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Closing the Communication Gap Between Undergraduates and International Faculty

This mixed-method study addressed the "foreign TA problem," reconceptualizing it as the *communication gap*, an issue created by multiple parties—including bias originating from undergraduates. Experimental sessions measured undergraduates' comprehension of 2 brief lessons taught by an international professor. Between lessons, participants completed 1 of 3 short modules: a bias-stimulation module, a control module, or a linguistic-training module (which confronted both accent misunderstanding and accent bias). While training did not affect comprehension, questionnaire responses revealed a positive effect of training on sociolinguistic attitudes. Follow-up discussion sessions explored undergraduates' experiences with international faculty and responses to the communication gap. Several important themes emerged from these discussions, including effects on academic plans, negative cognitive effects, and a model of undergraduates' socialization into accent bias. The article concludes with recommendations specifically geared toward TESOL professionals' ongoing efforts to close the communication gap, including a greater recognition of undergraduates' role in perpetuating the gap.

Most of the lectures, I have no idea what's going on.
These people are geniuses, but I don't understand them. It's a lose-lose situation.
Everywhere you go, everyone's always talking about how, in the Math department, there's so many foreign teachers, it's so hard to understand them.
[In calculus,] a lot of people disappeared after the first class.

Complaints such as these are common among US undergraduates who encounter international instructors in their classes. These remarks typify an issue, first identified by Bailey (1984, p. 3ff) as the "foreign TA problem," that has attracted the ire of students, media, and policymakers (Gravois, 2005) for years. The problem extends beyond the classroom, however, as the preponderance of international teaching assistants (ITAs) in mathematics, engineering, and scientific fields causes some undergraduates to drop these majors altogether (Finder, 2005); given the US's dire need to produce greater

numbers of scientists in order to secure its future economic vitality (National Academy of Sciences, 2010), this is a worrisome trend. Ample research has confronted the "foreign TA problem" in the last 30 years, but if you speak to many US undergraduates, you will find that the problem has hardly diminished.

This paper represents a multifaceted approach to the "foreign TA problem," piloting an undergraduate-training program to investigate practical solutions and conducting discussion sessions with undergraduates to investigate the social/linguistic underpinnings of the problem. I argue that previous attempts to solve this problem have fallen short thanks to a faulty conceptualization in which ITAs alone create the problem. Linguistic factors (a foreign accent) and cultural and/or pragmatic factors (failing to grasp American educational norms such as students' right to ask questions in class; Zhou, 2009) create barriers to students' understanding their ITA; under this analysis, then, the problem stems from *accent misunderstanding*.[1] Previous research does indicate that accent misunderstanding is a legitimate concern. ITAs may have limited proficiency, for example, in the prosodic patterns (Pickering, 2001) and discourse structures (Tyler, 1992) necessary for academic communication, and foreign-accented speech in general takes longer to process (Munro & Derwing, 1995). Of course, undergraduates' receptive linguistic inabilities are also at fault, in that the problem would not exist if students could perfectly understand nonstandard English accents. But the number of US undergraduates dwarfs that of ITAs—for example, in 2010-2011, there were 24,211 US undergraduates and only 293 ITAs at the University of California, Davis (L. Timm, personal communication, July 22, 2011), an 83-to-1 ratio—so it makes sense to focus limited TESOL resources on ITAs to better prepare *them* for classroom communication. Make the "accent" go away, the reasoning goes, and so goes accent misunderstanding, and therefore the overall problem.

This accent-misunderstanding–based analysis, however, fails to fully account for the role that undergraduates play in creating the communication gap. Indeed, numerous studies of students' attitudes toward ITAs suggest that students may renounce responsibility for successful classroom communication. In some cases, undergraduates experience a feeling of dread the moment they realize they have an ITA (Rubin, 2002), with many students either dropping the course outright or simply "tun[ing] the teacher out" (Damron, 2000, p. 72). In an especially revealing study, Rubin (1992) played a lecture audiotape for two groups of students, with one group viewing a photograph of a Caucasian lecturer and another viewing an Asian lecturer (both being told that their lecturer was the one pictured). The "Asian" group rated the lecturer as significantly more accented and performed significantly worse on comprehension tasks, despite the fact that both groups heard the *same* lecture, recorded by a native English speaker from Ohio. In other words, the visual cue to ethnicity was sufficient to make students hear a native speaker as nonnative, and this misperception alone was sufficient to undermine students' listening comprehension. Miscommunication between instructor and student may therefore be destined to fail, even before the instructor has a chance to pronounce a word or commit pragmatic errors, if the student preemptively dismisses the possibility that the instructor

will be comprehensible (Lindemann, 2002). Contrary to the accent-misunderstanding–based analysis, no amount of pronunciation or cultural training for ITAs can overcome the *accent bias* that undergraduates bring to the table. Make the "accent" go away, it seems, and the problem remains.

Moreover, whereas public discourse (and public anger) about the "foreign TA problem" does not exclude more senior international faculty (e.g., Gravois, 2005), past research has reflected a focus only on TAs, as suggested by the very label "foreign TA problem" itself. Yet it does us little good to pretend that only ITA-led classes are involved in the problem; Brown (1992) found few differences between students' evaluations of an ITA versus an international senior faculty member. As a result, this paper uses the more inclusive term *International Teaching Faculty* (ITF), a category that includes ITAs and senior faculty, and reserves "ITA" specifically for discussing prior research.

I thus argue that any program to solve the "foreign TA problem" cannot fully succeed unless it discards a focus on TAs and directly addresses undergraduates' contributions to the problem. A more complete analysis of the problem must account for the accent bias generated by undergraduates in addition to accent misunderstanding. I suggest that "foreign TA problem" is an inadequate term—suggesting an inadequate formulation—to describe this issue. Instead, I propose a formulation and nomenclature that recognizes that the problem is co-constructed (Tyler, 1995) and is not limited to TAs: *the communication gap between undergraduates and international faculty* (or simply *the gap*). Schematized in Figure 1, this model recognizes the roles that all parties play in creating the gap, informing our attempts to solve the gap.

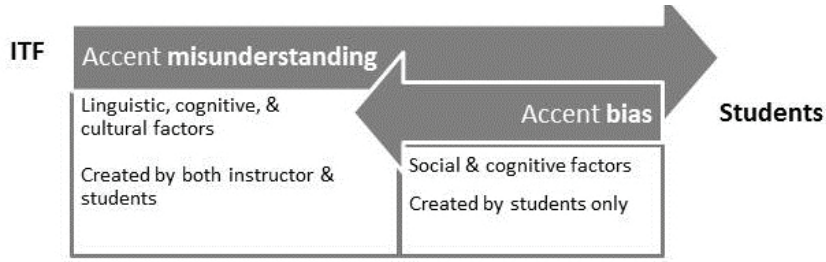

Figure 1. Model of the communication gap between undergraduates and international faculty.

Features of the Communication Gap

Accent Misunderstanding

Nonnative speakers of any language face considerable difficulties in attempting to approximate native speakers' phonological and prosodic patterns, and a speaker's chances of acquiring native phonological characteristics of the language decrease with age (Gass & Selinker, 2001). In other words, if a long-time speaker of an L2 uses a foreign accent, it is unlikely that he or she will ever lose it, and those who listen to him or her will be forced to interpret nonnative phonological/prosodic patterns. A speaker's nonnative accent may have tangible consequences, as foreign-accented speech is processed more slowly than

non-foreign-accented speech, even when it is highly intelligible (Munro & Derwing, 1995). Nonnative prosody may likewise hurt comprehensibility; whereas US-born TAs often use rising tones to establish common ground, ITAs may use level or falling tones, inadvertently conveying disinterest (Pickering, 2001). Translating these findings to the classroom, it is clear that even an unbiased undergraduate may quickly fall behind in a class taught by an ITF.

Used in the context of the communication gap, however, *accent* is not usually limited to phonology and prosody but is instead a cover term for ITFs' general manner of communication and teaching style (see Note 1). ITAs' lectures often feature single-clause sentences and misused discourse markers, which obscure information structure (Tyler, 1992), and long pauses, which cause students to lose attention (Rounds, 1987). Students often fault ITAs for inadequately addressing students' in-class questions, at times simply dismissing questions if the answer is unknown (Plakans, 1997; Trentin, 2008). In addition, some ITAs' native educational cultures demand reverence toward instructors, so when challenged by US undergraduates (who are acting in accordance with American norms), these ITAs may react in a manner perceived as autocratic (Tyler, 1995).

Accent Bias

The findings of Rubin (1992) should not be surprising given the powerful effects of language attitudes. In a now-classic study, John Baugh used three different guises—Standard American English (SAE), African American Vernacular English, and Chicano English—when calling landlords about advertised apartments. Baugh's non-SAE guises received fewer appointments than his SAE guise, especially in predominantly white locales (Purnell, Idsardi, & Baugh, 1999). Similarly, Lev-Ari and Keysar (2010) found that listeners assigned less credibility to nonnative speech than native, even when they were informed that the speakers were merely passing along information. Atagi's (2003) follow-up to Rubin (1992) found that undergraduates rated "Korean" and "Mexican" speakers (again, identities falsely assigned to standard-accented speech) as having stronger accents than "French Canadian" speakers. And just as complaints about ITFs' general communication skills project onto "accent," so too may undergraduates' "annoyed ethnocentrism" (Bailey, 1984, p. 15) toward ITFs enhance accent bias. One survey asked undergraduates who was responsible when communication broke down between ITAs and students. Ninety-two percent blamed TAs, 4% blamed cultural differences, and 4% did not respond—that is, no undergraduates blamed themselves (Damron, 2000). The bias that prevented students from understanding the "Asian" teacher in Rubin (1992) is thus well ingrained, leaving for us the empirical question of how this bias is perpetuated in the first place.

Previous Research on the Communication Gap

As stated above, research on the communication gap has historically focused on ITAs' (not ITFs') contributions to the gap, and programs described in such research have overwhelmingly involved just ITAs. Universities have

often coupled ITA training with standardized tests such as the Test of English as a Foreign Language (Xi, 2008), such that prospective ITAs who fail must complete additional course work before being reconsidered for a teaching position (Bauer & Tanner, 1994). Zhou (2009) identifies three historical phases in ITA training, as an emphasis on linguistic and communication skills was supplanted by one on pedagogy and US culture, which then led to the current emphasis on the shared responsibility for classroom communication. However, asking prospective ITAs to shoulder the increased workload of ITA training courses (which usually grant no academic credit; Bauer & Tanner, 1994) but asking nothing of undergraduates seems to undermine the notion of shared responsibility.

Involving undergraduates in ITA training programs, on the other hand, does reflect an ethic of shared responsibility, and this idea is in fact hardly new (Bailey, 1984; Rubin, 1992). University of Utah undergraduates, for example, can serve as pre-semester consultants, advising ITAs-in-training on teaching skills and cultural norms (Cotsonas, 2006). But while it is useful that undergraduates who participate in these types of programs "come away with a better understanding of the … additional challenges that ITAs face" (p. 111), we must remember that these programs exist primarily to train ITAs; that a few undergraduates can better understand them is a serendipitous side effect. The overall lack of training programs centering *solely* on undergraduates is at odds with my model of the gap, which holds both ITAs *and* undergraduates culpable.

One notable exception to this trend (Derwing, Rossiter, & Munro, 2002) involved two 8-week training programs for social work students; one program involved lessons on cross-cultural differences and another augmented these cultural lessons with instruction on a Vietnamese speaker's nonnative phonological characteristics. Both groups took pre- and posttests that included comprehension tasks and attitude questionnaires. A qualitative analysis of the training groups' responses indicated significantly increased empathy toward immigrants. Furthermore, those in the culture-and-accent group showed significantly improved confidence in their ability to interact with nonnative speakers and understand foreign accents, representing greater increases than that of the culture-only group. The authors note that the cultural-awareness program "unlocked [students'] existing ability to comprehend [foreign-]accented speech by reducing their fear" (p. 256). While this program was not engineered toward communication with ITFs, its applicability to the communication gap is immediate.

The Present Research

This two-part study consists of an experiment to assess the effectiveness of a pilot student-training program and a qualitative analysis of follow-up discussion sessions (cf. Damron, 2000) to explore the communication gap and training program from students' perspective. I deliberately chose this mixed-method format to gain both the replicability of a quantitative study and the ecological depth of a qualitative study. Moreover, this research was designed to address shortcomings in prior communication gap research. First, where-

as popular opinion assumes that ITFs alone are responsible for creating (and therefore for solving) the communication gap, this research operates on a more balanced model of the gap that acknowledges both misunderstanding *and* bias, shifting some of the communicative burden to students as a result (see Figure 1). Second, whereas the majority of research on the communication gap has focused on ITAs, this research focuses on ITFs in general. Third, this research seeks to uncover undergraduates' everyday experiences with the gap in hopes of learning more about accent bias. This research is thus both practical and theoretical, illuminating the processes underlying the gap as well as enriching efforts to close it.

Experimental Sessions

Methods

The experimental sessions assessed 80 undergraduates' comprehension of Professor Aditi Acharya (a pseudonym), a professor at a top-ranked Indian university whose accent exhibits several phonological features of Indian English (V. Chand, personal communication, September 1, 2011). Participants viewed two mathematics lessons taught by Professor Acharya, with comprehension measured by scores on assessments taken directly after each lesson. Between lessons, undergraduates viewed one of three modules, depending on experimental group: an accent-training module, a bias-simulation module, and a control module. Between-lesson improvement was calculated for each of the three groups to assess both the effectiveness of accent training and the inhibitory effects of bias.

Setting. This study was conducted at Southeast College (SC; a pseudonym), a 4-year university in the southeastern US that—unlike the large universities prevalent in ITA literature—enrolls just over 6,000 undergraduates. SC has a strong ethic of undergraduate instruction, and as a result SC offers few large lectures and many small class sections (roughly two-thirds of all sections enroll fewer than 30 students). SC undergraduates rarely encounter TAs in the classroom, as TAs teach less than 1% of all courses. This does not mean that the communication gap is nonexistent at SC, however, as I will discuss below. The SC Mathematics Department, for example, includes a healthy presence of international senior faculty; in 2008, the department's 20 tenured/tenure-track faculty included four from Russophone nations and five from China.

Stimulus Materials. Three experimental modules—linearly organized websites—corresponded to the three experimental groups: Control, Bias, and Training. (I therefore identify groups by their module name.) All three modules were similar in overall appearance and length. The Control module contained neutral information about math education (while avoiding the topics of ITFs or foreign accents), and the Bias module contained materials promoting the widespread sentiment that ITFs are liable for the communication gap.

The Training module, the focus of the experiment, adopted the design of Franz's (2009) "Language variation in the classroom" website, which was created to help teachers better comprehend students who speak nonstandard dialects of English. Franz's website first presents general linguistic instruction,

such as the systematic nature of nonstandard dialects, and then describes features of Southern English and African American English. Likewise, the Training module asked students to consider the struggles and sacrifices of ITFs before providing general accent instruction, and then it presented six salient nonstandard features of Professor Acharya's speech (with illustrative sound clips). In this way, the Training module folded Franz (2009) into Derwing et al.'s (2002) bimodal training model, with empathy and linguistic ideology—reflecting at a deeper level Lippi-Green's (2011, p. 334) call for "mak[ing] people aware of the process of language subordination"—standing in for cross-cultural awareness. The Training module therefore addressed both components of the two-part communication gap model (Figure 1), with linguistic-ideological instruction confronting accent bias, and specific accent instruction confronting accent misunderstanding.

Three lesson videos were created (with permission) based on an online mathematics course taught by Professor Acharya.[2] The audio tracks were extracted from the original online video lessons in order to both conceal the professor's identity and to avoid additional bias effects related to visible ethnicity (e.g., Rubin, 1992). The audio for each lesson was augmented with animations simulating an unseen professor writing on a chalkboard. The resulting lesson videos were between 5 and 7 minutes in length.

Procedures. Experimental sessions were conducted in a computer lab. After signing a consent form, participants were randomly assigned to experimental groups and given URLs that directed them to their assigned lessons and module. To engage participants in the study, participants were told that Professor Acharya was an applicant for the SC mathematics faculty and that they were assisting with the selection process, and then they were shown their first lesson. Participants completed a relevant assessment at the end of this lesson and then were directed to their respective modules. After the modules, participants completed another lesson and assessment, and then a questionnaire to measure other factors that could potentially affect assessment scores and attitudes toward ITFs (e.g., Plakans, 1997; Rubin & Smith, 1990). The questionnaire included the question, "Do you think you speak with an accent? If so, how would you describe it?"; this question served to assess Training students' internalization of the linguistic axiom, presented in the Training module, that every speaker has an accent (Lippi-Green, 2011).

Each assessment was scored independently and blindly by two graders, following rubrics for assigning scores between 0-16. (The graders discussed and reached consensus on all discrepancies.) Each student's *improvement score* (with a range of -16 to +16) was calculated by subtracting his or her first from second lesson score, reflecting the module's effect on the student's comprehension of Professor Acharya. In addition, responses to "Do you think you speak with an accent?" were blindly coded "No" or "Yes" for evidence that participants believed they either lacked or possessed an accent, respectively. Responses that indicated the student's belief that a speaker could ever lack an accent (e.g., "not really, sometimes I slip into a combination of Pittsburgh, Baltimore, and southern VA accents") were coded "No." Otherwise, responses were coded

"Yes"; for example, the quotation marks in "typical 'accentless' American" were interpreted as scare quotes, an acknowledgment that no speaker is in reality "accentless."

I hypothesized that the Training students would show greater improvement scores (and the Bias students lesser improvement scores) than Control students. I also hypothesized that a greater proportion of Training students would self-report an accent than Control or Bias students.

Results

Assessments. Contrary to my first hypothesis, the Control group improvement scores (M = 0.79, SD = 6.48) were overall slightly greater than improvement scores for both the Training (M = -0.79, SD = 6.24) and Bias groups (M = -1.09, SD = 6.99). A one-way ANOVA failed to demonstrate an effect of experimental group on improvement, $F(2, 77) = 0.63$, $p = .534$. This relationship is summarized in Figure 2.

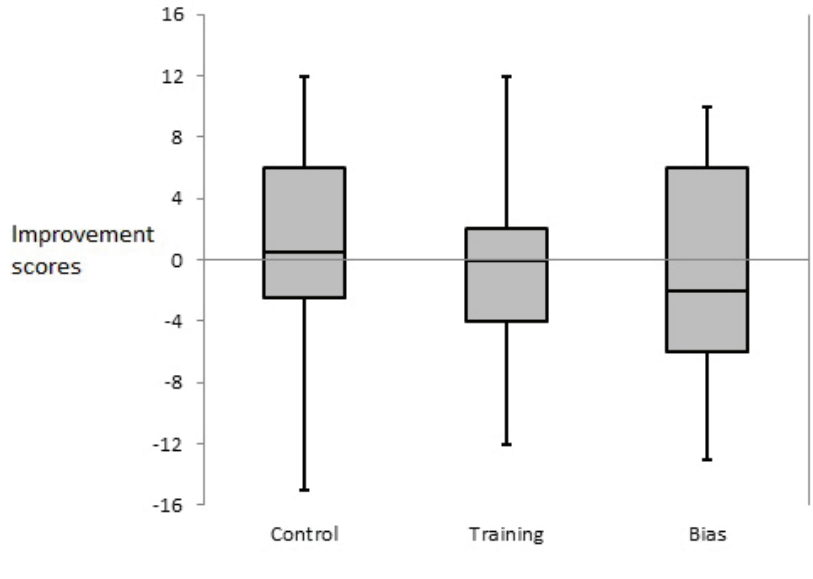

Figure 2. Boxplots of improvement scores for three experimental groups (range: -16 to +16).

The first assessment score for each participant (score1) was analyzed to compare lessons' baseline difficulty, since the first lesson was an untreated condition for all participants. There was a significant discrepancy in score1 means between the three lesson videos, $F(2, 77) = 25.65$, $p < .001$, as shown in Table 1. Not surprisingly, this disparity affected improvement scores, as lesson ordering had a significant effect on improvement, $F(5, 74) = 21.74$, $p < .001$.

Linguistic Profile Questionnaire. Binary-coded responses to "Do you think you speak with an accent?" for the Training group and the combined

Table 1
Mean Score1 by Lesson

Lesson	*Mean score1 (SD)*
A	12.71 (3.18)
B	14.85 (2.66)
C	8.38 (4.01)

Note. *(SD = standard deviation)*

Control and Bias groups are displayed in Figure 3. (Neither the Control nor the Bias group viewed the accent-training materials, so for the purposes of this question they constitute a single control group.) A 2-proportion *z*-test revealed that Training students self-reported as having an accent significantly more often than non-Training students ($z = -2.67$, $p < .005$). This result demonstrates that respondents were able to internalize an important piece of accent ideology presented in the Training module.

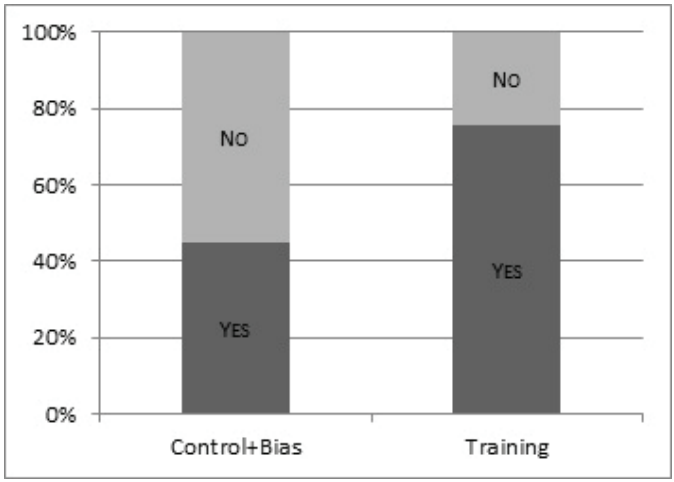

Figure 3. Binary-coded questionnaire responses to "Do you think you speak with an accent? If so, how would you describe it?" by experimental group.

Discussion Sessions

Fifty-seven participants from the experimental sessions took part in one of nine discussion sessions (cf. Damron, 2000) 2 weeks after the experiment. The sessions were stratified by experimental group, involved between 4 and 11 participants, and lasted between 60 and 75 minutes. The following questions formed the basis of the discussions:

1. For starters, how many classes, if any, have you taken with a foreign-born professor? Have any been Math classes? Did his or her accent ever hurt your understanding of the material?

2. Do you talk about professors' accents a lot with your friends?
3. Have you ever dropped a class or even changed your academic plans because the professor had a foreign accent? What about other students you know?
4. What do you think impedes communication between students and professors the most, regardless of accent?
5. What do you wish professors (or even [SC]) would do to deal with the issue of the communication gap between undergraduates and mathematics professors?
6. Do you feel that you gained anything from this process? Do you think that you are now at least somewhat better equipped to deal with issues of accent in your instructors?
7. Do you think that programs such as these would be effective in dealing with the communication gap?

These seven groups of questions were presented one group at a time. The second part of the sixth group was posed only to the Training participants, and the seventh question was presented to Control and Bias participants only after the purpose of the Training module was explained to them. Participants were encouraged to speak openly about the gap, but in spite of reassurances that reported opinions would be anonymous, some participants undoubtedly chose to conceal or moderate less socially acceptable opinions about the communication gap.

Results

I transcribed the discussion sessions and performed a broad thematic coding of students' responses. Codes were combined and analyzed to reveal the main themes emerging from the discussion sessions. These themes included students' overall perceptions of ITFs' accents, preferences for ITFs in narrow circumstances, negative cognitive effects, social responses to ITFs, possible solutions, and others. The themes most pertinent to TESOL are discussed below.

Perceptions of Accent. Students' experiences with ITFs were fundamentally shaped by their perceptions of professors' accents. Several students, for example, could notice phonological differences between ITFs' accents and SAE as manifested in noticeably strange pronunciations of isolated words. These "mispronunciations" were a source of both humor and frustration, such as the teachers who called the *origin* the *orange* or who "liked the word *focus* a lot; he'd be like, 'You need to focus, you must focus,' only with his accent, it came out *fuckus*." In some cases, the "mispronunciation" of a single word could hinder a student's comprehension of sections of a lecture: "If the professor pronounces something just in a really strange way, you'll eventually catch on, but for a while, you'll have no idea what they're talking about, even if you're familiar with the term pronounced in a different way." Although some participants observed systemic phonological patterns in their ITFs' accents, including the well-known [l-r] merger among Japanese L2-English speakers (Miyawaki et al., 1975), these observations were rare. In other words, while students were able to

notice isolated "mispronunciations," the overall phonological systems governing these "mispronunciations" remained opaque.

Negative Cognitive Effects. A number of participants reported that ITFs' accents negatively affected cognitive processes such as attention, making the ITF-led classroom a less hospitable environment for learning. A student said his professor's accent "definitely made it easier to sometimes just mentally check out … [you can] barely understand what he's saying." Another complained that her professor's accent made it "easier to not pay attention," since "obviously, she was smart, but it sucks that you don't want to listen to her." Another participant posited that the additional effort required to understand her ITF's accent dissuaded the participant from engaging herself in the class.

Similarly, several students reported experiencing cognitive processing delays that impeded comprehension of their professors' speech. This processing slowdown was presented both as a minor annoyance ("It may take you longer to place all the words") and as a major impediment ("The whole class, you're trying to decipher [the accent] … let alone trying to understand the actual material"). One student reflected, "It just takes a [second] to flip the words around or think about how he's getting to his point, but then … he's moved on, and it does take longer to process it." This observation hints at one way students may fall behind in these classes: The extra mental effort needed to process the ITF's current utterance comes at the expense of understanding the ITF's next utterance. While it would need to be empirically verified, such an effect would be consistent with the findings of Munro and Derwing (1995) about delays in processing foreign-accented speech.

The combination of these interpretive barriers caused some students to completely give up on trying to understand their professors' accents; three out of four students in one Bias discussion group reported that they had made less of an effort to understand Professor Acharya in the second lesson video. One said, "I tried a lot harder [in] the first lesson to try to figure out what she was saying; then the second lesson came around and I was like, 'Not happening.'" It is possible that these students' exposure to the Bias module influenced them to approach the second lesson with a perspective in which the gap was Professor Acharya's burden. That such an attitude could diminish attention is consistent with a communication gap model that includes bias effects.

Habituation to Foreign Accents. Several students recounted situations (both in and out of the classroom) in which exposure to a foreign accent gradually facilitated greater comprehension of that accent. For example, one student said that his professors' accents "take a while to get used to, but it's usually manageable." Another participant remarked that her knowledge of features such as the Japanese [l-r] merger "definitely helps ease the flow of conversation" when communicating with Japanese-born friends. Three students who were in classes with ITFs remarked that they had already grown accustomed to their professors' accents by that point in the semester (after 8 weeks of classes). But this experience was not universal; one participant dropped a class partially because of her ITF's accent and was later told by a friend, "God, you were so smart to drop that class, because I didn't understand a thing he said the whole time."

In addition to accent-specific habituation, several students reported that prior exposure to nonstandard speech had granted them a greater capacity to understand nonstandard accents in general, such as one student with two foreign-born parents: "I don't even notice [some speakers] have one, because I guess I've gotten used to deciphering it."

These observations about habituation to foreign accents reinforce the utility of the type of phonological exposure presented in the Training module. If greater exposure to an accent entails greater comprehension, then it should be possible to expose students to an accent to prepare them for listening to and understanding it. Furthermore, familiarity with specific accent features should enhance gains in comprehension.

Talking About ITFs and Accents. Students had varied responses to the second discussion question ("Do you talk about professors' accents a lot with your friends?"). Although a few said otherwise, most students indicated that professors' accents were indeed a frequent conversation topic, especially among classmates and friends in residential communities. For example, one professor's foreign accent was a "hot topic of discussion" among members of one participant's freshman residence hall who "all bombed a test" because they misunderstood the professor's oral instructions. Students reported discussing professors' accents out of frustration, such as the student who dealt with a particularly negative experience with an ITF by "[ranting] to a lot of people, [which] made me feel a little bit better." Another participant spoke to the issue of responsibility for the communication gap: "Most of the time I hear when people are talking about professors' accents, it's in a way that sort of blames the professor's accent for their failures." Mathematics professors were the most frequent topic of discussion among the groups. According to some students, friends studying mathematics tended to discuss accents more than other majors: "That's normally the only thing they really have to say about it: 'I don't like my teacher, I can't understand anything he says.'" Similarly, a participant asserted that "everywhere you go, everyone's always talking about how, in the Math Department, there's so many foreign teachers, it's so hard to understand them."

Day-to-day conversations about ITFs' accents extended to the course-registration process, as participants reported avoiding and/or cautioning peers about ITFs. These conversations were especially common around mathematics classes; one student regularly consulted fellow mathematics majors "if [potential professors] have a foreign-sounding name." Students warned one another about an ITF's accent even if they held the ITF or class in high regard:

> It's a good class, he teaches it well, but you're going to have to make sure you're paying attention to what's up on the PowerPoint so that you follow along with what he's saying … know [that his accent is] coming and be ready for it.

Another participant recounted browsing professor ratings on RateMyProfessors.com (a website that features anonymous reviews of professors) and "look[ing] for specifically accent-related things, especially for math classes."

His skepticism about ITFs was rewarded: "I probably will continue to do that, because this is only my first math class here, and I can understand everything fine, even with a slight accent, and I want to make sure that continues." His belief in the need to avoid certain ITFs was thus reinforced.

Effects on Academic Plans. Several students reported dropping at least one class with an ITF, often claiming that accents had played a role in these decisions. One student, for example, complained about "incredibly boring" course material, and one freshman had already dropped three ITF-taught classes in her 1st semester. Interestingly (and in contrast with Damron, 2000), participants seldom named accents as the *primary* reason for dropping an ITF-taught class. One such student, however, later revisited her denial that accent was a factor in her decision: "The accent, I guess, helped the fact that I wanted to switch, because it made it a little bit harder for me, especially when I didn't understand stuff."

Accents were also implicated in altering students' academic plans on a larger scale. One participant was interested in international relations (IR), an interdisciplinary major at SC that primarily combines government and economics classes, and after taking an introductory government course with an ITF, "I kept telling myself, 'Oh, I hate government, I like [economics] more,' which is really rare to hear from IR students … I took a different class with an American-born professor and I liked [government] a lot better." In other words, the ITF's accent was sufficient to persuade her that she did not enjoy a subject in which she was clearly interested. Another participant described her "dilemma over the summer over whether to drop physics or not. … I was just in so much pain every class, and I would just sit down with my homework and not understand anything." She ended up deciding to drop the class, despite being a premedical student, and this decision "totally ruined my entire plan. … Now I need to take a year or two off to get physics before I can study for grad school, so that kind of sucks."

Ownership of the Communication Gap and Possible Solutions. One consideration that bore strongly on proposed solutions for the communication gap was the question of who "owns" the gap; whichever group(s) (ITFs or students) owns the problem bears the responsibility for solving it. The claim that ITFs are commonly assumed to own the problem—a fundamental claim for this research—was largely borne out in the discussion sessions. Many students doubted their peers' willingness to take responsibility for the gap, instead abdicating any communicative burden in the classroom (cf. Lippi-Green, 2011). One student described such an attitude as, "I want [SC] to change for me, I don't want to have to change for [SC]." As a participant described,

> It kind of depends on the student's attitude, because I have a feeling at least a lot of the guys I hang out with probably wouldn't want to learn, or go to a class, for them to learn how to understand accents. They would just be like, "Mmmm, no, they can learn English."

Another participant blamed students for complacency: "It's so much easier to

be like, 'Oh, I failed this class because my professor has an accent and it sucks,' as opposed to, 'It's my fault for not understanding his accent and not doing anything about it.'" In fact, when presented with the fifth discussion question, asking about possible solutions to the communication gap, no Control or Bias students suggested a solution that would require students to take ownership.

A general suggestion arose in several sessions that the SC administration or academic departments should solicit students' advice in evaluating prospective faculty. Students hoped that this practice would eliminate any candidates with unsatisfactory English skills, a solution that, despite creating a role for undergraduates, maintains ITFs' ownership of the gap. Several students suggested that prospective hires could conduct live mock lectures so students could assess their teaching abilities. Students defended the need for this sort of process, saying, "If they have a communication barrier, then the class is just an awful experience." (Note the telling wording here; the "communication barrier" is considered to be something that ITFs can possess.) This is not a novel idea, as a matter of fact. In addition to personal interviews, all candidates for faculty positions at SC must "teach a class or present a seminar in order to ensure that they are sufficiently proficient in English to teach at [SC]," a process that may not necessarily involve students' input (dean of Arts and Sciences, personal communication, November 19, 2009). In the Mathematics Department, for example, prospective hires must participate in one-on-one interviews with current faculty and give a talk. However:

> In the past, we also required candidates for faculty positions to give a talk to our undergraduate math club, but that has not worked very well because our undergraduates don't have time to attend so many talks (in some years, we have had 11-12 job candidates visit campus in February and March). (Mathematics chair, personal communication, November 20, 2009)

In other words, a program that enlisted students' help in the hiring process was discontinued because students themselves could not commit to it, as if students failed to accept even this level of responsibility for the communication gap.

On the other hand, several Training students mentioned the Training module's usefulness: "Just explaining some things about the accent really helped." Another student found the information on accent features highly informative: "I was sitting there like, 'Why don't people do this all the time?'" Some Training students planned to use interpretive skills that they learned in the Training module in their real-life classes:

> [It's helpful to] have a set of things that you can keep in mind when you're listening to someone, that if I hear this, it's probably this going on. Even if you don't have a specific professor now, if I have one later, I'll probably be listening for specific things instead of just sitting forward in my seat.

In fact, one participant had already used what he had learned in the experimental session in an actual classroom situation: "[I] really found it useful thinking

about specific things a professor's accent does to what they're saying, and actually that did help me understand some of my professors." This observation is encouraging given that just 8 instructional days separated this student's experimental and discussion sessions.

Several Training students likewise indicated that they had already internalized the Training module's accent ideology. One participant found a statement about many ITFs' high regard in their fields "eye-opening." Another echoed the Training module's sentiment about the burden of communication often laid solely on ITFs:

> They're very intelligent people, obviously, and … teaching in a second language in a foreign country [is] a lot to deal with already. It's a cultural difference as well as a linguistic difference, so you don't want to alienate them by requiring that, as well.

These examples, echoing the positive outcomes of Derwing et al. (2002), demonstrate that educators have the power, given careful presentation, to positively influence undergraduates' attitudes and reverse socially acceptable biases against ITFs.

Discussion and Recommendations

This research has addressed a perceived deficiency in previous communication gap research and, in so doing, has argued for a fundamental reconceptualization of the gap. If researchers and TESOL professionals are to have any success in closing the communication gap, we must recognize that both the sources and impacts of the gap are broader than popularly assumed. The first step is to retire the term "foreign TA problem" in favor of "the communication gap between undergraduates and international faculty," which not only unloads the troublesome label "foreign" but also acknowledges co-ownership on the part of multiple parties.

Notably, smaller schools such as SC, where TAs carry a smaller proportion of the teaching load, are not immune to the communication gap. Whereas previous research at large universities reported ITA-centered undergraduate complaints, those same complaints were repeated at SC but centered on SC's international professors, for whom teaching is not merely a degree requirement or a means for temporary employment but a way of life. We therefore cannot afford to address only TAs in our future efforts, as so much past research has. To this point, English language-proficiency coordinators may understandably object (as several have when I have presented this research at conferences) that although they would like to extend more communication training to faculty, it is much easier to require ITAs to participate in training.[3] This, too, strikes me as an argument for focusing more training efforts on undergraduates.

Next, it is crucial for researchers to remain cognizant of the role that undergraduates play in perpetuating and exacerbating the gap. In particular, discussion results suggest a model to account for the *socialization of accent bias*. Undergraduates first hear about problems with ITFs' accents from their peers

and internalize an association between a professor's accent and poor teaching quality. They then bring their low expectations about ITFs with them to the first day of class and, per Rubin (1992), these expectations create a mental barrier that inhibits students' ability to understand their ITFs. Deteriorated understanding naturally impairs academic performance, as with the group of SC freshmen who (as one discussion participant reported) "all bombed a test" because of accent; the frustration that arises from this lower performance not only confirms the foreign accent–poor teaching quality association, but it also prompts undergraduates (such as one SC senior) to "[rant] to a lot of people." When undergraduates then discover that their peers have experienced similar difficulties with ITFs, their bias is not only confirmed but validated as a *socially acceptable point of view*. Anti-ITF bias thus spreads, conversation by conversation, until the concept of ITFs' inherent inferiority to non-ITFs is a social axiom of undergraduate life. This model is schematized in Figure 4.

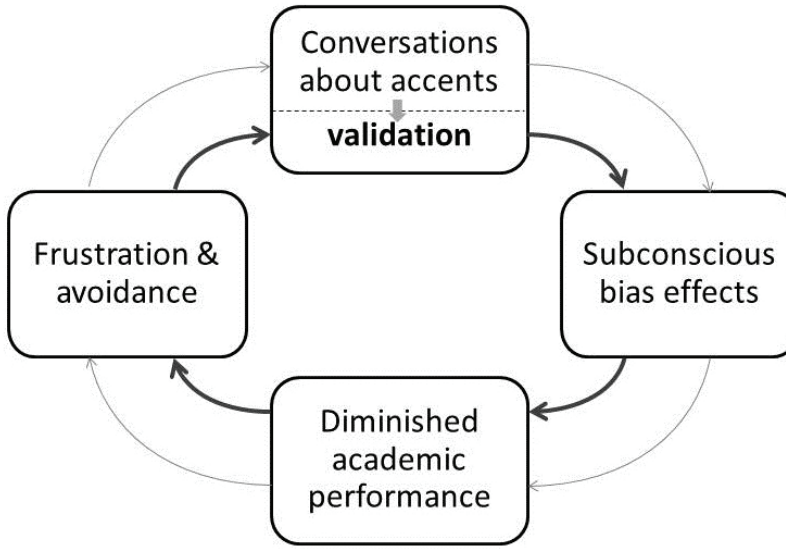

Figure 4. A model of the socialization of accent bias among undergraduates.

The final step of this model, social validation of bias, receives support from the fact that the discussion sessions themselves *created* bias in a few participants. One student said that his session, featuring numerous negative stories from participants, "has made me even more wary about signing up for classes where there might be an accent problem." When presented with the sixth discussion question ("Do you feel that you gained anything from this process?"), a student stated, "I decided that I'm never taking another math or finance-related class … I guess that's a good thing to know about yourself." The discussion sessions also validated some participants' prior biases, such as the student for whom the Bias module and discussion session "made me feel better about how I think about it, like, 'Oh, I'm not alone in thinking some of the things I think.'"

I would of course have preferred that participants gain a more accepting view of ITFs and their accents through the discussions, but the fact that several participants gained bias demonstrates the power of processes that reproduce the communication gap.[4]

It is only through this more complete understanding of the gap—which discussion participants overwhelmingly agreed remained a relevant issue—that educators and TESOL professionals can begin to address the gap with greater success. Here, TESOL professionals can lend their expertise in a variety of ways, for example by developing programs large and small to encourage undergraduates to open their ears to ITFs (in other words, implementing the Training module). These programs could take the form of a new-student orientation session, an optional online resource that undergraduates could access at any time (both of which were suggested by discussion participants), or even an academic course. These programs must take care to neither serve as petri dishes for the spread of bias (as some of the discussion sessions inadvertently did) nor demonize undergraduates for their role in the communication gap. Instead, these programs should adopt an approach that asks undergraduates to consider the unique challenges that ITFs must face and how students might meet them halfway (Rubin, 2002). Although the Training module fell short of affecting mathematics scores, it is encouraging that Training participants discarded folk-linguistic myths and began to accept a more balanced view of the gap, as these myths are essential to the process of bias socialization. This article should prompt a proliferation in undergraduate-training courses (and reported research thereof), such that TESOL professionals can enrich their further efforts.

This research has, in fact, already led to a proposed undergraduate course that I am helping to develop at the University of California, Davis. This course, which was to begin in Spring 2013, will situate undergraduates' co-ownership of the gap within the larger contexts of intercultural communication and World Englishes. Using Jenkins (2009) as its chief text, the course will introduce students to highly current research on topics such as the global spread of English (excerpts from Crystal, 2003), linguistic landscapes (Blommaert, 2012; Bolton, 2012), intelligibility and comprehensibility (Rajadurai, 2007), and the modern use of English in different parts of the world (e.g., in Macedonia: Dimova, 2012). While the course thus does not focus on the communication gap alone, it addresses the gap in a manner akin to the Training module described here; students will develop not only their listening skills (via learning how to transcribe diverse Englishes in the International Phonetic Alphabet), but also a critical perspective toward current discourses on language variation. To that end, students' final projects will consist of investigating either the phonetic properties of a non-Inner-Circle variety of English or the attitudes that their peers hold about such varieties. As a result, the course also resembles the Training module in that it addresses the two-part communication gap model (Figure 1), confronting both accent misunderstanding and accent bias. Moreover, the course will attempt to counteract the early effects of accent-bias socialization by targeting 1st-year students.

These sorts of courses will take a fair investment of time and professional

resources to establish, and TESOL professionals may wonder what can be done in the meantime (or instead), given that their only audience may be ITFs. My recommendation here is simple: Encourage ITFs to encourage communication about their English use from their students. When ITFs express openness about their style of speaking, ITFs not only invite undergraduates to appreciate their own communicative burden, but ITFs also concede their own contribution to the communication gap. This simple strategy was praised by a discussion participant whose ITF substantially opened the channels of student-professor communication by saying on the 1st day of class, "Remember: Slow me down if you don't understand. …You shouldn't need to speak Chinese to take my class." Similar attitudes, emphasizing collaboration on both linguistic and content issues, can go a long way toward mitigating the gap. Of course, greater metacommunication in the classroom is a useful goal for *all* faculty, so ITFs need not be singled out when presenting this suggestion.

Conclusion

Thirty years after the "foreign TA problem" was first identified, the imperative to close the communication gap is stronger than ever. No matter the future direction, researchers in linguistics and TESOL cannot afford to prolong the failed paradigm of placing responsibility for the communication gap on ITFs alone. Only through effort from all parties involved will we have a hope of closing the communication gap between undergraduates and international faculty.

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Notes

[1]I am using *accent* here not in the strict sense of phonological/prosodic speech properties, but as a proxy for instructor-generated communicative difficulties in general—the colloquial sense in which it is used in public discussions about ITAs (e.g., Gravois, 2005).

[2]My experience as a mathematics major suggested that, with regard to the communication gap, mathematics was a particular source of concern for SC undergraduates; discussion session results later justified this intuition. While the subject of mathematics may intensify the communication gap, however, my discussion and recommendations are meant to be applicable to any subject.

[3]For example, the University of California, Irvine, offered a 3-day workshop on speaking and cultural expectations to international professors in Fall 2010. The workshop was cancelled because of a lack of participation (M. E. Wynn, personal communication, April 11, 2011).

[4]This consideration of bias validation also sets this communication gap model apart from Lippi-Green's (2011, p. 95) model, which explains the negative effects of anti-ITF bias but fails to account for how this bias is socialized and perpetuated.

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