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ABSTRACT

A study tested paths predicted by Communication Accommodation Theory (CAT) in the context of interactions between 105 Chinese and 283 Anglo-Australian students and 98 academic staff in situations of potential conflict. Videotapes of student-lecturer interactions in which speakers accommodated, over-accommodated, or under-accommodated were rated by ingroup and outgroup students and staff members on non-verbal behavior, appropriateness of behavior, motives, and evaluations of the speakers as people. Results of path analyses indicated general support for the relationships proposed by CAT, in that accommodating behavior was labelled more positively and resulted in more positive evaluations of speakers. Ratings of non-verbal behavior were overwhelmingly determined by actual behavior; in turn, they predicted the way behavior was labelled, which finally predicted ratings of solidarity and, to a lesser extent, power evaluations. In general, however, the ethnicity and sex of the speaker were not strong influences on perceptions or evaluations. (Two figures of data are included and 18 references are attached.) (Author/SR)

Communication Accommodation between Chinese and Australian Students and Academic Staff

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Abstract

This paper presents a test of paths predicted by Communication Accommodation Theory in the context of interactions between Chinese and Anglo-Australian students and academic staff in situations of potential conflict. Videotapes of student-lecturer interactions in which speakers accommodated, over-accommodated, or under-accommodated were rated by ingroup and outgroup members of students and staff on non-verbal behaviour, appropriateness of behaviour, motives, and evaluations of the speakers as people. Results of path analyses indicated general support for the relationships proposed by CAT, in that accommodating behaviour was labelled more positively and resulted in more positive evaluations of speakers. Ratings of non-verbal behaviour were overwhelmingly determined by actual behaviour; in turn, they predicted the way behaviour was labelled, which finally predicted ratings of solidarity and, to a lesser extent, power evaluations. In general, however, the ethnicity and sex of the speaker were not strong influences on perceptions or evaluations.

Communication Accommodation between Chinese and Australian Students and Academic Staff

Universities and colleges in Australia, like those in other countries, have in recent years been actively involved in enrolling students from overseas. Numbers have increased especially in the past five years, as a result of educational policy changes. Today, overseas students constitute about four percent of the total college and university student population. Chinese ethnic students, particularly those from southeast Asian countries, have become the largest single ethnic group of overseas students in this country. An understanding of communication problems and issues involving these students has therefore become an important area for study. In this paper, we present part of a project we are conducting on communication issues between Chinese students, Australian students, and Australian academic staff in the university setting.

Many studies have surveyed the academic and cultural problems experienced by overseas students, in Australia and elsewhere (e.g., see Bradley & Bradley, 1984; Furnham & Bochner, 1986; Kim, 1988). It is now well-recognised that overseas students experience problems related to their English language proficiency, as well as to their ability to cope with the educational system in the host country and the new culture in general. Many foreign students have identified difficulties in understanding formal communication, fluency, and expressing opinions and disagreements. In contrast, communication problems related to differences in non-verbal and conversational strategies, as well as more subtle conversational rules, have been studied less extensively. Indeed, the problems experienced by overseas students are often attributed to problems with English, even when the students are fluent English speakers (or native speakers, as are Singaporean and many Hong Kong Chinese students). In this project, we have concentrated on communication difficulties which are not due to lack of fluency in English.

Communication Accommodation Theory (CAT) seems especially suited to studying the types of problems described in the preceding paragraphs. CAT first emerged as Speech Accommodation Theory in the early 1970's (Giles, 1973) with a focus on speech convergence and divergence, or approximation, where speakers attune their speech behaviour to become more similar or more different to that of another interactant (see Giles, Mulac, Bradac & Johnson, 1987). The theory proposed an explanation of the cognitive and affective processes underlining convergence and divergence, together with making predictions about how speech convergence and divergence are evaluated. More recently, CAT has been revised and expanded in two ways. Coupland, Coupland, Giles, and Henwood (1988) proposed three additional communicative strategies: interpretability, where the speaker attends to the other person's interpretive competence or ability to understand, discourse management, where speakers judge and respond to the conversational needs of their partners, and interpersonal control, where speakers attend to their role relations.

In addition, the different elements of the theory have been integrated into a larger model of the communication process (see Giles & Coupland, 1991). The expanded model proposes that speakers enter an interaction with an initial orientation based on their personal and social identity, which is based in part on their dependence on and solidarity with their social groups (Gallois, Franklyn-Stokes, Giles, & Coupland, 1988). A speaker's initial orientation is also affected by a sense of the vitality of the speaker's group, which includes the status and demography of the group, together with the level of institutional

support for the language and culture of the group (Giles, Bourhis, & Taylor, 1977). The initial orientation of speakers determines whether speakers view an interaction as high intergroup, high interpersonal, high on both dimensions, or low on both dimensions. Moreover, the initial orientation of speakers also determines their interpersonal goals within an interaction.

The goals of speakers, together with their initial orientation, determine the addressee focus the speakers adopt. Addressee focus refers to the aspect of the other person's communication which is attended to. For example, the speaker can focus on the actual or perceived behaviour of the other person, or on the other person's receptive skills (Coupland et al,, 1988). The addressee focus of the speaker in turn determines which communicative strategies speakers choose to enact.

CAT also proposes that speakers label each other's behaviour (as accommodative, over-accommodative, under-accommodative, or counter-accommodative; see Giles & Coupland, 1991), as well as making attributions about the behaviour of the other person. These decoding processes then affect the orientation and addressee focus of the speaker, resulting in possible changes within an interaction of the communication strategies being enacted. At the conclusion of the interaction, speakers make evaluations of the other speaker as a person, which are influenced by initial orientation as well as by events within the interaction.

While recent versions of CAT have tended to be construed as taxonomic, in fact the model is predictive, as it proposes a path through an interaction, beginning with the initial orientation of interactants and ending with their evaluations of each other. The model describes and predicts the behaviour of participants in an interaction. In this paper, however, we present the reactions of observers of interactions between Chinese and Australian students and staff, in terms of several sets of variables: actual behaviour and group memberships of the interactants, behaviour as perceived by observers, labelling and attributions about the behaviour, and evaluations of the interactants as people.

To date, there has been extensive research on some parts of the CAT model, in particular initial orientation, approximation strategies, and evaluations (see Giles & Coupland, 1991, for a recent review). Tests of CAT have usually supported the theory, although reformulations have occurred. For example, Giles and Johnson (1987) reported that among Welsh speakers, high subjective ELV was associated with greater linguistic differentiation among those who identified less strongly with their ingroup, but for those who identified strongly with their group, low vitality was associated with greater language differentiation. Other aspects of initial orientation have also been found to predict speech behaviour: Guimond and Dubé-Simard (1983) found that feelings of fraternal deprivation among French-Canadians were associated with greater support of the ingroup language. Feelings of relative deprivation can also be a significant predictor of ethnic attitudes.

Turning to the relationship between other stages of the model, one of the most consistent findings is that convergence results in positive reactions by speakers and is rated highly on traits related to social attractiveness and solidarity (e.g., Gallois & Callan, 1988). Giles, Taylor, and Bourhis, (1973) showed, however, the importance of attributions in determining how convergence is evaluated, finding that the greater the amount of effort a speaker was perceived to have put into converging, the more favourably the speaker was perceived. Moreover, Simard, Taylor, and Giles (1976) found that convergence is evaluated favourably only when it is internally attributed, rather than to situational pressures forcing the speaker to converge.

There has been little research on CAT that has tested the relationship between more than two stages of the model. The aim of this study was to measure the relationships among three stages: speakers' behaviour, labelling and attributions, and evaluations of speakers. Subjects described the non-verbal behaviour of speakers in videotaped interactions between a lecturer and a student, whose behaviour varied: first, a rule-following and accommodative style; second, a non-accommodative style that still adhered to universal norms about politeness; and, third, a non-accommodative style that was also rule-violating. We then looked at the attributions subjects made for the behaviour of the lecturer and the student, using both internal (e.g., personality) and external (e.g., the kind of situation) attributions. We also looked at how subjects labelled the behaviour of the lecturer and the student in terms of its overall appropriateness and the respect and cooperation each person showed. Finally, we examined the evaluations subjects made of the speakers on status and solidarity, two dimensions frequently used in speech evaluation research.

On the basis of the results from another part of this project (Jones, Gallois, Barker, & Callan, 1991), we decided to examine the relationships among the three stages. We did not make specific predictions, as explorations of the path predicted by CAT are still few. Our main interest was in testing the mediating role of labelling and attributions between behaviour and evaluations, as well as the role of the initial characteristics of speakers in determining perceptions. Gallois and Callan (1988) found that non-vocal behaviour (smiling, gaze) was the best predictor of solidarity ratings, while vocal behaviour was the best predictor of status ratings; we expected that our results would be similar. Finally, we expected that non-accommodative non-verbal behaviour attributed internally would result in lower solidarity ratings, but possibly in higher status ratings (see Gallois et al., 1988).

Method

Subjects

There were three groups of subjects. The first group were 119 male and 164 female first-year psychology students, who were given course credit for participating. These students were all of Anglo-Australian ethnic background, with Australian-born parents and grandparents. The mean ages for male and female students were 20.8 years and 19.83 years, respectively. The second group were 54 male and 44 female academic staff members from three Queensland tertiary institutions. These people came from a number of departments which have varying degrees of contact with overseas students. The mean ages for male and female staff members were 41.35 years and 37.53 years, respectively. The third group of subjects were 54 male and 51 female students of Chinese ethnic background, who were enrolled at tertiary institutions in Southeast Queensland. These students came from Singapore, Hong Kong, or Malaysia. The mean ages for male and female students were 21.17 years and 21.45 years, respectively.

Materials

Videotapes. Two scripts were used for the videotapes: a student consulting a lecturer for advice about an assignment, and a student consulting a lecturer to discuss the poor mark he or she had received for an assignment. Five different versions of each script were prepared, in which both the verbal and the non-verbal behaviour of the lecturer and the student varied. In the first version (student under-accommodating), the student

behaved in a passive style. The student was polite, submissive, spoke softly, and made little eye contact with the lecturer. The student was apologetic and ashamed of his or her problem. While this behaviour is appropriate for student-lecturer encounters in Chinese ethnic groups, it is seen as too passive, although still polite, in Australia. In the second version (student over-accommodating), the student was aggressive and outraged by the assignment or his or her low grade. The student addressed the lecturer by first name, interrupted often, leant close to the lecturer, used a lot of eye contact and spoke loudly. This behaviour is relatively common among Australian students, but violates social rules about politeness and respect for lecturers, because the student assumes too much of the lecturer's power. In both these versions, the lecturer behaved in the same manner used in the third version.

In the third version (accommodating), both the lecturer and the student behaved in a norm-following manner. They were assertive in their behaviour, maintained eye contact without staring, spoke with moderate volume and pitch, and used some smiles and nods. This behaviour was scripted to follow Australian norms in this situation as closely as possible.

In the fourth version (lecturer under-accommodating), the lecturer was cold and unhelpful, and very negative about students in general. The lecturer made little eye contact and did not smile. He or she made no effort to help the student, acted very busy and distracted, and tried to dismiss the student as quickly as possible. In the fifth version (lecturer over-accommodating), the lecturer was overhelpful and condescending. The lecturer spoke slowly and carefully and was effusively warm. In both versions four and five, the student behaved in the same manner used in version three.

Altogether, forty videotapes were prepared. Twenty interactions were between a male lecturer and a male student of either Australian (10 interactions) or Chinese (10 interactions) ethnic background. A corresponding set of 20 interactions were between a female lecturer and a female student of either Australian or Chinese ethnic background. The 20 interactions consisted of each of the five versions of the two scripts being role-played by a lecturer with both an Australian and a Chinese student. For each role (lecturer, Australian and Chinese student), there were two males and two females acting as stimulus persons. Chinese actors were fluent in English and had spent several years in Australia as students, but they spoke with a distinct Chinese-influenced accent. Australian actors were native-born Australians of Anglo-Celtic ethnic background. All student actors were students, while lecturer actors were either University academic staff members or professional actors. All actors dressed in the types of clothing common to students or lecturers in universities in Brisbane. Actors were counterbalanced across the different versions of each script.

The stimulus interactions were set in the lecturer's office, with the lecturer seated at a desk. Each scene began with the student knocking and entering the office. As the interaction continued, the student sat down in a chair beside the desk. Each scene consisted of about a minute's interaction, and included two or three camera shots. Actors were rehearsed to speak and act similarly in the same version of the scripts, and they imitated each other's non-verbal behaviour in order to do so.

Questionnaire. The questionnaire subjects completed was in three parts. The first two parts consisted of a series of background questions measuring the initial orientation of the subjects and a measure of the ethnolinguistic vitality of Australian and Chinese students. Results from the third part provided the measures used to test the CAT model.

In this part, using 6-point bipolar scales (1 = too little to 6 = too much), subjects rated nine aspects of the non-verbal behaviour of the lecturer and the student. Items included five vocal behaviours (pitch, volume, speed, tenseness, and complexity), and 4 non-vocal behaviours (smiling, gazing, gestures, and posture). Two scales were devised using these items, a vocal and a non-vocal scale, which had reliabilities of .70 and .63, respectively; the item about the complexity of the speaker's voice was dropped from the vocal scale, as it reduced reliability significantly. These scales were used as measures of subjects' descriptions of the vocal and non-vocal behaviour of the speakers.

Subjects then rated the importance of 10 attributions for the behaviour of the student, and nine attributions for the behaviour of the lecturer, using 6-point scales (1 = not at all important to 6 = very important). One of the attributions used to rate the student's behaviour, 'the correct way to act in the student's home country,' was inappropriate for use with lecturers. The list of attributions included five general attributions (personality, knowledge, confidence, effort, and the kind of situation), with the remaining attributions being more specific to the situation (for example, the student's wish to get a better mark). The five general attributions were pooled to make an attribution scale, which had a reliability of .64. In forming this scale, scores for internal attributions were reflected, so that high scores measured more external attributions. The scale was labelled external attribution.

Next were five questions that labelled the person's behaviour in terms of the amount of respect shown, how helpful the student found the lecturer, to what extent the person's goals were achieved, how reasonable the person's goals were, and the likely future behaviour of the person. Subjects rated the lecturer and the student on each question using a 6-point scale (1 = not at all to 6 = very much). These questions formed a scale labelled social cooperation with a reliability of .80. Subjects also rated the overall appropriateness of the lecturer's and the student's behaviour on a 6-point scale (1 = very inappropriate to 6 = very appropriate). The attribution and labelling scales, together with the measure of overall appropriateness, represented the decoding part of the model. Scale scores for each subject were devised by calculating mean scores for the items on each scale.

Finally, subjects rated the lecturer and the student on 14 personality characteristics: easy to understand, successful, kind, I would like as a friend, good, trustworthy, helpful, intelligent, hardworking, aggressive, powerful, dominant, in control of the situation, and I would respect this person. These have all been associated in previous research with status or solidarity. Subjects rated the lecturer and the student on each characteristic, using 6-point scales (1 = not at all to 6 = extremely). A principal-axis factor analysis with varimax rotation produced a two-factor solution which explained 61% of the variance in the ratings. Ten characteristics, explaining 42% of the variance, formed a solidarity dimension. The remaining four characteristics (aggressive, powerful, dominant, in control of the situation), explaining 19% of the variance, represented a power or status dimension. Characteristics that loaded highly on each of the dimensions were summed and a mean taken to form scale scores for each subject. The two scale scores formed, power and solidarity, had reliabilities of .82 and .92, respectively; they represented the evaluation part of the model.

Procedure

Subjects were told that the researchers were interested in their evaluations of interactions between students and lecturers. They began by completing the background information questionnaire. Half the subjects then completed the vitality questionnaire before watching the videotapes; the remaining subjects completed the vitality questionnaire after viewing the videotapes. Subjects watched two videotapes, each of which was played twice. After seeing a videotape for the first time, subjects completed the items rating the non-verbal and overall behaviour of the student and the lecturer. After viewing the tape again, they completed the remainder of the questionnaire, including the ratings of personality characteristics. Each subject saw one videotape of an Australian student and one videotape of a Chinese student, either both male or both female, interacting with a same-sex lecturer. The videotapes contained the same version but a different script (either the assignment query or the low grade). Order of presentation of the script and the ethnicity of the student were counterbalanced across subjects.

Results

Separate three-phase path analyses were conducted for ratings of lecturer actors and student actors, using multiple regression analyses (SPSS-X). The path analysis was conducted phase by phase, and hierarchical regression was used to test the influence of indirect paths. All results reported as significant met the criterion of $p < .01$. Figure 1 presents the significant path coefficients (beta weights) for students, while Figure 2 presents the same information for lecturers.

Insert Figures 1 and 2 about here

In the first phase, actor sex, ethnicity of the student actor, and version (accommodative behaviour) were used to predict ratings of vocal and non-vocal behaviour. The value assigned to each version was based on the premise that aggression would be seen as less appropriate than non-assertion, as they are more rule-violating, and that non-accommodating styles would be evaluated less positively than accommodation. Thus, for the analysis for students, the aggressive student version was assigned a value of 1, the passive student 2, and the accommodating student 3. In the analysis for lecturers, the aggressive under-accommodating lecturer was assigned a value of 1, the patronising over-accommodating lecturer 2, and the accommodating lecturer 3. It should be noted that, while the behaviour of lecturer and student actors in the accommodating version was matched, non-accommodating behaviour was different for lecturers and students, as it was scripted within their roles.

For students, actor sex and version were significant predictors of vocal behaviour. The multiple correlation was significant and R^2 indicated that these variables explained 25% of the variance. The relationship was negative for both variables. Thus, males were more likely to be rated as having too animated (i.e., too loud, too tense, too fast, etc.) vocal behaviour. Moreover, the more rule-violating and less accommodative a student behaviour was, the more the student was seen as using too animated vocal behaviour. Actor sex and version were not significant predictors of students' non-vocal behaviour. On the other hand, actor sex and version significantly predicted both vocal and non-vocal behaviour for lecturers, explaining 17% and 14% of the variance, respectively. Again, the

relationship between version and vocal behaviour was negative. The relationship between version and non-vocal behaviour was positive, however, suggesting that accommodating lecturers were seen as using more animated non-vocal behaviour (i.e., more smiling, gaze, etc.). Sex of lecturer was not a significant predictor of either vocal or non-vocal behaviour.

In the second phase of the path analysis, the two non-verbal behaviour scales were used to predict ratings on the external attribution scale, the social cooperation scale, and the overall appropriateness of the speaker's behaviour. Actor ethnicity, actor sex, and version were then entered as the second step of the hierarchical regression to check for indirect paths. Indirect paths are only reported here when the increment in explained variance was significant at $p < .01$. Path coefficients for students and lecturers in this phase are presented in Figures 1 and 2.

Vocal behaviour was a significant predictor of all three scores for both students and lecturers. More animated vocal behaviour was more internally attributed, and was seen as less appropriate and less socially cooperative. More animated non-vocal behaviour was rated as more appropriate for both students and lecturers; it was also attributed more externally for students and rated higher on social cooperation for lecturers. The variance explained by the direct paths was relatively low, particularly for students (social cooperation: 18 percent; appropriateness: 14 percent; external attributions: 2 percent), but also for lecturers (social cooperation: 31 percent; appropriateness: 20 percent; external attributions: 5 percent). This was especially so where attributions were concerned.

Significant indirect paths appeared between version and all three scales for both students and lecturers, after the two non-verbal behaviour scales had been entered into the equation. These resulted from fairly large increments in explained variance in the model for students on social cooperation (increment of 32 percent) and appropriateness (increment of 17 percent), but a smaller increment for external attributions (5 percent). Increments in the model for lecturers showed the same pattern, but were smaller (social cooperation: increment of 7 percent; appropriateness: increment of 9 percent; external attributions: increment of 2 percent). More accommodative behaviour was related to more internal attributions and higher ratings on the appropriateness and social cooperation scales. Actor sex was also a significant predictor of appropriateness for students, with females receiving higher scores on the appropriateness scale. Finally, actor ethnicity was positively related to the appropriateness scale for students.

In the final stage of the path analysis, the three labelling and attribution scales were initially entered to predict solidarity and power ratings for students and lecturers. These were followed by the vocal and non-vocal scales, and version and actor sex were entered last. The path coefficients for students and lecturers are again reported in Figures 1 and 2. For solidarity, behaviour appropriateness and social cooperation were significant predictors for both students and lecturers, explaining 44 and 66 percent of the variance, respectively. Behaviour labelled as more appropriate and more socially cooperative received higher ratings for solidarity. In addition, more internal attributions were related to higher solidarity ratings for students. Indirect paths added small increments of 2 percent of the explained variance for both students and lecturers. There was a negative path between vocal behaviour and solidarity for both students and lecturers; the more (aggressively) animated vocal behaviour speakers were seen to use, the lower they were rated on solidarity. Overall, the measures were good predictors of solidarity ratings for both students and lecturers.

For power, direct paths used explained substantially less of the variance for both students (4 percent) and lecturers (8 percent). In addition, there were fewer significant paths between the predictors and power ratings. The only direct path for students was a negative relationship between appropriateness and power; for lecturers, there was an additional negative relationship between social cooperation and power. Thus, the less appropriate the behaviour of speakers was rated (and the less cooperative lecturers were seen to be), the higher the ratings on power. There were several indirect paths, however, resulting in increments of explained variance of 23 percent for students and 4 percent for lecturers. More animated vocal behaviour was related to higher power ratings for both students and lecturers. While non-vocal behaviour was a significant predictor of power for both students and lecturers, more animated non-vocal behaviour resulted in higher power ratings for students, but lower power ratings for lecturers. Finally, for students, version was a significant predictor of power ratings. The less accommodative and the more rule-violating a person's behaviour was, the higher the person was rated on power.

Discussion

Overall, the results of this study support the predictions of the CAT model, although there was stronger support for predictors of solidarity than power. Thus, our findings are in line with those of Gallois and Callan (1988). In addition, the CAT model was a better predictor of power ratings for students than for lecturers. It may be that perceived power is strongly related to a person's role, to the extent that a high-status role may be a better predictor of perceived power than a person's behaviour.

These results also shed light on the nature of the relationships between different parts of the model. Each stage of the model significantly predicted the next stage, but there were notable differences in the strength of predictors, and there were a number of indirect paths. As expected, version (in which the accommodative behaviour of the actors was manipulated by the researchers) was a strong predictor of perceived behaviour, both vocal and non-vocal. The more an actor used an accommodating type of behaviour, the more the behaviour was rated as animated on the non-vocal channel, and the less so on the vocal channel. These ratings take on meaning as the path analysis is examined further (see below).

Sex was a predictor of perceived vocal behaviour only for students, and the ethnic group membership of the student actor did not predict perceived behaviour at all. Thus, it appears that observers were in general able to "look past" the group memberships of actors and observe what the actors actually did. This result is in accord with previous research on CAT in more interpersonal situations, which these may well have been with respect to sex (they were all same-sex interactions) and ethnic group (ethnicity was not stressed). Future research should examine the path between actual and perceived behaviour as it is influenced by these variables in more intergroup-salient situations.

At this point, it is not possible to determine definitively whether the weak tendency to rate male student actors relative to females as louder, tenser, more high-pitched, and so forth, reflects a bias on the part of observers. Actors' behaviour was carefully controlled, but it is still possible that this control may have been inadequate in some way; future research should examine this issue further (preferably with synthesised or resynthesised speech). In any case, it appears that actual behaviour, rather than characteristics of the actors, was the strongest predictor of perceived behaviour in these interactions. Thus, the results lend some support to cross-cultural adaptation models (e.g., Kim, 1988), in that

students who behaved in the same way were perceived to have done so, regardless of whether they were Chinese or Australian.

When the labelling and attribution measures are considered, the kinds of relationships predicted by CAT tended to emerge. First, vocal behaviour was a significant predictor of all three measures, with louder, faster, tenser voices being labelled more negatively and attributed more to the person. Weaker but expected relationships appeared for non-vocal behaviour, with more animated behaviour being rated as more appropriate and as due more to external factors. Thus, the loud, tense, fast, high-pitched speech of the more aggressive versions received negative labels, while friendlier non-vocal behaviour received more positive ratings. It should be noted that the relationship between version and labelling was not entirely mediated by behaviour, which indicates that behaviour not measured in this study (in particular, verbal behaviour) also played an important role in labelling. More interesting for our purposes is that actor sex and ethnicity contributed only very weakly to labelling and attributions, and female and Chinese student actors were rated as more appropriate. Again, the reason for these effects is not clear at this stage; it is likely, however, to be related to positive prejudice on the part of subjects (most of whom were Australians).

Finally, the way behaviour was labelled predicted evaluations of the speaker, especially those related to solidarity. All three measures of labelling and attributions predicted solidarity for students, although the externality scale was a weaker predictor. It should be noted that CAT proposes that internality of attributions interacts with other aspects of labelling to influence evaluations. Thus, positively-perceived behaviour that is attributed internally to the person should result in particularly positive ratings on solidarity, while negatively-labelled but internally-attributed behaviour should result in low solidarity ratings (see Giles & Johnson, 1987; see also Gallois et al., 1988). At this point, we have not examined the attributions made by subjects as they interact with other labels, which may explain the weak influence of attributions on solidarity and power ratings. As can be seen from Figures 1 and 2, however, the other labels predicted solidarity ratings very strongly for both students and lecturers. Social cooperation was the strongest predictor of solidarity ratings. The only other predictor of solidarity was vocal behaviour, where less animated vocal behaviour led to higher solidarity ratings. Again, this suggests that aspects of vocal behaviour not captured by the labels we measured also influenced impressions of solidarity.

The only scale from the labelling and attributions stage to predict power was appropriateness, and the relationship was negative for both lecturers and students, suggesting that the power dimension was indeed a measure of power or dominance. There was also a direct positive relationship between vocal behaviour and power, which supports previous research (Gallois & Callan, 1988). The difference between lecturers and students in the direction of the relationship between non-vocal behaviour and power probably reflects both the different versions used for students and lecturers in this study and the difference in status between lecturers and students. This result must be interpreted with caution, as it was unpredicted and is the only one in which a different direction appeared for students and lecturers.

In any case, evaluations of power may not fit as well into the CAT framework as do evaluations in terms of solidarity. Power is closely related to the extent to which a speaker is threatening, and threat has often been shown to be paradoxically related to social identity considerations, including accommodative behaviour (see Giles & Coupland, 1991; Giles & Johnson, 1987). Although power has often been used as a measure of

evaluations in past research, it may be that other aspects of evaluation are more appropriate dependent variables in tests of the CAT model.

It is interesting that neither actor sex or actor ethnicity were strong predictors at any stage of the model. We intend to explore the paths predicted by CAT in more detail with respect to the initial orientation of the observers, and this may well produce stronger effects for ethnicity. At present, however, the results suggest that observers in this study viewed the actors more as students or lecturers than as people of a particular sex or ethnic group. Supplementary analyses indicate that this was the case even for the most rule-violating condition, the aggressive student. It may mean that students and lecturers in Australia are coming to grips to some extent with the increasingly multi-cultural nature of the campus. Future research will show whether this conclusion holds up for behaviour in real interactions between Chinese and Australian students and staff.

There are a number of limitations to this study. First, the measures themselves may have missed important influences on evaluations. In addition, the measures we took did not capture the behavioural strategies proposed by Coupland et al. (1988) in a precise way (in another part of this project, research by Mavor, 1991, suggests that these strategies do predict evaluations of behaviour). Secondly, we have used the ratings of observers, rather than the ratings of interactants themselves. As research has shown that observers and interactants differ in the evaluations they make of interactions (see, for example, Street, 1986; Street, Mulac, & Wiemann, 1988), it is important that researchers test the relationships between the stages for actual interactants. We are doing this in another part of this project. Finally, we have focused on only some parts of the CAT model, and we have assumed a strict path model where a less constrained model may be more appropriate. It will be valuable in future research to develop CAT and explore its potential more fully.

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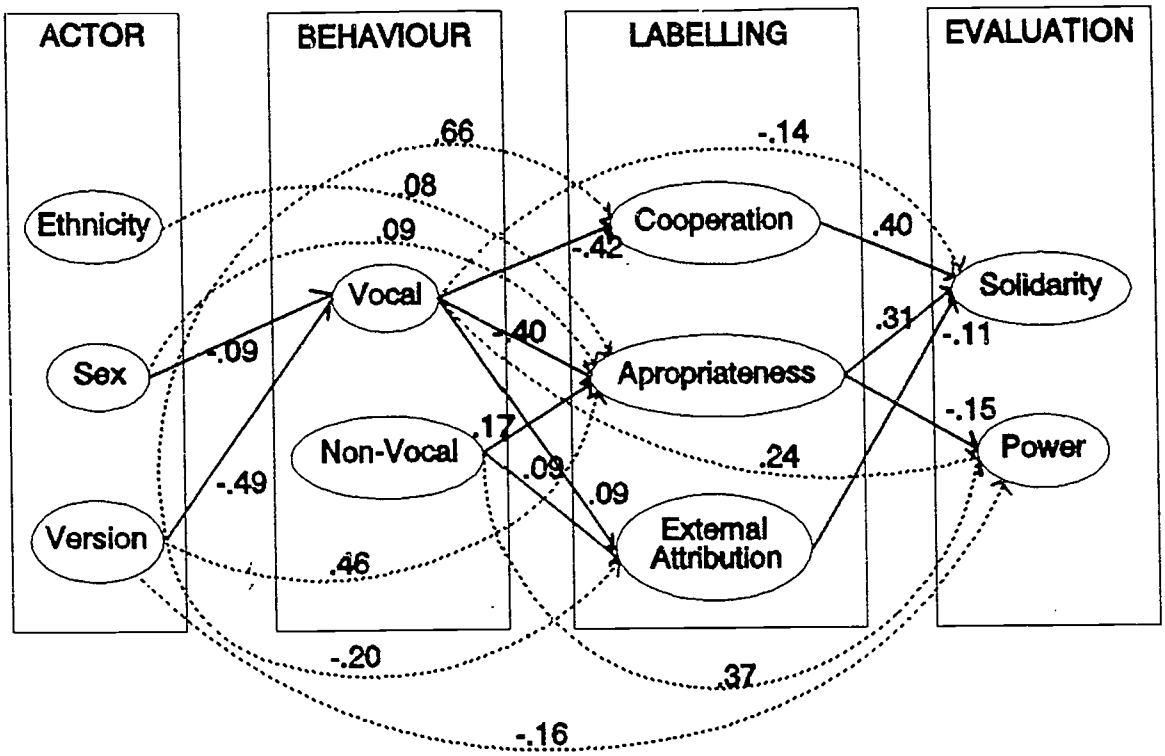
Figure 1. Paths for Students



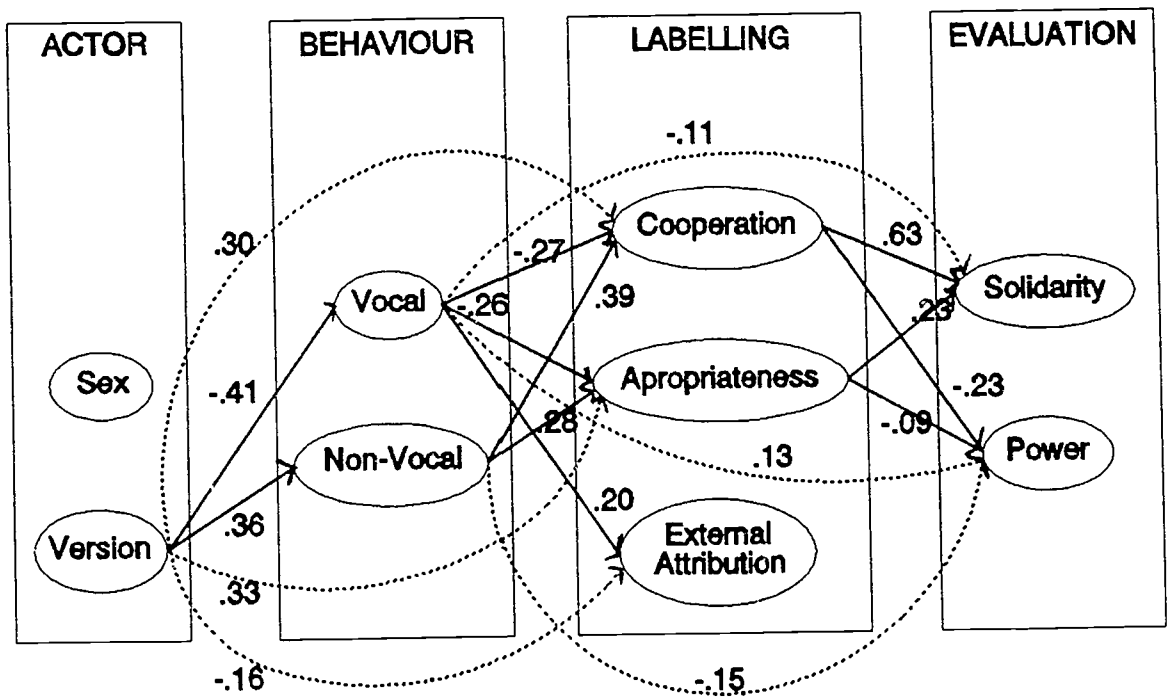


Figure 2. Paths for Lecturers