

GENDER DIFFERENCES IN PERCEIVED GRATIFICATIONS OBTAINED THROUGH ELECTRONIC MAIL

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Electronic mail provides users with unique positive psychological consequences that differentiate it from other media. These consequences or gratifications have been mentioned separately across the electronic mail literature, yet there is no specific measure for these gratifications. The study found that females ($M = 7.7$; $SD = 1.8$) achieve higher levels ($SD = 1.9$ $F = 28.02$; $p < .01$; $\eta^2 = .31$) of interpersonal gratification than do males ($M = 6.5$; $SD = 1.9$).

INTRODUCTION

Computer-mediated communication researchers have devoted tremendous scholastic activity over the last 35 years to understand the cognitive and interpersonal justifications for electronic mail use. One specific area of investigation has centered upon the positive perceived consequences achieved through electronic mail interaction. However, there are no measures for researchers to compare or evaluate electronic mail gratifications. Equally, the literature holds very little data concerning the role that gender may play in achieving electronic mail gratifications. The present report addresses these issues by scaling

electronic mail gratifications and assessing whether gender poses any significant influence.

RELEVANT LITERATURE

The uses and gratifications (U&G) perspective is one of the most durable and malleable approaches to the psychology of mediated interaction. The essence of the perspective is that people use particular media because they receive measurable gratifications in return. From its origin, the keystone of the approach is the notion that individuals are active participants in the communication process, which is

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an idea that has been reiterated for over 5 decades (Ball-Rokeach, 1985; Katz & Lazarsfeld, 1955).

Palmgreen (1984) described that a variety of variables (values, beliefs, attitudes) initiated the media utilization process and developed into the gratifications sought (GS) variable. Loosely recognized as motivation, the GS variable builds within the individual and influences the consumption or avoidance of mediated messages [Note: although the literature adequately presents gratification outcomes achieved through electronic mail interaction, specific avoidance activities were not found and thus could be sufficiently scaled.]. Gratifications obtained (GO) are believed to be the positive cognitive result of media utilization, which accordingly have a reinforcing effect upon GS variables. Palmgreen and Rayburn (1982) explain “the feedback relationship between behavior and descriptive beliefs ... suggests that gratifications *obtained* ... might be linked to beliefs and ... into a more general process theory of uses and gratifications” (p. 578). With this literature in mind, the present query into electronic mail gratifications is constructed around the notion that GO variables are the most indicative of the entire gratification process.

One additional concern refers to the types of electronic mail gratifications. In pursuit of these, the body of electronic mail research yielded three categories that lead to psychological fulfillment (interpersonal, organizational, and intrinsic). Interpersonal relational maintenance is clearly one of the most often identified gratifications obtained from electronic mail interaction. Stafford, Kline, and Dimmick (1999) conducted an extensive examination concerning the utility of electronic mail and found that people mostly used electronic mail for interpersonal reasons. The authors noted that “individuals appear to sustain relationships via e-mail” (p. 666).

Additionally, gender has proven to be influential in these interpersonal relational activities. Investigators have found that females achieve higher levels of motivation (Jackson,

2001), perceived presence (Olaniran, 1993), language style and use of graphical accents (Sussman & Tyson, 2000) and perceived relational development (Boneva, Kraut, & Frohlich, 2001) than males. With this information, this report is organized around the hypothesis that females will score higher than males in reference to *interpersonal gratifications obtained* (IO).

Another prominent portion of the electronic mail literature pertains to *organizational gratifications* (OO) obtained, which refer to the use of electronic mail to receive pertinent information about one’s position within organizational social networks (i.e., work, school, and government). Unlike other perspectives that view task completion as the primary indicator of organizational gratification (see McGrath, 1991), the present conceptualization focuses upon the electronic exchange of messages that bind organizational relationships (Dawley & Anthony, 2003). In the organizational setting, the literature suggests that females perceive organizational gratifications at higher levels than do males (Dennis & Kinney 1999). Thus, the second hypothesis describes that females and males will differ significantly in reference to their organizational gratifications obtained.

Lastly, electronic mail possesses intrinsic characteristics that differentiate it from other media such as speed and asynchronicity. Although the labels vary, there is significant literature identifying this gratification. Stafford et al. (1999) describes these gratification opportunities as “the use of a particular medium [due to] ... its beneficial attributes” (p. 663). Steuer (1992) also points out that a medium is gratifying in terms of the “presence” or feeling of interaction communicated between the participants, and there is recent evidence that gender also plays a role in these types of gratifications (Nicovich, Boller, & Cornwell, 2005). Consequently, the third hypothesis takes the position that gender differences exist in reference to *intrinsic gratifications* (TO).

METHOD

In order to address the above hypotheses, three measures (interpersonal, organizational, and intrinsic) were developed (Table 1), leading to the three variables assessed by the hypotheses (IO, OO, and TO). The project began by creating 18 Likert items (six per measure with anchors 1 = *strongly disagree*, 5 = *strongly agree*) with the issue of face validity in mind. Eighteen student coders from a southwestern university in the United States participated in item reduction.

First, the student coders were provided with conceptual definitions (Table 2), then the coders rated each item (with anchors 1 = *strongly unfavorable to the concept*, 5 = *strongly favorable to the concept*). After the responses were scored, all items with low coefficients to the summed score of the items intended for each particular scale were removed [Note: items were eliminated when their correlations with the total score fell below a .6 threshold.]. This process yields items that theoretically congre-

gate around the construct of interest. Next, the average ratings of the coders in the top and bottom quartiles were computed. A test of difference produces *t* scores that indicate the degree of discrimination between the coder's ratings. By using these techniques in conjunction, the unstable items were eliminated from the analyses.

Six items (two per measure) remained after item reduction, and a convenience sample of 84 (29 men, 34.5%; 55 women, 65.5%) was collected from the same university in the Southwest for the pilot (2 American Indian, 2.4%; 3 Asian, 3.6%; 10 African American, 11.9%; 16 Hispanic, 19%; 45 Caucasian, 53.6%; 8 biracial, 9.5%). Factor analysis was used to confirm that three distinct measures existed within the dataset and each of the items would load upon the correct factor with no cross loading over .4 [Note: although permission was given to electronically send the measures to the university population, privacy concerns prohibited the actual *acquisition* of the sampling frame (i.e. list of electronic mail

TABLE 1
Scale Items Assessing Electronic Mail Gratifications

Interpersonal Gratifications Obtained (IO)
IO ₁) I like e-mail because it permits me to socialize with family.
IO ₂) I like e-mail because it allows me to maintain relationships with family and friends.
Organizational Gratifications Obtained (OO)
OO ₁) I like using e-mail because it helps me to make sure I have the organizational information that others have.
OO ₂) I like e-mail because it helps me to work better with other people in the organization.
Intrinsic Gratifications Obtained (TO)
TO ₁) I like e-mail because it helps me communicate in a cheap way.
TO ₂) I like e-mail because it permits me to communicate in a fast way.

TABLE 2
Construct Definitions for Variables

Interpersonal Gratifications Obtained
These items measure the satisfaction associated with using electronic mail to create and maintain interpersonal relationships.
Organizational Gratifications Obtained
These items measure the respondent satisfaction with electronic mail to create and maintain organizational relationships
Intrinsic Gratifications Obtained
These items measure the degree of satisfaction that the respondent obtains through the inherent use of electronic mail.

addresses). Consequently, nonprobability sampling was utilized in the present report.]. In addition, it was expected that the three measures would hold a combined variance explained over 75%.

A three-factor principal components analysis with varimax rotation revealed that the *a priori* specifications were accurate. The rotated solution demonstrated that the first factor (OO₁ and OO₂) was composed of organizational gratifications obtained, which explained the most variance (43.9%) with each of the items holding strong partial correlations (.94 and .91, respectively) with the first factor. Second, the interpersonal gratifications items (IO₁ and IO₂) also explained a sizable portion of variance (24.4%), with each of the items holding strong partial correlations as well (.89 and .86, respectively). The last factor composed of intrinsic gratifications (TO₁ and TO₂) held strong to moderate correlations (.77 and .92, respectively) with the third factor and explained a moderate portion of variance (16.3%). Taken as a group, the items performed well under the *a priori* specifications with a combined explained variance of 84.7% and no cross loadings over .4.

With piloting complete, a balanced sample of 265 was drawn from the same university in the southwest to assess the possible differences related to gender (135 females, 50.9%; 130 males; 49.1%; 27 Asian, 10.2%; 12 African American, 4.5%; 52 Hispanic, 19.6%; 2 Pacific Islander, .8%; 150 Caucasian, 56.6%; 20 biracial, 7.5%; 2 missing .8%). Of note, the scales achieved strong to moderate reliability statistics (IO = .70, OO=.85, and TO = .70). The hypothesis testing revealed that the literature pointed accurately toward statistical differences concerning gender. In reference to H1, the data indicated that females ($M = 7.7$; $SD = 1.8$) scored significantly higher than males ($M = 6.5$; $SD = 1.9$) in reference to interpersonal gratifications obtained ($M = 7.1$; $SD = 1.9$ $F = 28.02$; $p < .01$; $\eta^2 = .31$). Analysis of the hypotheses referring to the organizational and intrinsic gratifications did not yield any significant differences in reference to gender.

DISCUSSION

This report adds to the body of research concerning the role of gender in gratifications obtained through electronic mail interaction. However, limitations in design and sampling both contribute to several cautions that must be attached to any conclusions drawn in the present report. As described above, females have been shown to possess higher levels of motivation and performance concerning interpersonal electronic mail interaction. The present report extends this logic by establishing that females also achieve higher levels of interpersonal gratification than do males. The most fruitful avenue of future research would be to examine whether reciprocal relationships exist between these gratification outcomes and other modalities of computer mediated competence and message construction.

A subset of this dataset was previously published in an academic journal.

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