INFORMATION TECHNOLOGY AND LEADERSHIP EMERGENCE OF WOMEN IN MIDDLE MANAGEMENT DECISION-MAKING GROUPS

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1 INTRODUCTION

Women today constitute 50% of middle management [4]. Research has suggested that this proportion is the result of educational and other "objective" credentials carrying greater weight for middle management positions than for the ranks of upper management [1]. Despite their roughly equal representation in middle management, women do not participate equally with men in group decision-making [8] [12]. Research (e.g., [14] [16]) has indicated that there is a direct relationship between the rate of participation in group discussions and leadership emergence. Thus, within middle management decision-making groups, leadership by women is lagging. IT has the potential for reversing this state of affairs. Specifically, two factors are suggested as enablers of leadership emergence by women in middle management decision-making groups: (a) technology-based information accessibility, and (b) increased participation in decision-making through computer-mediated communication (CMC).

2 THE AVAILABILITY OF INFORMATION THROUGH INFORMATION TECHNOLOGY

The Internet has transformed the distribution of power within organizations, making information and knowledge, which are sources of power, accessible to all, thereby empowering employees and middle managers, including women. The variety and comprehensive nature of the information available on the Web combined with powerful search engines that facilitate access to such information allow one to quickly and easily gain expert knowledge in a given area [10]. An individual with such knowledge can thereby wield considerable influence over colleagues through the exercise of expert power, which results from having some distinct knowledge or skill [6]. Through such Web-obtained expert power, women middle managers in decision-making groups can influence others and emerge as leaders.

Moreover, women managers are especially good at sharing information and knowledge with others [20]. Such sharing is vital for an organization's success because it allows appropriate personnel to gain a complete and accurate picture of the organization, including its customers and competitors. With the advent of the Internet and the vast amounts of information that are available on it, the sharing of information can be easily accomplished on a large scale and with a minimum expenditure of time. This sharing propensity of women managers allows for the sharing of Web-based information, thus ensuring that information that is available and accessible is, in fact, disseminated.

Additionally, the sharing by women managers of such information plays an important role in the development of strong interpersonal relationships and in the creation of a loyal following "by signaling to coworkers . . . that they are trusted and their ideas respected" [20, p. 123], enabling women managers in decision-making groups to emerge as leaders within these groups and to increase their "capacity to influence the attitudes, values, or behaviors of others" [17, p. 7]. Thus, it is suggested that this sharing of information may result in referent power, which is power based on strong interpersonal ties that develop from the respect, liking, and admiration of others within the organization [6] [9]. According to French and Raven [6], referent power is an extremely effective source of social influence.

IT has changed the configuration of power within organizations in yet another way: it has played a significant role in de-layering the organizational structure and thereby has broadened the base of decision-making. Specifically, in today's global business environment, where flexibility, reduced costs, swift decision-making, and quick response to market conditions and competitive pressures are essential for survival and growth, an increasing number of organizations are harnessing IT to transform themselves into nimbler, more efficient, and flatter entities. In these flatter organizations, IT — Internet, intranet, and extranet — is used to disperse information throughout the firm, thereby eliminating layers of unnecessary managers and decentralizing decision-making [11].

The decentralization of decision-making in flatter organizations allows women in middle management to emerge as leaders within decision-making groups. This is so because IT has the potential for empowering the remaining middle managers, both men and women, by enabling them to obtain information heretofore available only to upper management and thus make decisions that were formerly the province of the latter. This reduction of layers of

hierarchy is made possible by the widening of the span of control (the number of subordinates a supervisor controls), a process in which IT plays a critical role by, among other things, assuming management's coordinating function, allowing for asynchronous communication over geographically dispersed locations so that individuals need not be available at the same time, and permitting the storage and retrieval of information from shared data bases [7, pp. 14-17] [11]. Thus, the decentralization of decision-making in flat organizations results in leadership opportunities for middle managers, half of whom are women [4].

3 COMPUTER-MEDIATED COMMUNICATION AND INCREASED DECISION-MAKING PARTICIPATION

Creativity and productivity in decision-making groups within organizations is enhanced by the participation of all group members (see [12]). A driving force for the full and equal participation of women in group decision-making within corporations — potentially advancing their emergence as leaders within these groups (see, e.g., [16]) — has been computer-mediated communication (CMC). The latter term encompasses a variety of computer systems and software that employ computer networks to promote and expedite communication and includes group support systems (GSS), also known as groupware, which refer to "a set of techniques, software and technology designed to focus and enhance the communication, deliberations and decision making of groups" [18, p. 357].

A key feature of GSS is anonymity, or anonymous interaction, whereby group members interact with each other and put forth ideas without their identities being disclosed. This anonymity feature is especially important because it enables ideas to "be evaluated on their inherent worth and not on the reputation or rank of their proposers" [8, p. 214].

In traditional face-to-face (FTF) mixed gender groups, men have tended to emerge as leaders more frequently than women (e.g., [3]). This finding has been explained by reference to expectation states theory, a social psychological theory which posits that group members will tend to evaluate their fellow members on the basis of their stereotypical performance expectations, which are influenced by external status characteristics. When gender is treated as a status characteristic, the theory predicts that because society regards men as having higher status than women, the task contributions of men will be regarded as more valuable than the contributions of women [12] [13] [15] [21]. The devaluation of women group members' performance and contributions has resulted in the decreased participation of women, thereby hindering their emergence as group leaders.

It is suggested that in computer-mediated groups using anonymity-featured GSS, gender will be eliminated as a status characteristic because the differentiating gender cues will not be communicated. Thus, anonymity allows for the evaluation of ideas without the distorting influence of gender, equalizing male-female participation rates and enabling women members to emerge as leaders in initially leaderless groups. While anonymity in GSS results in the absence of gender cues, individual linguistic features (e.g., language, grammar, repeated phrases) will, to a large extent, serve to distinguish the various unidentified group members. In this way, an individual member's participation will be recognized while remaining anonymous, with each member having an equal opportunity to emerge as a leader without regard to considerations of gender. Although research has demonstrated that gender differences in emergent leadership disappear over time as group members interact with each other [5], women will have the opportunity to emerge as leaders even in *newly constituted* computer-mediated groups. This is so because the anonymity feature of GSS should neutralize the reluctance of women in mixed gender groups to participate in decision-making [12], the participation rate being positively related to leadership emergence (see [2] [14] [16] [19]).

4 CONCLUSIONS

It holds promise as an enabler of leadership emergence by women in middle management decision-making groups. The accessibility of information has the potential for the development of expert and referent power through information sharing. Moreover, the trend toward the decentralization of decision-making, made possible by the accessibility of information by middle managers, empowers these middle managers of both genders, thus providing women the opportunity to exercise leadership. Finally, computer-mediated communication, such as GSS with its anonymity feature, allows women to increase their participation in decision-making within groups and to emerge as leaders in these groups, potentially bringing about creativity and productivity gains to management. Thus, IT plays a crucial role in the removal of barriers to decision-making participation within organizations and to the emergence of leadership by women in middle management.

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