

FACTORS AFFECTING EMAIL RESPONSE RATES IN A CORPORATE ENVIRONMENT

Robert LaMastro, Assem-Pak, Inc., lamastro@rowan.edu
Daniel McFarland, Rowan University, mcfarland@rowan.edu

ABSTRACT

This study uses social loafing and diffusion of responsibility to explain email response rates in a medium sized corporation. Response rates were examined in terms of group size, message importance, and power distance of the sender. While the overall response rate of this study was unexpectedly high compared to other studies, it failed to confirm the influence of these factors on the overall response rate. However, factors such as Cognitive Dissonance and Organizational Commitment might also be relevant in explaining the observed response rates.

INTRODUCTION

Most professionals and academics would agree that email usage has impacted business practices and redefined corporate culture. However, email response rates and helping behavior has often been disappointing and can have unexpected results with far reaching implications for corporate productivity. The behavior of group members in computer-mediated communications can exhibit the same or similar effects as noted in the social psychological literature as groups that communicate face-to-face. Such phenomenon includes the bystander effect, diffusion of responsibility and social loafing.

This study goes beyond the current literature by examining the email response rate in a business environment whereas previous work has focused exclusively upon an academic or open access setting. This study also examines the effects of message content and authority of the sender as potential mediators of the response rate.

LITERATURE REVIEW

Research on human behaviors in computer-mediated communications has concluded that computer users can be influenced by the same or similar social psychological phenomena that affect face-to-face communications. Key among these are the bystander effect, diffusion of responsibility, social loafing, and social impact theory.

Latané and Darley (1969) found that the chance of getting help from a bystander in an emergency drops as the number of bystanders increases. They further broke down the factors that might lead to a decision by a bystander to help a victim. One factor, the diffusion of responsibility, showed how individuals would place more responsibility on other bystanders and therefore decide not to become involved themselves. Subsequent research (Latané, 1981) shows how diffusion of responsibility can also be applied to non-emergency situations.

Social loafing is a group phenomenon whereby individual efforts are reduced in a group setting relative to individuals working alone. Research on social loafing (Latané, et al. 1979) has revealed that social loafing is more likely to occur when the group members believe the quality of work will be judged collectively and not individually. Further, the perceived importance of the task has a bearing on the effects of social loafing. The smaller and more cohesive the group, the less likely it is that members would reduce their efforts.

Social Impact Theory (Latané, 1981) relates authority and response to authority on three factors, strength, immediacy, and number. Strength is the relative status of the authority figure. Immediacy measures how close in proximity the authority figure is relative to the individual. Finally, the number refers to the number of persons an individual has in authority above them. People resist authority if there is little immediacy, and follow authority when number increases. However, the latter phenomenon has been shown to have diminishing returns.

Kiesler et al. (1984) found that status and position cues of the group members regulated feedback, and influenced processing pressures and timing, as well as norms while using a computer. The study found that the difficulties were due to lack of feedback, absence of social influence cues, and depersonalization from a lack of nonverbal involvement. Similarly, Siegel et al. (1986) found that computer-mediated communication influenced efficiency, participation, interpersonal behavior, and group choice. Furthermore, social equalization was higher in computer-mediated communication, however it took longer for a group to reach consensus (Adrianson et al., 1991). Dubrovsky et al. (1991) also found there was increased equity in computer-mediated communications compared to face-to-face communications when the high status member of the group was also the primary advocate for the task. This was evident despite the absence of face-to-face nonverbal cues. They concluded that social norms in email communication were being developed in such a way that certain emotions and non-verbal cues could be expressed within the context of the message.

Several studies also investigated response rates and helping behaviors in computer-mediated communications. Markey (2000) studied the bystander effect (bystander apathy) using instant messaging (IM) as the electronic communications format. The study included 400 chat rooms where vague requests for help were flashed while the sender was part of the normal chat room chatter. As hypothesized, the more people that were logged into the chat room, the longer it took to get a response when the request was made with no name specified. Barron and Yechiam (2002) used diffusion of responsibility to explain why a single recipient email messages received more replies and higher quality replies as compared to group recipient email messages. Lewis et al. (2004) studied the impact of group size and message priority on the helping behavior of email recipients. Overall, 49% of the students read the email, and 28% completed the survey. Of those that did respond, there was no significant effect of group size on response rate. Similarly, there was no significant difference between those sent with normal priority and those sent with high priority. However, Blair et al. (2005) found a significant difference in response rates between single recipient emails and group emails. Clearly, the research results describing group email response rates is not consistent.

Prior investigations on computer-mediated response rates have been limited either to academic settings or open access environment (e.g., chat room or Listserv). Corporate settings are different from these other settings in that there is a lack of anonymity, the recipients have more of a shared purpose, and there are typically many other forms of frequent communication (e.g., face-to-face, telephone, social). Given the critical nature of email in today's business climate, it is important to evaluate the efficiency of computer-mediated communications.

PURPOSE AND EXPERIMENTAL DESIGN

This study evaluated the response rates of email requests within a corporate environment. It is hypothesized that email response rates within a corporate environment will show the same diffusion of responsibility consistent with the By-Stander Effect. The factors considered include group size, message importance, and the relative authority of the email sender. It was further hypothesized that this study will confirm the effect of group size on response rate when the intensity of the help request is "normal" and the sender is at a lower authority level. Further that increasing the intensity of the request or has a sender with a higher authority level will reduce the difference in response rates. It was also hypothesized that the effect of authority level will be stronger than the intensity of the help request.

This investigation studied the email response rates of the user population of a medium sized company. The total population of the email user group for this company was 180 people. A total of 96 employees were selected randomly and assigned to one of 12 conditions. Each recipient was requested to complete an attached survey related to IT services. One-third of the employees received their email request individually while another third was sent the request in groups of 4 individuals. The last third was sent the request in a group of eight. Within each set, one of two levels of sender authority was assigned as was one of the two levels of intensity of the message accompanying the email. In total, the study represented a 3x2x2 factor design.

RESULTS

The subject company consisted of three manufacturing plants in two States in the USA plus the corporate headquarters. Assignments to one of the 12 study groups was first stratified by location and then selected randomly. This not only controlled for possible difference by location, but also minimized the possibility of non-email communications concerning this survey. The characteristics of the 12 groups can be found in Table 1.

A confederate in the IT department provided not only the technical support for this survey, but also fronted as the sender of all e-mails. To increase the power distance of the emails, an attachment provided by the CEO was attached to each email as appropriate. The wording of the emails was also adjusted to convey a short time frame for response (4 days) or no time limit.

To minimize the impact of this survey, they were distributed over a three week period. Initially, all emails sent individually were sent, followed a week later with email send to groups of four. Finally all eight person groups were sent a week after that. A summary of the number of returned surveys is given in Table 2.

TABLE 1: CHARACTERISTICS OF SUBJECT POOL BY LOCATION

<i>Group</i>	<i>Grouping Size</i>	<i>Power Distance</i>	<i>Priority</i>	<i>Location 1</i>	<i>Location 2</i>	<i>Location 3</i>	<i>Location 4</i>
1	1	Low	Normal	3	2	2	1
2	1	Low	High	3	2	1	2
3	1	High	Normal	3	2	1	2
4	1	High	High	3	2	1	2
5	4	Low	Normal	3	2	1	2
6	4	Low	High	2	2	1	3
7	4	High	Normal	2	2	1	3
8	4	High	High	2	2	1	3
9	8	Low	Normal	2	2	1	3
10	8	Low	High	3	2	1	2
11	8	High	Normal	3	2	2	1
12	8	High	High	3	2	1	2

TABLE 2: NUMBER OF RETURNED SURVEYS FROM SETS OF EIGHT

	<i>Power Distance</i>	<i>Priority</i>	
		<i>Low</i>	<i>High</i>
Emails sent individually	Low	5	7
	High	8	6
Emails sent in groups of 4	Low	6	5
	High	5	6
Emails sent in groups of 8	Low	6	7
	High	6	7

The overall response rate was quite high at 77.1% or an average of 6.2 responses per cell. Results of the Chi Squared Analysis indicated no significant difference between cells ($\chi^2 = 3.136$, $df = 2$, $P=0.208$). Similarly, probing each individual factor provided no evidence that would suggest an influence on response rates.

DISCUSSION

The results of this study suggest that email responsiveness may be more complicated than a simple assumption of diffusion of responsibility or social loafing. Darley and Latané's (1968) Model of Helping established the steps

required by an individual before they would actually provide help in an emergency situation. The step that requires acceptance of personal responsibility is the ultimate basis for diffusion of responsibility. The need to help and innate responsibility is very different in a business environment.

Cognitive Dissonance Theory would suggest that individuals would feel they have been placed in an uncomfortable situation if they did not reply. While the design of this study was created to prevent a forced response, it is possible that external conditions may have existed that affected the work environment at the time the survey was issued. This company was sold to a new parent company just two years earlier.

In Commitment Theory, individuals will respond because they feel they have either an explicit or implicit obligation. According to Cotterell et al. (1992), studying commitment in the organization, "the reciprocity norm would encourage individuals to help others generously so as to engender obligations that could be drawn on in the future."

The response pattern can possibly be explained in terms of the norm of reciprocity (Gouldner, 1960), which states that aid received from others should be compensated. The confederate used to send these emails was an individual who would have been perceived as having considerable expertise in the area of computer programming and technology by the subject pool. They might need to be called upon this individual to address computer problems that could affect their productivity. Therefore, it is the best interest of the person receiving the request for help to respond promptly, as it sets up a situation where the other part will be somewhat obligated to respond in the future should help be required.

In terms of the study itself, the assumption was made that a group size of 8 was sufficiently large to establish a diffusion of responsibility and the literature supported this. Since the evidence of large groups (N=180) suggest that diffusion of responsibility exists, it may be true that a work environment requires a larger number of individuals being involved. It is also possible since the other names in group email were not all familiar because of the stratification by location so that the notion of diffusion of responsibility did not attach.

There are several limitations with the experimental design of the current study. First, the only one company was studied and this company has a relatively small population of email users. The fact that this organization is a medium sized manufacturing sector company may make generalization to other organizations difficult. Also, because coworkers within the company have existing relationships and communicate in other ways, it is difficult to isolate the effects of the study.

SUGGESTIONS FOR FUTURE WORK

This study suggests that the processes for email responses within a business environment are not the same as a non-business environment in terms of diffusion of responsibility or social loafing. Future studies should look at other companies in multiple industries and attempt to assess one's feeling of commitment or obligations. Finally, the existing relationship of the organizational members should be considered, particularly the relationship between the sender and the recipients.

REFERENCES

1. Adrianson, L., & Hjelmquist, E. (1991). Group Processes in Face-to-face and Computer-mediated Communication. *Behavior & Information Technology*, 10, 281-296.
2. Barron, G. & Yechiam, E. (2002). Private E-mail Requests and the Diffusion of Responsibility. *Computers in Human Behavior*, 18, 507-520.
3. Blair, C. A., Thompson, L. F., & Wuensch, K. L. (2005). Electronic Helping Behavior: The Virtual Presence of Others Makes a Difference. *Basic and Applied Social Psychology*, 27, 171-178.
4. Cotterell, N., Eisenberger, R., and Speicher, H. (1992). Inhibiting Effects of Reciprocation Wariness on Interpersonal Relationships. *Journal of Personality and Social Psychology*, 62, 658-668.

5. Dubrovsky, V. J., Kiesler, S., & Sethna, B. N., (1991). The equalization Phenomenon: Status Effects in Computer-mediated and Face-to-face Decision-making Groups. *Human Computer Interaction*, 6, 119-46.
6. Gouldner, A.W. (1960). The Norm of Reciprocity: A Preliminary Statement. *American Sociological Review*, 25(2), 161-178.
7. Kiesler, S., Siegel, J., & McGuire, T., (1984). Social Psychological Aspects of Computer-mediated Communications. *American Psychologist*, 39, 1123-1134.
8. Latané, B. (1981). The Psychology of Social Impact. *American Psychologist*, 36, 343-356.
9. Latané, B. & Darley, J.M. (1968). Group Inhibition of bystander intervention. *Journal of Personality and Social Psychology*, 10, 215-221.
10. Latané, B. Williams, K., & Harkins, S. (1979). Many hands make light the work: The causes of consequences of social loafing. *Journal of Personality and Social Psychology*, 37, 822-832.
11. Lewis, C. E., Thompson, L. F., Wuensch, K. L., Grossnickle, W. F., & Cope, J. G. (2004). The Impact of Recipient List Size and Priority Signs on Electronic Helping Behavior. *Computers in Human Behavior*, 20, 633-644.
12. Markey, P. M. (2000). Bystander Intervention in Computer-Mediated Communication. *Computers in Human Behavior*, 16, 183-188.
13. Siegel, J., Dubrovsky, V., Kiesler, S., & McGuire, T., (1986). Group Processes in Computer-mediated Communication. *Organizational Behavior and Human Decision Processes*, 37, 157-87.