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Male and Female Attitudes Toward Computer-Mediated Group Interactions

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Without question, the impact of computer-mediated communication, such as e-mail, chat groups, and group support systems on the functioning of businesses and society-at-large has been considerable. This impact has led to many assertions, like the ability of computer mediums to level, in some respects, the business interaction process by bringing individuals from anywhere within the business hierarchy together. Moreover, it has been maintained that it may also produce more open and democratic interactions than face-to-face communication by masking the normal trappings of authority or status that are commonly found in face-to-face communication (Sproull & Keisler, 1992). However, we still do not have a firm grasp of what effect this medium has upon both male and female attitudes stemming from task-related interactions.

Previous studies have produced mixed findings related to computer-mediated communications and gender. On the one hand, the use of computer-related devices are typically associated more with males than females. For instance, historically the computer has been coupled more with males in the work environment than females. In fact, male dominance of computers was said to hover as high as 98 percent of the population of computer users in the 1980s (Kirk, 1992). This, accompanied by the normative belief that males are more competent in dealing with computers (Hawkins, 1985) are cited as reasons for the prevailing male domination of computer-related activities. It has even been found that classrooms teachers are generally more likely to call on and respond to male students than to females students when computers are involved in the curriculum (Clark, 1992). Thus according to these findings, males should tend to state that they are more comfortable with computers, perceive themselves as more proficient at computer-related tasks, and would be drawn more to this technology than females.

On the other hand, other researchers have reached different conclusions for computer-mediated mediums, stating that these types of environments may allow females to escape from well established, male-oriented gender norms and thus may be preferred more by females than by males. For example, Hiltz and Johnson (1990) found in their study that females viewed computer-mediated communication more favorably than males because, as they suggest, females may "appreciate the opportunity to have their say" when normally this may be more difficult to do (p. 760). Furthermore, Allen (1995), in a study examining

business professionals found that females perceived e-mail to be easier to use, as well as being more efficient and more effective than males because, according to her, it can promote relational communication, which is typically favored more by females than by males.

In this study, we were interested in the confidence of males and females in their group's task decision, as well as how satisfied they were with the group interaction process when the gender of the other group members were not known. Not knowing the gender of the other group members should allow them to interact more freely, without the baggage associated with gender expectations.

To do this, we randomly assigned 22 male and 32 female college students (ages ranging from 17 to 47, with a mean age of 23 and an average of 2 years in college) to computer-mediated groups of three. Each participant was located in a separate room where they read a story in which they were stranded in the subarctic with ten survival items. They were instructed to rank the survival items that were at their disposal, from the most helpful to the least helpful to their survival. First, they ranked the items individually. This was done to help produce a degree of 'ownership' to the ranking. Then they ranked the items as a group using synchronous, three-way communication software that presented the interactions on the screen in three sections, one section for each group member. As a group, they were to reach a consensus and were given 45 minutes to do so. After they ranked the items as a group, they answered questions pertaining to their confidence in their group ranking, as well as their satisfaction with the group process.

RESULTS

As expected, there were no significant differences in the ranking performance between males and females. However, in examining the perceptions of group-member task confidence, we found that males significantly believed that they developed the best possible ranking [$F(1,52) = -2.14$, $p < .05$] (males, $\underline{M} = 5.4$; females, $\underline{M} = 4.9$, using a 7-point scale) and that the final solution reflected their input (males, $\underline{M} = 4.2$; females, $\underline{M} = 3.7$) more than females. Moreover, males significantly [$F(1,52) = 2.02$, $p < .05$] indicated more than females that their group's problem-solving process was understandable (males, $\underline{M} = 4.5$; females, $\underline{M} = 3.8$), as well as being generally more satisfied with the interaction process to a marginally significant degree (males, $\underline{M} = 4.2$; females, $\underline{M} = 3.9$); [$F(1,49) = 1.78$, $p < .08$].

Interestingly, even though there was no significant difference in the use of e-mail and chat groups between males and females, males had significantly [$F(1,50) = -1.99$, $p < .05$] (males, $\underline{M} = 2.1$, females, $\underline{M} = 2.6$) had lower levels of computer anxiety than females, which may help to partially explain the above findings. That is, having lower levels of anxiety could have allowed the males to enjoy the interaction process more than females. Moreover, the normative expectation of males in dealing with computer-mediated environments as well as the socialization differences between males and females could have had a strong impact on the communicators in this study.

Previous studies have found that males tend to dominate group discussions even when they are in the minority, as well as produce more aggressive communications. Moreover, it has been found that when females attempt to communicate in computer-mediated environments (involving males) they are often marginalized and excluded from group conversations. This could occur because of the more aggressive style of males, in conjunction with the more anonymous nature of the computer-mediated medium (see Bernard,1998). It is consequently believed that some males might take advantage of the anonymity of this medium and interact in a manner that is more domineering. Females, on the other hand, are typically not socially conditioned to act as aggressively and might react to this behavior by being less

satisfied with the group process, and may even avoid participation altogether (see Andrews, 1992 for a discussion of this).

More research needs to be done to investigate the male/female attitudinal differences demonstrated in this study. For this population of college students, a combination of the expectation that males are more proficient at using this medium and the males' style of communication may have lowered the females' level of decision confidence and satisfaction. It would be interesting to investigate if the same results hold true with other populations (varying in age, professional status, and ethnicity) using computer-mediated communication.

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