The conception and perception of noncontent speech performance: implications for speech-accommodation theory

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Introduction

Speech-accommodation theory consists of two basic premises: communicators (1) have motivational reasons for adjusting their speech toward one another; and (2) behaviorally and evaluatively respond to one another with respect to perceived characteristics of these adjustments (see Giles 1977, 1980; also Beebe and Giles, this issue). For example, speakers wishing to show or win approval, communicate effectively, and socially identify with a listener, may make their speech styles more similar or 'converge'. Likewise, speakers wishing to dissociate or show disfavor may increase dissimilarities or 'diverge' speech. Unless situational constraints dictate otherwise (for example, the notions of speech complementarity, see Giles 1980; and Thakerar et al. 1982), perceived moves toward similar speech are responded to more favorably (e.g. positive evaluation and reciprocal convergence) than divergent speech. Speech-accommodation theorists posit that an array of speech dimensions are susceptible to accommodative influences such as language choice, accent, speech rate, pause duration, self-disclosure, utterance length, and slang (see Giles and Powesland 1975; Giles 1977, 1980; and Street and Giles 1982 for reviews).

Support for accommodation theory has been extensive within intercultural contexts involving language choice, accent, and speech rate (Simard et al. 1976; Bourhis and Giles 1977; Bourhis et al. 1979; Giles and Smith 1979). However, research among intracultural interpersonal settings has been limited, though somewhat promising. For example, Thakerar et al. (1982) observed that dyadic participants converged toward the accent and speech rate believed characteristic of their partners to gain positive affect and identification. Street (1982) noted that convergence of speech rate and response latency generated higher social attractiveness ratings than divergent moves. Yet, because of the paucity of research and of other theoretical challenges, application of speech-accommodation tenets in intracultural settings warrants further empirical attention, especially regarding noncontent speech behaviors.

Paralinguistic features of speech are often called 'noncontent' since they concern 'how' speech is produced rather than 'what' is said. Representative of this class are speech rate, pause duration, vocal intensity and pitch, accent, utterance duration, and grammatical complexity, among others. Since degree of noncontent speech convergence has been related to need for social approval (Natale 1975a, 1975b), perceived similarity (Welkowitz and Feldstein 1969, 1970), and desire for social identification (Thakerar et al. 1982), Giles and others have reasoned that these findings reflect accommo-dative adaptations (Giles and Powesland 1975; Giles 1977, 1980). However, two arguments can be made against this claim.

First, since noncontent speech is typically produced and received at low awareness levels (Webb 1972; Natale 1975a; Cappella 1981), it is unreason-able to assume that communicators actively monitor interlocutors' speech on a variety of levels, make judgements of intentions, find the baseline speech levels, and finally adapt behavior accordingly (Cappella 1981; Cappella and Planalp 1981). In reply, the theory's proponents argue that accommodation processes may be enacted automatically (or *covert* accommodation, see Giles and Powesland 1975; Giles 1980), that communicators may have 'nonconscious' motives for convergence and divergence (Giles 1980; von Raffler-Engel 1980), and that interactants are often not aware of speech features which influence their evaluative judgements (Nisbett and Wilson 1977). Research indicates that the awareness issue is complex. Street (1982) reported that listeners rarely identified speech rate and response latency convergence but were highly cognizant of divergence. Correspondingly, con-vergence was received more positively than divergence. In dyads of unequal-status partners, Thakerar et al. (1982) found that the interactants incorrectly assessed their partners' speech rate and accent but nevertheless converged toward their partners' *perceived* speech levels. For example, low-status inter-locutors thought their high-status partners talked faster and with more standardized accents than in actuality and in turn converged to those perceptions.

The second objection to an accommodation explication of noncontent speech performance is grounded in speech style evaluation research. Typically two evaluative dimensions emerge in these studies, competence (e.g. intelli-gence, expertness, confidence, etc.) and social attractiveness (e.g. benevo-lence, likeability, trustworthiness, sociability, etc.; see Brown 1980; Street and Brady 1982; Street 1982). Different noncontent speech levels appear to score positively on each. Competence ratings are associated with faster speech rates (Brown 1980), shorter response latencies (Lay and Burron 1968; Scherer et al. 1973), longer turn lengths (Hayes and Meltzer 1972; Stang 1973), and more standard and prestigious accents (Giles 1979; Ryan 1979), whereas social attractiveness appears related to moderate speech rates (Brown

1980), moderate response latencies (Baskett and Freedle 1974), medium turn lengths (Hayes and Meltzer 1972), and regional and less standard accents (Giles 1979; Ryan 1979).

These results indicate that different noncontent speech styles index distinctive impressions. Thus, one might argue that conversants would modify noncontent speech to stereotypic levels, regardless of a partner's speech levels, which are associated with competence or social attractiveness. Ryan (1979) and Giles (1979) have recently offered insight into these issues by suggesting that certain stereotypic and prestigious speech forms (e.g. standard accent, language of the dominant group, faster rates, etc.) may enhance competence judgments. On the other hand, impressions of social attractiveness are determined by participants' perceptions of similarity, including speech similarity. Thus, moderate rates, latencies, turn durations, and informal accents are considered more socially attractive, since these levels are probably more closely aligned with the speech levels typical of most listeners. In support of this, Street and Brady (1982) reported that, regardless of their own speech rates, listeners' competence judgements were linearly related to a speaker's rate, with faster rates being perceived more competent. However, a significant listener-rate-by-speaker-rate interaction indicated that faster-talking listeners viewed speakers with faster rates more socially attractive and those with slower rates more unattractive than did the slower-talking listeners. Similarly, Giles and Smith (1979) observed that, when a Canadian speaker slowed his rate toward that of a slower-speaking English audience, he was judged more effective and cooperative.

From the accommodation perspective, a conversant may encounter interesting, if not difficult, choices depending on how one wishes to be perceived. If an interlocutor employs standard, prestigious speech forms, convergence should result in both perceived competence and social attractiveness. That is, the conversant would be speaking competently (e.g. standard accent, faster rate, etc.) and similarly to the interlocutor. Giles and Powesland (1975) have labeled moves toward another having a prestigious speech style 'upward' convergence. However, what if one's interlocutor has a less-prestigious mode of speaking? Thus, the voice of competence may be behaviorally distinct from the voice of sociability. Depending on which is the primary motivation, a conversant will either opt for the stereotypic levels associated with competence, or converge toward the lower-status speech style ('downward' convergence) of the listener to enhance perceived social attractiveness.

In sum, though it may occur automatically with little or no awareness, noncontent speech shifts are conceivably related to communicators' intentions for social integration or dissociation. However, even if one wishes to create a favorable impression, interactants may be faced with choices among

speech styles depending upon whether sociability or competence is the primary motivation (see Coupland, this issue). In two studies, we sought to examine speech-accommodation predictions regarding three noncontent speech behaviors − speech rate, response latency, and turn duration − within the context of a fact-finding interview.

Study 1

Purpose

In the first study, we examined the relationship of noncontent speech levels and adjustments to interviewees' impression management efforts (i.e. intentions). Four combinations of impressions were employed: competent-likeable, not competent-likeable, competent-not likeable, and not competent-not likeable. If noncontent speech convergence facilitates liking, we expect support for the following hypothesis:

H_1 : *When interviewees are creating a likeable impression, a significant positive relationship exists between their speech rates, response latencies, and turn durations and those of interviewers.*

Given the evidence that perceived competence is consistently associated with certain noncontent speech levels, we forward the following prediction:

H_2 : *Interviewees creating impressions of competence produce significantly faster speech rates, shorter response latencies, and longer turn durations than interviewees creating impressions of lacking competence.*

Given the confounding influence of managing impressions regarding competence and likeability, we were also interested in how interactants sought to resolve potential incongruities among antithetical intentions (e.g. be likeable but not competent) and among problems associated with the interlocutor's speech (e.g. how to appear competent-likeable to a slow-talking partner). Though we do not have enough evidence to formulate a specific prediction, we nonetheless were interested in identifying what, if any, general strategies interviewees employed to accomplish specific goals regarding interviewers with varying speech forms.

Method

Subjects were 40 undergraduates (20 male and 20 female) enrolled in basic communication courses at the University of Arkansas-Fayetteville. They were informed that the study was part of a program to help graduate students

increase awareness and perceptual skills during interviews. The subjects' tasks were to create a particular impression during a fact-finding interview (e.g. competent-likeable, competent-not likeable, etc.). They were told to think about people they knew who tended to leave these impressions, how they conducted themselves, and how they talked. After thinking about the assignment for five minutes, subjects were ushered into the interview room. To prevent mixed-sex effects, males were interviewed by males and females by females. Neither the interviewers nor the interviewees were previously familiar with one another. The interviews were standardized with each interviewer asking the same eight questions. The questions ranged from 20 to 30 seconds. A tape-recorder was in sight but sufficiently out of the interactants' way. Two males and two females served as interviewers and had either graduate or senior undergraduate academic standing.

Noncontent speech behaviors were computed from transcripts using stopwatches and for each interactant's speaking turn during the interview. Speech rate was measured by computing the average number of syllables per minute (Webb 1972). Response latency was measured as the time between the conclusion of one interactant's turn to the beginning of the next interactant's turn and was attributed to the following speaker (Matarazzo and Wiens 1972). Turn duration consisted of the amount of time to produce a speaking turn. Thus, each participant's score reflected their average rate, response latency, and turn duration per speaking turn for the interaction.

Admittedly, convergence is usually a product of *mutual* speech adjustment. Since we were interested in the interviewees' speech shifts, we attempted to impose stability in the interviewers' speech per interaction. Thus, they were trained to produce consistent speech patterns during one interview but then change the pattern during another. For example, during one interaction the interviewer would talk fast and use short latencies; during another, he or she would talk fast and use long latencies, etc. Interviewers varied their speech styles to prevent confounding impressions of competence and likeability. For example, if the interviewer maintained a fast rate with short latencies, we would not be able to ascertain whether convergence from an interviewee was due to efforts to appear competent, likeable, or both.

To test the accommodation hypothesis (H_1), the dyadic participants' speech behaviors were correlated within individual conditions (e.g. competent-likeable) and across impressions (e.g. combining likeable-competent with likeable-not competent). For the competence prediction (H_2), analyses of variance were computed using a 2 × 2 design with two levels of competence (competent and not competent) and two levels of likeable (likeable and not likeable).

Results

Accommodation. Only the correlation for speech rate in the likeable-competent condition was significant (r = .66, p < .05). Also, regardless of the competence impressions, interviewees who were also trying to appear likeable tended to converge their rate toward the interviewer (r = .38, p < .1). Thus, in a strict sense, minimal support was provided for the accommodation prediction (H_1). However, examination of the scores reveal some promising trends. In the likeable conditions, the positive scores for speech rate (r = .38) and turn duration (r = .28) showed some convergence tendencies, while in the not-likeable conditions the pattern of results was in the opposite direction. That is, interviewees creating not-likeable impressions slightly diverged their speech rate (r = -.17) and turn duration (r = -.17). A similar pattern was not evident in the competence conditions as these correlations were similar and near zero.

Competence. The second hypothesis received substantial support. Interviewees produced significantly shorter response latencies (F(1,39) = 4.39, p < .05) and longer turn durations (F(1,39) = 8.76, p < .01) when producing impressions of competence than when trying to appear not competent. Though not significant, competent interviewees tended to produce faster speech rates ($\overline{X}$ = 3.94 syllables per second) than not competent ones ($\overline{X}$ = 3.82 syllables per second). However, for both response latency (F(1,39) = 6.29, p < .025) and turn duration (F(1,39) = 10.34, p < .005), significant competence by likeable interactions emerged. The interaction is primarily due to (1) longer turns and shorter latencies which, though evident in both competence conditions, were most pronounced when interviewees were trying to be competent *and* likeable, and (2) the not competent *but* likeable condition having the shortest turns and longest latencies. Though they displayed some convergence, it would appear that interviewees creating competent–likeable impressions primarily opted for noncontent speech indicative of competence, perhaps thinking this would also enhance attraction. On the other hand, interviewees in the not-competent-but-likeable condition seemed to emphasize their sociability. Not only was convergence the greatest in this condition, but the shorter turns and longer latencies by the not-competent-likeable subjects more closely resembled the interviewers' actual behavior than did those in any other condition.

Summary

The competence prediction received strong support regarding response latency and turn duration. The only significant substantiation of the accom-

modation prediction involved speech rate. These data indicate that inter-
actants (at least these interviewees) may rely more heavily on some non-
content speech to create images of competence and modify other behaviors
to manage sociability impressions.

Study 2

Purpose

Study 1 was designed to examine communicators' encoding choices in
relation to creating impressions of likeability and competence. While manipu-
lation of intentions was deemed necessary, the artificiality of the task must
be acknowledged. While Rosenfeld (1966) has employed similar techniques
to examine approval-seeking behaviors, the situation may have created
unrealistic or confounding effects. For example, it is probably difficult for
persons to independently manipulate combinations of competence and like-
ability, especially since these dimensions are often moderately correlated
(Street and Brady 1982; Street 1982). This appears especially true for not
competent–not likeable since presumably such goals are rarely, if ever,
operating. In addition, making subjects attend to specific intentions may have
disrupted noncontent speech processes for several reasons. First, though
possibly aware of particular goals (e.g. get a job or a date), interactants may
not be cognizant of particular intentions or strategies (e.g. appear sociable)
related to these goals (e.g. Berger and Roloff 1980; Norman 1981; Street and
Giles 1982). Second, making subjects especially aware of particular impres-
sions may have disrupted normal noncontent speech processes. For example,
the participants may have overattended noncontent speech or may have
focused so much on *what* to say (i.e. content) that their vocal behavior was
not characteristic of everyday interaction.

Whereas Study 1 concerned interviewees' accommodative adjustments
with respect to particular intentions, Study 2 involves perceptual and evalua-
tive judgments communicators make from noncontent speech. To compare
findings in the first study with more naturalistic interactions, Study 2 was
designed to examine *both* the interviewers' and interviewees' judgements of
their own and partners' noncontent speech. Three hypotheses were formu-
lated in two parts, one for the interviewers' evaluations of the interviewees
and one for the interviewees' evaluations of the interviewers.

For the first prediction, correlations were computed between the discrep-
ancy between participants' average performance per turn and partners' social-
attractiveness ratings. Thus, we expected support for this hypothesis:

H_{1a}: *Interviewers' judgements of interviewees' social attractiveness are positively related to the participants' actual degree of noncontent speech similarity.*

H_{1b}: *Interviewees' judgements of interviewers' social attractiveness are positively related to the participants' actual degree of noncontent speech similarity.*

Given that accommodation theory emphasizes the primacy of *perceived* message characteristics (a variable unfortunately not studied in Study 1), a second hypothesis was formulated correlating participants' perceptions of speech similarity to social-attractiveness ratings.

H_{2a}: *Interviewers' judgements of interviewees' social attractiveness are positively related to the interviewers' perceptions of the degree to which their own and the interviewees' noncontent speech behaviors are similar.*

H_{2b}: *Interviewees' judgements of interviewers' social attractiveness are positively related to the interviewees' perceptions of the degree to which their own and the interviewers' noncontent speech behaviors are similar.*

Thus, the greater the actual and perceived similarity to one another's speech, the more participants will consider their partners socially attractive.

On the other hand, we expect competence judgements to be correlated with actual speech levels. Specifically, greater competence will be associated with faster rates, shorter latencies, and longer turns.

H_{3a}: *Interviewers' judgements of interviewees' competence are directly related to the interviewees' noncontent speech levels.*

H_{3b}: *Interviewees' judgements of interviewers' competence are directly related to the interviewers' noncontent speech levels.*

Method

Interviewees were 20 undergraduates (10 male and 10 female) enrolled in basic communication courses during the fall 1981 semester at the University of Arkansas-Fayetteville. Interviewers were two graduate students (1 male and 1 female) enrolled in the Department of Communication. Interview participants were informed that the purpose of the interview was to gather student opinions regarding the University's academic policies. Interviewers were given a list of six questions but, contrary to Study 1, were allowed to ask additional questions, ask for elaboration, probe, etc. Neither interviewees nor interviewers were informed of the purpose of the study. The interviews were terminated after 15 minutes. After each interview, the interviewers and interviewees completed a questionnaire regarding their perceptual and evaluative judgements of own and partners' noncontent speech. The response form included the following items: for social attractiveness, the last two items

(summed they produce an index of attraction that has a split-half reliability of .85) from the Interpersonal Judgement Scale (Byrne 1971); and for competence, two items commonly employed on competence scales – intelligent/not intelligent and competent/not competent – which were included in 7-point semantic differential form; in addition, three statements regarding perceptions of own and partners' noncontent speech were included: (1) 'our speech rates were similar'; (2) 'our pauses between turns were of a similar duration'; and (3) 'the duration of our conversational turns was about the same'. After each statement, there was a 7-point strongly agree-strongly disagree scale. Finally, subjects were asked to judge their noncontent speech relative to their partners'. This included three multiple-choice questions (one for each behavior); for example, 'Compared to my partner, my speech rate (or pauses between turns or conversational turns) was faster, about the same, or slower.'

Results

Two general patterns in the data should be discussed prior to examination of individual hypotheses. First, with rare exception, evaluations by both interviewers and interviewees were toward the positive end of the scales. In other words, most participants perceived their partners as relatively competent and socially attractive. For the most part, then, our analysis involves more-positive as opposed to less-positive judgements. Second, there was an overall tendency for participants to converge toward one another. For speech rate ($r = .43$, $p < .06$) and turn duration ($r = .47$, $p < .05$), interviewees and interviewers significantly modified speech in similar directions. The relationship for response latency was also positive but insignificant ($r = .23$). These findings are consistent with the predominance of convergence tendencies evidenced in other studies (see Cappella 1981; and Cappella and Planalp 1981, for reviews).

Giles (1977, 1980; Street and Giles 1982) has explained the tendency to converge as due to a response set to create favorable impressions and communicate effectively. Given the positive nature of these evaluations, implicit support is given to this view. Additional insight can be gained by examining individual findings.

Interviewers' judgements of interviewees. Hypothesis 1a received tentative support only for response latency. The greater the degree of actual response-latency similarity, the more the interviewee was viewed socially attractive ($r = .41$, $p < .1$). For speech rate, the relationship was insignificant ($r = .17$), and for turn duration the correlation was significant but *opposite* the predicted direction ($r = -.50$, $p < .05$). The more interviewees diverged their

turn duration from the interviewer, the more they were judged socially attractive. This finding is discussed more fully later.

Hypothesis 2a received marginal support. The relationships between interviewees' social-attractiveness scores and the interviewers' perceptions of response-latency ($r = .37$, $p < .1$) and speech-rate ($r = .39$, $p < .1$) similarity only approached significance. For turn duration, the correlation was insignificant ($r = .05$).

An issue of intrigue emerges when comparing the data regarding actual and perceived speech characteristics. For response latency, both actual and perceived similarity were positively related to social-attractiveness judgements. Not surprisingly, the interviewers were fairly accurate in perceiving the interviewers' average latencies relative to their own ($r = .63$, $p < .1$). Apparently, response latency for the interviewer was a salient interaction feature. While perceived speech-rate similarity was related to the attraction scores, actual similarity was not. Additionally, the interviewers were rather inaccurate in assessing the interviewees' rates relative to their own ($r = .19$, N.S.). Though it cannot be ascertained from the data in this study, an important question for later research is to determine whether interviewers indeed *perceived* their partners' rates as similar (or not), or whether they *assumed* some degree of similarity, given the degree of positive evaluation. In other words, was the evaluation process characterized as the interviewer perceiving rate similarity and thus liking the interviewee, or liking the interviewee and thus assuming rate similarity? Nevertheless, in accord with speech-accommodation theory predictions, a trend toward a positive association between perceived speech similarity (excluding turn duration) and social-attractiveness judgements was evident.

Regarding Hypothesis 3a, the competence prediction, only turn duration was merely 1.5 sps. Elsewhere, Street (1982) and Street and Brady (1982) interviewees were viewed as competent ($r = .65$, $p < .01$). However, rate of speech ($r = .18$, N.S.) and shortness of latency ($r = .09$) were not positively related to perceived competence as predicted. Two explanations could account for the insignificant results. First, given that effective answers to questions may call for some pondering and deliberation, longer pauses and slower rates may have been attributed to thoughtfulness prior to and during the interviewee's answers. Though this is primarily speculation, a similar explanation regarding context effects has been forwarded by Giles et al. (1981). In that study, a relatively slow speaker was not downgraded when his slow speech was attributed to efforts to help an audience understand an unfamiliar topic. Second, the variance among the interviewees' rates and latencies was small (not surprising given the general trend toward convergence). For example, the difference between the fastest and slowest interviewee rates was merely 1.5 sps. Elsewhere, Street (1982) and Street and Brady (1982)

have noted that significant differences among listener judgements of speakers' varying rate are primarily explained by evaluative distinctions made between faster and slower extremes.

In Study 1 we reported that interviewees' attempts to create impressions of competent and not competent were independent of degree of speech similarity to the interviewer. Consistent with those results, interviewers' judgements of interviewees' competence were not related to either perceived or actual response-latency and speech-rate similarity.

Turn duration and speech complementarity. As mentioned earlier, the findings for turn-duration accommodation were opposite the predicted direction. Though the interviewers were rather unaware of the interviewees' average turn durations relative to their own ($r = .11$, N.S.), they nevertheless upgraded interviewee moves toward turn-duration dissimilarity. This is apparently due to interviewees with longer turns being viewed more socially attractive ($r = .46$, $p < .05$) and competent ($r = .65$, $p < .001$). Longer interviewee turns generally created greater discrepancy relative to the interviewer, thus the degree of turn-duration similarity was inversely related to both social attractiveness ($r = -.50$) and competence ($r = -.58$) judgements. This finding probably reflects role differences between the participants which call for different speech styles (i.e. speech complementarity). More-responsive interviewees feasibly talk for longer periods than less-responsive ones in order to fully answer questions and provide relevant information and opinions. Interviewers in turn seemingly consider such responsiveness indicative of the interviewees' cooperativeness and ability.

Interviewees' judgements of interviewers. Hypothesis 1b received support, as the greater the degree of speech-rate ($r = .61$, $p < .01$) and response-latency ($r = .54$, $p < .05$) similarity, the more the interviewers were considered socially attractive by the interviewees. Turn-duration similarity was unrelated to social attractiveness ($r = .10$, N.S.). Hypothesis 2b received marginal but similar support. Degree of perceived speech-rate ($r = .40$, $p < .1$) and response-latency ($r = .41$, $p < .1$) similarity tended to be positively associated with the interviewers' social-attractiveness ratings. No relationship was observed for perceived turn-duration similarity ($r = .13$).

Hypothesis 3b received no support. No significant relationship emerged between the interviewers' competence scores and turn lengths ($r = -.13$) and response latencies (.15). Perhaps interviewers' competencies are judged independently of these behaviors. However, the consistency among interviewers' speech levels in individual interviews may have prevented a fair test of the hypothesis. For example, the interviewers' average turn durations rarely differed more than two seconds and most latencies rarely varied more than

one second. A marginally significant relationship was observed for speech rate but opposite the predicted direction. The interviewees tended to view *slower*-talking interviewers more competent (r = −.38, p< .1). Perhaps the competent interviewer is one who does not ask questions too quickly, so that they are understood by interviewees (see, for example, Giles et al. 1981).

Summary

The interviewer and interviewee judgement data are comparable in several respects. First, perceived and actual response-latency similarity was directly related to social-attractiveness ratings. In addition, both interviewers (r = .63, p< .01) and interviewees (r = .62, p< .01) were fairly accurate in assessing their partners' average latencies relative to their own. Second, for both participants, perceived speech-rate similarity was associated with attractiveness. However, actual speech-rate similarity was significantly correlated with social attractiveness only regarding the interviewees' judgements of interviewers. Though not significant, the interviewees tended to be more accurate (r = .30) in perceiving their partner's rates than were the interviewers (r = .19). It would appear that in this study partner rate was more important for the interviewees' than interviewers' judgements. Third, for both participants, perceived competence was mostly unrelated to degree of non-content speech similarity. This is consistent with our claim that speech similarity is typically more a determinant of social attractiveness than of competence impressions (see Ball et al., this issue). Fourth, our prediction that faster rates, shorter latencies, and longer turns are associated with increases in perceived competence received no support among interviewee judgements and only for turn duration among the interviewer judgements. This could be credited to practically all participants being perceived as relatively competent for this context; thus comparing their speech behaviors to those of incompetent interactants was not possible. On the other hand, these findings also indicate that other behaviors (e.g. content dimensions, pronunciation, etc.) may have served as competence cues rather than the noncontent speech forms examined here. As a final note, we should acknowledge that our sample sizes were relatively small. A study employing more subjects would be a more powerful attempt at detecting actual differences.

General discussion

Speech-accommodation researchers posit that noncontent speech behaviors and evaluations are explained by the accommodation framework. Challenges

to this claim arise in two areas. First, since noncontent speech is typically received at low levels of awareness, it is probably not linked to communicators' intentions. Second, noncontent speech evaluations appear related to stereotypic levels associated with competence and social attractiveness rather than to speech similarity. Two studies were designed to test accommodation-theory predictions regarding noncontent speech in light of these challenges.

Support for accommodation theory

In three respects these studies substantiated accommodation-theory predictions. First, for one noncontent speech form, rate, the data of Study 1 linked accommodative adjustments to intentions to appear likeable or not likeable. Specifically, interviewees significantly converged speech rate toward that of the interviewer when trying to be likeable and slightly diverged when seeking to be not likeable. Though statistically insignificant, the turn duration findings revealed similar accommodative tendencies.

Second, Study 2 strongly supported the accommodation-theory claim that, unless situational constraints dictate otherwise, speech convergence generates more favorable interlocutor responses (at least regarding social attractiveness) than does divergence. Generally, the interview participants tended to converge toward one another on rate ($r = .43$), turn duration ($r = .47$) and response latency ($r = .23$). In addition, all social-attractiveness ratings were within the positive end of the scale. More specifically, the degree of actual and perceived similarity between interactants' speech rates and response latencies were significantly (or marginally significantly) related to judgements of partners' social attractiveness (with the exception of actual rate similarity regarding interviewers' ratings of interviewees).

Third, the findings for the interviewees' turn durations appear supportive of the notion of speech complementarity, or situationally appropriate speech differences (Giles 1977, 1980). The more the interviewees talked, the more they were perceived as socially attractive and competent. These data indicate that during a fact-finding interview interviewees are responsible for providing adequate amounts of information and are probably expected to do most of the talking. As additional support, the turn-duration results in Study 1 revealed that interviewees talked the most when attempting to appear competent *and* likeable. On the other hand, neither turn-duration similarity nor length were meaningfully associated with interviewees' perceptions of interviewers. Unless at extreme levels, turn duration is probably not an important dimension for evaluating interviewers. Turn duration appears to be a common behavior by which interactants complement one another, be

it to fulfill role expectations (as in this study) or to maintain the flow of interaction (see Matarazzo et al. 1968; Street et al. 1983).

Implications for accommodation theory

The results of these studies suggest two areas in which accommodation theory should be extended. First, Giles has claimed that convergence (or divergence) results from motivations for social approval and integration (or dissociation and psychological distinctiveness) and is generally perceived positively (or negatively). Yet such intentions and evaluations involve multiple dimensions, two being social attraction and competence. In the realm of noncontent speech, previous research indicated that perceptions of social attractiveness and competence are related to different noncontent speech patterns. From this research, we formulated (and generally supported) hypotheses predicting that similar and dissimilar speech have motivational and evaluative impli- cations regarding interactants' positive and negative affective orientations toward one another; that is, regarding attraction and identification. Competence (e.g. intelligence, expertise, confidence, etc.), on the other hand, appears most closely tied to stereotypic associations of specific noncontent speech levels, including standard accents, faster rates, shorter latencies, and longer turns. Thus, accommodation theory should incorporate distinctions not only between the favorableness and unfavorableness of intentions and evaluations but also the character of those intentions and evaluations. We are not suggesting a complex array of accommodative moves regarding numerous evaluative and motivational dimensions. Rather, we feel specific predictions can be made (as in these studies) by distinguishing between per- ceptions and intentions related to social attraction and competence. This distinction has much explanatory potential and also can add to the parsimony and integrity of accommodation theory.

Second, these findings provide insight into the varying degrees of salience that different noncontent speech behaviors have for interview participants. Thus, interactants may adjust and attend to some noncontent speech forms (e.g. latency) more readily than to others (e.g. loudness). For example, response latency appears to be a very influential feature of interviews. Both interviewers and interviewees were generally aware of their partners' latencies and perceived partners' social attractiveness in concordance with degree of response-latency similarity (see also Street 1982). Though perceived speech- rate similarity was also related to attractiveness, actual rate similarity was significantly correlated only with interviewees' judgements of interviewers. Additionally, both sets of participants were generally unaware of their partners' rates relative to their own. Though both speech rates and response

latency are salient evaluative cues, it would appear that perceivers are more able to discriminate among average latencies than among average rates. This may be because rates fluctuate more during interaction than do response latencies. Thus, as Giles has noted, it is important to focus on *perceived* behaviors. As a result, the relationship between degree of convergence and strength of the evaluation or intention may not necessarily be linear (Giles and Smith 1979; Street and Giles 1982). Rather, interactants probably accommodate toward and perceive one another with respect to a *range* of acceptance (Street and Brady 1982). Though there may be some extent of actual discrepancy (and these differences may even be noticed), interactants may still perceive one another positively. The salience of a particular noncontent speech behavior as well as receivers' abilities to detect varying performance levels are two of perhaps several factors (see, for example, Cappella and Greene 1982) which may influence the width of one's acceptance zone, or the extent to which·interactants tolerate speech differences.

Future research

We propose several directions for future research. First, studies like these should use larger sample sizes to ensure greater statistical power to detect differences among behavior and evaluations. Second, whereas the need to manipulate communicator intentions was necessary, the task of Study 1 was admittedly artificial. More effort should be given to examining intentions naturally (e.g. subjects could be instructed to try to get this job or date), and then posttest the strength of the manipulation by asking participants of specific intentions and strategies employed. Third, the impact of context on accommodation should receive greater attention regarding noncontent speech. As mentioned earlier, situational constraints may dictate complementary rather than similar speech styles, contextual information may allow for listener attributions which result in different evaluations for the same behavior (Giles et al. 1981), and receivers may tolerate a wider range of noncontent speech in some settings (e.g. conversations) than in others (e.g. employment interviews; Street and Brady 1982). Fourth, though we examined several behaviors here, future research should investigate the interface of noncontent and content dimensions of speech.

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Notes

1.   The first author is at the Department of Speech Communication, University of Illinois, Urbana, Illinois, while the second author is now at the Department of Speech Communication, Texas Tech University, Lubbock, Texas.

References

Baskett, G. D., and Freedle, R. O. (1974). Aspects of language and the social perception of lying. *Journal of Psycholinguistic Research* 3, 117-130.

Berger, C. R., and Roloff, M. E. (1980). Social cognition, self-awareness and interpersonal communication. In *Progress in Communication Sciences*, vol. 2, B. Dervin and M. J. Voight (eds.), 1-49. Norwood, N.J.: Ablex.

Bourhis, R.Y., and Giles, H. (1977). The language of intergroup distinctiveness. In *Language, Ethnicity and Intergroup Relations*, H. Giles (ed.), 119-135. London: Academic Press.

—, Giles, H., Leyens, J. -P., and Tajfel, H. (1979). Psychological distinctiveness: language divergence in Belgium. In *Language and Social Psychology*, H. Giles and R. N. St. Clair (eds.), 158-185. Oxford: Blackwell.

Brown, B. L. (1980). Effects of speech rate on personality attributions and competency ratings. In *Language: Social Psychological Perspectives*, H. Giles, W. P. Robinson, and P. M. Smith (eds.), 293-300. Oxford: Pergamon.

Byrne, D. (1971). *The Attraction Paradigm*. New York: Academic Press.

Cappella, J. N. (1981). Mutual influence in expressive behavior: adult-adult and infant-adult dyadic interaction. *Psychological Bulletin* 89, 101-132.

—, and Greene, J. O. (1982). A discrepancy-arousal explanation of mutual influence in expressive behavior for adult and infant-adult interaction. *Communication Monographs* 49, 89-114.

—, and Planalp, S. (1981). Talk and silence sequences in informal conversations, III: Interspeaker influence. *Human Communication Research* 7, 117-132.

Feldstein, S., and Welkowitz, J. (1978). A chronography of conversation: in defense of an objective approach. In *Nonverbal Behavior and Communication*, A. W. Siegman and S. Feldstein (eds.), 329-378. Hillsdale, N.J.: Erlbaum.

Giles, H. (1977). Social psychology and applied linguistics: toward an integrative approach. *ITL: Review of Applied Linguistics* 33, 27-40.

— (1979). Ethnicity markers in speech. In *Social Markers in Speech*, K. R. Scherer and H. Giles (eds.), 251-289. Cambridge: Cambridge University Press.

— (1980). Accommodation theory: some new directions. In *Aspects of Linguistic Behavior*, S. de Silva (ed.), 105-136. York: University of York Press.

—, and Powesland, P. F. (1975). *Speech Style and Social Evaluation*. London: Academic Press.

—, and Smith, P. M. (1979). Accommodation theory: optimal levels of convergence. In *Language and Social Psychology*, H. Giles and R. N. St. Clair (eds.), 45-65. Oxford: Blackwell.

—, Brown, B. L., and Thakerar, J. N. (1981). The effects of speech rate, accent and context on the attribution of a speaker's personality characteristics. Unpublished manuscript, University of Bristol.

Hayes, D. P., and Meltzer, L. (1972). Interpersonal factors based on talkativeness: fact or artifact. *Sociometry* 35, 538-561.

Lay, C. H., and Burron, B. F. (1968). Perception of the personality of the hesitant speaker. *Perceptual and Motor Skills* 26, 951-956.

Matarazzo, J. D., and Wiens, A. N. (1972). *The Interview: Research on its Anatomy and Structure*. Chicago: Aldine.

–, Wiens, A. N., Matarazzo, R. G., and Saslow, G. (1968). Speech and silence behavior in clinical psychotherapy and its laboratory correlates. In *Research in Psychotherapy*, vol. 3, J. Schlien, H. Hunt, J. D. Matarazzo, and C. Savage (eds.), 347-394. Washington, D.C.: American Psychological Association.

Natale, M. (1975a). Convergence of mean vocal intensity in dyadic communication as a function of social desirability. *Journal of Personality and Social Psychology* 32, 790-804.

– (1975b). Social desirability as related to convergence of temporal speech patterns. *Perceptual and Motor Skills* 40, 827-830.

Nisbett, R. E., and Wilson, T. D. (1977). The halo effect: evidence for unconscious alteration of judgement. *Journal of Personality and Social Psychology* 35, 250-256.

Norman, D. A. (1981). Categorization of action slips. *Psychological Review* 88, 1-15.

O'Keefe, B., and Delia, J. (i.p.). Psychological and interactional dimensions of communicative development. In *Recent Advances in Language, Communication and Social Psychology*, H. Giles and R. N. St. Clair (eds.). London: Erlbaum.

Rosenfeld, H. M. (1966). Approval seeking and approval inducing functions of verbal and nonverbal responses in the dyad. *Journal of Personality and Social Psychology* 4, 597-605.

Ryan, E. B. (1979). Why do low prestige language varieties persist? In *Language and Social Psychology*, H. Giles and R. N. St. Clair (eds.), 145-157. Oxford: Blackwell.

Scherer, K. R., London, H., and Wolf, J. (1973). The voice of confidence: paralinguistic cues and audience evaluation. *Journal of Research in Personality* 7, 31-44.

Simard, L., Taylor, D. M., and Giles, H. (1976). Attribution processes and interpersonal accommodation in a bilingual setting. *Language and Speech* 19, 374-387.

Stang, D. J. (1973). Effect of interaction rate on ratings of leadership and likeability. *Journal of Personality and Social Psychology* 27, 405-408.

Street, R. L., Jr. (1982). Evaluation of noncontent speech accommodation. *Language and Communication* 2, 13-31.

–, and Brady, R. M. (1982). Evaluative responses as a function of speaker speech rate, listener rate and context. *Communication Monographs* 49, 290-308.

–, and Giles, H. (1982). Speech accommodation theory: a social cognitive approach to language and speech behavior. In *Social Cognition and Communication*, M. Roloff and C. Berger (eds.). Beverly Hills, Calif.: Sage.

–, Street, N.J., and Van Kleeck, A. (1983). Speech convergence among talkative and reticent three-year-olds. *Language Sciences* 5, 79-96.

Thakerar, J. N., and Giles, H. (1981). They are – so they spoke: noncontent speech stereotypes. *Language and Communication* 1, 255-261.

–, Giles, H., and Cheshire, J. (1982). Psychological and linguistic parameters of speech accommodation theory. In *Advances in the Social Psychology of Language*, C. Fraser and K. R. Scherer (eds.), 205-255. Cambridge: Cambridge University Press.

von Raffler-Engel, W. (1980). The unconscious element in intercultural communication. In *The Social and Psychological Contexts of Language*, R. N. St. Clair and H. Giles (eds.), 101-129. Hillsdale, N.J.: Erlbaum.

Webb, J. T. (1972). Interview synchrony: an investigation of two speech rate measures

in an automated standardized interview. In *Studies in Dyadic Communication*, A. W. Siegman and B. Pope (eds.), 115–133. Oxford: Pergamon.

Welkowitz, J., and Feldstein, S. (1969). Dyadic interactions and induced differences in perceived similarity. *Proceedings of the 77th Annual Convention of the American Psychological Association* 4, 343.

—, and Feldstein, S. (1970). Relation of experimentally manipulated perception and psychological differentiation to the temporal patterning of conversation. *Proceedings of the 78th Annual Convention of the American Psychological Association* 5, 387–388.