

Gender and status effects in student e-mails to staff

R. O'Neill & A. Colley

School of Psychology, University of Leicester, Leicester, UK

Abstract

This study aimed to examine gender and status effects in the kind of e-mails used to manage course administrative issues in an educational setting. Students were asked to respond to an e-mail presented as being from a member of staff, informing them of failure to submit coursework and asking for an explanation to be provided. The sex and status of the sender were varied. The data showed both gender and status effects. The men more frequently adopted an assertive stance, while the women more frequently referred to work-related issues in a conciliatory way. A number of features of the e-mails varied according to the sex of the participant, and the status and sex of the sender. There was evidence of a greater influence of status in features of the replies from the men, although the effect of this varied according to the sex of the sender. In addition, accommodation to the gender-stereotypes of the senders was evident in features of the data from both men and women.

Keywords

accommodation, e-mails, gender, language, status.

Introduction

The use of e-mail in educational settings has grown tremendously over the last decade. It is now commonly used for contact in place of face-to-face meetings or formal letter, and in distance education it is the primary mode of communication between students and their tutors. E-mail is one of several forms of computer-mediated communication (CMC) and alongside its increasing use, there has also been widespread adoption of other forms of CMC in education, particularly computer-based discussion lists. Such discussion lists are used both in e-learning and as an adjunct to face-to-face teaching to supplement other teaching methods and promote peer interaction. Consequently, a number of research projects have explored the pedagogic implications of this (e.g. Rosen & Petty 1997; Stocks & Fredolino 2000;

Hendriks & Maor 2004). However, the use of e-mail goes beyond instructional support and may also impact upon student-staff contact on pastoral and administrative issues. Potential topics that may be communicated include suggestions relating to an assignment, arrangements for a meeting, provision of feedback on work and requests for work that has not been submitted on time. This raises questions about the nature of the communication that occurs in a situation in which the tutor or administrator and student are separated in time and location.

E-mails are less formal than traditional written communications (Baron 1998). For example, the conventions concerning how to start and end an e-mail are flexible. An initial address can be formal ('Dear Jane ...'), informal ('Hi you!') or absent. Similarly, endings can be informal ('BFN'), formal ('Yours sincerely') or absent. The lack of formal stylistic conventions in e-mails and their immediacy resembles speech, while some syntactic features of writing are retained (Baron 1998). As in both speech and more formal writing, certain features of the language used in

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Correspondence: Prof. Ann Colley, School of Psychology, University of Leicester, Henry Wellcome Building, Lancaster Road, Leicester LE1 9HN, UK. E-mail: aoc@le.ac.uk

CMC vary in frequency according to the sex of the author of the communication (Herring 1994; Thomson & Murachver 2001). Research on language and gender received considerable impetus from the publication of Lakoff's (1975) book, 'Language and a woman's place', which explored differences in language usage between men and women, and put forward the argument that features of women's language are associated with low social power. Such language markers include the use of hedges ('He was kind of short . . .'), empty adjectives ('divine', 'charming'), intensifiers ('I would so appreciate it') and tag questions 'Jane is in her office, isn't she?', which serve to avoid confrontation or are considerate of the recipient.

Subsequent researchers have examined the features of powerlessness and politeness in women's language, and assertiveness in men's that underpin traditional sex role differences (e.g. Tannen 1990). In a number of studies, women's language has been shown to be more tentative and supportive of others, and more emotional, while men's has more directly assertive features (e.g. Rubin & Greene 1992). With respect to e-mail specifically, men and women use its informality in different ways and, in particular, women have been found to take greater advantage of opportunities to signal emotion (Colley & Todd 2002; Colley *et al.* 2004). Barrett and Lally (1999) found that gender differences were also present in online interactions between learners; however, their study focused upon the roles adopted by the participants and the kinds of contributions they made. As in other studies of CMC (e.g. Herring 1994), the men posted longer contributions than the women. These contributions contained more 'social' content unrelated to the task in hand. The women made more 'interactive' contributions, referring back to previous postings in their messages, and the authors interpreted these differences as indicative of a greater task focus among the women. The kinds of differences that have been found in studies of gender and language, and in electronic communication in particular, might have implications for the content of staff-student e-mail communication in educational settings, and an initial investigation of this is one of the aims of this study.

A further important issue relating to the structure and content of communications, including e-mails, concerns the impact of characteristics of the recipient. Communication Accommodation Theory (Giles &

Powesland 1997) proposed that convergence to the preferred style of the recipient occurs in friendly communications. Thus, by increasing similarity through language, individuals can gain the approval of those they are interacting with. Divergence, or emphasis of a difference in style, can be used to signal distance or in interpersonal attraction contexts, signal gender characteristics of the two sexes (Winn & Rubin 2001). There is evidence that accommodation effects occur in friendly e-mails to peers (Colley & Todd 2002; Colley *et al.* 2004), but the more formal context of staff-student interaction has not yet been explored.

So far, this review has concentrated on stylistic aspects of language, but the topics covered in communications can also vary with the gender of those interacting. Again, in line with traditional gender role stereotypes, Aries and Johnson (1983) found that close female friends spent more time than men discussing personal and intimate topics, and Colley and Todd (2002) found that women made more mention of personal and domestic issues in e-mails to friends. Would this apparently greater willingness to discuss the personal, particularly with other women, on the part of women generalize to more formal communications with staff members?

Given the existing literature on gendered language, it would seem timely to examine gender and accommodation effects in the types of e-mails that might be used in educational settings. One of the features of educational and other work settings that differs from interactions between friends or peers, is the frequent presence of a status and thus a power differential between those interacting. This raises interesting questions concerning possible differences in the way in which students might communicate to staff at different levels in the academic hierarchy. Homzie, Kotsonis and Toris (1981) found status effect in letters written by undergraduates to a supposed high school student and someone with a master's degree. Not surprisingly, formality was greater for the latter. The presence of a power differential in an educational setting would also be expected to elicit polite language. Politeness has been conceptualized as a strategy to minimize face threat (Brown & Levinson 1987) that may be mediated by the interpersonal variables of relative power and relationship distance, together with the degree of imposition when a request is made. Empirical support for such mediation has been found, together with differ-

ences between men and women (e.g. Holtgraves & Yang 1992): men have been found to be more strongly influenced by power than women. A further question, therefore, is whether and how features of politeness vary according to the gender and status of the participants in e-mail correspondence between students and staff.

The present study was designed as a preliminary investigation of gender and accommodation effects in the replies of students to e-mails supposedly from male and female staff members at two levels of status within a University requesting a reason for non-submission of coursework. The variables examined included measures concerned with formality, politeness, assertiveness, and emotional disclosure, together with the type of reason presented.

Method

Participants and design

The participants were 58 male and 78 female undergraduate students, with a mean age of 20.04 years ($SD = 1.91$). All were regular users of e-mail within a University setting. They were randomly allocated to one of four conditions relating to the sex and status of the sender of an e-mail to which they were asked to respond: high status male, high status female, lower status male and lower status female.

Materials and procedure

The participants were sent an e-mail instructing them that they were being asked to take part in a role-play dealing with communication. They were asked to provide a full response (minimum of one paragraph) to an e-mail that followed. They were informed of their right to withdraw at any time, and that their response would be stored anonymously. The e-mail that followed contained the following text: 'Dear Student, The records show that you have failed to submit your last piece of work. In accordance with the University of Leicester's regulations the Board of Examiners are meeting next week to discuss the consequence of your action. Therefore, you are required to write the reason for your failure to submit this piece of work. With regards'. The signature on the e-mail varied according to the condition: Miss Jane Cook/Mr. Mark Cook

Administrative Officer (lower status female/male); Dr. Jane Cook/Dr. Mark Cook (high status female/male).

Coding and analysis

The coding categories were derived from a preliminary sample of the data to ensure relevance and were undertaken and agreed by two coders. Initial blind coding of a 10% sample produced 91.3% agreement. The following content categories (presented here under general headings indicative of the area of focus) were coded as present or absent unless otherwise stated:

Formality: Address was coded as one of three categories: formal e.g. 'Dear Mr Cook', informal e.g. 'Hi Mark', or absent; signature was coded as one of three categories: formal, e.g. 'Yours sincerely', informal, e.g. 'Sorry once again', or absent; signature was also separately coded for friendliness, e.g. 'Kind regards'

Politeness: apology given; multiple apologies given; thanks expressed.

Mitigation: reference to past diligence, e.g. 'As you will see from my records this is very out of character for me as I usually always hand work in well before the deadline'.; Reference to work nearly completed or desire to complete, e.g. 'I... hope that by completing this piece of work as soon as possible, the repercussions are not too great'.; Reference to knowing own responsibilities not fulfilled/taking full responsibility, e.g. 'While I realise that this is no excuse for not submitting the work...'; Plea for lenient treatment/circumstances to be taken into account.

Assertiveness: request to meet; challenge to facts presented.

Excuses: physical illness; mental illness; family issues; personal issues; computer problems; personal failing; overwork.

Other categories: mention of emotional reaction; request for response containing further information.

The effects of participant sex, sender sex, and sender status upon frequencies within these categories were examined using chi square tests.

In addition, two linguistic categories, intensifiers (e.g. 'My family are going through an extremely hard time') and hedges ('perhaps I could have an extra week to hand it in'), which have previously been identified as associated with women's language, were counted and converted to rate per 50 words. Other stereotypical features of women's language were expected to appear with very low frequency in the kinds of communication under study, and this was confirmed

in a sample of the e-mails. Finally, a word count was taken of each message with initial address and signature removed. These measures were analysed using $2 \times 2 \times 2$ (participant sex \times sender sex \times sender status) analysis of variances (ANOVAs).

Results

Length of message

The main effects of participant sex, sender sex, and sender status were not statistically significant. However, there was a significant three-way interaction, $F(1, 128) = 5.10$, $P < 0.05$, partial $\zeta^2 = 0.04$. Further analysis of simple effects revealed that the men wrote significantly longer messages to the male sender than to the female sender in the high-status condition, $F(1, 55) = 6.38$, $P < 0.05$. Inspection of the means shows that the lengths of these two sets of messages tended to be longer and shorter, respectively, than the messages in the other combinations of gender and status (see Table 1).

Linguistic categories

The analysis of the frequency of the use of hedges revealed no significant effects. For intensifiers, however, the ANOVA revealed a significant interaction between sender sex and sender status, $F(1, 128) = 8.28$, $P < 0.01$. Further analysis of simple effects revealed that a higher rate of intensifiers occurred in the replies to the high-status female sender (mean = 0.64, $SD = 0.61$) than to the low status female sender (mean = 0.33, $SD = 0.34$), $F(1, 133) = 7.10$, $P < 0.01$. A higher mean rate was found in the replies to the low-status male sender (mean = 0.60, $SD = 0.44$) than to

the high-status male sender (mean = 0.44, $SD = 0.46$) but this difference was not significant.

Content

Overall effects of participant sex

The e-mails from men contained a higher frequency of both content categories under the 'challenge' heading (see Table 2). More men than women requested meetings to discuss the circumstances and challenged the facts as presented to them. The women referred to work-related issues more frequently both as mitigation and as an excuse for nonsubmission of the work in question.

Effects of sender status

The e-mails to high-status senders contained a higher proportion of apologies (high status: 74.6%, low status: 50.8%; $\chi^2(1) = 8.32$, $P < 0.01$). Analysis of the replies within each combination of sender and participant sex (see Table 3) revealed that the male rather than the female participants apologized more to high-status males and females, while the females thanked the high-status female more than the low-status female.

The e-mails to high-status senders contained a higher proportion of formal endings (69.0% formal, 18.3% informal, 12.7% absent), than the e-mails to low-status senders (40.0% formal, 33.8% informal, 26.2% absent) which showed less variation across categories, $\chi^2(2) = 11.59$, $P < 0.01$. Analysis of the replies within each combination of sender and participant sex revealed that this overall effect was most marked in the female-to-female replies (to low status: 33.0% formal, 55.6% informal, 11.1% absent; to high status: 65.0% formal, 15.0% informal, 20.0% absent; $\chi^2(2) = 6.93$, $P < 0.05$).

The only category that appeared more frequently in e-mails to the low-status senders was requests for as-

Table 1. Word count by condition.

	To male		To female	
	Mean	SD	Mean	SD
Male participants				
To low status	129.42	51.52	118.73	35.83
To high status	148.56	98.09	93.40*	27.71
Female participants				
To low status	140.40	50.40	115.83	48.45
To high status	119.55	52.23	129.05	52.67

* $P < 0.05$.

Table 2. Differences in category frequencies due to participant sex.

Category	% males	% females	χ^2
Request for meeting	27.6	2.6	18.14**
Challenge to facts	24.1	10.3	4.73*
Mention of past diligence	13.8	28.2	4.04*
Mention of work in progress/desire to complete	37.9	60.3	6.63**
Overwork as reason	3.6	15.4	5.13*

* $P < 0.05$; ** $P < 0.01$.

sistance (to high status: 7.0%, to low status: 18.5%, $\chi^2 = 4.05$, $P < 0.05$) and as Table 3 shows, both the men and the women requested assistance more often from the low-status sender of their own sex. Finally, the men more often excused their behaviour by referring to family circumstances in replies to the high-status male.

Effects of sender sex

The replies to males contained a higher proportion of references to taking responsibility, pleas for lenient

treatment, mentions of emotional state and family reasons for nonsubmission of the work (see Table 4). No other overall effects were significant. The replies were then analysed within each combination of participant sex and condition (see Table 5). These analyses revealed that the men made a higher proportion of requests for assistance, pleas for lenient treatment and admissions of personal failings to the low-status male sender than the low-status female sender, but mentioned past diligence in completing work only to the low-status female sender. In the high-status con-

Table 3. Effects of sender status upon content of replies from male and female participants in the male and female sender conditions.

Participant sex	Sender sex	Category	% to low status	% to high status	χ^2
Male	Male	Multiple apologies	0.0	50.0	8.40**
		Apologies	33.3	81.3	8.60**
		Family circumstances as reason	9.1	43.8	4.22*
		Request for assistance	41.7	6.3	5.10*
Male	Female	Apologies	40.0	86.7	7.03**
Female	Female	Thanks	5.6	30.0	3.77*
		Request for assistance	27.8	0.0	6.40**

* $P < 0.05$; ** $P < 0.01$.

Table 4. Differences in category frequencies due to the sex of the message sender.

Category	% to male	% to female	χ^2
Taking of responsibility	48.5	27.9	6.10*
Plea for lenient treatment	38.2	13.2	11.12**
Mention of emotional state	27.9	13.2	4.50*
Family reasons for nonsubmission	32.4	17.6	3.92*

* $P < 0.05$; ** $P < 0.01$.

Table 5. Effects of the sex of the sender of the message upon content of replies from male and female participants in the low- and high-status conditions.

Participant Sex	Status Condition	Category	% to male	% to female	χ^2
Male	Low	Request for assistance	41.7	6.7	4.73*
		Plea for lenient treatment	50.0	13.3	4.30*
		Personal failing as reason	25.0	0.0	4.22*
		Mention of past diligence	0.00	26.7	3.76*
Male	High	Personal situation as reason	25.0	0.0	4.31*
Female	Low	Thanks	40.0	5.6	3.77*
		Mention of emotional state	40.0	11.1	4.08*
		Request for assistance	5.0	27.8	3.70*
		Friendly signature	10.0	44.4	5.80*
Female	High	Plea for lenient treatment	30.0	5.0	4.33*
		Challenge to facts	20.0	0.0	4.44*
		Physical illness as reason	20	50	3.96*

* $P < 0.05$.

dition, the men mentioned personal circumstances only when replying to the male.

In the low-status condition, the women gave thanks and mentioned their emotional state more frequently in replies to the male than to the female, while they more frequently requested assistance and used friendly signatures in the replies to the female. They also used informal signatures more frequently in replies to the female and no signature more frequently to the male (to male: 40.0% formal, 20.0% informal, 40.0% absent; to female: 33.3% formal, 55.6% informal, 11.1% absent; $\chi^2(2) = 6.37$, $P < 0.05$). In the high-status condition, the women more frequently pleaded for lenient treatment and challenged the facts presented when replying to the male, and described physical illness as a reason for nonsubmission more frequently when replying to the female.

Discussion

The overall gender differences found showed a clear relationship with traditional gender role expectations. The men more frequently adopted a stance that could be interpreted as more assertive: they challenged the facts more frequently than the female participants, and requested face-to-face meetings more. The women attempted to mitigate more and adopted a more conciliatory stance by more frequently mentioning a good past history of submitting work, mentioning that they had nearly finished the work in question or would like to submit it late, and mentioning that a high workload had caused them to miss the deadline. Such content also suggests a greater task focus on behalf of the women, which is line with the findings of Barrett and Lally (1999).

There was no evidence that the women were using polite strategies more than the males. Rather, the use of features of politeness varied according to the status of the staff member supposedly sending the e-mail. Apologies were sent more often to a high-status sender. More detailed inspection of the data revealed that this applied particularly to men's responses to both male and female senders, supporting previous findings that men are more influenced by power than women (Holtgraves & Yang 1992). The women in the high-status condition, however, did thank the female sender more frequently than in those in the low-status condition. Thus, the men and women used different

markers of politeness in responding to higher status senders. Brown and Levinson (1987) distinguished between positive politeness, which promotes solidarity by showing appreciation of others, and negative politeness, which attempts to minimize imposition on others. Thanks can be seen as an example of the former, while apologies reflect the latter. These findings again reflect the more communal approach of the women, in this instance to a high-status member of their own sex. The lack of a similar effect in the women's responses to the high-status male suggests that they accommodated to the sex of the sender.

A higher level of formality, which can also be regarded as indicative of politeness, was found in the structure of the endings of the replies to the high-status senders. Again, more detailed inspection of the data revealed that this was a feature of female-to-female communication in particular, and, in the context of the relative lack of formal conventions that apply to e-mails, can be interpreted as a positive politeness strategy that respects the standing of the high-status female.

In addition to influencing the use of features of politeness, the sex and status of the supposed sender influenced other aspects of the style and content of the e-mails. The men requested assistance more, pleaded more and mentioned their personal failings more in e-mails to the low-status sender of the same sex, suggesting same-sex camaraderie in which they were attempting to elicit help and sympathy. The men mentioned their past record of diligence more to the female low-status sender, perhaps suggesting a strategy of convergence by stressing an attribute that they feel will be more valued by women who have a more task-focused approach. Same-sex camaraderie could also account for gender differences in the female to low-status sender replies, which had a higher incidence of friendly signatures and requests for assistance in replies to the female sender. The women's higher incidence of both thanks and mentions of emotional state to the male than the female in the low-status condition suggests a divergent strategy aimed at capitalizing upon male-female gender relations, in which they were stressing female attributes of emotionality and positive appreciation. In this more distant and formal setting, there was no evidence of greater female-to-female disclosure as found by Aries and Johnson's (1983) in their study of friends.

The effects found in the responses to high-status senders suggest greater same-sex disclosure on the part of the men who more frequently mentioned personal circumstances to male than female senders. The men also wrote significantly longer replies to the high-status male than to the high-status female, again indicating greater comfort in male-to-male rather than male-to-female communication with high-status figures, possibly partially due again to their greater sensitivity to status than their female counterparts. An alternative or additional possibility is that they were adopting a more assertive stance as has been evident in the longer postings found by men than women in on-line discussions (Herring 1994; Barrett & Lally 1999). A mixture of strategies is evident in the women's replies to the high-status sender. They challenged the facts more frequently in responding to the high-status male than to the high-status female, thus adopting a masculine assertive style more, but more pleas for lenience were also made to the male, suggesting a strategy using stereotypical gender relations. Finally, accommodation to a female linguistic style was evident in the greater use of intensifiers in communications to the high-status female sender than to her low-status counterpart, suggesting that higher status encourages greater linguistic convergence.

This is an exploratory study based upon a role-play rather than naturalistic materials. As such, some methodological issues need to be acknowledged. The participants had no expectation that their responses would actually have an impact upon their academic career. However, there was no indication from the responses that the participants had not taken the task seriously. One potential criticism of using an experimental rather than a naturalistic methodology is that the senders of the e-mails are fictional and thus the situation is depersonalized. Under such circumstances, participants might be expected to base their responses upon stereotypes of the recipient (e.g. Locksley *et al.* 1980). However, in real educational contexts, students are acquainted with staff members within a very restricted context or may not know them at all, so stereotypes rather than individuating information might be expected to have a substantial influence upon their interactions.

The results from this study indicate that both gender and accommodation effects are present in e-mail communications from students to staff. While some of these effects might also be expected to occur in face-to-

face interactions, address and signature are features of written communications, and the possibility of variation is a feature of electronic communication in particular. The written record provided by e-mail gives a succinct medium in which to examine gender and status effects, but may also reinforce their influence, as speech is momentary but e-mails can be re-read. Further research could examine communications with different intentions, such as e-mails from students requesting assistance with coursework from male or female tutors. However, from a practical point of view, it is the interaction between tutors and students that is of primary interest as this has the potential to produce different or even less favourable treatment depending on the communication styles adopted by male and female students. Thus, one important research question is whether tutors' responses to different styles of gendered communication vary in style or content. The richness of the preliminary data collected here indicates that there is scope for more research in this area, using different kinds of interactive contexts, in order to inform our knowledge of staff-student interactions and of the way in which electronic mail may impact upon them.

References

- Aries E.J. & Johnson F.L. (1983) Close friendship in adulthood: conversational conduct between same-sex friends. *Sex Roles* **9**, 183–191.
- Baron N.S. (1998) Letters by phone or speech by other means: the linguistics of e-mail. *Language and Communication* **18**, 133–170.
- Barrett E. & Lally V. (1999) Gender differences in an on-line learning environment. *Journal of Computer Assisted Learning* **15**, 48–60.
- Brown P. & Levinson S. (1987) *Politeness: Some Universals in Language Usage*. Cambridge University Press, Cambridge.
- Colley A. & Todd Z. (2002) Gender-linked differences in the style and content of e-mails to friends. *Journal of Language and Social Psychology* **21**, 380–392.
- Colley A., Todd Z., Bland M., Holmes M., Khanom N. & Pike H. (2004) Style and content in e-mails and letters to male and female friends. *Journal of Language and Social Psychology* **23**, 369–378.
- Giles H. & Powesland P. (1997) Accommodation theory. In *Sociolinguistics: A Reader and Course Book* (eds N. Coupland & A. Jaworski), pp. 232–239. Macmillan, London.
- Hendriks V. & Maor D. (2004) Quality of students' communicative strategies delivered through computer-mediated

- ated discussions. *Journal of Interactive Learning Research* **15**, 5–32.
- Herring S.C. (1994) Politeness in computer culture: why women thank and men flame. In *Communication in, Through and Across Cultures: Proceedings of the Third Berkeley Women and Language Group* (eds M. Bucholtz, A. Liang & L. Sutton), pp. 278–294. Berkeley Women and Language Group, Berkeley, CA.
- Holtgraves T. & Yang J-M. (1992) Interpersonal underpinnings of request strategies: general principles and differences due to culture and gender. *Journal of Personality and Social Psychology* **62**, 246–256.
- Homzie M.J., Kotsonis M.J. & Toris C.C. (1981) Letter writing differences: relative status effects. *Language and Speech* **24**, 377–385.
- Lakoff R. (1975) *Language and a Woman's Place*. Harper & Row, New York.
- Locksley A., Borgida E., Brekke N. & Hepburn C. (1980) Sex stereotypes and social judgement. *Journal of Experimental Social Psychology* **18**, 23–42.
- Rosen E.F. & Petty L.C. (1997) Using Internet resources in a research methods course. *Behavior Research Methods, Instruments and Computers* **29**, 222–227.
- Rubin D.L. & Greene K. (1992) Gender typical style in written language. *Research in the Teaching of English* **26**, 7–40.
- Stocks T.J. & Freddolino P. (2000) Enhancing computer-mediated teaching through interactivity. The second iteration of a World Wide Web-based graduate social work course. *Research on Social Work Practice* **10**, 505–518.
- Tannen D. (1990) *You Just Don't Understand: Women and Men in Conversation*. William Morrow, New York.
- Thomson R. & Murachver T. (2001) Predicting gender from electronic discourse. *British Journal of Social Psychology* **40**, 193–208.
- Winn L.L. & Rubin D.L. (2001) Enacting gender identity in written discourse: responding to gender-role bidding in personal ads. *Journal of Language and Social Psychology* **20**, 393–418.