Who's "Unintelligible"? The Perceiver's Role

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Public discussion of Arizona policy regarding non-native English-speaking teachers often presupposes that assessments of a teacher's intelligibility are clear-cut and obvious. This paper discusses research indicating that such judgments are by no means straightforward; fair and accurate assessments also require consideration of the role of the listeners. For example, listeners' attitudes toward non-native speakers may influence how they interact with non-native speakers, as well as the degree to which they acknowledge those speakers' proficiency. Even without clearly negative attitudes toward the speaker, listeners' perception may be biased by expectations so that the same pronunciations are heard as different depending on the listener's beliefs about the speaker's language background. In some cases, it is the perception of "standard" English that is inaccurate, effectively imposing a higher standard on non-native than on native speech. These findings suggest that impressionistic assessments of non-native English are very likely to result in discrimination.

Introduction

When the *Wall Street Journal* published an article about the Arizona Department of Education's policy of removing teachers with "heavily accented or ungrammatical" English from classes for students learning English (Jordan, 2010), reactions ranged from criticism of the policy to astonishment that such a policy was not in effect everywhere. In this paper I discuss how the debate about the Arizona policy may be informed by research on how a non-native speaker's success in communicating can be influenced by the listener's perceptions and behavior. Specifically, two major relevant findings from linguistics research are that 1) A listener's negative attitude toward a speaker's accent can affect how s/he interacts with the speaker, which in turn affects the success of communication, and 2) Even a listener who is not necessarily very negative toward the speaker may mishear specific details of a speaker's accent based on their expectations of how it will sound. I will first discuss the policy itself and then the research supporting these two points.

The Arizona Policy

In trying to find out what exactly the Arizona policy was, I came across contradictory information, sometimes within one news story. For example, in one online news site, a post entitled "Superintendent Horne: English teachers cannot have accent" (Kidd, 2010) featured a news video which I have transcribed in part below:

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Newscaster: Arizona teachers with a heavy accident, won't be te- or heavy accent rather, won't be teaching English anymore in our classrooms.

Horne: … It's just- ordinary common sense that if you want to teach English to kids you should be proficient in the language you're teaching.

Interestingly, this one brief news item includes three very different characterizations of the policy. The most prominent, in the headline, suggests that English teachers cannot have an accent at all, which from a linguistic point of view is impossible, if not completely nonsensical. Since an accent is simply a particular pattern of pronunciation, everyone has an accent, including those who have accents that are widely accepted as "correct," "good English," or even just "normal." The newscaster's characterization of the policy, that English teachers cannot have a "heavy accent," is a little more plausible since it at least clarifies a type of accent. However, "heavy" is vague and subjective, and even this version is highly problematic for a number of reasons, some of which will be discussed in this paper. The third characterization, the actual quotation of Superintendent Tom Horne saying that English teachers "should be proficient" in English, seems like such obvious common sense that most people might wonder why such a policy would be at all controversial.

These very different descriptions of the policy all within one very brief news story demonstrate the importance of being cautious when looking at public discussion, in which terms such as "heavy accent" or even "proficient" are used without being clearly defined. In some cases, as in the news article above, these very different terms are used interchangeably, implying that they all mean the same thing. This can lead to very non-productive debate, in which one side may be arguing for allowing teachers to have an accent, while the other side argues that the teachers must be proficient, and at least some of those arguing may not realize that these views are not actually contradictory.

Even in cases where linguists and the wider public may use the same term, like "proficient," we may have different ideas of what it means. In trying to find out what is considered "not proficient" under the Arizona policy, I found a couple of related definitions. One was from Superintendent Horne in the interview transcribed above: "…if you- if you mispronounce words to the extent that they sound like other words, um you shouldn't be teaching kids English." (In another interview, Horne gave the example of a native Spanish-speaking English teacher who had pronounced *comma* as *coma*; I will return to this example later.) In the actual protocol used by evaluators of non-native English speaking teachers in Arizona, two examples are given for which a teacher would be evaluated as not having accurate pronunciation: "message that is incomprehensible in English from the instructor" and "words used that are impeding communication" (Arizona Department of Education, 2009, p. 3).

Of these definitions of "not proficient," the descriptor "incomprehensible" may seem the least controversial, since it would be hard to argue that an *incomprehensible* English speaker would make an appropriate English language teacher. However, I will argue that identifying whether a teacher is "incomprehensible", or even whether s/he "mispronounces words to the extent that they sound like other words" is by no means as obvious and straightforward as it sounds. The complicating issue is that the listener can play an important role in assessment and even performance of a non-native speaker, so that incomprehensibility is not just a matter of the speaker's proficiency, but also of the listener's beliefs and behavior. To show how this works, I will discuss research on attitudes towards non-native speakers and expectations about their speech that shows that informal assessments of English proficiency can be very problematic. In the next section I will discuss my own research on the relationship between listeners' attitudes to non-native speech and the success of communication. In the section following that, I will look at a number of studies that suggest that even in the absence of outright negative attitudes, expectations about a speaker may cause a listener to mishear specific details of their accent.

The Role of Listener Attitudes in Speaker Performance

The first study I will discuss showed that listeners' attitudes—that is, their overall positive or negative feelings—toward Korean non-native speakers of English could affect their comprehension of those speakers (Lindemann, 2002). This study involved assessing native speakers' attitudes towards non-native speech and then having them interact with non-native speakers under carefully controlled conditions. Since understanding the study design is crucial to appreciating the strength of the findings, I will discuss it in some detail.

Description of Study Tasks

In this study, I measured attitudes toward Koreans by asking native US English-speaking college students to rate recordings of Korean-accented speech and of native US English speech. All the recordings they heard were of people reading the same brief message. Listeners rated the speaker on things like how *intelligent*, *friendly*, and *nice to listen to* they thought they were, based on how they sounded. Some of the listeners rated all of the Koreans more negatively than all of the native English speakers, especially on descriptors like *nice to listen to*. These listeners were considered to have more negative attitudes to Koreans (compare how they might rate native speakers of French or Italian reading the same texts). Other listeners rated the native Korean speakers and the native English speakers about the same, as we might expect given that they were all saying the same thing. These listeners were considered to have more positive attitudes to Koreans, since they did not rate them as less *intelligent* or *nice to listen to* based on their accent alone.

A subset of the participants whose attitudes were measured, those who had either rated Koreans most negatively or rated them most positively, also completed a task with a native speaker of Korean in English. Since all participants were college students in the US, the Korean speakers were at a relatively high level of English proficiency. (In the following discussion I will refer to the native Korean speakers either as Koreans or as non-native speakers, since the interaction was in English; I will refer to the study participants whose attitudes were measured as native speakers.) The task was designed to allow me to be able to compare the effectiveness of different native speakers in interactions with non-native speakers. In the task, both people were given a map of the same imaginary place, but only the non-native speaker's map had a route drawn on it. To complete the task, the non-native speaker needed to tell the native speaker how to draw a route on her map so that it matched the one drawn on the non-native speaker's map. They could not see each other's maps or use gestures to visually represent the shape of the route.

In order to represent the usual situation where people who are communicating with each other do not share all the same background information, the landmarks on the two maps were slightly different. This task, while comparatively artificial, allowed me to know what the non-native speaker was trying to communicate, what the native speaker actually understood, and exactly what background information they did and did not share; all of these are important to know in order to compare the success of different interactions. The participants were told that the maps were different, that the native English speaker could ask questions, and that they could talk as much as they needed to complete the task.

Each non-native speaker interacted with two native English-speaking partners, one with a more negative attitude toward Koreans and another with a more positive attitude toward Koreans (see Figure 1). This allows us to focus on differences due to the *native speaker*'s attitude rather than the non-native speaker's proficiency: differences between the success of a non-native speaker's two interactions cannot be due to her language proficiency, since it would be the same non-native speaker in both cases.

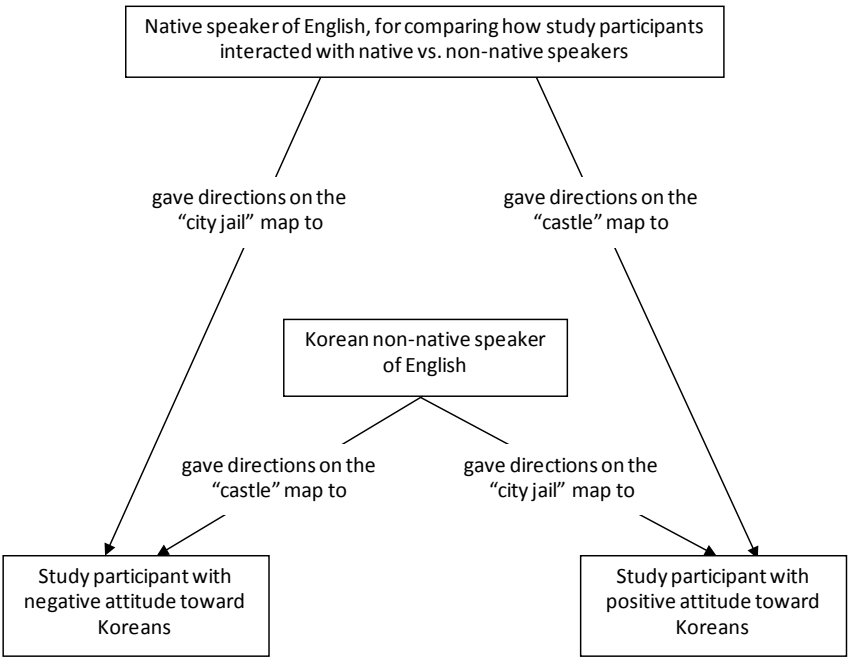
Results: Success of Communication

All interactions were recorded and transcribed for analysis. When I actually analyzed the data, I had arranged it so that I did not know which of the native speakers had negative attitudes and which had positive attitudes, so that such knowledge would not influence my analysis. In fact, I was able to identify the negative-attitude participants by their actual behavior—that is, what they said and how they said it—in the interaction most of the time.

Nearly all (10/12) of these interactions were successful in terms of an objective measure—the similarity between the original map and the map the native speaker drew following the non-native speaker's instructions. The two "unsuccessful" interactions were with native speakers with negative attitudes toward Koreans. The Koreans who participated in those interactions were successful with

native-speaking partners who had positive attitudes to Koreans. The native English speakers who participated in the unsuccessful interactions also were successful when they completed the same task with another native speaker of English. This suggests that the difficulty in these two interactions was not simply due to poorer map-direction skills of the participants involved, since all participants were successful with different partners. The difficulty was also not solely due to the non-native speaker's English proficiency, since the same non-native speaker was successful in the same task with a different partner.

Figure 1.
Configuration Of Pairings Completing The Map Task.



Note. Pairings were actually randomly assigned which map to use, but each participant used each map once.

Significantly, the two negative-attitude participants who were not successful in the map task behaved differently in their interaction with a non-native speaker than they did in a similar interaction with a native speaker, and this different behavior negatively affected the success of the outcome. For example, when they got confusing directions (due to the difference between maps), they failed to ask questions or give accurate information about their own maps to clarify.

Two other negative-attitude participants were successful in terms of the objective measure, but spoke in a way during the interaction that downplayed

their Korean partner's role in successful communication. In general, these two participants did not acknowledge their partner's attempts to explain the map. For example, one participant frequently repeated her partner with questioning intonation, followed by another question in her next turn. The lack of acknowledgement of what she had understood from her partner's previous turn (for example, by saying "okay" before continuing with her next question) in some cases gives the interaction the flavor of a cross-examination. She also used "but" when there was not really a contrast between what she was saying and what her partner had just said, making what she said appear oppositional when it did not need to be. Both of these negative-attitude participants also ignored their non-native partners' attempts to explain the route, instead asking questions without acknowledging what their partner had just said. In both cases, they responded to their partners' attempts to explain in a way that suggested that they had a problem with their partners' speech, even when they apparently understood it.

To sum up, four out of the six negative-attitude participants either had interactions that were unsuccessful, or that seemed unsuccessful because the native speaker treated much of what their non-native partner said as somehow wrong. None of these "unsuccessful" interactions could be attributed (solely) to the Korean speaker's English proficiency, since the same Korean speakers were successful when they interacted with native English speakers with more positive attitudes. In other words, the overall success of communication chiefly depended on the strategies used by the *native* speaker.

Results: Native Speaker Beliefs About The Success Of Communication

Listeners' assessments of the success of an interaction may also have more to do with their own attitudes than with speaker proficiency. After completing each task, participants rated how successful they thought the task was, still without being able to look at each others' maps. All participants with positive attitudes to Koreans rated the task as successful, which was consistent with the objective measure of the success of the interactions. Meanwhile, *none* of the participants with negative attitudes to Koreans rated the task as successful, even though most of them were successful. In other words, the native speaker's beliefs about how successful the interaction was also turned out to be unrelated to the Korean's English proficiency. Instead, their beliefs about the degree of success the interaction achieved could be attributed to their own attitude to Koreans.

Role Of The Listener In The Perception Of Accent

While the study I have been describing looked at the role of listener attitudes in the success of interactive communication with non-native speakers, there are also a number of studies that suggest that the listener can play an important role even when there is no interaction. In this section I will discuss a number of studies

that have shown that listeners' expectations can also influence their perception of a speaker's accent.

One possibility is that listeners' perceptions of speaker accent may be influenced by the speaker's appearance, as found in a study by Rubin (1992). In this study, undergraduates listened to a recording of a native speaker of English from Ohio give a lecture. All listeners were shown a picture of the person supposedly giving the lecture. One group saw a picture of an Asian speaker while the other group saw a picture of a Caucasian speaker. In comparison to students who saw a picture of a Caucasian, students who saw a picture of an Asian rated the speaker's accent as "more foreign." That is, the *same speaker* was rated as more foreign-sounding if she merely looked Asian.

Several other studies show that listeners' beliefs about who the speaker is can affect their perception of pronunciation at a very detailed level, not only in overall perception of "foreign accent." Individual sounds may be perceived stereotypically, based on who the listener thinks the speaker is. For example, Strand (1999) found that a sound that is ambiguous between *s* and *sh* is perceived as *s* if it looks like a man is saying it and *sh* if it looks like a woman is saying it (men's pronunciation of *s* is lower-frequency than women's, which makes it sound more like women's *sh*). In this case, identification of a particular sound is affected by beliefs about the gender of the speaker.

Niedzielski (1999) showed that beliefs about a speaker's nationality can also affect perception of pronunciation. Her study was conducted in Detroit, where English speakers typically describe their own speech as "standard." Many of these English speakers are aware of a Canadian pronunciation of the vowel in *house* that they do not identify as standard, but they are not aware that Detroiters may pronounce it the same way. In Niedzielski's study, Detroiters listening to a speaker from Detroit heard the vowel in *house* accurately, as having the "Canadian" vowel, if they thought they were hearing a Canadian. They heard the vowel inaccurately, matching it to a standard (or even hyper-standard) vowel, if they thought they were listening to a Detroiter. So they heard the *same pronunciation* differently depending on whether they identified the speaker as a "standard" English speaker.

Similarly, a study by Hay and her colleagues (Hay, Nolan, and Drager, 2006) showed that New Zealanders heard a speaker's pronunciation of *fish* differently based on whether the speaker was labeled as being from Australia or New Zealand. While Australians and New Zealanders do pronounce the word differently, the listeners were actually hearing a New Zealander in both cases; the same speaker was just labeled as Australian for half of the listeners. In other words, in this study as well as in Niedzielski's Detroit study, the listeners heard an accent that was consistent with their expectations.

Hu and Lindemann (2009) looked at whether such stereotyped expectations could influence perceptions of specific details of a non-native accent as well. Our research was conducted in China with native speakers of Cantonese. Cantonese speakers stereotype their own English as being "cut off" at the ends of words like

book, so that the *k* isn't fully pronounced, even when the word is pronounced by itself, or when read in a list of words. (In linguistic terms, this pronunciation is described as an unreleased word-final stop, "unreleased" being the part that refers to the "cut off" quality.) They perceive this feature of Cantonese English negatively. On the other hand, they stereotype native US English as being "perfect," and therefore, we suspected, as not being cut off at the ends of words.

Our methodology was based on that used by Nancy Niedzielski in the Detroit study discussed above. In our study, Cantonese study participants were given a list of sentences that each had a key word (like *book*) in it, underlined. They listened to a recording of a speaker reading the sentence, followed by three versions of the key word: one with the *k* "cut off", one with it fully pronounced[1], and one in-between pronunciation[2]. Listeners were asked to choose which of the three versions of the key word matched how it was pronounced in the sentence. One group of listeners was told that the speaker was American, while the other group was told that she was Cantonese.

Although all listeners actually heard the same recording of the same native speaker of English from the US, they tended to choose the "fully pronounced" version to match the speaker's pronunciation if they thought the speaker was American, and the "cut off" version if they thought the speaker was Cantonese. As with the listeners in the previously discussed studies, the listeners heard the speaker's accent as matching their expectations. This is obviously a problem for assessments of non-native accent, if knowing or believing that a speaker is non-native is enough to trigger perception not only of a non-native accent, but of specific features of that accent.

As it turns out, the listeners' perception of the supposedly Cantonese speaker was actually more accurate, since words like *book* in the context of a sentence by the (American) speaker were seldom "fully pronounced." This suggests that stigmatized pronunciations are more likely to be noticed if they are spoken by a stigmatized speaker, such as a non-native speaker of English. This kind of bias is likely to be even more problematic for fair assessment of non-native English because even very careful listening, trying to ensure that one's assessment is fair, will confirm that the non-native speaker really does have that "problem." However, the listener may not realize that the "problem" is actually a feature of native speech as well.

At a more global level, this tendency to notice "problems" in non-native speech while missing them in native speech brings us back to Superintendent Horne's hypothetical example of a non-native teacher who pronounced *comma* as *coma*, which he provided as evidence of the teacher's insufficient proficiency. If pronouncing a word so that it sounds like another word is evidence of insufficient language proficiency, we would also logically consider speakers not proficient if they pronounce *pen* as *pin*, especially since this can even more easily lead to miscommunication. Pronouncing *caught* as *cot* would likewise show a lack of proficiency, as would pronouncing *merry* like *Mary* or *marry*. While the *comma-coma* example is characteristic of the pronunciation of native speakers of Spanish,

most native US English speakers do not make all of the other distinctions in the examples above. However, failure to distinguish particular pairs of words is only treated as a problem if the speaker is non-native.

Summary & Conclusions

The studies I have discussed demonstrate that listeners' expectations of the speaker can influence perception of their pronunciation. These expectations may lead to perception of a non-native accent when the accent is actually a native one. They can also lead to misperception of specific details of pronunciation, with native speech being perceived as more "perfect" or as making more distinctions than non-native speech, even when the particular details are the same for native and non-native speakers. Depending on how the listener's expectations influence their behavior to the speaker, these expectations may also lead to poorer communication, or at least the appearance of poorer communication.

These common misperceptions present a clear problem for the Arizona policy, since none of the explanations of the policy expressed by Superintendent Horne or the protocols for observation of non-native speaking teachers take the listener's role into account. For example, since all speakers of English, including native speakers, will "mispronounce words to the extent that they sound like other words" according to speakers of other dialects of English, an example of such a "mispronunciation" cannot be considered grounds for evaluation of a speaker as not proficient. Even if a speaker may be found by a particular listener to be "incomprehensible," it is crucial to consider the wider context, including the degree to which the person being spoken to is responding in a constructive way, and what skills the speaker has for clarifying miscommunications.

Even more specific descriptions of non-native accents must be evaluated with caution. Since people are not usually aware of the effect of listener expectations, what they think are "common sense" or "obvious" judgments may actually be biased, even if their intention is essentially positive. Therefore, assessments of speaker proficiency cannot be made fairly in an impressionistic fashion, especially without substantial linguistic knowledge of the language(s) involved. Judgments of incomprehensibility or of specific pronunciations, even judgments that seem obvious, cannot be taken at face value, nor can such superficial judgments be relied upon in formulating responsible public policy.

Notes

1. In linguistic terms, the "fully pronounced" version included a release burst plus aspiration, or in the case of voiced stops, an epenthetic vowel.
2. In linguistic terms, the "in-between" pronunciation ended in a release burst only, with no aspiration or epenthetic vowel.

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