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THE POWER OF PREJUDICE IN ACCENT PERCEPTION: REVERSE LINGUISTIC STEREOTYPING AND ITS IMPACT ON LISTENER JUDGMENTS AND DECISIONS

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Pronunciation is not merely accoustics; it has an active social life. Linguistic stereotyping is a robust mechanism of social judgment whereby listeners ascribe a myriad of traits to speakers based often on only very thin samples of pronunciation. The converse social judgmental process is "reverse linguistic stereotyping," whereby listeners ascribe pronunciation characteristics to speech samples based on cues about speakers' social identities. In reverse linguistic stereotyping, listeners "hear" the pronunciation they expect to hear, sometimes with little regard to the actual properties of the acoustic signal. Much of the research on reverse linguistic stereotyping applies to educational settings. Over two decades of research document that mainstream college students often expect international teaching assistants to speak with incomprehensible accents. Therefore when an international identity is ascribed to a voice with patently standard North American pronunciation, students rate the pronunciation as nonstandard and evince comprehension decrements. Another arena in which mainstream speakers have consequential interactions with Outer and Expanding circle World Englishes speakers is healthcare. The broader significance of research on reverse linguistic stereotyping includes at the the following four recommendations: (1) *Keep research practices simple and replicate, replicate.* (2) *Pronunciation rating is susceptible to error.* (3) *Train listeners, not just speakers.* (4) *Preserve social justice as the core.*

Telling a Story About Listener Prejudice

In an intellectual climate marked by the polarized camps of hyperscientism and antiscientism, it is well to remember that no single research study– no matter what its methodology– is built to "prove" anything. Rather, the point of empirical research is to tell a coherent story (Abelson, 1995), and most compelling stories are built of multiple, inter-linked episodes. That is to say, scientific knowing is an accretive process. The story of how listener expectations affect those listeners' perceptions of speaker accent is thus informed by multiple studies (see reviews in Kang & Rubin, 2009; Rubin, 2002), some more engrossing than others. It is the consistency of evidence across those multiple studies that might convince an interested educator, employer, or policy maker that any assessment of a speaker's speech performance could very well reflect nearly as much about the listener as about the speaker.

We routinely rely on judgments of oral language to make high-stakes decisions (Lippi-Green, 2012). In a court of law, for example, jurors' assessments of a witness' credibility

can be affected by perceived speech dysfluencies and by perceived degree of "accentedness" (Frumkin, 2007). Several nations now utilize "shiboleth tests" to determine who shall be permitted to dwell within their borders (McNamara & Shohamy, 2008). For even the most experienced international medical graduate, license to practice medicine in the United States depends on the Spoken English Proficiency rating of a simulated patient (Boulet, Van Zanten, McKinley, & Gary, 2001). Admission to graduate study for nonnative speakers of English (NNSs) demands a high score on a standardized measure of speaking proficiency such as the iBT TOEFL speaking section. And of course informal, on-the-spot, and largely nonconscious speech judgments are embedded in every-day social impressions.

Listener Expectations and Language Perception

Notwithstanding society's reliance on speech assessments, it should come as no surprise to discover that such perceptions are highly susceptible to the listener's own expectations of what she is about to hear. The very process of listening is wired in that way. Sensory systems are not just efferent, but also afferent. Our brains actively "tune" our ears to selectively attend and identify sounds that make sense to hear in particular situations (Gibson, 1966). Identifying phonemes in speech is very much a matter of creating or at least completing sound formant vectors by inserting information which is actually missing in the accoustical signal (Liberman, Cooper, Shankweiler, & Studdert-Kennedy, 1967). In short, perceiving speech is a constructivist process (von Glasersfeld, 1995) in which individual listeners impose patterning based on serial probabilities about what sounds make sense for them to hear.

Classic linguistic stereotyping – in which listeners made assumptions and judgments about speakers based on those speakers' language varieties– is well explored in research on language and social psychology (see reviews in Bradac, Cargile, & Hallett, 2001; Fuertes, Gottdiener, Martin, Gilbert, & Giles, 2011). As originally explicated by Lambert and colleagues in the 1960's (Lambert, Hodgson, Gardner, & Fillenbaum, 1960), the Linguistic Stereotype Hypothesis asserts that speech style is a powerful emblem of social identity. Listeners naturally attribute social identity to speakers, and then judge those speakers in accordance with their stereotypes of the speaker's putative social group. As listeners, we make many judgments about speakers depending on how they pronounce words and phrases. A wide variety of studies have shown that linguistic stereotyping is common, and that listeners consistently make decisions about speakers that on the surface seem only marginally linked to the way that they speak. Speech-linked stereotypes include judgments about speakers' ethnicity, social status, enthusiasm, confidence, intelligence, academic success, and even their physical height.

Reverse Linguistic Stereotyping

Reverse linguistic stereotyping (RLS) is the complementary process: listeners attribute a speech style to a speaker based not on what they hear, but on what they believe is the speaker's social identity (Kang & Rubin, 2009; see also Lindemann, 2002; Niedzielski, 1999). If I am told that I am about to hear a speaker of Nigerian English, I am likely to perceive at least traces of Nigerian accent in that speaker's oral performance. Individuals vary in their proclivity to engage in RLS. A high-RLS person will be especially error-prone in judging a NNS accent. Perhaps less well-known is the tendency of listeners to

suffer deficits of listening comprehension based on reverse linguistic stereotyping, that is, to anticipate that they will understand less well based on beliefs about a speaker's national or ethnic identity.

The research methodology we have been using to unwind the story of RLS builds on the matched guise techniques developed by early researchers in language and attitude (e.g., Lambert et al., 1960) The goal of the matched guise technique is to eliminate effects on speech perception due to idiosyncratic differences in voice quality and style among speakers. For example, a speaker with less "vocal fry" is likely to elicit higher impressions on psychosocial scales than will someone with a more gravelly voice (Zuckerman & Miyake, 1993). But these individual differences in vocal quality are of little importance to sociolinguistics. So in matched guise experiments, a single speaker produces stimulus speech samples in two contrasting language varieties. The RLS technique is even simpler. In most of the studies, a speaker (usually a speaker of mainstream North American English) produces a single speech sample. The very same speech sample is presented to different groups of listeners, but with varying national/ethnic identity ascribed to the speaker by means of photos and simulated dossiers. In this research method, when a listener finds Speaker A less socially attractive or less comprehensible than Speaker B, the explanation can only lie in the listener's own proclivity to RLS, for the listener is actually hearing the very same speech sample.

The series of studies conducted via this method have indeed confirmed RLS as a factor in social judgment. Most of these studies have focused on US undergraduates perceptions of international teaching assistants (ITAs). For example, in an as-yet unpublished study, ITA race (white, black, or Asian– ascribed via photographs) was crossed with ITA nationality (US or international). Thus the ascribed ITA identities were African American, Asian American, Euro American, Nigerian, Chinese, and Danish. In each case, the actual speech sample was produced by a speaker of mainstream North American English. Listeners were US undergraduates. Results indicated that rated ITA accentedness was a function of perceived physical attractiveness (accounting for 17% of variance in accent ratings) and nationality (6% of variance). Race did not account for any signficant variance. Similarly, nationality accounted for 8% of the variance in comprehension scores (equivalent to an 11% decrement in comprehension scores when students were lead to believe that the speaker was an ITA). However once again, these results found no significant effect for race on the comprehension measure.

The story of RLS extends beyond educational settings however. One study in this series explored the RLS phenomenon in business (manager-employee relations; Rubin, Ainsworth, Cho, Turk, & Winn, 1999) and another examined health care (HIV-prevention counseling; Rubin, Healy, Zath, Gardiner, & Moore, 1997). Most recently we have been examining the role of RLS in a grossly understudied context that constitutes one of the most common and yet fraught settings for cross-cultural contact in the US: interactions between older adults who are speakers of North American Englishes and their international health care aides (HCAs), many of whom are NNSs or speakers of nonmainstream Englishes (Duff, Wong & Early, 2002). The health care workforce in the US has been enriched over the last several decades by an infusion of international migrants and sojourners. More than one of four physicians in the US was educated overseas (Castillo-Page, 2010), and an estimated 15% of all health care workers are

internationals (Clearfield & Batalova, 2007). In light of increasing coverage by international HCAs and consistent expressions of dissatisfaction with the quality of their care, it is important to try to understand how much of that negative reaction might be attributable to RLS.

In an as-yet unpublished study conducted with colleagues Valerie Coles, Joshua Barnett, and Sarah Mink Tuck, older adults heard the very same North American mainstream English speech issue from a HCA depicted in a video recorded interaction with a patient. In one case, however, they were lead to believe that the HCA was a native Spanish speaker of Mexican origin. In the other condition, the HCA was identified as an Anglo native speaker of English. Results indicated that manipulating the HCA's attributed linguistic and cultural identity did indeed exert a powerful impact on listeners' judgments, with effect sizes on psychosocial impression variables generally exceeding .30.

Most notably, even though the voice they heard was identical, participants judged the Anglo guise HCA to sound more like an "American accent." In general, this HCA's language skills were seen to interfere with comprehension less than was the case for the Mexican guise. In this respect, the findings of the present study parallel those found in earlier research on RLS in the classroom. The present study, however, failed to establish the hypothesized effect of HCA ethnicity/language background on comprehension of a health message (about eye health).

Significance of RLS Research

Beyond its intrinsic interest for the social psychology of language, what is the broader significance of RLS research? Several domains suggest themselves.

1. *Keep research practices simple and replicate, replicate.* One not insignificant "lesson learned" from this program of research on RLS concerns how empirical research tells a story (Abelson, 1995). Our research methods could hardly be simpler: one speech recording, two photographs. Sometimes a simple research design is the most compelling. Also, RLS research is convincing because it constitutes an accumulation from not just one study, nor just two, but from 10 or so related episodes. In most of these studies the dramatic finding about decrements in comprehension has been replicated. Lay as well as academic audiences have found that story memorable.

2. *Pronunciation rating is susceptible to error.* For accent and pronunciation assessment programs, RLS research reminds us that short of computer-assisted acoustical analysis, any measures of accentedness based on listener ratings – no matter how "expert" or "trained" those listeners– inevitably reflects the listener's expectation-driven construction how well the speaker speaks. (Incidentally, it is worth bearing in mind that RLS works in two directions; distorted expectations of NNS speech performance can be positive as well as negative. Thus, those of us who spend a great deal of our time interacting with NNSs as colleagues or students may be liable to exercise rather lenient criteria for what is comprehensible and what is not, relative to criteria utilized by a preponderance of speakers of the mainstream variety.)

3. *Train listeners, not just speakers.* RLS research enjoins us to acknowledge that listeners as well as speakers share the onus for "accent reduction." No amount of speech

training or therapy will erase the effects of RLS. Mainstream listeners will continue to "hear" the vestiges of NNS accent that they expect to hear. It is only when mainstream listeners are trained to recognize and countervail against their proclivity to RLS that pronunciation training can protect NNS speakers from being judged negatively. The cynical might say that RLS limits the efficacy of pronunciation training.

4. *Preserve social justice as the core.* RLS research ensconces social justice considerations at the heart of pronunciation research and teaching. Why, after all, do we participate in this pronunciation industry? Certainly we hope to enhance inter-group communication by improving intelligibility across varieties of a language and between NNSs and mainstream speakers. But RLS research has shown us that even comprehension is in part a function of the listener's social prejudices. In the end, we pursue pronunciation research and teaching, with the ultimate goal of mitigating (if not erasing) negative prejudices that arise simply because certain speakers' talk mark them as the "other."

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