Dominance and deference in conversation

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Nonhuman primates form status hierarchies that are established and maintained through exchanges of dominance and deference actions. Do similar mechanisms operate among humans, whose primary face-to-face interaction is through polite conversation? Three experiments address this question. In the first, dyads formed of a professor and a student are asked to converse so that styles of conversation can be compared. Here a person of established high status uses more dominant conversational signs than someone of low status. In the second experiment, dyads formed of two students are asked to converse and afterward to participate in a cooperative decision-making task. The dyad partner who uses more dominant actions in the conversation is also more influential in the decision task. In the third experiment, dyads formed of a student subject and a student confederate of the experimenter are asked to converse and afterward to participate in a decision-making task. The confederate speaks dominantly to half of the subjects and deferentially to the others. Subjects paired with the deferent-speaking confederate act the high-status conversational role that is thrust at them, but they accept the confederate's influence in the decision task. Subjects paired with the dominant-speaking confederate do not accept low status, but instead compete with the confederate. These experiments show that ordinary conversation is affected by status signalling in a manner consistent with the general primate pattern.

Introduction

Primates of virtually all species that have been studied, including humans, form status hierarchies in their face-to-face groups (Mazur, 1973, 1985). Thus, group members are fairly consistently ranked such that higher status individuals have more power, influence, and valued prerogatives than lower ranked members. Among nonhuman primates, the status hierarchy is established and maintained during ordinary interaction through an exchange of dominance and deference acts. For example, an individual may assert dominance by staring, sexual mounting, strutting, or lunging; and the recipient of this action may defer by adverting his eyes, presenting for mounting, crouching, or running away. In newly-formed primate groups, individuals who act dominantly usually attain high status, either because the others cede it or because dominant actors win it from challengers.

Humans—especially adolescents—sometimes vie for status through overt competitions like staredowns, shouting matches, and physical combat. Such blatant dominance contests are less frequent among adults, especially in polite society where conversation is the most important means of communication. Is ordinary conversation rife with
dominance and deference actions, serving as a medium for allocating status in human groups, as we might expect from analogy with other primate species?

The words of a conversation may carry lexical meaning indicating that the speaker (or listener) is a high or low status person (‘I came, I saw, I conquered’, vs. ‘I am the dust beneath your feet’). We can understand these meanings only by knowing the language. Conversations also carry information in their form and action—apart from the particular string of words—so that we sometimes recognize the relative status of conversing foreigners even though we do not understand their speech. Perhaps these features of form and action, independent of grammar or lexicon, are themselves signs of dominance or deference, indicating which of the participants has control of the interaction. They include the introduction and ending of segments of conversation, control of turn taking, and the tones and gestures that accompany speech. Such nonlexical signs of control may combine with the words actually spoken to reflect or impose status differences between the speakers (Derber, 1979; Mazur, Rosa, Faupel, Heller, Leen & Thurman, 1980; Brinkerhoff & Booth, 1981; Molotch & Boden, 1985; Ridgeway, Berger & Smith, 1985).

**Experimental strategy**

Three experiments are reported here, each addressed to a major question raised by this primate perspective on status. First, do people of established high status display more conversational signs of dominance than those of low status, consistent with the primate pattern? To answer this, dyads formed of a professor and a student were asked to converse so that their styles of speech could be compared.

Second, among people who are not initially differentiated in status, do those who take more dominant conversational actions tend to become more influential than those who use deferent signs? To answer this, dyads formed of two students, without apparent status differences, were first asked to converse and afterward to participate in a cooperative decision-making task. Degree of dominance in the conversation was used to predict influence in the decision-making task.

Third, can conversational rules be manipulated in order to thrust people into high or low status positions? To answer this, dyads formed of a naive student subject and a student confederate of the experimenter were asked to converse. The confederate spoke with dominant signs to half of the naive subjects and with deferent signs to the other half. After the conversation, the subject and confederate participated in a cooperative decision-making task. The confederate's degree of influence on the naive subject in this task could then be compared between the dominant and deferent conversation treatments.

All experiments were run in a laboratory setting. Student subjects were paid, professor subjects volunteered. The subjects in each dyad were seated across a table about three feet wide, their view of one another blocked by a portable screen on the table. They were asked to converse about any topic they chose. The experimenter removed the screen to start the conversation and replaced it some minutes later to end the talk. Each conversation was videotaped for later coding.

Most dyads were then asked to cooperate in making a series of decisions, and they were given a version of Berger's standard ICOM task (Berger, Fisek & Conner, 1974), which provides a convenient measure of influence in a cooperative decision-making situation. Still seated at the table, with the screen again in place, subjects were shown 23 slides, each containing two black-and-white geometric patterns, and asked to choose the pattern in each pair that had the greater white area. (The slides are standardized so that
subjects are equally likely to pick either pattern.) After subjects made an initial choice, which they entered on a switchbox given to them for that purpose, light on their switchboxes informed them of their partner's choice. They were then asked to make a second (final) choice, again entered on their switchboxes. In fact the switchboxes were rigged so that for 15 of the 23 trials, subjects were told that their partner's choice was different from their own. Thus, they were put in a situation where their final choice could be influenced by their partner's disagreement. The number of trials on which a subject changed his mind (from 0 to 15) is assumed to measure the degree to which he was influenced by his partner. Since having high status implies being influential, and having low status implies being influenceable, the number of changes is a measure of status. Upon completion of the tasks, subjects were fully debriefed. Few subjects suspected deception in the ICOM task, and none were eliminated from the analysis for this reason.

**Conversational variables**

Several nonlexical features of the conversation were coded from videotapes as potential signs of dominance or deference. Usually these were based on an appraisal of who was in control of the conversation, displaying the power, influence, and prerogatives of high status.

*First substantive speech* The person who made the first substantive speech, thus directing the opening of the conversation, was scored as dominant on this indicator, and his partner was scored deferent. Coders did not count as substantive speech the 'empty' brief ritual greetings ('Hi' or 'My name is ...') that normally open a conversation since they do not introduce topics. The first remark after these ritual greetings was noted as the opening substantive speech. Two independent coders scored the 32 dyads, disagreeing in only one case which was counted a tie.

*Most topics* Conversation moves through a series of major topics. In our setting, the first major topic was often 'who are you?', in which each person tells the other about himself including where he lives, his academic field, etc. Subsequent topics were diverse. Sometimes the boundary between topics is clearly marked by a long pause, or by a distinct statement or question that leads the dyad in a new direction. Sometimes topics evolve from one to another in a barely perceptible manner. The number of clearly-begun new topics ranged from two to seven during the first three minutes of conversation. The dyad member initiating the most successful topics was scored dominant because he was controlling the substance of the conversation, while the other member was scored deferent. Only successfully introduced initiations were scored, so a topic had to last at least five seconds and be addressed by each speaker for at least two turns before it was counted. This is the most difficult variable to code since the designation of 'major topics' is somewhat arbitrary. Two independent coders initially agreed on their choice of the dominant and deferent partner for 70% of the dyads, and they reached agreement after simple reconciliations on another 20%. The remaining 10% of dyads, on which they disagreed, were scored as ties.

*Talking time* In groups of three or more members, high status people talk more than low status people (Bales, 1951; Reynolds, 1980). However, this relationship may not hold in the special
case of dyads where it is difficult for the low status partner to withdraw from conversation, as he can in a larger group (Lamb, 1981; Kollock, Blumstein & Schwartz, 1985) Each speaker's talking time during the first three minutes of conversation was measured by two independent coders, who agreed to within six seconds 74% of the time. When the timing of coders differed by more than six seconds, the speaker was retimed until that criterion was achieved. The dyad partner with the longest mean talking time was scored dominant and the other deferent. If the measured difference between partners was less than six seconds, they were regarded as tied.

Thirty-second impression When strangers who are not initially differentiated on status are formed into small groups, a status hierarchy often emerges very quickly, sometimes within the first seconds of interaction (Fisek & Ofshe, 1970; Lamb, 1981). The reasons for this rapid differentiation are not well understood. It may involve the opening exchange of verbal and nonverbal gestures (Rosa & Mazur, 1979; Lee & Ofshe, 1981), or it may be partly based on the fact that some people simply look more dominant than others in face and physique, which aids them in attaining high status (Keating, Mazur & Segall, 1981; Mazur, Mazur & Keating, 1984). For the second experiment only, three naive judges viewed the first 30 seconds of each conversation on a split-screen television, which presents a front view of both members of the dyad simultaneously. The judges were asked to guess, based on subjects' actions and physical appearance, which one would become the leader and be the most influential of the two if they stayed together over an extended period. The three judges were in complete agreement on 40% of the dyads. Failing unanimity, the dyad member who received the most votes was scored dominant. Two dyads in which one or more judges could not pick a dominant partner were scored as tied.

Conversational control Since confederates manipulated most of the above variables in the third experiment, these were no longer useful for measuring conversational dominance. In that experiment only, three experienced judges viewed the first minute of each conversation and separately rated the subject's attempt to control the interaction, using a four-category scale from highly dominant to highly submissive. Unlike naive judges, these raters had knowledge of the experiment that could have biased their scores, however this concern was counterbalanced by their experience in evaluating conversational behaviour. The three judges gave identical scores to 33% of the subjects; for another 58% of the subjects, two judges agreed and the third was one category away. Each subject was assigned his median score. These ratings were based on the judges' global impressions and will be described in more detail under Experiment 3.

Experiment 1. Professor-student dyads Do people of established high status display more dominant conversational signs than those of low status? To test this, dyads were formed of people initially unequal in status so that their styles of conversation could be compared.

Method Twelve male pairs, each consisting of a professor and a college student, were seated across a three-foot wide table, introduced and asked to converse about anything they
Results

Professors were more likely than students to rank high on all three conversational variables, however the differences are strong and significant only for First Substantive Speech and Most Topics (Table 1). Talking Time was only weakly and insignificantly related to status.

Discussion

Professors clearly use more dominant signs than students in talks between them, especially in setting the substance of the conversation. This result will not startle most professors. It is more surprising that students spent nearly as much time talking as did the professors, perhaps because it was difficult for them to avoid responding when they were the professors’ sole audience.

It has always been easy to predict the direction of influence in interactions between people unequal in status (Berger, Fisek & Conner, 1974). The harder problem has been to predict who will influence whom when the people involved are not initially differentiated by such obvious status markers as sex, race, age, or occupation. We now turn to this situation, looking at student-student dyads to see if dominant and deferent signs in their conversations ‘between equals’ allow us to predict who will influence whom.

Experiment 2. Student-student dyads

Among people who are not initially differentiated by obvious markers of status, do those who speak with dominant sign wield more influence than those who speak with deferent signs? To answer this, dyads of two students, without apparent status differences, were first asked to converse and afterward to participate in a cooperative decision-making
Table 2. Gamma correlations among four conversational variables

<table>
<thead>
<tr>
<th>Conversational variables</th>
<th>First Substantive Speech</th>
<th>Most Topics</th>
<th>30-Second Impression</th>
</tr>
</thead>
<tbody>
<tr>
<td>Most Topics</td>
<td>0.35</td>
<td>0.43</td>
<td>0.57 (P = 0.16, n = 17)</td>
</tr>
<tr>
<td>30-Second Impression</td>
<td>(P = 0.23, n = 16)*</td>
<td>0.57</td>
<td>(P = 0.06, n = 15)</td>
</tr>
<tr>
<td>Talking Time</td>
<td>0.00</td>
<td>0.25</td>
<td>-0.26 (ns, n = 16)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(P = 0.29, n = 13) (ns, n = 15)</td>
</tr>
</tbody>
</table>

*Significance levels are based on a one-tail binomial test on dyads, excluding ties, n = number of untied dyads.

Task. Degree of dominance in the conversation could then be used to predict influence in the decision-making task.

Method

Twenty pairs of previously-unacquainted male college students were placed in the same laboratory situation as before and given the same instructions. The members of each dyad were matched on race as well as sex, and were about the same age and year in school. All pairs were given the Berger ICOM task following their conversations. Videotapes of the first three minutes of conversation were scored by two independent coders for the same three conversational variables as before. In addition, three naive judges viewing the first 30 seconds of conversation independently scored subjects on 30-Second Impression, guessing which member of the dyad would most likely become the ‘leader’ (as described above).

Results

Table 2 contains a matrix of gamma correlations for the four conversational variables. (Gamma is a convenient measure of association for three-value ordinal variables, as in this case, and has the advantage of being insensitive to marginal distribution.) Since the members of a dyad do not act independently, the significance level for each relationship is based on a one-tail binomial test on dyads, excluding dyads tied on either variable. The significance level for each relationship, and the number of untied dyads upon which it is based, are shown in parentheses under each gamma.

If one person in each dyad has taken the high status role and the other the low status role, then the indicators of dominant/deferent speech should cluster together, producing a matrix of positive correlation coefficients. This is nearly what occurs in Table 2 except that Talking Time is excluded from the cluster. Otherwise the gammas are of moderate size (if not statistically significant, with the small ns), suggesting that the dyad member who dominates on one conversational variable tends to dominate on others as well.

Do the deferential-speaking members of these dyads accept influence from the dominant speakers, as the theory suggests? To answer this, performance on Berger's ICOM task was compared for those scored dominant versus those scored deferent on each of the four conversational variables (Table 3). A high ICOM score (i.e. many changes) indicates high acceptance of influence.

For two conversational variables, Most Topics and 30-Second Impression, dominant speakers have substantially (and significantly) lower mean ICOM scores than their deferent partners. Talking Time and First Substantive Speech are unrelated to ICOM.
Table 3. Mean ICOM scores for students who were dominant (Dom.) and deferent (Def.) on four conversational variables

<table>
<thead>
<tr>
<th>Conversational variables</th>
<th>First Substantive Speech</th>
<th>Most Topics</th>
<th>30-Second Impression</th>
<th>Talking Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dom.</td>
<td>(19)</td>
<td>(16)</td>
<td>(18)</td>
<td>(17)</td>
</tr>
<tr>
<td>Def.</td>
<td>(19)*</td>
<td>(16)</td>
<td>(18)</td>
<td>(17)</td>
</tr>
<tr>
<td>Mean ICOM score</td>
<td>5.5</td>
<td>4.6</td>
<td>5.3</td>
<td>5.3</td>
</tr>
<tr>
<td>Sig. level</td>
<td>ns†</td>
<td>P = 0.01</td>
<td>P = 0.05</td>
<td>ns</td>
</tr>
</tbody>
</table>

* Number of subjects, in parentheses, excludes dyad partners who were tied on a particular conversational variable.
† The significance levels of ICOM differences between dominant and deferent partners are based on the Wilcoxon matched-pairs test, with direction of difference predicted.

Discussion

Dyad partners often differentiated themselves within the first three minutes of conversation so that one took a more dominant speaking role than the other (although not strongly enough to reach conventional levels of significance in Table 2). Furthermore, the dominant speaker (as measured by Most Topics or 30-Second Impression) was more influential (i.e. had the lower ICOM score) than his partner in a subsequent cooperative decision-making task.

As in Experiment 1, Talking Time does not contribute to these relationships, suggesting again that it is not as valid an indicator of status in dyads as it is in larger groups.

Perhaps the most intriguing result here is the relationship of 30-Second Impression to ICOM score. Naive judges who watched only the first 30 seconds of conversation—on rather poor quality videotapes—successfully predicted which of the partners would be more influential in their subsequent interaction. What did the judges notice in these early moments of conversation that allowed them to make accurate predictions? In attempting to answer this, we first tested if new judges, following the same procedures, could do as well with only 10 seconds of observation. They could not. Impressions formed in 10 seconds were unrelated to Most Topics or ICOM score, and only slightly related to 30-Second Impression (gamma = 0.36, ns), but highly related to First Substantive Speech (gamma = 0.61, P = 0.08). Apparently, the relevant cues take longer than 10 seconds to emerge or accumulate.

We measured additional features of the early conversation which have been suggested as status cues. Thus, there is some experimental evidence that the first partner in a dyad to break initial eye contact will become subordinate, and that the first person to speak (whether it is a substantive speech or not) will become dominant (Strongman & Champness, 1968; Rosa & Mazur, 1979; Willard & Strodbeck, 1972). Individuals with lowered eyebrows are judged as looking more dominant than when their brows are raised, and nonsmiling individuals are viewed as more dominant than smilers (Keating, 1985). Listeners are reported to look more attentively at speakers when the speaker is of higher status than the listener (Exline, 1972; Dovidio & Ellyson, 1985). Any of these might be cues that allowed our naive judges to predict who in the dyad would influence whom. In order to test this, we measured these variables from the videotapes (Cataldo, 1978). In our dyads, whether or not a person spoke first (including ritual greetings) has a 0.30 (ns) correlation with Talking Time but is otherwise unrelated to the conversational variables and to ICOM score. The first person to break initial eye contact also fails to
relate in the predicted manner to the conversational variables and to ICOM. We timed the amount of smiling and brow raising during the first three minutes of conversation, but both are unrelated to the conversational variables and to ICOM. Finally, we measured the degree to which each partner looked at the other while that other was speaking; this correlated 0.40 to Speaking Time but was otherwise unrelated to the conversational variables and to ICOM. In sum, these various (mainly nonverbal) cues had little if any relationship to our conversational variables or to ICOM score. Perhaps if conversations had been more competitive, or if channels of communication has been more constrained so that these cues carried a greater burden of the information flow, then they may have aligned more closely with status in the dyads.

**Experiment 3. Confederate-subject dyads**

Can conversational rules be manipulated so as to thrust people into high or low status positions? To answer this, pairs of students were placed in nearly the same situation as in Experiment 2 except that one student in each pair was a confederate, trained to speak in either a dominant or deferent manner, depending upon the condition to which the subject was assigned. How would subjects respond to this manipulation?

One possibility is that they may not respond at all. Since the conversation is short and there is little at stake, and the two students are unlikely to meet again, then the manipulation may be irrelevant to subjects, and they would behave similarly in both treatments.

A second possibility is that subjects may respond cooperatively to the manipulation, taking the opposite status from that displayed by the confederate: when the confederate speaks dominantly, the subject would act deferentially and accept influence (i.e., make frequent changes) in the ICOM task. When the confederate speaks deferentially, the cooperative subject would accept the dominant role in conversation and make few changes in the ICOM task.

A third possibility is that subjects may respond competitively toward the dominant confederate, challenging him for the high status position. These subjects would meet the confederate’s attempts to control the conversation with dominant speeches of their own. If they maintained their challenges into the ICOM situation, they would reject the confederate’s influence there too, making few changes during the decision making task. (Challenge is an unlikely response to the deferent confederate since he offers no competition, giving the high status role to anyone who wants it.)

Therefore, the essential questions to be answered here are: Does the manipulation have any effect on subjects? If so, do they cooperatively accept the opposite status to that taken by the confederate? Or, do subjects challenge the dominant confederate for high status?

**Method**

Two male drama majors were hired as confederates and trained to play dominant and deferent roles. The dominant role is defined as someone who is confident, relaxed, and in control of the situation; he leads the conversation wherever he wants it to go. The deferent role is the opposite: a person who is submissive, unsure of himself, uncomfortable, and lacking control of the situation; he follows wherever the other person leads the conversation. Posture should be erect and relaxed in the dominant role, slightly slumped and tense in the deferent one. While it is important to be friendly in both roles, smiles are often a sign of submission, so they should be spare in the dominant role, frequent
in the deferent one. The deferent confederate always looks at a subject who is speaking; the dominant confederate looks less intently at the speaker. The deferent confederate lets the subject open the conversation; the dominant confederate makes the substantive opening himself. The dominant person leads the conversation, setting most new topics, ending each topic when it is finished, and then introducing the next one. The deferent person rarely sets topics himself but takes up whatever topic is suggested by the dominant, continuing with it as long as the dominant continues.

Both of the students who served as confederates were tall and nice-looking, which probably aided them in playing the dominant part. Both were instructed to claim they were juniors, if asked, although one was in fact a senior. Otherwise they improvised their conversations as honestly as they could within the constraints of their roles. Each confederate alternated dominant and deferent roles, effectively randomizing the assignment of subjects to treatment, and each treated roughly half the subjects. After the experiment, the confederates and an experimenter evaluated the videotapes and agreed that the roles had been played in a satisfactory manner.

Subjects were 33 male undergraduates, 16 of them meeting a dominant confederate and 17 meeting a deferent one. The procedure was nearly the same as in Experiment 2. The subject and confederate were seated across a table with a screen blocking their view of one another. They were instructed that when the screen was removed, they should converse about anything they liked. After five minutes of conversation, which was videotaped, the screen was replaced, and the subject (and confederate) was given the ICOM task. Finally, the subject was completely debriefed. No subject doubted the legitimacy of his confederate partner.

After all subjects were run, both confederates and an experimenter viewed the first minute of each conversation, rating the subject's degree of Conversational Control during interaction. (Typically, the first minute was a good representation of the full five-minute conversation.) Each rater separately scored the subject as highly dominant, slightly dominant, slightly submissive, or highly submissive. The dominant and deferent role descriptions, given above, are the paradigms for these ratings.

Results

In qualitative terms, there is a marked difference between subjects paired with dominant and deferent confederates. With confederates taking the dominant role, conversations are animated, more interesting, sometimes humorous, sometimes argumentative, and there are rarely silent gaps. With deferent confederates leaving control to the subjects, the conversations often drag, speech is slower and quieter with less enthusiasm, disagreements are rare, and there are long silences filled with smiles, fidgeting and eye aversion. Clearly, subjects are matching whatever pace and mood are set by the confederates.

Figure 1 shows the distribution of subjects on Conversation Control for each treatment. Those in both treatments are usually scored 'slightly dominant'. However, subjects facing dominant confederates (black bars) are more dominant than subjects paired with deferent confederates (white bars). Gamma between treatment and Conversational Control is 0.42, which fails to reach conventional significance (? = 0.15 using a two-tail Monte Carlo computer simulation), but it is clear enough that our subjects do not yield high status to the dominant confederate, and submissive behaviour occurs most often among subjects in the deferent-confederate treatment. However, the majority of subjects paired with deferent confederates do accept the dominant conversational role which is thrust at them.
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Fig. 1. Distribution of subjects on conversational control for deferent-confederate (white) and dominant-confederate (black) conditions

Fig. 2. Distribution of ICOM scores for deferent-confederate (horizontal hatch), dominant-confederate (vertical hatch), and Experiment 2 (solid black)
Figure 2 shows the distribution of ICOM scores for each treatment, as well as ICOM scores from Experiment 2, which serve as a 'normal' benchmark. Subjects facing dominant confederates (vertical hatch) have a mean ICOM score of 4.5 and a median score of 4, while subjects paired with deferent confederates (horizontal hatch) have a mean score of 5.7 and a median of 7 (P = 0.14 for the difference of means, and P = 0.02 for the difference of medians, both based on two-tail Monte Carlo computer simulations). Compared with subjects in Experiment 2 (solid black), where the central tendency of ICOM score was 5 to 6, those facing dominant confederates have unusually low ICOM scores, while subjects paired with deferent confederates have relatively high scores. Thus, subjects are extremely resistant to influence from dominant confederates but extremely receptive to deferent confederates.

To check for possible confounding effects of the confederates' individual characteristics, or of subjects' year in school, these were entered along with treatment (dominant vs. deferent) as independent variables in regressions for ICOM score and Conversational Control. The confederates had no effect as individuals, apart from the roles they play. Year in school has a slight and very insignificant inverse relationship to ICOM score, which does not diminish the effect of treatment; grade has no effect on Conversational Control. ICOM score was regressed on treatment and Conversational Control to see if the latter has any independent effect on ICOM; it does not.

Discussion Most subjects who were paired with a deferent confederate accepted the dominant conversational role that was thrust at them, although sometimes reluctantly. However, these subjects did not act autonomously during the ICOM task, instead being extremely accepting of influence from the deferent confederate. In contrast, subjects faced with dominant confederates compete with them rather than cooperating, acting relatively dominant in conversation and rejecting the confederate's influence in the ICOM decision-making task. The deferent-confederate treatment offers a paradox. Since its subjects accept the high status role in the conversation, why do they then go to such extremes in accepting the confederate's influence during the ICOM task? Surely there is nothing in the deferent confederate's demeanour which would suggest that he has any special competence at the decision making task. Under these circumstances, a high status actor should trust his own judgement, sticking to his original ICOM choices, yet this does not occur. Why not?

A subject's ICOM score is supposed to measure the extent to which he regards his own opinions as more or less valid than those of this partner, and no doubt it does this in many situations. However, the ICOM task is explained to subjects as a cooperative situation. Subjects are instructed to work together as a team to reach the best solution. Therefore the subject's ICOM score depends partly on the extent to which he is willing to accommodate his partner's opinions, incorporating them into the team's final decision. The subject may accept his partner's choice because he wants to include the partner in the team, even if he has no special regard for the quality of those choices. Apparently, this teamwork motive is prominent in the setting produced by the experimental manipulation. Subjects who met the deferent confederate, an obliging and unassuming fellow, likely took a very cooperative stance—the noblesse oblige of their newly-gained high rank, bending over backwards to incorporate their partner's input into the team output. In contrast, subjects faced with the dominant confederate, who was pushy and sure of himself, made a point of resisting his influence, no matter if his opinions were competent or not. If this interpretation is correct, then we
would expect to see a stark reversal in ICOM scores if the decision-making task were suddenly to have high stakes, for then the quality of the final decision, rather than inclusion or rejection of the partner, would be the prime consideration. Unfortunately this could not be tested.

In sum, the manipulation thrusts subjects into a competitive or a cooperative stance, as if they were matching the behavior of the confederate. Subjects responded to the dominant confederate by challenging him, both in the conversation and the ICOM task. They responded to the deferent confederate by becoming his solicitous superior, taking special care to include his opinions in their final ICOM decisions.

**General discussion**

Dominance and deference actions appear in ordinary dyadic conversation among humans, just as in other forms of primate interaction. Whether the dyad is formed with people of different formal rank (professor and student), or of initially equal status (two students) whose relative influence only becomes apparent in a subsequent decision-making task, the high- and low-ranked dyad members speak differently. The high status person leads the conversation, setting topics, ending them, and keeping the flow of talk moving. The low status person follows, taking up each topic that is introduced and responding to cues from the leader. Thus, human status behavior is consistent with the general primate pattern.

Others have reported that newly formed conversational groups often become differentiated by status within the first minute of interaction, perhaps within the first few seconds (Fiske and Ofshe, 1970; Rosa and Mazur, 1979; Lamb, 1981). In Experiment 2, naive judges who watched the first 30 seconds of each conversation were fairly successful in predicting who would dominate, although they could not do it from just 10 seconds of observation. This result corroborates the phenomenon of very early differentiation but not as quickly as a few seconds. Perhaps with better quality videotapes than ours, the faster prediction would have been successful. In any case, it is surprisingly easy to predict eventual status from nearly the outset of interaction.

On the other hand, talking time, which has a long history as a reliable measure of status in groups larger than two (Bales, 1951; Reynolds, 1980), was not a successful indicator of status in our experiments. We doubt that talking time measures status in dyads. Apparently, when there are only two people in a group, it is difficult for the low status person to withdraw from participation, as he can in a larger group.

Among monkeys and apes, the exchange of status signs often occurs in well recognized contests for dominance. One implication of a status mechanism common to all primates is that humans too engage in frequent (if subtle) dominance contests (Mazur, 1985). Experiment 3 supports this contention, showing the remarkable ease with which a dominant-speaking confederate can elicit a challenge from subjects, inducing them to return his dominant speech and to resist his influence during the cooperative ICOM task. These competitions are not hostile or agonistic confrontations; to the contrary, they are polite and usually friendly, but they are contests nonetheless.

We emphasize how different the behaviors of student subjects were in Experiments 2 and 3. In the manipulated dyads of Experiment 3, most subjects who were paired with a dominant confederate clearly competed with him for high rank. Such obvious competition was rarely seen in the natural dyads of Experiment 2. Furthermore, comparing the distributions of ICOM scores in the two experiments (Figure 2), the bimodality of
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Experiment 3—compared with the unimodal distribution of Experiment 2—indicates a level of resistance (to dominant confederates) that is absent in the natural dyads. Why should the 'artificially' dominant confederates in Experiment 3 have evoked challenges from their partners when the 'naturally' dominant subjects of Experiment 2 did not? Our impression from the videotapes is that confederates behaved in a more extreme manner than natural subjects, whichever role they were playing. Real subjects were rarely so submissively deferent or as assertively dominant. Sometimes a deferent confederate was paired with a meek subject, resulting in a conversation that lagged to a degree unknown in Experiment 2. (In one extreme instance, there was less than two minutes of speech during the five minutes allotted for talk.) The dominant confederates probably 'came on too strong' for the situation, striking sparks that were absent from the more normal conversations between genuine subjects. Also, it may be relevant that most subjects were teenage males, who are exceptionally sensitive to challenge (Brinkerhoff and Booth, 1984). Perhaps women or older men would have been less prone to resist a dominant confederate.

References