Structuring Organizational Communication: Employees’ Role and Network Position as Predictive of Institutional Talk About the Adoption of Technology

Corey Jay Liberman
Marymount Manhattan College
cliberman@mmm.edu

Marya L. Doerfel
Rutgers University
mdoerfel@rutgers.edu

Abstract
The purpose of this study is to assess whether and to what extent structuration theory, role theory, and network theory can help explain employees’ attitudes about the introduction of a new, organization-wide Electronic Mail system. The analysis considers how an organization’s existing structures, along with one’s role and network affiliation within the organization, combine to shed light on the communicative effects resulting from assimilation processes of new technology by organizational members. The results of the case study indicate that one’s role within an organization and one’s network position within the organization impact views of the introduction of Electronic Mail as positive and beneficial, or negative and disadvantageous. These findings indicate the need to understand and assess seemingly covert variables that might influence the extent to which employees are actively willing to adopt new communication technologies and incorporate them into their everyday organizational routines.

1. Introduction

Recent studies relating to the impact of technology on communication processes within organizations abound [1, 2, 3]. Specifically, scholars are interested in understanding how the introduction of new media has both facilitated and complicated interaction between and among employees. Within the organizational communication and management literatures there exists a plethora of research endeavors attempting to explain how and why organizational members adopt new modes of communication, as well as the problems that they encounter during the adaptation and post-adaptation stages [4, 5, 6]. Researchers over the years have tackled these issues relating to technology within organizations from two different perspectives, analyzing communication technologies as either a product or as a process [7, 8]. Those that attempt to understand the product of new media within organizations are interested in assessing whether and to what extent new forms of communication have benefited the overall communication practices within particular institutions. In other words, they are interested in the relationship between new technologies and more efficient and effective communication. On the other hand, those that study technology as a process are more interested in the ways in which organizational members are able to adopt a new communication medium, as well as adapt their preexisting methods for interaction. In other words, these scholars are interested in studying technology as a means to an end, not an end in itself.

This paper attempts to shed light on a third, under-researched area related to the use of communication technology by organizational employees. Of interest is not the impact of new communication media on employees, nor the process by which employees begin to utilize and make sense of new media, but rather employees’ overall opinions of, and attitudes toward, the utilization of such technology. In essence, what comes to determine and/or control how employees communicate about the introduction of new media within the organizational [social] environment? This paper, therefore, addresses whether and to what extent one’s role and network position impact how he/she perceives of, and communicates about, new methods for communication. The underlying premises of structuration theory, role theory, and social network theory are utilized in an effort to add additional insight into the process of technology implementation within an organizational setting.

2. Structuration theory

Before addressing how and why one’s organizational role and network position come to influence how one communicates about the introduction of technology, it is important to explain why communication and behavior are, at least to some extent, predictable. Much communication scholarship over the years has concluded that communication does not happen randomly, nor haphazardly. Instead, communication is based on
established social structures, whereby societal members understand their daily routines due to recurring experiences and repeated social situations. According to Giddens [9], who is responsible for structuration theory, individuals begin to make sense of their social environments by understanding the rules and norms that govern their very social existence. In short, Giddens [9] argues that the process of structuration involves “studying the modes in which [social] systems, grounded in the knowledgeable activities of situated actors who draw upon the rules and resources in the diversity of action contexts, are produced and reproduced in interaction” (p. 25). Thus, it is through the process of structuration that rules for behavior and communication are socially constructed.

Employees, according to Giddens [12], understand how to communicate with others because of the recurrent social practices that they experience daily. These recurring social practices, or structures (rules for interaction), allow organizational individuals to understand their organization’s culture and communication practices and enable them to conduct themselves in a way that is conducive to their organization’s environment. Giddens [9] views organizational structures as both enabling and constraining: enabling because they provide a useful framework for social interaction, though constraining because they offer little flexibility for how one behaves and interacts within the organizational confines. Thus, although structuration theory helps clarify the communication practices within organizations and aids in explaining how employees understand their organization’s rules, structures can be beneficial, though also disadvantageous, for institutions (at the macro level) and employees (at the micro level).

Using Giddens’ [9] theoretical perspective, Desanctis and Poole [10] used the underlying logic embedded in structuration theory and applied it to the organizational setting. Structures, according to them, provide a framework or guide for individuals, allowing employees to understand how to complete tasks, how to communicate, with whom to communicate, and other such variables linked to organizational processes. Perhaps Desanctis and Poole’s [10] greatest contribution to Giddens’ [9] theory was their discussion dealing with the relationship between structure and social change: how existing organizational structures come to influence social change and how, as a result of social change, structures become altered. According to Giddens [12], and later reaffirmed by Desanctis and Poole [10], alterations involving an organization’s social structure are common and necessitate that structures be continuously recreated. Over the years, scholars have conducted much research in an effort to understand the impact of technology on the existence, maintenance, utility, and potential change of organizational structures [10, 15, 16]. As Lewis and Seibold [11] point out, this is important to study because “organizational structure affects outcomes of [technology] adoption” (p. 336).

In their oft-cited article dealing with adaptive structuration theory, Desanctis and Poole [10] believe that technological innovations within organizations do not require employees to create structures from the ground up, but rather force these individuals to rethink, reconfigure, and recreate these structures. New technologies offer new rules, novel resources, and innovative capabilities. Upon adoption, employees must begin to combine preexisting structures (or ways of doing) with new technological structures in an effort to create one unified social system. Fulk [15] concurs with this idea, as she believes that the introduction of communication technologies within organizations not only forces employees to socially reconstruct existing relationships and communicative practices, but also provides new structures through which individuals can understand the changes brought about by new media. In order for employees to comply with the new rules, procedures, and resources allotted by the adoption of a new technology, according to Fulk [15], new structures must be created to maximize the possibility that employees will perform preexisting tasks and accomplish preexisting goals using novel forms of technology.

From a structurational perspective, the adoption of technology has been viewed from two different perspectives. As Lewis and Seibold [11] argue, sometimes employees merely have technology thrust upon them (perhaps even unwillingly). Fulk [15], however, takes the opposite view, positing that employees are instrumental in creating the new organizational structures and, therefore, are active agents in the process of technology adoption. Regardless of which perspective one adopts, it is quite difficult to contest Orlikowski and Yates’ [16], Orlikowski’s [5], and Yates and Orlikowski’s [17] claim that the structures that accompany the introduction of organizational technologies impact, challenge, complicate, alter, and question existing methods and modes of interaction within, between, and among organizational constituents. Yates and Orlikowski [17] found, for example, that the introduction of Electronic Mail for purposes of organizational communication led to the modification
of existing structures. That is to say, employees used their knowledge of communication rules, based on existing structures, to incorporate Electronic Mail into their daily organizational routines. This does not imply that communication and the social processes associated with it do not change. It does imply, however, that existing structures help organizational members make sense of communicative changes evoked by the introduction of technology, adding further credulity to the ideas about which Giddens [9] speaks.

From where, then, does this knowledge, situated in preexisting rules, about organizational behavior come? Or, put more simply, from where do these structures come? For purposes of the present study, the authors claim that these structures are found in both employees’ roles and employees’ network position, to which we now turn.

3. Role theory

Role theory, which was popularized by Katz and Kahn [18], might best be defined as “conceptions of how typical people in typical positions are expected to behave” [13, p. 1239]. According to role theory, organizational members learn their respective expectations, duties, responsibilities, and appropriate behaviors through human communication. Katz and Kahn [18] argue that such roles emerge through both formal and informal training. Although overstated and seemingly mundane, organizational members enter an institution with much uncertainty regarding both occupational and organizational ambiguity. These feelings of uncertainty are ultimately alleviated, and possibly even eliminated, as a result of information seeking and sensemaking activities [30]. One such sensemaking activity is role development, whereby organizational members learn and willingly accept a particular identity based on, among other variables, their formal position. Since Katz and Kahn [18] believe that organizational roles are usually covert and unknown, they must be communicated during the early stages of organizational entry, otherwise norms and behavioral expectations will remain hidden. It is, therefore, though human communication that incoming employees are able to understand, adopt, and ultimately carry out their organizational roles: a major tenet of Katz and Kahn’s [18] role theory. From an empirical perspective, a clear conceptualization of one’s role as employee has been linked to both organizational commitment and organizational satisfaction [21].

The important question, however, is what happens to roles (if anything) when a new technological medium for communication is introduced into an organization? Although Brotherton [24] believes that the introduction of technology has forced organizations to hire individuals capable of utilizing new communication media, other scholars argue that organizational roles are readjusted and reconstructed based on the requirements of the new technology [7, 25, 26]. Similar to Giddens’ [9] and Desanctis and Poole’s [10] discussions relating to organizational structures, these scholars argue that organizational roles are reconfigured due to the changing social norms resulting from the inclusion of new media technologies. When one readily and willingly adopts an organizational role, he/she is accepting a psychological contract, or an [often unspoken] agreement between employee and employer regarding behavioral (including communicative) norms. When a new technology is introduced, both the employee and the organization must work together in an effort to readjust this psychological contract to assess how a new form of communication might alter one’s existing role. Unfortunately, role conflict, role ambiguity, and role refusal is elevated during times of organizational modification [18]. The introduction of technology into an organization is a prime example of such modification. It is how employees learn to deal with the aforementioned role issues (i.e. learning how to incorporate a new technology into work processes) that has begun to intrigue social science scholars over the past several years [1, 3, 15]. Although many scholars interested in using role theory to help understand social phenomena have criticized its basic roots, arguing that its foundations and assumptions are premature [29, 30, 13], Biddle [23] believes that role theory is extremely important for understanding organizational change and the effects of it.

This study, unlike most others, does not attempt to explain how technology affects one’s organizational role, how one’s organizational role influences the utilization of new media, or how one’s role might be affected by the introduction of a new communication technology. Rather, of concern is how role theory might inform organizational members’ rhetoric concerning the use of technology for intra-organizational communication. In other words, does one’s role within the organization predict and/or determine how he/she communicates about the new technology? According to Cass and Zimmer [22], there are two types of organizations: a role-oriented organization and a task-oriented organization. In the former, roles are socially
constructed, whereas in the latter, roles are merely given. Biddle [23] argues that employees are role makers in a role-oriented organization and role takers in a task-oriented organization. This logic is very similar to Katz and Kahn’s [18] contention that “some [employees] have to be shaped for the role and others are hired because they already fit the mold” (p. 189). Based on these ideas, it is quite likely that those in role-taking positions, or what Biddle [23] would refer to as non-management positions, have very little to do with organizational decisions and might merely go with the flow of things. Those in role-making positions, however, what Biddle [23] would refer to as management positions, are instrumental in the organizational decision-making process. Thus, it is likely that those in role-taking positions might communicate about the decision to use an organization-wide Electronic Mail system more negatively than their role-making counterparts, most notably because they were not instrumental in the decision to introduce the system and, as such, have little to lose if employees, through communicative contagion, speak harshly about its implementation. In light of this, the first hypothesis for the current study is:

H1 – Employees holding a managerial role (a role-making position) will communicate about the new technology more favorably than those employees holding a non-managerial role (a role-taking position).

4. Social network theory

Very closely linked to the idea of role in an organization is the idea of network position. At the very basic level, understanding one’s network position involves understanding to whom others are socially connected, how they are socially connected, and what these networks provide. As Ahuja [31] makes quite clear, much of the prior scholarship linking together technology and networks has framed technology as a product, assessing whether and to what extent new forms of communication have changed social structures and networks, as well as benefited overall organizational communication practices. For example, Valente [32] was interested in the network variables that come to predict employees’ willingness to adopt and implement a new form of communication media and Papa and Papa [6] were interested in the relationship among network partners, network centrality, and one’s utilization of new communication media. In opposition to this product perspective, other studies have attempted to assess the impact of technology on the process of social network alteration and formation within an organizational setting. Although results remain inconclusive [31, 32, 33], one salient question has been collectively raised: how have the opportunities afforded by new electronic communication media affected intra-organizational social networks? Wellman et al. [34] argue that the possibility for one’s social network to increase is great, since technology provides individuals with a much easier, more rapid form of communication. Vaast [35] agrees with this notion and argues that an increase in the number of individuals within one’s network will occur merely because the new technology allows employees to enhance and diversify with whom they communicate. According to Burkhardt and Brass [33], the ability to communicate with more employees through the use of computer-mediated communication devices does lead to a subsequent increase in both the scope and magnitude of one’s internal network. However, they argue that employees increase the number of individuals within their social networks not merely because they have the ability to do so, but rather to ease the amount of uncertainty caused by the increased complexity of a new communication medium. After all, increased communication is one of the tactics for uncertainty reduction as first posited by Berger and Calabrese [36]. Using Giddens’ [12] language, one might very well look to others, and increase his/her social network, in an effort to adopt the new organizational structures created by the introduction of technology.

Morgan, Neal, and Carder [37] introduce a concept know as the underlying network, which refers to any possible individual to whom an employee might have either a weak or strong tie. Using this idea of an underlying network, the introduction of technology greatly increases the amount of possible ties that an employee can have. When the number of possible social ties that one has increases, there will be a subsequent increase in one’s total network size [37]. In opposition to this, Ahuja [31], using Burt’s [38] structural holes theory, argues that although technology does offer the possibility for employees to increase the number of contacts within their social networks, this ability does not necessarily lead to an increase in one’s social system. In fact, according to Ahuja [31], new media devices merely make communication easier for employees to interact with those previously in their social network. Similarly, Wellman, Wong, Tindall, and Nazer [39] argue that employees will communicate more often with individuals with whom they share a strong tie,
but will not necessarily increase the amount of employees considered part of their social network.

This study, rather than looking at how organizational networks are directly affected by the introduction of new technology, attempts to determine whether one’s network position within the organization impacts how he/she communicates about the utilization of technology. One important network variable that likely impacts how an employee communicates about organizational change is centrality. According to Freeman [42], centrality is, in a very basic sense, a numerical value describing one’s overall level of importance in a given network. Although there are many different ways of assessing one’s level of importance in a network (i.e. betweenness, closeness, eigenvector), one of the centrality indicators that has received much attention over the years is degree centrality. Operationally defined, one has more degree centrality than another because he/she has more communication ties, comparatively speaking. In an organizational social network, an employee with social ties to many others is considered to be more “central” to that network, whereas an employee with few social ties to others is considered to be more “peripheral” to that network. For purposes of this study, of importance is whether one’s network position (central vs. peripheral) influences how he/she communicates about the use of new communication media within the organizational environment. Very similar to the previous discussion related to role theory, it is quite likely that those who are role-makers are also those more central to the overall organizational communication network and those who are role-takers are more peripheral to the overall organizational communication network. Thus, those more central are also more likely to be involved in the process of technology adoption (from the pre-adoption stage through the post-adoption stage) and, therefore, have much more to lose (psychologically and behaviorally) if, as a result of communication, the new technology fails. As such, the second hypothesis for the current study is:

H2 – Employees considered more central to the organizational social network will communicate about the new technology more positively than those employees considered part of the periphery of the organizational social network.

5. Method

The data for this investigation were gathered from various participants employed in a small township’s municipal offices located in the northeast United States. The organization was chosen because it recently began to utilize Electronic Mail to advance and simplify the methods of communication within the municipality. The town’s municipality was managed under a mayor-council form of government, wherein the borough administrator’s liaison position in the organizational chart is the link among the salaried and hourly workers in the town and the elected mayor and council. The manager meets weekly with the mayor and council during public town meetings, in which he/she reports on a variety of topics associated with the organization’s functioning and its presence in the community. The council members work part time in their elected positions and, in most cases, hold careers outside of the town politics. The organizational members in this study (N=65) included the town manager (who oversees the daily operations of the administrative offices), as well as employees from the departments of administration, finance, public works, community affairs, public utilities, and health, welfare, and recreation. Given the organizational structure, the town manager and the departments previously mentioned are treated in this study as the organization. The various department heads, in coordination with the town manager, are responsible for all hiring, firing, and routine management of the organization.

Data were collected using both qualitative and quantitative methods. First, unstructured interviews of municipality employees attempted to assess overall opinions about, and concerns associated with, the newly implemented communication technology (i.e. what technology they find essential for the work that they do; in what ways they have used the new technology system at the borough; what glitches they have experienced with the new technology system). Employees who participated in the interviews were randomly selected from each of the six departments, though each of the six departments had at least one interviewee, increasing the representativeness of the sample: a form of stratified random sampling. A total of 12 organizational employees participated in the unstructured interviews, each of which lasted approximately 30 minutes. The transcripts from the unstructured interviews were analyzed using discourse analysis, based on a coding scheme first established by Meyers, Seibold, and Brashers [40], and later refined by Brashers, Adkins, and Meyers [41]. This scheme attempts to assess how individuals communicate during computer-mediated group decision making and how existing structures might play a role in the communication practices of
organizational employees. The coding scheme allows the analyzer to group statements, or groups of statements, into seven related, though mutually exclusive, categories: potential arguable (any statement that does not indicate any direct arguments, but has the ability to lead to an argument, disagreement, or dispute), reason-using arguable (any statement that offers support, evidence, proof, or confirmation regarding a statement of fact or opinion), reason-giving arguable (any statement that attempts to better explain or expand upon a fact or opinion in order to establish the relevance of the argument at hand), reinforcer (any statement that expresses agreement with another statement), prompter (any statement that either denies the truth of an arguable or challenges a statement of fact or opinion), delimiter (any statement that attempts to provide a proper context for a previously communicated arguable), and a nonarguable (any statement that does not include any argument, but rather attempts to orient the group to its main task). All of these variables, and their accompanying definitions, were taken from previously published scholarship [40, 41]. All interviews were independently coded by two members of the research team and the intercoder reliability coefficient was relatively high (α = 0.87). The two members discussed issues where there was obvious disagreement and were able to reconcile these differences.

Second, paper-and-pencil surveys assessed, among other variables, data related to employees’ social networks. The network data are based on 65 employees who were identified as members of the municipality’s borough. A total of 62 employees completed the survey, translating into a response rate of 95%. Although reciprocation was assumed, we report in-degree centrality measures as a way to describe the system and, thus, the nonparticipants’ missing data are mathematically insignificant. In other words, because in-degree centrality reports the extent to which each person in the system is sought out by all other participants, each subject’s in-degree centrality measure is a function of the 61 other participating employees. All 62 participants were given an employee roster organized by work unit (i.e. public works, community affairs). Written instructions required that participants first circle all of those employees with whom they communicate on a regular, weekly basis. Once participants identified these communication contacts, they then evaluated each of these contacts by estimating how often, in a typical month, they communicated with each other person in the organization. A social network matrix was created for each participant based on the information provided about their communication habits with coworkers. Therefore, a resulting valued network provided information about both one’s contacts and the strength of these contacts. This network is based on self-report data that indicates perceptions of relationships [43]. In effort to obtain one’s informal network position, the researchers took the valued, directed communication networks, which formed the basis for developing network integration and strength of coworker relationships, dichotomized them, and then analyzed the data using the in-degree centrality measure available in the UCINET 5 network analysis computer program. The in-degree centrality values, which could potentially range from 0 (not at all integrated) to 64 (completely integrated), ranged from 6.0-46.0, M(N=62) = 19.71, SD = 9.54.

In order to determine one’s formal role within the organization (managerial vs. non-managerial), a list of all employees was provided by the borough administrator, which listed the employee’s name, tenure in the organization, affiliated department, and position (management vs. non-management).

6. Results

The first hypothesis, that employees holding a managerial role (a role-making position) will communicate about the new technology more favorably than those employees holding a non-managerial role (a role-taking position), was supported. Based on the qualitative assessment of the unstructured interviews, those holding managerial roles were more likely to speak about the introduction of technology using reinforcers, whereas employees holding non-managerial positions were more likely to use prompters. To reiterate, reinforcers are statements that express agreement with another statement and prompters are statements that either deny the truth of an arguable or challenge a statement of fact or opinion [40, 41]. For example, the following two responses came from two employees who occupy managerial roles within the organization. Each individual uses statements considered to be reinforcers to describe their feelings regarding the new technology:

I can now email my file over to the attorneys, send memos, and follow up on memos. It is faster and sometimes the phone does not work. In Trenton, they cannot always get someone to return the phone calls. We should take advantage of email. Email may not help communication with the upper level, but there will be a long-term benefit.
I will be able to communicate to my subordinates important information. I will be able to communicate up the chain concerns and complaints. I will be able to communicate with people on the other side of the street. I hope there is going to be more communication across the board.

As these two examples illustrate, these individuals who hold managerial roles within the municipality used reinforcers (also known as agreements) to reinforce the positive aspects that the introduction of the new technology might have for them, as individuals, as well as for the organization at large. On the other hand, however, individuals holding non-managerial roles within the organization communicated about the newly acquired and newly introduced technology quite differently. Based on the qualitative assessment of the unstructured interviews, non-managerial employees tended to communicate about Electronic Mail using prompters:

It has already been presented that people have access, but this would be limited to people that they feel right away are good with computers. There is only one computer in the building and it has been free. They are pretty much under the assumption that computers will go to the vital people, not the people in general. That is why you have the very small group of computers. It will probably work really well in the regular offices, but ours is just a working garage. Very different. It is not conducive to our office.

Our department is unique and very different from other departments. Most of the time we have good communication. We have pagers, phones, and by and large good communication. Thirty men are on the road, not working in the office. If I take the day off, three days later, five days later, I will get the message. Email will create possibly another delay in getting a message and a response.

The second hypothesis, that employees considered more central to the organizational social network will communicate about the new technology more positively than those employees considered part of the periphery of the organizational social network, was not supported. Based on both the in-degree centrality measures and the qualitative assessment of the unstructured interviews, central organizational employees were more likely to speak about the introduction of technology using prompters, whereas those more peripheral were more likely to speak using reason-using arguables and reinforcers. To reiterate, prompters are statements that either deny the truth of an arguable or challenge a statement of fact or opinion, reason-using arguables are statements that offer support, evidence, proof, or confirmation regarding a statement of fact or opinion, and a reinforcer is a statement that expresses agreement with another statement [40, 41]. For example, the following two responses came from two employees with high in-degree centrality measures, each of whom uses statements regarded as prompters (also known as challenges):

Well, I had computer contact many years ago. I will get familiar with the keyboard again. And there is always a mouse and I will get familiar with whatever programs are now current. That does not really scare me or keep me away from using this type of technology. But I only have a certain amount of time during the day to devote to inputting data. Technology is good, but it kills you like a bullet. That is the thing. Are we getting something that we can really use or will it take more time to use it?

As far as our office is concerned, how difficult is it going to be? I mean we do not know. And are we going to spend a lot of time on this system? We have other work. We are hoping that we will get to pick up whatever information we need to learn fast, so that we feel comfortable. We are hoping that we will get to learn whatever they have designed as far as this computer and we can pick it up quickly. We just do not know.

In each of these examples, the employees offer some possible benefits of using the technology, but are also raising several questions and communicating several challenges that are likely to arise as a result of the implementation process. This is in contrast to the way that more peripheral employees communicate about the new technology, as they were more likely to either defend against previously communicated objections to the new technology or communicate statements that provide some type of evidence as to why they hold the opinions that they do. The following two responses came from two employees occupying a peripheral network position in the municipality. Both responses illustrate reason-using arguables (otherwise known as elaborations):

Our department, again, emphasized the advantages of managing external relationships. I am compiling a database that will help me with registrations, volunteers, and coaches. In the long run, it will be beneficial in terms of dealing with the outside public. We have to realize that it is now the 21st century.

It is like an older telephone operator now. If you want a phone number or address, you have to sift through a lot of stuff. With email, you can get right to that information. Some people do not know how to use a computer, though, and some prefer to use the old phone book. But if things have been moved or...
changed, you cannot find that out. There is information out there that the dispatcher could get while you are on the job and need something. If we had internet access and email from this building to the police department, in a database, the important information would be in there. We would have access to it.

7. Discussion

The overarching purpose of this study was to determine the link (or lack thereof) among one’s organizational role, one’s level of network centrality, and how one communicated about the introduction of a newly introduced Electronic Mail system. Using Giddens’ [12] theory, it was argued that structures provide an organizational framework (or guide) for individuals and these structures are located in both one’s role (managerial vs. non-managerial) and one’s network position (central vs. peripheral). In other words, roles and network position both create, and are created by, existing organizational structures. The underlying question that prompted this study, therefore, is the following: if structures come to influence communication, and if roles and network positions come to influence structures, then shouldn’t roles and network positions come to influence communication? That is, shouldn’t the way that employees communicate about the introduction of a new technological medium be influenced (at least partially) by one’s role and network position? The results indicate that only part of this relational triad was supported.

As the results indicate, employees occupying managerial roles within the municipality used mainly reinforcers to communicate about the new communication technology, whereas employees occupying non-managerial roles used mainly prompters. In other words, the former framed their rhetorical responses in a way that could be interpreted as more positive, optimistic, and encouraging, and the latter framed their rhetorical responses in a way that could be interpreted as more pessimistic, objectionable, and challenging. For example, one of the managers within the organization claimed that there will be a long-term, positive benefit from the utilization of a new electronic medium, insofar as he will be able to keep in contact with other employees when face-to-face communication is not possible. Another manager argued that it will be easier for people to communicate their complaints and concerns up and down the chain of command, facilitating traditional interaction practices. A non-managerial-level employee argued that it might be useful for some departments, but not all (including his own). Another non-managerial-level employee believed that Electronic Mail might take more time to use than merely picking up the telephone or writing a memo on letterhead.

These findings are extremely important in terms of technology adoption by both managerial-level and non-managerial employees, for positive and encouraging messages will be communicated from top management to others throughout the organization: namely lower-level employees. Biddle [23] argues, perhaps more covertly, that those in more hierarchically prestigious roles (i.e. managerial roles) might have the ability to influence others through social contagion. Thus, and based on the results from this study, if managerial-level employees communicate about how great and useful the new technology is, and if this type of communication becomes contagious, then the positive rhetoric that spreads throughout the organization regarding the new technology abounds. As mentioned earlier, it is fitting that those in managerial roles speak more positively about the introduction of new technology because, after all, they were instrumental in the decision to implement it. This favorable communication throughout the organization should (and likely will) increase employees’ positive sentiments about the introduction of technology, making the transition from face-to-face interaction and memos to Electronic Mail easier. It is, therefore, likely that even though non-managerial-level employees were initially speaking somewhat negatively about the technology (as evidenced by the qualitative data from this study), the positive views of technology communicated by those in managerial-level roles might have a ripple, contagion effect. If this is the case, non-managerial-level employees might realize the benefits, possibilities, and advantages of using Electronic Mail.

The finding that network centrality did not influence one’s positive or negative rhetoric about the introduction of technology into the municipality the way the authors originally hypothesized is a bit more perplexing and troublesome. As the results indicate, employees more central to the organization communicated about the new technology through the use of challenges, posing questions or objections that might impede the success of the implementation, whereas those considered part of the periphery communicated about the new technology through the use of reason-using arguables and reinforcers. For example, one of the central employees asked if this new form of communication will actually be better or
whether it will be too cumbersome to learn, whereas one of the peripheral employees claimed that the new technology can only be beneficial. Having individuals considered central, or core, to the organization speaking about the new communication technology in a skeptical, and possibly even negative, way might have serious repercussions for the organization at large. Just as communication from managerial-level employees will likely come to influence the communication of non-managerial-level employees, so, too, will the communication from central employees likely come to influence the communication of those more peripheral.

One interesting question that one might have, especially in light of this finding, is why those in managerial-level positions communicated about the new technology more positively, though those occupying a central position in the organization communicated about the new technology more negatively? An informing way to answer this is to say that, despite scholarly intuition, data from the current study indicate that those in managerial-level roles are not, interestingly, more central than those holding a non-managerial-level role. In fact, it was just the opposite: non-managerial-level employees were, by and large, more central to the organizational network than their managerial-level counterparts. From this perspective, then, the results make sense. Non-managerial-level employees and central employees both communicate about the introduction of technology from a more negative, hesitant perspective because, based on the data, those occupying non-managerial-level roles are those employees more central to the network. According to Valente [32], one’s measure of centrality is based not only on communication dealing with organizationally-related issues, but also communication dealing with social, non-organizational issues. As such, and based on the results of this study, centrality in the borough’s municipality is based more on communicative practices between and among employees than one’s formal role: a result that has surfaced elsewhere [44]. What becomes problematic, however, is that if those more central to the organizational network are communicating about the introduction of technology more negatively and cynically, and if those more central have the power to make this rhetoric socially contagious, then this negative, cynical, pessimistic view of technology might spread throughout the organization like a brushfire. After all, as Morgan, Neal, and Carder [37] argue, those considered part of the core organizational network structure have more perceived social power and influence than those in the periphery. Because the data from the present study were cross-sectional, however, it is necessary to conduct a time-two (and perhaps time-three) study to determine if and, more importantly, why the attitudes of those peripheral employees changed.

This study adds to the body of literature related to technology implementation within organizations. It underscores the importance of understanding how structures, roles, and network positions combine to play a role in the communication practices of employees. As this research suggests, both roles and network positions influence how individuals might communicate about the introduction, and subsequent utilization, of communication technology. From an organizational perspective, one would hope that those communicating positively about the technology are those who are more centrally located within the organizational network, so that this rhetoric has a contagion effect. In this study, however, it was just the opposite. A longitudinal study of this organization’s communication practices is needed, however, in order to determine whether and to what extent this finding has negative implications for technology use within the borough’s municipality.

8. References


