather than superficial or strategic (Gasiorek & Giles, 2012; Giles, Willemyns, Gallois, & Anderson, 2007; Simard, Taylor, & Giles, 1976). Because full language accommodation in a non-native language is near impossible (Moyer, 2004), attempts by non-native speakers to successfully imitate native speech patterns are likely to fail. Such failure may ironically result in less positive perceptions from native speakers. Because these encounters are intergroup as much as they are interpersonal, any negative perceptions triggered might not refer just to the individual but also to their assumed group.

The Present Research

We explore two possible consequences of language-based stigma for non-native speakers. Drawing on the logic of stereotype threat, we consider how perceived stigma around one's accent might interfere with the individual's ability to communicate in English. Drawing on wider insights about communication in intergroup settings, we also consider how anticipated stigma might interfere with interpersonal and intergroup connections, and whether language-accommodation is a successful strategy for counteracting these effects. Finally, we explore individual differences that might moderate the negative impacts of language-based stigma (see Study 2).

We propose that language-based stigma will result in more active attempts to accommodate speech patterns towards native norms but less positive relations with native speakers. Drawing on the stereotype threat and intergroup contact literature, we also expect that intergroup anxiety will be a key mediator of the negative effect of language-based stigma on reduced abilities to communicate and on interpersonal and intergroup outcomes. In other words, we predict that the negative outcomes brought about by language-based stigma will be a result of the anxiety it elicits during interactions.

Study 1

In Study 1, we explore how perceived accent strength and perceived accent stigma are related to barriers for integrating with native speakers. Although accent strength and one's perception of their accent are linked (stronger accents are generally perceived as less desirable; Gluszek & Dovidio, 2010a), the effect each of these parameters has on non-native speakers may be decidedly different. For instance, although speakers with strong accents are more vulnerable to language-based stigma (Nesdale & Rooney, 1996) and are more likely to experience difficulties communicating with native speakers (Gluszek & Dovidio, 2010b), some speakers regard their accent as a positive trait that uniquely distinguishes them from others (Moyer, 2007). As a result, these speakers may be more confident when communicating, and therefore have more constructive interactions with native speakers (Gluszek & Dovidio, 2010a). Hence, in terms of the effects of language-based stigma, speakers' subjective attitudes towards their stigmatized accent may be as important as their accent strength.

We predict that stronger accents and stronger perceptions of language-based stigma will be independently associated with the following:

Hypothesis 1: A perceived lack of belonging among native speakers.

Hypothesis 2: More communication difficulties during interactions with native speakers.

Hypothesis 3: A preference to associate with other non-native speakers as opposed to native speakers.

Hypothesis 4: More reported attempts to accommodate their language patterns towards native norms.

Method

Participants and Design. An online questionnaire was distributed to 108 non-native speaking students and staff at a British University. Participants ($M^{age}=25.97$, $SD=7.94$) represented 40 countries and had been living in the U.K. for an average of 18 months. Participants consisted of 31 males and 75 females (2 unspecified) and were offered the chance to enter a prize draw for one of five £20 gift vouchers.

Materials and Procedure. The questionnaire stated that researchers were interested in the experience of speaking English with a non-native accent while living in the U.K. The word “accent” was defined to participants as any phonetic difference between their speech patterns and those of a British person. After agreeing to take part in the study, participants were asked to rate the strength of their accent from 1 (no accent) to 7 (very strong accent). All subsequent measures used a similar Likert-type response scale that ranged from 1 (strongly disagree) to 7 (strongly agree).

Measurement. All measures were developed by the researchers and can be found in full in Appendix A. Six items measured participant’ attitudes about their accent (e.g., “I wish that I did not speak English with an accent”; $\alpha =.68$) and three items measured their perception that

having an accent is a barrier to feeling a sense of belonging (e.g., “It would be easier to fit into British life if I did not speak with an accent”; $\alpha = .83$). Six further items measured the perception that their non-native accent is a barrier when communicating (e.g., “Having an accent makes communicating with British people more difficult”; $\alpha = .87$) while five items measured participants’ preference for associating with other non-British people over British people (e.g., “Since arriving in the U.K, I spend most of my time with others from the same part of the world as I am from”; $\alpha = .83$). Finally, six items assessed whether participants tend to accommodate their language towards native speech patterns, (e.g., “When I hear British people speak, I try to imitate them”; $\alpha = .74$) (see Table S1 for correlation coefficients).

Results and Discussion

Supporting H1 and H2 (and replicating previous research; Gluszek & Dovidio, 2010b), we found that accent strength was positively associated with a lack of belonging among the native population, $r(106) = .244$, $p = .012$, and with perceived difficulties communicating with native speakers, $r(108) = .422$, $p < .001$. However, each of these variables was more strongly associated with accent attitudes – that is, one’s subjective perception of accent-related stigma ($r(106) = .281$, $p = .004$; $r(108) = .484$, $p < .001$). H3 and H4 were partially supported: The more negatively participants felt about their accent the more they preferred to associate with other non-native speakers, $r(104) = .194$, $p = .048$, and the more they reported accommodating their language towards native norms $r(102) = .205$; $p = .039$. There was no relationship between accent strength and either social preferences or reported attempts to accommodate, $r_s < -.074$, $p_s > .452$.

Because accent strength was positively associated with negative attitudes towards having an accent, $r(106) = .267$, $p = .006$, we computed partial correlations between the two variables to test if the relationship between accent attitudes and each of the outcome variables

was independent of the reported accent strength. When controlling for accent strength all of the previously described relationships held: The more negatively participants felt about their accent, the more they perceived their accent as a barrier to belonging, $r(101)=.233, p=.018$, the more difficulties they reported when communicating, $r(103)=.425, p<.001$, the more they preferred to associate with non-native speakers, $r(101)=.206, p=.037$, and the more they reported accommodating towards native speech patterns, $r(99)=.243, p=.014$, regardless of how strong they perceived their accent to be. When accent attitudes were controlled for, the relationship between accent strength and lacking a sense of belonging also remained significant, $r(101)=.209, p=.038$, as did the relationship between accent strength and communication difficulties, $r(101)=.364, p<.001$.

These results suggest that perceiving language-based stigma has consequences for the individual and their relationships, and that these consequences are not merely attributable to simple perceptions of one's actual accent strength. Furthermore, the positive association between accent attitudes and language accommodation supports our premise that minimizing one's accent may be a strategy employed by non-native speakers to cope with language-based stigma. However, the correlational nature of the data means we cannot discount the premise that the experience of being excluded by native speakers might result in negative attitudes about one's accent. There is also the possibility that these variables are not directly related but mutually determined by a lack of confidence in speaking. Furthermore, because our measure of accent strength relied on participants' perceptions, it is invariably affected by the extent to which they perceive their accent as problematic, as demonstrated by the significant relationship between negative accent perceptions and stronger accents. To address these limitations, we moved to an experimental design in Study 2.

Study 2

In Study 2, we simulate an experience with stigma by asking non-native speakers to converse with a native speaker (a British confederate) after receiving either negative feedback or positive feedback about their accent. Because Study 1 indicated that negative accent attitudes were somewhat independent of actual accent strength, we were confident we could induce a sense of language-based stigma even among a relatively proficient sample. Based on the positive association between negative accent attitudes and feeling a lack of belonging among native speakers observed in Study 1 and the previous literature on stereotype threat, we expect the following:

Hypothesis 1: Experiencing language-based stigma will result in less positive interpersonal and intergroup relations.

Hypothesis 2: Experiencing language-based stigma will impair speaker's language abilities

Hypothesis 3: All consequences of language-based stigma will be indirectly affected by feelings of anxiety.

Hypothesis 4: Experiencing language-based stigma will result in unsuccessful attempts to imitate native norms.

Although we expect language-based stigma to result in a broadly negative pattern of outcomes, we are also aware that not all speakers will be equally disposed towards feeling anxious in response to stigma. Research suggests a range of factors that can moderate individual reactions to group-based stigma (see Barreto, 2014). One of these factors is the speakers' individual specific goal orientation. According to regulatory focus theory, individuals can be distinguished by their orientation towards promotion or prevention goals

(Higgins, 1998). Promotion focused individuals generally engage in behaviors aimed at attaining positive outcomes while prevention focused individuals center their actions around avoiding negative consequences. These goal orientations have been found to have implications for the cognitions, emotions, and behaviors of individuals where stigma is relevant. For example, studies have shown that pursuing prevention (versus promotion) goals can be depleting when White individuals interact with a Black experimenter (Trawalter & Richeson, 2006), and that pursuing promotion (versus prevention) goals can facilitate positive interaction behaviors when stigmatized targets interact with a higher-status partner (Newheiser, Barreto, Ellemers, Derks, & Scheepers, 2015).

Following this, we reasoned that individual goal orientations might moderate the disruptive effects of language-based stigma. Specifically, we expected that any anxieties triggered by the activation of language-based stigma should be particularly strong for those focused towards prevention goals. Because avoiding rejection from the non-stigmatized out-group is ultimately a prevention goal, those focused towards prevention are more likely to react to information that suggests that the attainment of this goal is unlikely (in this case, the stigma manipulation).

Hypothesis 5: Speakers highly orientated towards prevention goals may be particularly prone to experience anxiety following the exposure to language-based stigma than for those whom such goals are unimportant.

Method

Participants and Design. Fifty-six non-native English speakers ($M^{\text{age}}=21.69$, $SD=2.89$) completed the study. Participants (40 females and 16 males) represented 22 countries, reported 23 different

native languages, and had been living in the U.K. for an average of 1.87 years. All were completing degrees at university level taught in English.

Participants were recruited via an email advertisement offering £5 for having one's voice recorded. The advertisement stated that researchers in Psychology were collecting recordings of people speaking in English and participants who speak with a non-native accent were needed. The study used a between-subjects design with two experimental conditions (negative vs. positive feedback).

Procedure.

Ethics. The experiment received approval from the Psychology Ethics Committee at the first author's previous institution. As stipulated by the committee, all participants were debriefed in person as well as given a letter outlining the purpose of the research. Participants were encouraged to ask questions and express any concerns, and were given a fact sheet outlining the positive aspects of speaking with a non-native accent to take home.

Part 1. Before arriving in the lab, participants were asked to complete an online questionnaire consisting of demographic questions and items measuring regulatory focus. The study itself took place in two labs located adjacent to one another. Upon arrival, participants were asked to read an information sheet about a (fake) software programme called "iSpeak", which, they were told, had proven effective in improving the language skills of students learning English. They were also told that the programme relies on over 400,000 recordings of people speaking in different accents and that it works by comparing pronunciations of words and analysing them. Participants learned that iSpeak's database had been effective in helping psychologists determine factors associated with the prejudice and discrimination of certain accents, and that recent research using the programme had revealed that these evaluations are largely independent of accent strength, relying instead on

how words are pronounced (see Appendix B). The latter information was considered important to make the subsequent feedback meaningful to all participants regardless of their own perceived accent strength. Participants were told that psychologists were working with iSpeak's manufacturers to investigate how the software could be used to predict people's experiences in the U.K. based on their speech patterns.

Participants were asked to record their speech twice for iSpeak's database: Once by themselves and once while having a conversation with another participant (i.e., the confederate), who they were told was a native English speaker. In the first recording, participants read 10 sentences out loud so that their speech patterns could be analyzed by iSpeak. An example of these sentences included "Eating good food brightens my mood." Once the experimenter had supposedly run the analysis on the recording, the participant waited several minutes while their (fake) personal speech profile was uploaded and printed. The profile given to participants served as the language-based stigma manipulation.

Each profile stated that iSpeak categorizes speakers into either the "crystal group" or the "cloud group." Participants allocated to the crystal group (cloud group) were told that their accent was likely perceived favorably (unfavorably) by native speakers. They were also told that accent reduction classes were not (were) recommended and received a number of predictions such as "Chances are low (high) that you will experience discrimination while living in the U.K." All participants were told that they were highly typical of their respective group (see Appendix C). Thus, depending on the feedback they received, participants were induced to anticipate low (versus high) stigma related to their accent.

After reading their profile, participants completed a questionnaire measuring their perceptions of their accent. This served as the manipulation check. The experimenter then asked the participant to follow her into the adjacent lab to have a conversation with the 'other participant' (the native-speaking British confederate) who was waiting in the lab. The

experimenter explained to both ‘participants’ that they should speak naturally about being a student and that their conversation would be recorded for iSpeak’s database. Each conversation lasted between four and five minutes. The confederate (a female student, blind to condition) always volunteered to start the conversation. Her main aim was to ensure that the conversation was two-sided, with participants speaking at least as much as she was. Afterwards, the participant returned to the original lab and completed a second questionnaire (which measured perceptions of the confederate, meta-perceptions, intergroup threat, attempts to accommodate language, and anxiety) and took a brief English comprehension test.

Part 2. Three female, white-British, native English-speaking psychology students, listened to the 56 conversations that took place between the confederate and each participant. Blind to the experimental conditions and unaware of the study’s purpose, they listened to the recordings in a different randomized order over three two-hour periods. Each student was paid £75 for their time. After each recording, the raters completed a questionnaire assessing their attitudes towards each participant, as well as their perceptions of each participant’s accent strength, attempts to accommodate, and commitment to living in the U.K.

Materials.

Non-native Speakers’ Measures. Participants gave their responses using a single Likert-type response scale from 1 (strongly disagree) to 7 (strongly agree). Responses to all items within each scale were averaged to form a single scale score. A comprehensive list of the items used can be found in Appendix D.

Prevention focus was measured using eight items adapted from Lockwood, Jordan, and Kunda’s (2002) Prevention Scale¹ (e.g., “I am focused on preventing negative events in my life”; $\alpha=.74$)

Following the feedback from iSpeak, a manipulation check scale consisting of fifteen items assessed participants' attitudes towards their accent ($\alpha=.94$; "I do not like that I speak English with an accent").

After the interaction, two scales assessed participants' perceptions of the confederate. Four items measured participants' general attitudes toward her (e.g., "The other participant seems like someone I would like to get to know"; $\alpha=.78$), while five items measured meta-perceptions (e.g., "I felt that the other participant liked me"; $\alpha=.73$). Intergroup threat was measured using 11 items adapted from Maddux, Galinsky, Cuddy, and Polifroni's (2008) Realistic Threat scale ("Non-British people living in the U.K. deserve to have more power than they currently do"; $\alpha=.88$). Six items measured anxiety ("I experience little anxiety when I speak to native English speakers" (recoded); $\alpha=.72$) and eight items measured accommodation ("When I am around native English speaker, I try my best to hide my accent"; $\alpha=.81$, see also Appendix E). Finally, participants took a short English test consisting of two approximately four-minute recordings (TOEFL iBT Test Sample Questions, 2013), followed by questions assessing participants' comprehension of its content. The number of correct responses out of 11 questions was used to measure performance.

Native Speakers' Perspective Measures. Raters were asked to assess the strength of each participant's accent from 1 (very weak) to 7 (very strong) ($\alpha=.86$). Unless otherwise indicated, all other scales used a single Likert-type response scale from 1 (strongly disagree) to 7 (strongly agree). The level of agreement between the three raters was assessed using intraclass correlation coefficient (two-way mixed model with absolute agreement). All items with alpha levels of less than .60 were dropped from the analysis and remaining items were averaged to from reliable scales (McGraw & Wong, 1996).

Five items measured perceptions of participants' attempts to accommodate their accent towards the confederate (e.g., "The participant tried to pronounce words in a British way"; $\alpha=.94$) while another five items assessed attitudes toward each participant (e.g., "I would be happy to have the participant as my neighbor" $\alpha=.97$). Raters were then asked to estimate both the length of time each participant had been living in the U.K and the length of time each participant intended to stay in the U.K., on a scale from 1 (less than 5 months) to 7 (over 15 years). These two items were averaged to form a scale measuring perceived commitment to living in the U.K. ($r(56)=.79, p<.001$).

Results and Discussion

Consistent with the intention of the manipulation, participants given negative feedback about their speech patterns reported feeling worse about their accent than participants given positive feedback, $t(53)=2.67, p=.010, d=.73, CI_{95} [.1699, 1.2619]$.

Target Perceptions. Supporting H1 and H2, the results demonstrate that language-based stigma can have a number of detrimental effects on its targets. Speakers exposed to the stigma manipulation had less positive attitudes towards the confederate, $t(54)=2.24, p=.029, d=.60, CI_{95} [.0604, 1.1319]$, less positive meta-perceptions, $t(54)=2.64, p=.011, d=.70, CI_{95} [.1613, 1.2417]$, experienced more intergroup threat, $t(51)=2.10, p=.041, d=.58, CI_{95} [.0235, 1.1235]$, more anxiety $t(54)=2.53, p=.015, d=.67, CI_{95} [.1328, 1.2109]$, and had lower scores on the English comprehension test, $t(54)=2.30, p=.025, d=.61, CI_{95} [.0755, 1.1484]$ than non-stigmatized speakers. Means and standard deviations are presented in Table 1.

<Insert Table 1 Here>

Consistent with previous research on stereotype threat and supporting H3, all of these effects were indirectly affected by anxiety. A bootstrapping analysis conducted using the PROCESS macro (Hayes, 2012), revealed that participants given negative feedback about their accent reported more anxiety when speaking English, $b=.76$, $SE=.30$, $t(54)=2.53$, $p=.015$, and this indirectly resulted in more negative attitudes towards the confederate, $b=-.25$, $SE=.10$, $t(53)=2.43$, $p=.019$, $CI_{95}[-.5002, -.0158]$, more negative meta-perceptions, $b=-.55$, $SE=.09$, $t(53)=6.42$, $p<.001$, $CI_{95}[-.8165, -.1007]$, higher perceptions of intergroup threat, $b=.51$, $SE=.12$, $t(50)=4.18$, $p<.001$, $CI_{95} [.1026, .8021]$, and a lower score on the English test, $b=-.60$, $SE=.25$, $t(53)=2.40$, $p=.020$, $CI_{95}[-1.2101, -.0913]$, than participants given positive feedback about their accent.

The effect of receiving negative feedback on increased anxiety was particularly pronounced for participants with high (rather than low) prevention focus (supporting H5). After centering the prevention variable and computing the feedback-by-prevention interaction term (Aiken & West, 1991), the two predictors and the interaction term were entered into a simultaneous regression model. The interaction between feedback and prevention focus was significant, $b=-.77$, $SE=.32$, $t(51)=2.40$, $p=.020$. Simple slopes analysis was performed to test the association between feedback and anxiety at low (+1 SD above the mean) and high (-1 SD below the mean) levels of prevention focus: feedback was only related to anxiety when participants' prevention focus was high, $b=-1.42$, $SE=.39$, $t(51)=3.66$, $p=.001$. When participants' prevention focus was low, there was no association between feedback and anxiety, $b=-.08$, $SE=.39$, $t(51)=0.20$, $p=.841$.

<Insert Figure 1 Here>

Given that prevention focus moderated the effects of feedback on anxiety, we explored the possibility that anxiety would mediate the relationship between feedback and outcomes among participants who were high (rather than low) in prevention focus orientation only (Figure 1). This model was tested via the PROCESS macro (Hayes, 2012), Model 7 using the default 1000 bootstrap resamples. For all four outcome variables the indirect effect through anxiety was only significant when participants were highly prevention focused, but not when participants were low in prevention focus (Table 2).

<Insert Table 2 Here>

Observer Perceptions. Although there was no effect on either perceived effort to accommodate or on attitudes towards the speaker, $t_s < 1.29$, $p_s > .202^3$, stigmatized speakers were rated as having stronger accents, $t(54) = 2.19$, $p = .033$, $d = .58$, $CI_{95} [.0470, 1.1177]$, and as being less committed to living in the U.K., $t(41.48) = 2.81$, $p = .008$, $d = .75$, $CI_{95} [.2056, .1.2906]$ than non-stigmatized speakers. This result is consistent with stereotype threat: focusing on one's performance (i.e., speech) after receiving negative feedback may have impaired speakers' conversational abilities during the interaction, making their accent stronger than it might normally have been.

Accommodation. Our expectation that stigmatized speakers would accommodate their language patterns towards British norms (H4) was not supported. Given the evidence that stigmatized speakers did alter their language patterns (e.g. native speakers rated their accents

as stronger than non-stigmatized speakers), it is possible that receiving negative feedback led to disruptions in speech fluency. Recent work has demonstrated that difficulty in processing language (due to interruptions in fluency) may help to determine native speakers' evaluations of non-native speakers (Dragojevic, Giles, Beck, & Tatum, 2017). Hence, it may have been that the differences in accent strength noted by the native speaking raters was actually a result of breaks (e.g. pauses, false starts) in stigmatized participants' speech, rather than because of failed attempts to accommodate.

Limitations. Results indicate that non-native speakers experience negative consequences specific to language-based stigma. However, we cannot discount the possibility that the consequences observed may be due to the fact that participants had received negative feedback generally or because they inferred that their ethnicity was the actual basis for discrimination. While the manipulation was designed to ensure that participants would associate the feedback given with their speech patterns specifically (and the manipulation check indicated that this was successful), future research should seek to fully eliminate these possibilities. In addition, given the relatively small samples used in this study, it is also imperative that these effects are replicated independently to confirm the disruptive effects of language-based stigma.

Conclusion

The two studies reported in this paper establish that for non-native speakers of English: (1) accented speech is a potentially devaluing characteristic, and (2) perceiving and anticipating language-based stigma has personal, interpersonal and intergroup consequences. This glimpse into the experience of language-based stigma from the perspective of non-native speakers extends previous research on accent perception. Importantly, we demonstrate that non-native speakers are not only aware of the negative attitudes associated with their accent but are

adversely affected by them. Like other stigmas, language-based stigma tends to evoke feelings of anxiety and impair both the cognitive abilities of its targets and their relationships with out-group members.

Acknowledgements

The authors would like to thank Magda Formanowicz, Caterina Suiter, and two anonymous reviewers for their valuable feedback on earlier drafts of this article. We would also like to thank Hannah Smith for her contributions towards the running of the second study and Suzanne Stewart for her support in the latter part of this project.

Declaration of Conflicting Interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

This research was supported by a PhD studentship from the University of Exeter and from an internal grant awarded by the University of Chester to the first and fourth author.

Notes

1. We also measured promotion focus as part of the scale. However, there were no significant results involving promotion focus when this was substituted as part of the analysis.
2. Because we wanted to ensure the robustness of our analysis due to our fairly small sample size, we ran a bootstrapped analysis on all of our t-tests.
3. To establish that there was a reliable effect of condition across the multiple DVs in Study 2 (and to reduce the possibility of a Type 1 error occurring), we ran a MANOVA on both

the target and observer DVs. With the exception of the manipulation check (i.e. accent perception), all DVs measuring the target's perspective were included: $F(6,46) = 2.00$, $p = .086$. On the observer side, the analysis included all four of the DVs measuring the observer's perspective: $F(4,51) = 2.11$, $p = .093$. These marginal effects, as well as the number of tests involved, increase the importance of confirmatory studies to be confident in our effects.

4. Although not predicted, we did consider the possibility that the other DVs (i.e. perceptions of the confederate, her group, and stereotype threat) could also mediate the effect on observers' perceptions. However, none of them did.

References

- Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Thousand Oaks, CA: Sage.
- Apfelbaum, E. P., Phillips, K. W., & Richeson, J. A. (2014). Rethinking the baseline in diversity research. Should we be explaining the effects of homogeneity? *Perspectives on Psychological Science*, 9, 235-244. <https://doi.org/10.1177/1745691614527466>
- Aronson, J., & McGlone, M.S. (2009). Stereotype and social identity threat. In T. Nelson (Ed.), *Handbook of prejudice, stereotyping, and discrimination* (pp.153-178). New York, NY: Psychology Press. 153.
- Ball, P., Gallois, C., & Callan, V. J. (1989) Language attitudes: a perspective from social psychology. In P. Collins & D. Blair (Eds.), *Australian English: The language of a new society* (pp. 89-102). St. Lucia, Australia: University of Queensland Press.
- Barreto, M. (2014). Experiencing and coping with stigma. In J. A. Simpson & J. F. Dovidio (Eds.), *APA handbook of personality and social psychology, Volume 2: Group*

- processes. APA handbooks in psychology* (pp. 473-506). Washington, DC, US: American Psychological Association. [http://dx.doi.org/ 10.1037/14342-018](http://dx.doi.org/10.1037/14342-018)
- Beebe, L., & Giles, H. (1984). Speech accommodation theories: A discussion in terms of second language acquisition. *International Journal of the Sociology of Language*, *46*, 5-32. <https://doi.org/10.1515/ijsl.1984.46.5>
- Blascovich, J., Spencer, S. J., Quinn, D., & Steele, C. (2001). African Americans and high blood pressure: The role of stereotype threat. *Psychological Science*, *12*, 225-229. <https://doi.org/10.1111/1467-9280.00340>
- Cosmides, L., Tooby, J., & Kurzban, R. (2003). Perceptions of race. *Trends in Cognitive Sciences*, *7*, 173-179. [https://doi.org/10.1016/S1364-6613\(03\)00057-3](https://doi.org/10.1016/S1364-6613(03)00057-3)
- Crandall, C. S., & Moriarty, D. (2011). Physical illness stigma and social rejection. *British Journal of Social Psychology*, *34*, 67-83. <https://doi.org/10.1111/j.2044-8309.1995.tb01049>
- Crystal, D. (2003). *English as a global language (second edition)*. Cambridge, U.K. Cambridge University Press.
- Derwing, T. M. (2003). What do ESL students say about their accents? *Canadian Modern Language Review*, *59*, 547-567. <https://doi.org/10.3138/cmlr.59.4.547>
- Derwing, T. M., & Rossiter, M. J. (2002). ESL learners' perceptions of their pronunciation needs and strategies. *System*, *30*, 155-166. [https://doi.org/10.1016/S0346-251X\(02\)00012-X](https://doi.org/10.1016/S0346-251X(02)00012-X)
- Dovidio, J. F., & Gluszek, A. (2012). Accents, nonverbal behavior, and intergroup bias. In H. Giles (Ed.), *The handbook of intergroup communication* (pp. 87-99). New York, NY: Routledge.

- Dragojevic, M., Giles, H., Beck A., & Tatum, N. (2017). The fluency principle: Why foreign accent strength negatively biases language attitude. *Communication Monographs*, *84*, 385-405. <https://doi.org/10.1080/03637751.2017.1322213>
- Echterhoff, G., Higgins E. T., Kopietz, R., & Groll S. (2008). How communication goals determine when audience tuning biases memory. *Journal of Experimental Psychology*, *137*, 3-31. <http://dx.doi.org/10.1037/0096-3445.137.1.3>
- Echterhoff, G., Lang, S., Kramer, N., & Higgins, E. T. (2009). Audience-tuning effects on memory: The role of audience status in sharing reality. *Social Psychology*, *40*, 150-163. <https://doi.org/10.1027/1864-9335.40.3.150>
- Feldman, D. B., & Crandall, C. S. (2007). Dimensions of mental illness stigma: What about mental illness causes social rejection? *Journal of Social and Clinical Psychology*, *26*, 137-154. <https://doi.org/10.1521/jscp.2007.26.2.137>
- Flege, J. E., Munro, M. J., & MacKay, I. R. (1995). Factors affecting strength of perceived foreign accent in a second language. *The Journal of the Acoustical Society of America*, *97*, 3125-3134. <https://doi.org/10.1121/1.413041>
- Flowerdew, J. (2008). Scholarly writers who use English as an additional language: What can Goffman's 'Stigma' tell us? *Journal of English for Academic Purposes*, *7*, 77-86. <https://doi.org/10.1016/j.jeap.2008.03.002>
- Frumkin, L. (2007). Influences of accent and ethnic background on perceptions of eyewitness testimony. *Psychology, Crime and Law*, *13*, 317-331. <https://doi.org/10.1080/10683160600822246>
- Fussell, S. R., & Krauss, R. M. (1989). The effects of intended audience on message production and comprehension: Reference in common ground framework. *Journal of Experimental Social Psychology*, *25*, 203-219. [https://doi.org/10.1016/0022-1031\(89\)90019-X](https://doi.org/10.1016/0022-1031(89)90019-X)

- Gallois, C., Franklin-Stokes, A., Giles, H., & Coupland, N. (1988). Communication accommodation in intercultural encounters. In Y. Y. Kim & W. B. Gudykunst (Eds.), *Theories in intercultural communication* (pp. 157-185). Newbury Park, CA: Sage.
- Gallois, C., Orgay, T., & Giles, H. (2005). Communication accommodation theory: A look back and a look ahead. In W. Gundykunst (Ed.), *Theorizing about intercultural communication* (pp.121-148). Thousand Oaks, CA: Sage.
- Gasiorek, J., & Giles, H. (2012). Effects of inferred motive on evaluations of nonaccommodative communication. *Human Communication Research*, 38, 309-331.
<https://doi.org/10.1111/j.1468-2958.2012.01426.x>
- Geschke, D., Mummendey, A., Kessler, T., & Funke, F. (2010). Majority members' acculturation goals as predictors and effects of attitudes and behaviours towards migrants. *British Journal of Social Psychology*, 49, 489-506.
<https://doi.org/10.1348/014466609X470544>
- Giles, H. (1973). Accent mobility: A model and some data. *Anthropological Linguistics*, 15(2), 87-109. <https://www.jstor.org/stable/30029508>
- Giles, H. (Ed.). (2016). *Communication accommodation theory. Negotiating personal relationships and social identities across contexts*. Cambridge, UK: Cambridge University Press.
- Giles, H., Coupland, J., & Coupland, N. (Eds.). (1991). *Contexts of accommodation: Developments in applied sociolinguistics*. New York, NY. Cambridge University Press.
- Giles, H., Mulac, A., Bradac, J. J., & Johnson, P. (1987). *Speech accommodation theory: The next decade and beyond*. In M. McLaughlin (Ed.), *Communication Yearbook 10*, (pp. 13-48). Newbury Park, CA: Sage.

- Giles, H., Willemys, M., Gallois, C., & Anderson, M.C. (2007). Accommodating a new frontier: The context of law enforcement. In K. Fiedler (Ed.), *Social communication*, (pp. 129-162). New York, NY: Psychology Press.
- Gluszek, A., & Dovidio, J. F. (2010a). The way they speak: A social psychological perspective on the stigma of nonnative accents in communication. *Personality and Social Psychology Review*, *14*, 214-237. <https://doi.org/10.1177/1088868309359288>
- Gluszek, A., & Dovidio, J. F. (2010b). Speaking with a non-native accent: Perceptions of bias, communication difficulties, and belonging in the United States. *Journal of Language and Social Psychology*, *29*, 224–234. <https://doi.org/10.1177/0261927X09359590>
- Gluszek, A., Newheiser, A. K., & Dovidio, J. F. (2011). Social psychological orientations and accent strength. *Journal of Language and Social Psychology*, *30*, 28-45. <https://doi.org/10.1177/0261927X10387100>
- Gregory, S. W., & Webster, S. (1996). A nonverbal signal in voices of interview partners effectively predicts communication accommodation and social status perceptions. *Journal of Personality and Social Psychology*, *70*, 1231-1240. <http://dx.doi.org/10.1037/0022-3514.70.6.1231>
- Greene, J. O., & Sparks, G. G. (1983). Explication and test of a cognitive model of communication apprehension: A new look at an old construct. *Human Communication Research*, *9*, 349-366. <https://doi.org/10.1111/j.1468-2958.1983.tb00704.x>
- Hamers, J. F., & Blanc, M. H. A. (1989). *Bilinguality and bilingualism*. Cambridge, U.K.: Cambridge University Press.
- Hansen, K., Rakić, T., & Steffens, M. C. (2014). When actions speak louder than words: Preventing discrimination of nonstandard speakers. *Journal of Language and Social Psychology*, *33*, 68–77. <https://doi.org/10.1177/0261927X13499761>

- Harwood, J., & Joyce, N. (2012). Intergroup contact and communication. In H. Giles (Ed.), *Handbook of intergroup communication* (pp. 167–180). New York, NY: Routledge
- Hayes, A. F. (2012). A versatile computational tool for observed variable mediation, moderation, and conditional process modeling. (White Paper). Retrieved from <http://www.afhayes.com/public/process2012.pdf>.
- Hess, T. M., & Hinson, J. T. (2006). Age-related variation in the influences of aging stereotypes on memory in adulthood. *Psychology and Ageing, 21*, 621. <http://dx.doi.org/10.1037/0882-7974.21.3.621>.
- Higgins, E. T. (1998). Promotion and prevention: Regulatory focus as a motivational principle. *Advances in Experimental Social Psychology, 30*, 1-45. [https://doi.org/10.1016/S0065-2601\(08\)60381-0](https://doi.org/10.1016/S0065-2601(08)60381-0)
- Hosoda, M., Nguyen, L. T. & Stone-Romero, E. F. (2012). The effect of Hispanic accents on employment decisions. *Journal of Managerial Psychology, 27*, 347-364. <http://dx.doi.org/10.1108/02683941211220162>
- Hosoda, M., & Stone-Romero, E. (2010). The effects of foreign accents on employment-related decisions. *Journal of Managerial Psychology, 25*, 113–132. <https://doi.org/10.1108/02683941011019339>
- Kessler, A. E., & Freeman, G. P. (2005). Public opinion in the EU on immigration from outside the community. *Journal of Common Market Studies, 43*, 825-850. <https://doi.org/10.1111/j.1468-5965.2005.00598.x>
- 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*, 1093- 1096. <http://dx.doi.org/10.1016/j.jesp.2010.05.025>
- Lippi-Green, R. (1997). *English with accents: Language, ideology, and discrimination in the United States*. New York, NY: Routledge.

- Lockwood, P., Jordon, C. H., & Kunda, Z. (2002). Motivation by positive or negative role models: Regulatory focus determines who will best inspire us. *Journal of Personality and Social Psychology*, 83, 854–864. <http://dx.doi.org/10.1037/0022-3514.83.4.854>
- Maddux, W. W., Galinsky, A. D., Cuddy, A. J. C., & Polifroni, M. (2008). When being a model minority is good...and bad: Realistic threat explains negativity toward Asian Americans. *Personality and Social Psychology Bulletin*, 34, 74-89. <https://doi.org/10.1177/0146167207309195>
- McGlone M. S., & Pfiester R. A. (2015). Stereotype threat and the evaluative context of communication. *Journal of Language and Social Psychology*, 34, 111-137. <http://dx.doi.org/10.1177/0261927X14562609>
- McGraw, K. O., & Wong, S. P. (1996). Forming inferences about some intraclass correlation coefficients. *Psychological Methods*, 1, 30–46. <http://dx.doi.org/10.1037/1082-989X.1.1.30>
- Moyer, A. (2004). *Age, accents, and experience in second language acquisition: An integrated approach to critical period inquiry*. Clevedon, UK: Multilingual Matters.
- Moyer, A. (2007). Do language attitudes determine accent? A study of bilinguals in the USA. *Journal of Multilingual and Multicultural Development*, 28, 502-518. <https://doi.org/10.2167/jmmd514.0>
- Nesdale, D., & Rooney, R. (1996). Evaluations and stereotyping of accented speakers by pre-adolescent children. *Journal of Language and Social Psychology*, 15, 133-154. <https://doi.org/10.1177/0261927X960152002>
- Neuliep, J. W., & Speten-Hansen, K. M. (2013). The influence of ethnocentrism on social perceptions of nonnative accents. *Language and Communication*, 33, 167-176. <http://dx.doi.org/10.1016/j.langcom.2013.05.001>

- Newheiser, A. K., Barreto, M., Ellemers, N., Derks, B., & Scheepers, D. (2015). Regulatory focus moderates the social performance of individuals who conceal a stigmatized identity. *British Journal of Social Psychology, 54*, 787-797. <https://doi.org/10.1111/bjso.12107>
- Osborne, J. W. (2007). Linking stereotype threat and anxiety. *Educational Psychology, 27*, 135–154. <https://doi.org/10.1080/01443410601069929>
- Paladino, M. P., Poddesu, L., Rauzi, M., Vaes, J., Cadinu, M., & Forer, D. (2009). Second language competence in the Italian-speaking population of Alto Adige/Sudtirol: Evidence for linguistic stereotype threat. *Journal of Language and Social Psychology, 28*, 222–243. <https://doi.org/10.1177/0261927X09335333>
- Pettigrew, T. F., & Tropp, L. R. (2008). How does intergroup contact reduce prejudice? Meta-analytic tests of three mediators. *European Journal of Social Psychology, 38*, 922-934. <https://doi.org/10.1002/ejsp.504>
- Pietraszewski, D., & Schwartz, A. (2014). Evidence that accent is a dedicated dimension of social categorization, not a byproduct of coalitional categorization. *Evolution and Human Behavior, 35*, 51-57. <https://doi.org/10.1016/j.evolhumbehav.2013.09.005>
- Phillipson, R. (2003). *English-only Europe? Challenging language policy*. London, UK: Routledge.
- Purcell, E. T., & Suter, R. W. (1980). Predictors of pronunciation accuracy: A re-examination. *Language Learning, 30*, 271-287. <https://doi.org/10.1111/j.1467-1770.1980.tb00319.x>
- Roessel, J., Schoel, C., & Stahlberg, D. (2017). What's in an accent? General spontaneous biases against non-native accents: An investigation with conceptual and auditory IATs. *European Journal of Social Psychology, 48*, 535-550. <https://doi.org/10.1002/ejsp.2339>

- Schmader, T., Johns, M., & Forbes, C. (2008). An integrated process model of stereotype threat effects on performance. *Psychological Review*, *115*, 336-356. <http://dx.doi.org/10.1037/0033-295X.115.2.336>
- Simard, L. M., Taylor, D. M., & Giles, H. (1976). Attribution processes and interpersonal accommodation in a bilingual setting. *Language and Speech*, *19*, 374-387. <https://doi.org/10.1177/002383097601900408>
- Spencer, S. J., Steele, C. M., & Quinn, D. M. (1999). Stereotype threat and women's math performance. *Journal of Experimental Social Psychology*, *35*, 42-28. <https://doi.org/10.1006/jesp.1998.1373>
- Steele, C. M., & Aronson, J. (1995). Stereotype threat and the intellectual test performance of African Americans. *Journal of Personality and Social Psychology*, *69*, 797-811. <http://dx.doi.org/10.1037/0022-3514.69.5.797>
- Stone, J. (2002). Battling doubt by avoiding practice: The effects of stereotype threat on self-handicapping white athletes. *Personality and Social Psychology Bulletin*, *28*, 1667-1678. <http://dx.doi.org/10.1177/014616702237648>
- TOEFL iBT Test Sample Questions. (2013). http://www.ets.org/toefl/ibt/prepare/sample_questions. Accessed 21 September 2013.
- Trawalter, S., & Richeson, J. A. (2006). Regulatory focus and executive function after interracial interactions. *Journal of Experimental Social Psychology*, *42*, 406-412. <http://dx.doi.org/10.1016/j.jesp.2005.05.008>
- Zhao, B., Ondrich, J., & Yinger, J. (2006). Why do real estate brokers continue to discriminate? Evidence from the 2000 housing discrimination study. *Journal of Urban Economics*, *59*, 394-419. <https://doi.org/10.1016/j.jue.2005.12.001>

Author Biographies

Megan E. Birney is a Senior Lecturer in the Applied Psychology Group at University Centre, Shrewsbury. Broadly, her research interests include social stigma, identity processes, interpersonal and intergroup relations, communication, and obedience.

Anna Rabinovich is a Senior Lecturer in Social Psychology at the University of Exeter. Her research interests are centered around group processes, attitude and behavior change, social influence, understanding and perception of science, time perspective, and communication.

Thomas A. Morton is an Associate Professor of Social Psychology at the University of Copenhagen. His research interests center on the ways in which identity is experienced and expressed in response to the symbolic and material properties of social and physical environments.

Hannah Heath is a Lecturer in Psychology at the University of Chester. Her research interests lie in the use of critical social psychology, and qualitative methods, to understand the impact that self-harm has on friends and friendships.

Sam Ashcroft is a PhD student at the University of Chester. His computer-based research examines how people respond to relational coherence, ambiguity and incoherence, working within the modern behaviorist framework called Relational Frame Theory.

Table 1. Means and Standard Deviations for all Dependent Measures

		Feedback				<i>t</i>
		Positive		Negative		
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Non-Native Speaker DVs	Accent Perception	3.16	1.40	4.09	1.15	2.67*
	Positive Attitude - Confederate	5.19	.86	4.65	.93	2.24*
	Meta-Perceptions	4.57	.91	3.90	1.00	2.64*
	Accommodation	4.38	1.30	4.67	.93	0.98
	Anxiety	2.94	1.06	3.70	1.20	2.53*
	Intergroup Threat	2.95	1.15	3.59	1.07	2.10*
	English Test Score	9.18	2.02	7.86	2.27	2.30*
Native Speaker DVs	Perceived Accent Strength	4.18	1.52	4.95	1.09	2.19*
	Perceived Accommodation	5.41	.85	5.13	.77	1.29
	Positive Attitude - Participant	4.06	1.30	3.60	1.18	1.38
	Perceived Commitment to UK	3.15	.88	2.62	.47	2.81*

Note. * = $p < .05$

Table 2. Conditional Indirect Effects of Language-based Stigma via Anxiety on Outcome Variables at Low and High Prevention Focus

	Low Prevention		High Prevention	
	95% CI	95% CI	95% CI	95% CI
Attitudes - Confederate	.1189	-.1795	.0830	.9006
Meta-Perceptions	-.3589	.5252	.2956	1.4014
Intergroup Threat	-.2903	.4464	-1.5993	-.4430
English Test Score	-.3792	.5421	.1624	1.9573

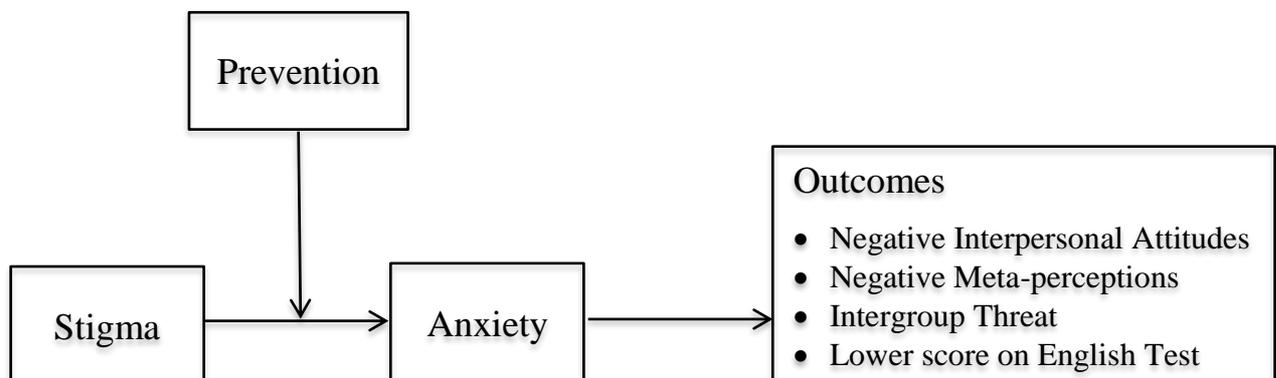


Figure 1. Conceptual model summarizing PROCESS analysis for targets. All indirect and conditional effects are significant.