

mexicaine ont pu être mis en évidence: le type de l'hédonisme, le type du réfractaire et le type de l'incertain, ces attitudes étant en grande partie influencées par les modes de pensée traditionnels rencontrés en Amérique Latine.

Les différents types de perception influencent le transfert technologique de différentes manières. Tandis que les experts qui classent le Mexicain dans la catégorie du "Refractaire" sont aussi ceux qui apportent de nombreux changements en rapport avec des technologies importées, ceux qui portent un jugement positif sur le mexicain ou le voit dans une situation de transition sont ceux qui innovent le plus sur le plan technique ou au niveau de la formation professionnelle. (author-supplied abstract)

En el presente proyecto de investigación, llevado a cabo en México, fueron confrontadas las opiniones de cien ejecutivos pertenecientes a compañías transnacionales, sobre cuestiones referidas a la influencia de la vida cotidiana mexicana y la cultura nacional en la transferencia de tecnología. En el análisis de los datos, usando p.ej. el concepto teórico de la multi-modal-personalidad, se dedujeron tres tipos de apreciaciones de la cultura mexicana: el hedonista, el de rechazo y el inseguro. Las actitudes están, en todo caso, muy influidas por la visión tradicional del latinoamericano. Las diferentes apreciaciones determinan la transferencia de tecnología en cierta forma. Unos ejecutivos que ven al mexicano como un "rechazador" adoptan pocos cambios en relación con la tecnología importada, otros que ven la personalidad del mexicano como positiva o en proceso de transición siguen un mayor plan de renovaciones técnicas, así como una mejor preparación profesional de los empleados. (author-supplied abstract)

EFFECTS OF ACCENT, ETHNICITY, AND LECTURE TOPIC ON UNDERGRADUATES' PERCEPTIONS OF NONNATIVE ENGLISH-SPEAKING TEACHING ASSISTANTS

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ABSTRACT. *The most common response to perceived lack of English language proficiency among nonnative English-speaking teaching assistants (NNSTAs), has been to set up workshops to remediate their linguistic and instructional skills. However, many factors other than low levels of communication competence may contribute to negative perceptions of NNSTAs. Some of these factors may be more germane to North American undergraduates' stereotypical attitudes than to NNSTAs' classroom talk. A matched guise study of undergraduates' comprehension and attitudes toward NNSTAs revealed that 40% of undergraduates avoid NNSTA instructed classes. However, measured outcomes manifested few direct effects of actual accentness in NNSTA speech. Instead, factors like instructor ethnicity and lecture topic, extraneous to actual NNSTA speaking proficiency, tended to be more potent determinants of undergraduate attitudes and comprehension. On the other hand, when students perceived — whether rightly or wrongly — high levels of foreign accentness, they judged speakers to be poor teachers. Results warrant collective "university community" training programs that focus on undergraduate attitudes and listening skills as well as on NNSTA competence.*

Before we can begin to resolve interpersonal conflicts, counsellors and therapists remind us, we must first learn to ask, "Who owns the problem?" The past several years have witnessed a dramatic rise in the role of nonnative English speaking teaching assistants (NNSTAs) in undergraduate education in the United States, and this trend has engendered considerable conflict on North American campuses. The most frequent response to the NNSTA situation has been to set up training workshops to remediate the language and instructional communication skills of

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¹This term is deliberately chosen as more informative than the prevalent acronym "ITA" for "international teaching assistant."

NNSTAs (see Byrd, Constantinides, & Pennington, 1989; Franck & De-sousa, 1982). This approach presumes that NNSTAs "own" the problem and that they are the ones who must resolve it — or at least mitigate it.

No doubt NNSTA training is a constructive effort, and improved training techniques will result in improved classroom instruction. It may be, however, that NNSTAs are not the only ones who own this problem. If North American undergraduates also own their own piece of this problem, then even the most effective training aimed at NNSTAs will fail to resolve campus discord. Listeners' language attitudes act as a sort of filter that mediates perceptions of speakers and their messages (Edwards, 1982). The purpose of this study is to explore undergraduate students' language attitudes as they bear on perceptions of NNSTA teaching competence and related variables. To the degree that undergraduates are shown to respond to NNSTAs stereotypically, independent of NNSTAs' actual language proficiency, to that degree the NNSTA "problem" is owned by undergraduates, and potential solutions must address that population as well as the population of NNSTAs.

The extent to which NNSTAs impact upon North American undergraduate education is difficult to assess (Constantinides, 1987). While the absolute number of international students in the United States has held fairly steady in recent years, there has been an appreciable shift toward Asian nations, with a particularly sharp increase in students from the People's Republic of China (Zikopoulos, 1988). Thus one dimension of undergraduates' encounters with NNSTAs is bound up not just with their instructors' foreign-ness, but with their Asian-ness in particular. Any attempt to assess undergraduates' perceptions of NNSTAs, therefore, must take into account ethnic, as well as linguistic, stereotypes.

Another dimension of undergraduates' experience with NNSTAs pertains to the kinds of courses in which North Americans are most likely to encounter these instructors. Frequently, NNSTAs are given charge of courses which are the most crucial to undergraduates' initiation into college studies, which are most fundamental to undergraduates' success. Ironically, these crucial courses are at the same time recognized as low status assignments (Constantinides, 1987). These are mainly introductory level multisectioned or laboratory classes. Especially in mathematics and in the natural sciences, these classes are likely to engender strong anxiety from many undergraduates, regardless of who is teaching them. In addition, some of these courses are acknowledged to rely on outmoded curricula and instructional methods and are currently candidates for reform and renovation (McDonald, 1987). Bailey (1984) found that undergraduates taking courses outside their majors were more negative in rating NNSTAs' communication competence than were students who shared the NNSTAs' majors. Course content, therefore, is another factor that must be considered in explanations of undergraduates' responses to NNSTAs.

Despite these other factors which contribute to undergraduates' discomforts with their NNSTAs, it is NNSTAs' English language proficiency that has been the specific target of campus discord and public alarm (Bailey, 1984). This alarm about NNSTAs' language skills is so strident that it echoes in the popular press (e.g., Hess, 1987) and even in the halls of state legislatures ("Instructors' broken English prompts Illinois law," 1987). Universities have responded by rapidly setting in place programs for assessing and remediating NNSTAs' English language skills (Abraham & Plaskans, 1988; Heller, 1985; Turitz, 1984). And yet there is little reliable information by which to chart either the English language proficiency or the quality of instruction offered by NNSTAs. Data about undergraduates' instructor and course evaluations likewise cannot isolate the source of students' dissatisfaction for they may be attributable to students' negative linguistic and cultural stereotypes rather than to NNSTAs' actual linguistic or instructional proficiency. For example Orth (cited in Bailey, 1984) found that students were biased by their anticipated grades in judging the language proficiency of their NNSTAs.

Language variation is a powerful prompt for cuing listeners' cultural stereotypes about speakers. Twenty-five years of research in this area yield a considerable literature documenting the potency of language variables in mediating person perception (Edwards, 1982). At the same time, language stereotypes function in a multivariate environment, and they interact with other kinds of information listeners obtain about speakers (Street & Hopper, 1982). Teachers, for example, evaluate nonstandard-speaking students more favorably when they believe those students have upper middle class backgrounds (Piche, Michlin, Rubin, & Sullivan, 1977). Most of this research on language-mediated stereotypes examines attitudes of higher status figures like teachers or personnel directors toward lower status figures like students and job applicants.

Only a few previous studies investigate students' linguistic stereotypes of their teachers. Orth (1982) found that undergraduate students' ratings of their NNSTAs' speaking competence were unrelated to presumably more objective experts' ratings. Instead, undergraduates' ratings were more closely related to their preexisting social stereotypes. Dalle and Ingles (1989) similarly report that undergraduate students' evaluations of their NNSTAs may be unrelated to those instructors' actual language proficiency scores. In these studies, undergraduates were rating their actual classroom instructors. This research technique may carry ecological validity, but it is also susceptible to confounding due to extraneous factors like instructors' physical attractiveness. Brown (1988) conducted a study in which undergraduates listened to a single stimulus speech sample to which varying characteristics of national origin, teaching status, and English language proficiency were attributed. Although actual linguistic content was held constant, students' beliefs about the instructor's back-

and strongly affected their perceptions of the instructors' language and teaching proficiency. None of these studies pertaining to students' language-mediated attitudes toward their instructors, however, used the more widely accepted matched guise technique.

Research on language attitudes has utilized a variety of dependent variables to gauge the dimensions of perception whereby listeners judge speakers. For the most part, these evaluative dimensions reflect judgments of the speaker's competence, social attractiveness, integrity, and solidarity with the listener (Edwards, 1982). One variable, homophily, bears on perceptions of solidarity and is especially germane to studies of cross-cultural communication (Dodd, 1986), yet it has not appeared in previous studies of language and attitude.

Homophily is a construct that derives from research on the diffusion of innovations both within and between cultures (Rogers & Shoemaker, 1971). To function as effective change agents for introducing innovations like new agricultural methods or new political beliefs, communicators must be perceived by their target listeners as relatively similar, homophilous, to those listeners. Elliot (1979) showed that homophily is likewise an important variable in teacher-student communication; there is a level of "optimal homophily" in students' perceptions of teachers which facilitates learning. Studies of perceived homophily make use of the measurement instrument devised and validated by McCroskey and his colleagues (1975). This instrument yields four theoretically independent subscales: value homophily, background homophily, attitude homophily, and appearance homophily.

The corpus of research on language attitudes also yields a methodology for eliciting ratings of speakers, the matched guise technique. The speaker's language variety (i.e., dialect, accent, or choice of native language, or some other code) is but one factor that affects listeners' evaluations. Listeners are also affected by speakers' individual vocal qualities like pitch, resonance, and volume (Street & Hopper, 1982). A potential confounding occurs if listener judgments reflect idiosyncratic differences between speakers as well as socially conditioned differences between language varieties. The matched guise technique introduced by Lambert and his associates (1960) overcomes this potential confounding by eliciting speech samples from speakers who are able to switch between the language varieties to be compared.

The present study partakes in the tradition of language and attitude research and seeks to make a pragmatic contribution to resolving the current conflict regarding the effectiveness of NNSTAs. Using the matched guise technique, highly accented and moderately Chinese-accented versions of classroom lectures were recorded. To explore the possible interactive effects of academic subject matter, one lecture pertained to a topic in the humanities, and one to a topic in the natural sciences. To try

to distinguish the effects of language-mediated stereotypes from those of other cultural stereotypes, speakers were identified as either Caucasian or Oriental. Measured outcomes included students' comprehension of the lectures as well as perceptions of instructor competence and of homophily.

METHOD

Participants

Research participants were 92 undergraduates enrolled in an introductory class in speech communication at The University of Georgia. Any international students were deliberately excluded from the sample. Seventy-five percent of the subjects were between 19 and 21 years old, and they ranged from freshmen to graduating seniors. Fifty-five percent were female. Forty-seven percent reported on a background questionnaire that they had never travelled outside of the United States. Subjects volunteered to participate in this study in lieu of a required out-of-class assignment.

Procedures

The experiment was administered to groups of between 2 and 10 subjects at a communications laboratory, which enabled each individual to listen to the tape-recorded stimuli through headphones. Each subject listened to a single speech sample of about 4 minutes in length that was presented as a classroom lecture delivered by a university "instructor." At the same time, a photograph of the instructor was projected at the front of the room. After the lecture, the photograph continued to be projected as subjects completed three instruments in order: (1) a cloze test of listening comprehension; (2) a set of semantic differential items that included randomly interspersed scales for measuring four dimensions of homophily (McCroskey, Richmond, & Daly, 1975), and several manipulation-check and general-impression scales; and (3) a 16-item "background survey" inquiring about (a) demographics, (b) experiences with nonnative instructors, and (c) nonschool experiences with nonnative speakers of English. The entire procedure took no more than 50 minutes for any subject.

Stimulus Materials

Independent variables in this study were (1) instructor ethnicity (Caucasian or Oriental), (2) level of accentedness (moderate or high), and (3) lecture topic (humanities or science). Instructor ethnicity was operationalized by projecting a photograph of either a Caucasian or an Oriental

oman. In order to control for potentially confounding effects of differing physical attractiveness, both models were similarly dressed, of similar height, and of similar hair color and style. Both were photographed behind a podium in a typical college classroom.

Degree of accentedness was operationalized by means of speech samples produced through a matched guise technique (Lambert, Hodgson, Gardner, & Fillenbaum, 1960). That is, to eliminate the potentially confounding effects of idiosyncratic differences between speakers in vocal quality, speakers produced two versions of each lecture, a moderately accented and a highly accented version. In order to be able to generalize beyond a single speaker, two native Chinese speaking women, both graduate students in communication/language and both highly fluent in English, each produced matched guise speech samples. (In subsequent analyses, data for the two speakers are pooled, since any differences between individual speakers are of no interest in this research.) In the first set, they read the speech script in their normal conversational English. The resulting speech samples were designated as moderately accented. For the second set of speech samples, the speakers were asked to caricature a style of English that they felt Americans would typically associate with Chinese speakers. Tape recordings were made at a radio station audio studio.

The two levels of lecture topic were operationalized by selecting one article on a science topic and one on a humanities topic from the *New York Times*. The science topic pertained to the growing scarcity of helium supplies. The humanities topic pertained to the Indian classic tale, the Mahabharata. It was assayed that subjects would be mainly unfamiliar with both topics. Both articles were edited to approximately 450 words. The recorded versions of the two topics (a total of 8 recordings across the two speakers, two levels of accentedness, and two topics) were all between 3.5 and 4 minutes long.

Measurement Instruments

To measure listening comprehension, a cloze test of the speech texts was constructed. Subjects were presented with a written transcript of the lectures with approximately every 7th word deleted, save in the first sentences, which were kept intact. Equal numbers of deletions were made in both lectures (science and humanities topics).

To measure homophily, 16 semantic differential scales taken from McCroskey, et al. (1975) were arranged in random order and with positive and negative polarities randomly alternated. These items comprise four distinct subscales: (1) attitude homophily, (2) background homophily, (3) value homophily, and (4) appearance homophily.

In addition to dimensions of homophily, semantic differential scales

were also devised to check experimental manipulations and to measure general impressions. These scales measured the instructors' perceived physical attractiveness, ethnicity, accent, and overall teaching ability.

Finally, a questionnaire surveyed subjects' experiences with nonnative instructors and their attitudes toward nonnative speakers in general. Students indicated the number of courses in which (1) their instructors were nonnative speakers, (2) they chose to avoid or drop a class because the instructor was a nonnative speaker, (3) their final grade was hurt because their instructor was a nonnative speaker, and (4) their final grade was hurt because of any instructors' poor communication skills.

Analysis

Cloze test scores along with the four homophily subscales, and the four manipulation-check/general-impression scales were all subjected to separate $2 \times 2 \times 2$ ANOVAs. In the ANOVAs, subjects were nested in level of accent (moderate versus high) \times instructor ethnicity (Oriental versus Caucasian) \times lecture topic (science versus humanities) combinations. For statistically significant interactions, Dunn's Multiple Comparisons (Bonferroni *ts*) were used as post hoc tests to probe all simple effects. Finally, Pearson correlations were calculated to show relations among the dependent measures listed above and survey items regarding students' experience with NNSTAs.

RESULTS

Marker and General Impression Variables

ANOVAs of the four marker and general impression variables are summarized in Table 1. For judgments of physical attractiveness, no significant differences emerged between levels of ethnicity or between levels of accent. The single significant difference to emerge for this variable showed that speakers were perceived as more attractive when speaking about the science topic relative to the humanities topic ($M_{sci} = 2.7$, $M_{hum} = 1.98$).

For ratings of instructor ethnicity, the Oriental model was indeed perceived as more Asian/Oriental than the European/Caucasian model ($M_{cau} = 4.54$, $M_{ori} = 6.85$). Instructors were also perceived as more Oriental/Asian when speaking about the humanities topic ($M_{hum} = 6.51$, $M_{sci} = 5.34$) and when speaking in the high accent style ($M_{hi} = 6.38$, $M_{mod} = 5.36$).

Table 1 also reveals significant two-way interactions for perceived ethnicity. Post hoc analysis of the Topic \times Accent interaction indicated that in the highly accented guise, humanities lecturers were seen as more Oriental/Asian than science lecturers. In addition, when instructors were

TABLE 1
Summary of ANOVAs of Marker and General-Impression Scales

	T	A	E	T x A	T x E	A x E	T x A x E	Error
df	1	1	1	1	1	1	1	82
Physical Attractiveness								
SS	10.64	2.10	1.32	0.17	0.07	0.01	0.64	189
F	4.63*	0.91	0.59	0.07	0.03	0.00	0.28	—
Perceived Ethnicity								
SS	13.14	18.52	97.58	11.55	13.50	7.80	9.86	132
F	8.20*	11.55*	60.86*	7.20*	8.42*	4.86*	6.15*	—
Accentedness								
SS	1.40	1.08	1.50	0.11	3.53	0.12	0.00	95
F	1.24	0.96	1.33	0.10	3.13	0.11	0.00	—
Teacher Quality								
SS	0.64	0.50	0.44	0.30	0.23	1.49	1.18	189
F	0.28	0.22	0.20	0.01	0.10	0.65	0.51	—

T = Topic; A = Accent; E = Ethnicity.

* $p < .05$

lecturing about the science topic, the highly accented guise was appropriately perceived as more markedly Oriental/Asian. In the humanities topic, however, level of accentedness did not affect students' perceptions of their instructors' ethnicity ($M_{sci/hi} = 6.33$, $M_{sci/mod} = 4.30$, $M_{hum/hi} = 6.42$, $M_{hum/mod} = 6.63$).

Post hoc analysis of the Topic \times Ethnicity interaction for perceived ethnicity showed that the Caucasian instructor speaking about the science topic was seen to be more Caucasian/European and less Oriental/Asian than was the Oriental instructor speaking about that same science topic. On the other hand, the Caucasian and the Oriental instructors were not distinguished in this way when the topic pertained to humanities ($M_{sci/ori} = 6.83$, $M_{sci/cau} = 3.78$, $M_{hum/ori} = 6.86$, $M_{hum/cau} = 5.79$).

Perceptions of speaker ethnicity were also affected by the interaction between accent and ethnicity. Cell mean contrasts reveal that the Caucasian instructor speaking with a moderate accent was regarded as more Caucasian/European and less Oriental/Asian than that same instructor speaking in a high-accent style. In addition, the moderately accented Caucasian instructor was regarded as less Oriental/Asian than the moderately accented Oriental instructor. In attributing ethnicity, students did not distinguish between the high and moderate accents for Oriental in-

structors, nor did they distinguish between the Oriental and the Caucasian instructors when both spoke in the high accent guise ($M_{hi/ori} = 6.93$, $M_{hi/cau} = 5.53$, $M_{mod/ori} = 6.75$, $M_{mod/cau} = 3.50$).

The cell means for the three-way interaction between accent, topic, and ethnicity on perceived ethnicity are presented in Figure 1. For contrasts within each ethnicity separately, Caucasians speaking in a moderate accent about the science topic were regarded as significantly more Caucasian/European and less Oriental/Asian than Caucasians speaking about the humanities topic, regardless of accent, and significantly more Caucasian/European than Caucasians speaking in the high accent guise about that same science topic. No statistically significant main or interaction effects appeared on the ANOVAs for either perceived accentedness or overall impression of teacher quality.

Comprehension Scores

The ANOVA of cloze test results is summarized in Table 2. The only effect to achieve statistical significance for this dependent variable is the interaction between topic and accent. Examination of cell means indicates that within the moderate accent guise, comprehension was highest for the humanities topic, relative to the science topic. No other comparisons of interest were significant ($M_{sci/hi} = 10.68$, $M_{sci/mod} = 7.55$, $M_{hum/hi} = 8.68$, $M_{hum/mod} = 12.11$).

Homophily

No main or interaction effects appeared on ANOVAs of three out of four homophily subscales. Topic and ethnicity interacted in affecting perceived value homophily. Caucasian instructors were attributed greater value homophily when they spoke about the humanities topic rather than the science topic. Within the humanities topic, Caucasian instructors were perceived as having more value homophily with students than Oriental instructors. When instructors were Oriental, topic did not affect judgments of homophily, and when the lecture was about the science topic, students made no distinctions based on instructor ethnicity.

Students' Experience With NNSTAs

Based on their background questionnaires, 88% of the students participating in this study indicated that they had encountered an NNSTA at least once in their academic careers. Sixty-seven percent had encountered two or more NNSTAs. About 42% of the students indicated that they had decided to drop or withdraw from at least one class because they discovered their instructor was not a native speaker of English. Fifty-seven

TABLE 2
Summary of ANOVAs of Comprehension and Homophily Variables

df	T	A	E	T x A	T x E	A x E	T x A x E	Error
1	1	1	1	1	1	1	1	76
Cloze								
SS	30.62	0.01	10.91	218.08	1.60	7.68	0.69	2067
F	1.13	0.00	10.92	8.02*	0.06	0.28	0.03	—
Attitude								
Homophily								
SS	55.06	6.57	10.66	4.23	62.58	4.68	0.20	1692
F	2.47	0.30	0.48	0.19	2.81	0.21	0.01	—
Background								
Homophily								
SS	0.07	0.80	43.39	1.45	29.27	0.50	5.66	1326
F	0.00	0.05	2.49	0.08	1.68	0.03	0.32	—
Value								
Homophily								
SS	0.00	0.05	6.45	0.72	106.28	2.20	1.27	789
F	0.00	0.01	0.62	0.07	10.23*	0.21	0.12	—
Appearance								
Homophily								
SS	7.74	1.00	52.78	30.18	65.28	2.71	41.86	1340
F	0.44	0.06	2.99	1.71	3.70	0.15	2.37	—

T = Topic; A = Accent; E = Ethnicity.
*p < .05

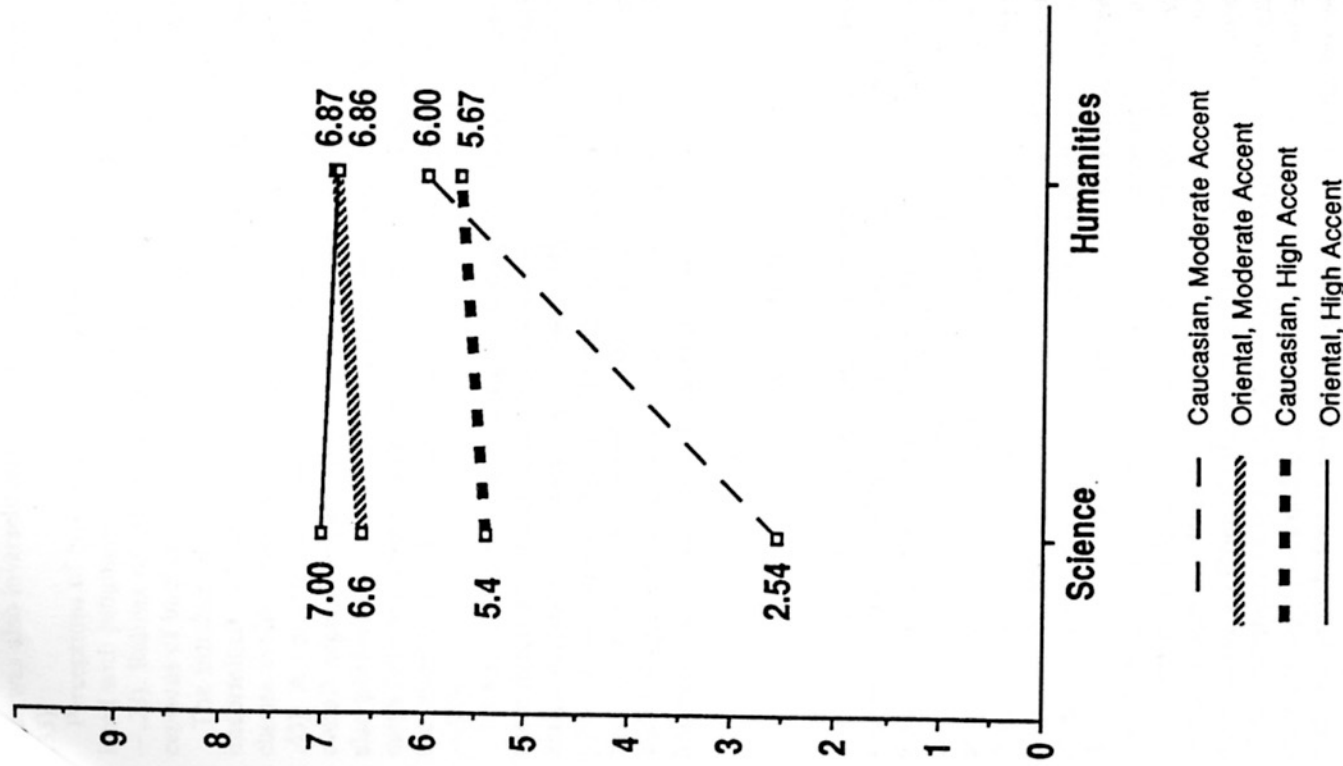


FIGURE 1. Interaction between topic, accent, and ethnicity on perceived ethnicity.

percent of the student felt that their grade in at least one course had been hurt because of the poor communication skills of an NNSTA. This compares with the 76% who felt that across all their instructors their course grade had been damaged on at least one occasion because of poor instructor communication skills.

Relationships Among Dependent Variables

Intercorrelations among the four marker and general-impression variables, the four homophily subscales, cloze test scores, and background information variables were all calculated. Because the large number of correlations entails a high risk of spurious results, a more conservative alpha of .01 was established for determining statistical significance in this data set. Given that criterion, comprehension test scores were found to correlate only with the number of courses taken which had been instructed by an NNSTA ($r = .25$). Impressions of overall teaching ability were found to correlate only with the NNSTA's perceived accentedness; the relationship was inverse ($r = -.41$). The NNSTA's perceived accented-

as was also inversely related to perceptions of attitude homophily ($r = .33$).

Perceptions of NNSTAs' Oriental/Asian ethnicity were inversely correlated with judgments of appearance homophily with these students ($r = -.28$). Ratings of instructors' physical attractiveness were related to perceptions of background ($r = .31$) and appearance ($r = .32$) homophily. The number of classes in which students felt their grades had been undermined by NNSTAs was positively correlated with the percentage of classes avoided because of nonnative English speaking instructors ($r = .43$). A correlation between negative NNSTA grading experiences and overall negative experiences with instructors' communication skills was also positive ($r = .39$). However the number of occasions in which students felt their grades had been hurt by NNSTAs was inversely related to the number of classes they had actually taken from NNSTAs ($r = -.29$).

Finally, of interest in evaluating the homophily construct, these results show significant positive intercorrelations among all four homophily subscales. Appearance homophily correlates .385 with value homophily, .596 with attitude homophily, and .613 with background homophily. In addition, value homophily correlates .494 with attitude homophily and .502 with background homophily. The correlation between perceived attitude homophily and background homophily was .658.

DISCUSSION

The question of primary practical significance is whether undergraduates' perceptions of NNSTAs were affected by those instructors' language varieties, i.e., by their degree of accentedness. The answer warranted by these results is "no and yes." On the one hand, subjects showed no sensitivity to accent differences on the single marker scale, "speaks with American accent/speaks with foreign accent." Response to language variation did emerge, however, in students' judgment of speaker ethnicity. As expected, high accented guises were perceived as more Oriental/Asian than low accented guises. Moreover this effect was complicated by interactions with topic and with ethnicity. In the science topic, presumably more anxiety-producing or at least carrying the expectation of lesser comprehensibility, level of accentedness made no difference. Similarly, when shown an Oriental face, students did not distinguish between levels of accentedness. In less certain, more ambiguously marked situations — when the topic pertained to the Mahabarata and when the face associated with this patently foreign voice was Caucasian, only then did subjects use accent as a basis for ascribing ethnicity.

In short, accent exerted an effect on students' perceptions of NNSTAs,

but not on their conscious awareness of accentedness. We conclude on the basis of these data and on subsequent informal discussions with our subjects that both the moderate and the high accent guises in this research were well above any threshold of discriminability. They were both simply "foreign accents."

Certainly the limited international exposure of the particular subjects participating in this research influenced their reactions to both accent and ethnicity. Background questionnaires indicated that the great majority had never even travelled outside of the United States. And while the State of Georgia is hosting increasing international immigration and sojourning, informal contact with internationals remains more the exception than the norm for the population from which this sample was drawn. Moreover, it is natural that research participants in this study might confuse oriental ethnicity with accentedness; they do not come from communities in which numbers of first-, second- or third-generation Asian Americans speak Standard American English as a matter of course.

Interestingly, the degree to which subjects *believed* the speech samples were accented (as opposed to the level of actual accent) was a good predictor of how they rated the NNSTA's teaching ability. The higher the level of *perceived* accentedness, the lower the teaching ratings. The pattern of results here is similar to other language and attitude research in which subjects failed to correctly identify the cultural identities of speakers, yet proceeded to ascribe stereotypical qualities based on those language-triggered but incorrect identifications (e.g., Edwards, 1982; Piche, Rubin, Turner, & Michlin, 1978).

Like language-mediated perceptions of NNSTAs, actual comprehension of NNSTA speech was only indirectly affected by level of accent; a topic effect favoring the humanities lecture was apparent only in the moderate accent guise. No contrasts between high and low accented speech affected comprehension in this study. Surely, however, it would be possible to construct speech samples that differed so dramatically in level of accent that effects on student comprehension would be detectable. For example a standard American accent compared with virtually any degree of Chinese accent above some threshold level would probably result in an effect on comprehension scores (though it is difficult to conceive of how such a study could be conducted using matched guises). But training programs for NNSTAs do not and cannot aim to eliminate nonnative accent, only to mitigate it. Therefore, the comparison used in this study between moderate and high levels of accentedness represents a more realistic contrast — and that realistic contrast exerted no reliable effect on comprehension.

The single variable of interest that did relate to listening comprehension was the number of courses in which students had been taught by NNSTAs. Since this is only a correlational finding, it is not possible to

ascribe causal directionality. It may be, for example, that those students with the best skills at listening to accented English are the ones who most frequently choose classes taught by NNSTAs.

The alternative causal hypothesis, that exposure to NNSTAs leads to improved listening comprehension is more plausible, however. At a large university such as the one at which this research was conducted, undergraduates rarely have the luxury to choose an instructor in an introductory level class; instructors in such classes are designated in the course schedule with the uninformative label, "staff." They can, however, choose to drop NNSTA instructed classes, and over 40% of this sample did so on at least one occasion. However, correlational results show once again that those with the most exposure to NNSTAs were least likely to believe that being taught by an NNSTA had hurt their grades. It appears that the more often students had sat in classes with NNSTAs the more satisfied they were with their instruction and the more skilled they became at listening to accented speech.

As a matter of instructional policy, these results generally support the view that if NNSTAs "own" part of the problem regarding the role of international teaching assistants, then undergraduates own another part of that problem to (at least) an equal degree. Virtually no amount of NNSTA pronunciation drill will ever eliminate that level of accentness which marks an instructor as ethnic and which triggers expectations of poor teaching ability. On the basis of these results, at any rate, feasible pronunciation training will not result in improved student comprehension.

Certainly there is no justification for reducing efforts at NNSTA training. On the other hand, results of the present study do show that the problem will also need to be attacked by working with the listeners, with the undergraduate population. North American undergraduates need to be trained to listen to accented English and to distinguish acceptably moderate levels of accent from unacceptably high levels. Models of listening instruction in other domains may be adapted for this purpose (e.g., Wolvin & Coakley, 1988).

Undergraduates need to be disabused of the stereotype that teachers who speak with nonnative accents are necessarily going to be poor instructors. This will require some kind of human relations and cultural sensitization training that can be delivered efficiently to large numbers of students. In the past, most cross-cultural training has been conducted in small groups, relying on experiential learning exercises, often including elements of intergroup contact, and over sustained periods of time (see, for example, Kohls, 1981). Moreover, most participants in cross-cultural training programs are self-selected and highly motivated. Those who are not (e.g., reluctant corporate transferees) cannot be expected to gain

Clearly, then, new models for intercultural training will need to be devised to meet the needs of undergraduates encountering NNSTAs at large universities. Perhaps it will be possible to use instructional innovations like computer-driven interactive video technology to deliver lessons that integrate course content with cross-cultural sensitization. For example, students enrolled in introductory algebra classes can be exposed to modules showing the roots of algebra in Arabic cultures, and showing algebra as an internationally recognized code that promotes global cooperation. At the same time, these instructional modules can be delivering guided practice in listening to nonnative English accents.

Results of the present study enjoin us, finally, that we must find ways to encourage our undergraduates to tough it out and stick with their NNSTAs. For if those students can give their nonnative instructors the benefit of the doubt, then they will be rewarded with greater satisfaction in their academic work and with improved ability to listen to the kind of English spoken beyond the limits of their culture-bound experience.

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ABSTRACT TRANSLATIONS

La réponse la plus commune à la perception d'un manque de compétence en anglais parmi les professeurs assistants dont la langue maternelle n'est pas l'anglais, a été d'organiser des groupes de travail

pour améliorer leurs habilités linguistiques et éducatives. Cependant, beaucoup de facteurs en dehors du bas niveau de compréhension peuvent contribuer à une perception négative des "NNSTA." line étude "matched guise" de la compréhension et de l'attitude des étudiants envers les "NNSTA" révèle que 40% des étudiants évitent les classes dirigées par des "NNSTA." Cependant, le véritable accent dans le discours des "NNSTA" semble montrer peu d'effets directs sur les résultats enregistrés. Au contraire, les facteurs tels que le caractère ethnique de l'instructeur ou le sujet du cours, étrangers à la véritable compétence d'élocution du "NNSTA" tendent à être des déterminants potentiels pour la compréhension et l'attitude des étudiants. D'un autre côté, quand les étudiants perçoivent (à tort ou à raison) un accent étranger très marqué, ils jugent que les orateurs sont de mauvais professeurs. Les résultats justifient un programme d'entraînement collectif de la communauté universitaire qui se concentre sur les attitudes et aptitudes et aptitudes à écouter des étudiants ainsi que sur la compétence des "NNSTA." (author-supplied abstract)

Existe la creencia de que los asistentes de enseñanza extranjeros ("NNSTAs", Non Native Student Teaching Assistants), tienen dificultades cuando enseñan en inglés. Para remediar esta aparente deficiencia lingüística, Universidades y Colegios ofrecen "workshops" en los cuales los NNSTAs reciben ayuda en este respecto. Sin embargo, es posible que otros factores contribuyan a esta percepción negativa de que los NNSTAs no hablan bien el inglés. Estos factores están arraigados en las imágenes estereotipadas que tienen los estudiantes norteamericanos de los NNSTAs. Un "matched guise" estudio de las actitudes de los estudiantes hacia los NNSTAs, y la comprensión lingüística de los estudiantes reveló que un 40% de los estudiantes evitan tomar cursos enseñados por los NNSTAs. Sin embargo, los resultados del estudio demostraron poca relación entre el acento lingüístico de los NNSTAs y la actitud de los estudiantes hacia los NNSTAs. Más bien, el origen étnico de los NNSTAs y el tópico del curso demostraron ser factores determinantes en la actitud de los estudiantes.

Por otro lado, cuando los estudiantes percibieron -correcta o incorrectamente - un acento marcado, los estudiantes juzgaron que los hablantes no eran buenos comunicadores. Los resultados de este estudio indican que es necesario un cambio en los métodos que usan las Universidades para entrenar a los NNSTAs. Estos cambios deben incluir programas que enfoquen, no solo en las habilidades lingüísticas de los NNSTAs, sino también en las actitudes de los estudiantes y las habilidades auditivas de estos. (author-supplied abstract)