STRATEGIC USES OF ELECTRONIC MAIL IN ORGANISATIONS

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E-Mail as an Efficient Tool

The 1980s and 1990s have witnessed a dramatic upswing in the use of computers for communication (Hiltz, Johnson, and Turoff 1987; Hiltz and Turoff 1978; Rice 1984; 1987). Perhaps the greatest proliferation of computer-aided communication has been in organisations, typically via electronic mail systems. Electronic mail (email) is defined as "the creation, editing, sending, receiving, storage, forwarding, and printing of text —all facilitated by the computer" (Rice and Bair 1984, 191).

An assumption of most of the early research on this subject is that email has certain objective characteristics which cause it to be used "primarily for its capacity to transmit messages efficiently" (Trevino, Lengel, and Daft 1987, 568; see also Schmitz 1988). Recently, this view seems to be changing. In this paper, we add to a growing literature that recognises the diverse and subtle ways in which email can be used to accomplish a broad range of communicative goals. For some of these goals, email simply offers an alternative way of communicating something that could be communicated via another medium. For other situations, the unique characteristics of the email medium create brand new possibilities for communicative strategies.

In its initial formulation, media richness theory (Daft and Lengel 1984; 1986) posited that media vary in richness and that media choice depends on the degree to which a manager perceives equivocality in a communicative situation. A medium's richness is a function of its availability for feedback, possibility for multiple cues, and the type of language used. "Equivocality means ambiguity, the existence of multiple and conflicting interpretations about an organisational situation" (Daft and

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Lengel 1986, 556). The theory predicts that managers will select media whose richness matches the degree of perceived equivocality of the anticipated situation.

Following this logic, media can be rank-ordered in terms of richness. According to Schmitz and Fulk (1991), "the rank order of media in terms of richness is face-to-face, telephone, email, personal written text (letters, memos), formal written text (documents, bulletins), and formal numeric text (computer output)" (Schmitz and Fulk 1991, 488). Trevino et al. (1987) explain the significance of such an ordering for communicative choices: "When meaning is ambiguous, face-to-face communications will increase. However, in unambiguous situations, media such as memos, letters, and electronic mail are sufficient to carry the message" (557). The main implication of media richness theory is that when managers encounter equivocal situations, email will be avoided in favour of richer media. While some uses of email suggested by media richness theory have been called "strategic," they are only so in a limited way — the "strategy" refers to an employee's ability to select the appropriate fit between a medium's richness and the amount of perceived ambiguity in a message.

Updating Media Richness Theory: Strategic Uses of Email

Empirical research evaluating media richness theory has yielded mixed results. Three studies are notable in their examination and extension of the theory. First, Trevino et al. (1987) extended media richness theory by stating that **symbolic** factors, in addition to the perceived level of equivocality in a situation, impact media choice. For Trevino et al., email is used symbolically when the choice of the medium itself communicates something above and beyond the content of the message. For example, a manager who opts to use email to send a routine message might also be trying to indicate something about her innovativeness and technological savvy. Alternatively, a face-to-face meeting may be called not because one is technically necessary due to the equivocality of the situation but because the manager wishes to communicate a degree of warmth and openness.

A second important extension of the theory is found in Markus' (1988) study of a large service organisation, in which she found the media richness approach to be lacking in explanatory power. In this case, she concluded that managers' behaviour was by and large rational, but **not** in ways suggested by the theory. Actual uses of email were more subtle. For example, she states: "Individuals appear to make media choices in part on the basis of the cues media **fail** to transmit, not just on the basis of the cues that media pass through" (Markus 1988, 24). Furthermore, employees were found to choose email in order to "utilise capabilities that are present in [email] but are not found in traditional communication media, like face-to-face, the telephone, and paper mail" (Markus 1988, 24). The new capabilities associated with email are discussed in detail later in this paper.

A third and final reformulation of media richness theory was conducted by Schmitz and Fulk (1991). In a review of the literature, they present conflicting findings regarding the predicted "match" between the equivocality of a situation and the richness of the chosen media. In about half of the studies, the predicted association was found; in half, it was not. They explain this discrepancy by focusing on the theory's reliance on "objective" characteristics of the media as the main criterion for determining degree of richness. As an alternative, they argue that **perceptions** of a media's richness are socially constructed and subjective, and that it is these perceptions, and not objective

characteristics, that most impact actual patterns of media use. In their study of email use in a technologically advanced research centre, Schmitz and Fulk conclude that perceptions of a medium's richness do indeed vary across people and affect both assessments of the medium and patterns of use.

In summary, most contemporary discussions of media choice in organisations move beyond simple assessments of media characteristics and presumed efficiencies to acknowledge communicators' multiple goals and inherent conflicts of interests (Eisenberg 1984; Morgan 1986; Riley 1983). It is well known that communicators select strategies that strike a balance among their sometimes conflicting goals. For example, an employee may be purposefully ambiguous in giving bad news to the boss in order to simultaneously get the message across and to save face. What is less well understood is the role of media choice in the design and implementation of such strategies.

Email, used alone or in conjunction with other media, has special properties that help employees accomplish their goals. Email is: asynchronous, low in typical paralinguistic information, high in plasticity (the ability to save and store messages), unlimited in potential audience size, limited in contextual cues, and capable of crossing functional and hierarchical lines without encountering traditional gatekeepers (c.f., Culnan and Markus 1987; Rogers 1986; and Sproull and Kiesler 1986). In addition to the obvious uses of email (e.g., leaving a message for someone so that you are sure they will get it), these media characteristics create new patterns of interaction and new possibilities for communicative strategy as well (c.f., Contractor and Eisenberg 1990; Kiesler, Siegel, and McGuire 1984).

Some of these new strategies will be directed toward increased efficiency, and others toward personal or political ends. For example, the "plasticity of 'soft copy'" allows for easy storage, retrieval, and forwarding of messages, each of which may be done for a variety of overt and covert reasons (c.f., Markus 1988). Furthermore, employees may choose email precisely because they do not want others to hear the uncertainty in their voice, or because they want to avoid having to meet someone face-to-face. A supervisor who wishes to maintain tight control over subordinates can send messages via email that let her know **that** the messages were received and **when** they were received. Some, especially Machiavellian, email systems even allow managers to "freeze" a recipient's keyboard **until** they respond. On the more positive side, much has also been made of the fact that email allows the lowest ranking employee to reach the mailbox of the CEO; most systems do permit this kind of access.

In summary, it is our contention that the unique features of email are used strategically by employees to accomplish multiple goals. Even with its various adaptations and extensions, media richness theory nonetheless focuses primarily on the application of email to unequivocal situations. The findings reported here provide a further suggestion that email is used in highly **equivocal** situations to accomplish strategic goals.

Method

Employees of a not-for-profit research institute affiliated with a West Coast University provided the main source of data. The institute (hereafter referred to as CRI), is a world leader in research addressing various aspects of computer technology. CRI employs over 200 people and has used email since its inception over fifteen years ago. Nearly all of the employees are on-line. Furthermore, almost all employees have di-

rect access to the email system through their own terminal. CRI is divided into two main groups — administrative and research. The administrative divisions include accountants, payroll workers, government contract overseers, purchasing officers and personnel charged with obtaining and maintaining computers (as well as providing user services). The three research divisions are involved in numerous projects dealing with such problems as microchip research, artificial intelligence, and computerised purchase services.

The first author of this paper gained access to CRI after initial contacts were made through a colleague whose spouse worked at CRI. After the author made contact with the Acting Executive Director of CRI through several letters and telephone conversations, the Acting Director approved the project. A manager in the Computer Services Division later arranged for the author to be given an account on CRI's email system. The author was unpaid. The only request from CRI was that the author "do a good study." Two computer bulletin board announcements were sent out from the Acting Executive Director's office which introduced the researcher, briefly explained the project, and solicited volunteers (see Phillips (1989) for a full description). While the Acting Executive Director approved the project, our participants were to be obtained on a strictly volunteer basis.

We chose a multifaceted approach to data collection which involved collecting actual messages from email users, in-depth interviews, and participant observation. We sought to obtain detailed, specific explanations in the user's own words of how email was being used at CRI. Our research question dictated the need for this much detail — whereas the identification of simple, efficient communication can be done mainly based on textual analysis, identifying strategies requires much more information about the communicative context.

Once having made this choice, twelve primary participants were enlisted voluntarily for the study. These employees represented a broad range of job types (e.g., shipping clerks, accountants, computer researchers), levels (from departmental secretaries to the deputy director of the business office), and email experience (from three months to over ten years).

Each of these primary participants was asked to suggest two individuals with whom they regularly interacted via email (hereafter referred to as **interactants** in order to distinguish them from participants). Interactants were asked to save the messages they sent **to** the primary participant during the period of email message collection for that particular participant. We felt this would provide us with interactive communication episodes. Five of the participants could not think of anyone with whom they had regular interaction via email. One participant could only think of one interactant[1].

Email messages sent **by** the primary participants were captured over a three week period[2]. As mentioned above, messages sent **to** most of these participants by key interactants were also captured where possible. In sum, we collected email messages from twelve primary participants and thirteen interactants. We obtained over eight hundred and fifty email messages from the twelve primary participants alone.

Aside from collecting messages, we conducted in-depth interviews with email users. Two structured interviews were conducted with each of the twelve primary participants (for a total of 24 interviews). The purpose of the initial interview was to discover the employees' patterns of usage and attitude toward email, with a special focus on communicative strategies. We specifically asked if there were special email strate-

gies they used when trying to persuade someone to do something (see Appendices in Phillips (1989) for sample interview schedules).

After the initial interviews, observation, message collection, and preliminary data analysis, each of the primary participants was interviewed again. These second interviews were conducted approximately two months after the initial interviews. Participants' reactions to the researchers' analysis and tentative conclusions were solicited. A key feature of our study took place in the second interviews. During these interviews, participants were also asked to reconstruct the context of one or two episodes taken from their collected messages. The participants were asked to comment upon the episodes (i.e., "What was happening here?" "Why did you use email?" "How did email help/hinder you?"). While asking in-depth questions about every message was impossible, our inquiring into the meanings of several episodes provided significant insight into the contextual strategies reported on below. The second interview thus obtained participant verification concerning the study's findings and gained further insight into the story behind several email exchanges. Interviews/informal discussions were conducted with several other employees at CRI.

In order to bolster the validity and generalisability of the findings, fourteen supplemental interviews were conducted in three other organisations - a university computing service, a city government, and a Federal government institution. The university computing service which employs over 250 people is the primary source of computer support for a West Coast university, and had utilised email for fourteen years. The city government employs over five hundred individuals (including the police and fire department), serves a city with a population of approximately 80,000, and has used an email system for less than a year. The Federal institution employs over 200 people, represents one of five regional offices, and had their email system installed less than four years ago. These interviews followed a similar format to the initial interviews with the primary participants at CRI (see Phillips (1989) for interview schedule).

In sum, we conducted twenty-four interviews with the primary participants (interviewing each participant twice, approximately two months apart). We also engaged in informal interviews/discussions with several other CRI employees and conducted fourteen supplemental interviews at three different organisations.

Aside from the collection of the email messages and the interviews, we also sought to engage in participant observation at CRI in order to more fully appreciate the nuances in the role of email in this organisation. Our observation, interviews, message collection, and informal interaction with employees took place at CRI over an 80-day period. Field notes were taken during portions of the observation. In addition to more structured forms of observation, the first author also engaged in virtual participant observation by sending and receiving over 130 messages via CRI's email system.

Analysis

We analysed the data in two primary ways. First, we were interested in the strategies that could be identified through careful textual analysis of the messages. Toward this end, we content-analysed 422 of the collected messages. The entire message was used as the unit of analysis[3].

The first step in our coding was, using the text of the messages alone, to determine which were attempts at persuasion and which were not[4]. Figure 1 explains the coding rules and provides examples. After a message was coded as persuasive, the message

was then further categorised according to type of persuasive strategy[5]. The two categories which emerged from this second coding along with the coding rules for the categories are discussed in the results section. An intercoder reliability of 95.8% was achieved for the content-analysis[6] (also see Phillips (1989) for full details).

Figure 1: Coding Rules and Examples for Initial Code

The decision on whether each message was to be coded as containing persuasive content (PC) or as not containing persuasive content (NPC) was based upon whether or not the coder felt the sender was trying to get someone to do something. If the coder felt that the sender was simply stating facts, providing information, or asking for information, the message was coded as nonpersuasive. Examples from the data help explain:

Persuasive Content:

"Hi [Sally], do you handle little problems like the 9th floor men's room has a sink leaking water on the floor? tnx, [Bill]"

"Please return call to [Jill Wheaton, GPA]."

Nonpersuasive Content:

"[Bob] will be giving a meeting regarding Accounting Packages. It will be held at 1:30 this afternoon and will be held in the 10th floor conference room."

"[Jim] will be in the office on Monday, 25 July only and will not be back in the office until Monday, 22 Aug. Who are the other people involved in this meeting?"

Believing that a content-analysis of the text of the collected messages would only provide insight into one facet of the strategic nature of email usage, we engaged in a qualitative, interpretive analysis of our field notes, interviews and collected messages. Our hope in moving beyond the text to the context of the messages was to gain an ability to read between the lines of the messages. The purpose of the interpretive analysis was to verify the existence and nature of certain persuasive strategies[7].

The interpretive analysis was accomplished in three steps. First, in the early stages of the data collection we searched for similarities and differences in the data from the various sources. For example, we might have realised that several participants and interviewees had mentioned one particular strategy. In this period we tried to formulate preliminary interpretations. Second, in the follow-up interviews with the primary participants we attempted to gain actor verification of our initial interpretations. In other words, we presented the preliminary findings to the participants and asked if these interpretations were in alignment with their experience. Third, and finally, we used the information from the second participant interviews to refine our interpretations. This involved collapsing categories and/or reassessing the importance of preliminary findings. The findings from the content-analysis and the interpretive analysis were then integrated to provide an overall picture of the persuasive uses of email at CRI.

Results

Our data analysis uncovered a range of email strategies, from simple, direct requests (consistent with the original predictions of media richness theory) to more complex manoeuvring. The four most common strategies are listed and defined in Figure 2. They are: Direct Requests; Indirect-Implicit Requests; Carbon-copying; and

Message-forwarding. While the first two strategies are identifiable from the text of a message, the last two require an understanding of contextual factors. Therefore, we refer to the direct requests and indirect-implicit requests as textual strategies, and carbon-copying and message-forwarding as contextual strategies.

Figure 2: Email Strategies

Direct Requests: The sender directly asked or told someone to do something.
Indirect-Implicit Requests: The sender provided information which inferred some action from the target.
Carbon Copying: The sender either CCd their own boss, someone else's boss and/or peers, or themselves in order to increase the likelihood of compliance with their request.
Message Forwarding: The sender "electronically" attached a prior message — either a related message or a copy of a first request — along with a message. The intent was again to increase the chance of compliance to a request.

Direct and Indirect-Implicit Requests

The data indicates that employees use two related strategies, both of which are identifiable from reading the text of the captured messages — direct and indirect-implicit requests. As explained above, we content-analysed 422 of the captured messages. Figure 3 explains the coding rules for the two categories and provides examples from the data. We found that 44% of the messages (185 out of 422) contained either a direct or indirect-implicit request. 101 messages were coded as direct requests and 84 were coded as indirect-implicit requests.

These direct and indirect-implicit requests are used mainly to accomplish what one participant termed "Administrivia" (administrative trivia). The implication is that email is a useful tool for helping keep the organisation afloat (i.e., scheduling meetings, leaving messages concerning routine tasks, etc.). In other words, email is used to accomplish everyday, ordinary tasks which could also have been accomplished via other media (e.g., phone, memos).

Figure 3: Coding Rules and Examples of Direct Requests and Indirect-Implicit Requests at CRI

Direct Requests: The definition of direct requests used in the content analysis was: a statement in which the agent overtly asks or tells the target to do something. Examples include:

"Please return call to Joan — said she will be there for awhile tonight."

"Do you have a list of other options for inclusion into [a computer file]? I wonder if I can have [an] automatic "cc" (carbon copy) to a history file. tnx".

"As far as I'm concerned, the first topic may be anything you'd like it to be. Perhaps you can discuss at your meeting on the 15th or 22nd and let me know. I won't be here on the 29th, and would appreciate some advance notice."

The definition of indirect-implicit requests for the content analysis was: a message in which an agent provides information to a target, inferring some action from the

target. However, the agent did not come out and ask (or tell) someone to do something. With this category, the coder felt there was a relatively strong implication for action from the sender. It was simply not made explicit. Examples from the data include:

"Maureen of Inatell returned your call 407-921-9982 x387."

"At long last your business cards have arrived. You can pick them up from me."

"You have a FAX down here. You can pick it up from me."

Strategies Involving Carbon Copies (CCs)

Many of the contextual strategies revolve around who a message is (or is not) sent to; often involving the "CC" line. Specifically, the strategies in this category include: CCing your own boss, CCing someone else's boss and/or peers, CCing yourself, and utilising blind CCs.

As an example of CCing your own boss, one participant explained:

> I can let [my boss] know what I'm doing by contacting somebody and letting [my boss] know what I'm requesting. In a way, that's [my boss's] way of keeping track of what I'm up to and what another employee is up to as far as my supervision. (...) It lets her know that I'm still doing my job [as well as letting] someone else know what to do.

As an example of CCing someone's boss and/or peers, one interviewee explained:

> The typical tactic [for getting someone to do something] is to carbon copy the message to management. Like, "Please do this," and it's carbon copied to both your managers. Now you've got the force of the manager looking over your shoulders. (...) I don't do it, because I consider it extremely rude. I would never do that to someone.

Other employees further explain:

> [Email] lets you know that everyone knows. It broadens the base. (...) [A strategy] that is used constantly here — if you tell someone to get you a particular item you quite often CC their boss. (...) For example, a young lady had a misunderstanding with [a person of high status] and he sent her a reply and CCd her supervisor. A lot of people who saw it thought it was uncalled for because it should have just been between them, but he had let the supervisor know, [that they had a little "to do"].

> I ask someone to do something that needs to be done and they don't do it. So I keep a copy of what it is I've originally asked them to do. A week later it's still not done, it's been a long enough time, I send them a message saying, "Have you had a chance to do this yet?" and I tack on electronically the first message I sent them that has the first date, and if necessary I carbon their boss, so that their boss is seeing these messages. You'd be surprised how efficient that can be!

> Your best bet [to get someone to do something] is to send them a message individually and if they don't respond within a certain amount of time or if it's urgent and if you haven't received anything back, send it again, different message, you copy a few people. [That makes them uncomfortable] because [they] know there are other people out there who

> know (...) [their] supervisor, and working associates, someone who's associated with the project — someone whose needs aren't being met. So [when someone doesn't respond to a message that is keeping other people's needs from being met] I send the message to them, I copy [the people whose needs aren't being met], and myself, and that person's supervisor. (...) That way everyone knows what's been said. It's been documented. ...

Carbon copies may also be used when an employee wishes to cover themselves. Common in business long before the advent of computers, "CYA" can now occur in new ways using the capabilities of new media. Employees use email to cover themselves and to deflect questions about their competence. A participant commented on this application of email:

> I'll send [my boss] a message saying "This has been done." Basically, it's to have it on record that the problem's been reported and solved. So, if someone comes back later and says, "You didn't do this," I can say, "Ha! It's here." (...) "You keep it on record."

Other employees help explain:

> Sometimes people will dispute what I've said in my message, and if I've saved it, I can send it [snaps fingers]. (...) You send it back and say, "See, here it is." It's happened many times, and it's very helpful to retain those messages.
>
> [Email is great for letting everyone know that an item has arrived.] That's why email is great. A phone call — maybe they're not there. As long as it lands in their [email] box — that's the key thing — if there's ever a problem I can say it landed in your box as so and so time. Here it is.
>
> If it's something that I'm working on that I'm waiting for a response from somebody I'll document it by sending them email. That documents the date, and what I was requesting and when I need it by.
>
> I use [email] particularly if I want to make sure there's a [documentation] trail. So that's a good part — I mean [there are] both good and bad about giving you a trail. ...

Blind CCs occur when the recipient of a message is not aware that the sender carbon copied a third party. A participant comments:

> I dislike blind CCs. (...) It's negative, deceptive. To think it's only the two or three of you discussing something, and in the meantime, there are two or three [others] in on it.

The common thread running throughout each of the behaviours is that the employee has strategically utilised the features of their email system in order to accomplish a goal or set of goals. Obviously, these actions could be carried out face-to-face or via the telephone. However, imagine marching into Person A's office, asking Person A to do something, telling Person A you are also going to tell Person B (Person A's boss) you asked them to do some task, then marching into Person B's office and telling Person B that you asked Person A to do something. When the same task could have been accomplished via email simply by hitting five to ten extra strokes on a keyboard, it is easy to understand why employees would choose email. Furthermore, it is much easier

socially to accomplish the task via email. That is, going into Person B's office (to tell them you have requested something of Person A — their subordinate) is more awkward socially than doing so via email. Therefore, the agent is able to more easily accomplish multiple goals — get Person A to do something and avoid a socially awkward situation. It should be noted, however, that the CC may still be frowned upon by both Person A and Person B. However, email appears to instantiate somewhat different appropriateness norms, thereby allowing employees to simultaneously achieve their primary and secondary goals.

Strategies Involving Message Forwarding

Another group of contextual strategies centre around employees sending an email message along with a prior message. The two strategies involve forwarding a related message and forwarding the first request with the second request. Two quotes concerning the forwarding of related messages help explain:

> I think a lot of persuasion is intended when people forward copies of other people's messages to the extent, "See, I really should be ticked off about something like that. Look at what I just got." [That] kind of thing. It's that kind of persuasion technique that's usually used.

> I like being able to forward messages and I like being able to show what I've received and show what I'm responding to. As opposed to paraphrasing something I can actually show the message in total. [This shows the other] person what I'm responding to. So if I get a message from Person A and I want to send it to Person C, I can put Person A's message in it. So, it contextualises everything. It shows my boss what I'm responding to, so I don't have to paraphrase anyone ...

During a second interview, a participant noted that forwarding messages can be one of the really nasty strategies used in email. The participant suggested that if you make someone mad due to an email message you have sent them, they can easily forward that message to someone of higher status. The participant implied that you may never know that they are mad or that they have forwarded your message up the line. The participant explained, "You don't know that you've screwed up." As an example of forwarding a first request with a second request, recall a quote from the previous section. The participant explained that when she has asked someone to do something and they have not done it, she keeps a copy of the message. Then, "A week later it's still not done [so] (...) I send them a message saying, "Have you had a chance to do this yet?" and I tack on electronically the first message I sent them that has the date."

Similar to the strategies involving CCs, one benefit of using email for these strategies is the relative ease with which they can be accomplished. If Person A was verbally asking Person B to do something and was passing along pertinent information from Person C, portions of Person C's message would undoubtedly be lost in the translation. However, if Person A can send an email request to Person B and forward the pertinent comments from Person C (in their original form), virtually nothing is lost. The date, the time, and the exact wording from Person C are right in front of Person B, along with Person A's request.

An episode uncovered during a second interview with a participant provides an

example of message forwarding. A participant received a message from a high-ranking manager in another department asking, "When will I receive all the data to generate the July billings?" One of the participant's co-workers was working on this information, but had not completed the task. The participant suggested to the first author that she felt pressure from the manager to get the information. Therefore, rather than simply tell her co-worker that the manager was putting pressure on her to get the data (she had told her co-worker verbally before), she chose to forward a copy of the message from the manager to her co-worker. She attached a message which said, "How are the [figures coming]? Do you have some sort of time frame that I can tell [the manager]?"

The implication is that by utilising email in this way, the participant put pressure on her co-worker by making it clear that she was getting pressure from above, thereby accomplishing her primary goal. Furthermore, the participant avoided having to be pushy (at least in person!) by her ability to forward the manager's message. This allowed the participant to maintain a pleasant working relationship with her co-worker.

Discussion

We have reported on two textual strategies — direct requests and indirect-implicit requests, and two contextual strategies — carbon-copying and message-forwarding. The data suggest that employees' email usage is not relegated to simple, direct tasks with low levels of equivocality. While email is used for many mundane functions in organisations, it is also employed toward persuasive ends and in highly strategic ways. Furthermore, two of the strategies uncovered in our analysis were subtle and context-dependent. Had we not taken an interpretive approach, which required us to spend time interacting with email users, we would have in all likelihood missed them altogether.

In fact, the phenomena of CCing and message-forwarding provide a good illustration of how "local," context dependent knowledge is essential in interpreting email messages. That is, it exemplifies how it is often literally impossible to make sense of a message from simply viewing the text. For example, if an employee were to send a message that read, "Please call Peter. He is upset about the report," we might say this employee utilised a direct request ("call Peter"), politeness ("please"), and supporting explanation ("He is upset"). But it would be a mistake to stop the analysis there. A look toward the context might reveal the employee has: (1) CCd him/herself to document that the request had been sent (engaged in CYA), (2) CCd the target's boss (to put additional pressure on the target), (3) CCd Peter (to let Peter know the target has been asked to call), (4) forwarded a message from Peter showing how mad he was about the report, and (5) forwarded the initial request for the target to call Peter (we find out this is a second request!).

Given this evidence, we conclude that at least in one respect, media richness theory is correct about the uses of electronic mail by managers and employees — organisational members at CRI do use email sometimes for "administrivia" (i.e., for routine, unequivocal tasks). The accomplishment of this "administrivia" often entails the usage of direct requests and indirect-implicit requests.

But there is more to the use of email than these mundane applications. Carbon-copying and message forwarding are genuinely new strategies made possible by unique characteristics of the medium. And the "objective characteristics" of the tech-

nology that are key to media richness theory seem less important than the ways in which these characteristics are interpreted and used by managers. There is no such thing as "pure" technology — all applications are social — and individuals "appropriate" a given medium to their own peculiar character and motivation (Contractor and Eisenberg 1990; Poole and DeSanctis 1990). Communication media are open to being used in "ironic" ways which are very different from how they were "objectively" designed or intended (Poole and DeSanctis 1990).

Our analysis further leads us to claim that email can be used to simultaneously accomplish multiple goals. For example, an employee may send a supervisor an elaborate justification for changing a policy or procedure. The choice of email to transmit the message may simultaneously be: (1) efficient (it saves time for both the superior and the subordinate to send it this way, avoiding phone tag and unread piles of paper on desks); (2) symbolic (the employee may be demonstrating that he is innovative, responsive, and computer literate; (3) strategically taking advantage of the cues the system does not send (i.e., by choosing to send a email message the employee may mask nonverbal indicators which would indicate that they have "stretched" the facts in some places); and (4) strategically taking advantage of unique features of the email system (i.e., the employee may also benefit by having a copy of the message on the computer so the boss cannot "conveniently" lose the message or claim that he or she did not receive it).

An interesting question that is raised in this study is whether email allows managers or employees to get away with acts of power, discipline, or intimidation that would be less likely to be communicated via other media. Related research on the electronic surveillance of employees reveals some surprising contradictions; while some employees hate it, others appreciate the visibility and subsequent accountability and rewards associated with being closely watched. While far from conclusive on this point, our data suggest that some of the features of email encourage co-workers (but not so much supervisors) to put pressure on their peers and to use the publicness of the information to force accountability. It was interesting to note that many of the influence attempts which were seen as strong, opprobrious, or rude were situations which involved peers or co-workers attempting influence. On the one hand, the ability to forward a message or send a blind CC increases the likelihood of embarrassment; on the other, there are some remaining appropriateness norms that cause other organisational members to see such actions as unjustifiably dirty. But these norms are by no means stable nor do we expect them to be the same across all or even most organisations.

We recognise that our work at CRI only begins to explore the communicative strategies available to employees via email. Other aspects of the medium, such as the use of subject headers and distribution lists, have obvious strategic implications. Furthermore, it is important to note that email systems vary in terms of the features they possess. We expect that employees will eventually come to strategically utilise many of the features their particular system possesses. As the use of email increases worldwide, we should expect even more creativity both in the pragmatics of usage and the growing capabilities of systems. Furthermore, as additional communication media enter the organisational arena, we would expect even more situations where employees routinely use multiple media in varying sequences to accomplish strategic goals.

In summary, we have argued in this paper that traditional conceptions of email in

organisations have been unnecessarily limited to simple, unequivocal uses. Even considering recent extensions, media richness theory takes an overly narrow view of the communicative strategies for which certain media may be used. Through analysis of email usage in a west-coast research institute, we identified four email strategies: (1) direct requests; (2) indirect-implicit requests; (3) carbon-copying; and (4) message forwarding. Media richness theory should be revised and extended to move beyond considering "strategic fit" of a medium's characteristics to the amount of equivocality in a message. Scholars should also consider the strategic applications to which any medium might be applied by the creative user balancing among multiple goals.

Finally, we argue that several aspects of our methodology allowed us to obtain findings that would have otherwise been missed. Specifically, the content-analysis of the messages showed us how the actors actually used email (as opposed to relying on self-report measures). The captured messages also provided insight into the actual content of private email messages rather than simply counting the flow of messages between nodes. Finally, the interviews, especially those where we sought actor verification, gave us a rich, "behind the text" look at several exemplary messages. We believe this multimethod approach provided us with the necessary context in order to more fully understand email usage at CRI.

Notes:

1. This should not suggest that these participants do not use email. They simply had difficulty thinking of particular employees with whom they regularly interacted. For example, they may interact with someone via email for two weeks, then not send them email for another six months.

2. Many of the participants were able to automatically save a copy of the messages they sent. After the data collection period, they were given the opportunity to strike through any message they felt was too confidential. In this way, the participants' right to privacy was protected and informed consent was obtained. All of the primary participants signed consent forms as well.

Some participants did not collect data for a full three weeks. One participant — due to a combination of someone failing to program the participant's email properly and the participant being gone to conventions — only collected one week's worth of messages. Another cut off the data collection early on the last day. Other participants missed one or more days due to company travel, holiday, or days off. Several others saved and submitted messages which they had sent before or after the "official" data collection period. These "extra" messages were generally not included in the content analysis.

3. We chose the message as the unit of analysis for several reasons. The primary reason is the nature of the medium itself. Since email is normally only interactive in an asynchronous manner, the entire transmission should be counted as one conversational "turn." Therefore, if any part of that "turn" is persuasive, we must argue that the "turn" itself was persuasive.

Furthermore, many of the messages were very short in nature. Therefore, to use the sentence as the unit of analysis would have unduly weighted the findings toward the extremely long transmissions of one or more pages. Since many of the messages were only several sentences long, the use of the paragraph as the unit of analysis would have been tantamount to using the entire transmission in many cases.

In the end, we do not believe the analysis would have been meaningfully altered if another unit of analysis would have been chosen.

4. For the content analysis our operationalisation of the term "strategic" is similar to what other literatures might refer to as "persuasion," or more specifically "compliance-gaining." That is, as stated in Table 1, a message was coded as persuasive (i.e., strategic), if the coder felt the sender was trying to get someone to do something.

5. Although strategies existing in the compliance-gaining literature provided a conceptual starting point (c.f., Bettinghaus and Cody 1987; Kipnis, Schmidt, and Wilkinson 1980), we allowed the categories for the textual strategies to emerge inductively from the data, refining, deleting, or adding categories where necessary to best describe the data.

6. The coder was familiar with the project. The first author had read over the messages, preliminarily attempting to settle on the coding categories. When the decision was made to engage another coder to check for intercoder reliability, the coding scheme was simplified somewhat and decision rules were established. The first author then randomly sampled 25% of each of the ten participant's messages (two participants sent less than ten messages within CRI and were therefore dropped from the content analysis). The first author recoded these messages, attempting to apply the new coding scheme.

After training, the selected messages were coded by the coder. A reliability of approximately 75% was achieved. The coding scheme was again simplified and the decision rules were spelled out more clearly. The coder and the first author recoded the messages, resulting in an overall reliability of around 85%. After deciding to throw out one category on this round of coding, a reliability of around 90% was achieved. At this point, the coder and the first author had high agreement on six of the ten participants' messages (had either zero or one disagreements). Viewing each participant as a category, a sample of a participant's messages were not recoded after a high reliability was achieved (zero or one disagreements). On one participant, the coder and the first author had only missed one message dealing with the category later thrown out. Therefore, the participant was counted as having zero disagreements.

Another random sample (of 20%) was obtained from the four participants' messages who had more than one disagreements. After again discussing the problems and clarifying the decision rules, the new sample of these four participants' messages were coded by both the coder and the researcher. This time, a high reliability was achieved on two of the participants' messages. After again discussing problems, the coder recoded the remaining two participants' messages.

Finally, dividing the number of agreements by the number of agreements and disagreements (combined from each participant after an acceptable reliability was established for their messages) resulted in an overall reliability of 95.8%. Due primarily to the relatively small number of messages available from some of these participants, a small number of messages which were used in coder training and discussions wound up being chosen in the random sample and coded. The resulting coding scheme was applied to the remainder of the 422 messages.

7. That is, while it was possible to perform a content analysis of the 422 messages from merely reading the text, a detailed account of the situation surrounding each of the 422 messages would have been required to obtain a quantitative count of the contextual strategies used. As mentioned above, such in-depth analysis of that many messages would have worn out the researchers' welcome with the most patient of participants. Furthermore, we believe that the mere existence of the contextual strategies, not their quantifiable occurrences, is the true point of interest at this juncture. Finally, it can be seen from the number of quotes presented that the phenomena are certainly not scarce.

References:

Bettinghaus, Erwin. P., and Michael J. Cody. 1987. *Persuasive Communication*. 4th Ed. New York: Holt, Rinehart, and Winston.

Contractor, Noshir, and Eric Eisenberg. 1990. Communication networks and new media in organizations. In J. Fulk and C. Steinfield (eds.), *Organizations and Communication Technology*, 143-172. Newbury Park, CA: Sage.

Culnan, Mary J., and Lynne M. Markus. 1987. Information Technologies. In F. Jablin, L. Putnam, K. Roberts, and L. Porter (eds.), *Handbook of Organizational Communication*, 420-43. Beverly Hills: Sage.

Daft, Richard L., and Robert. H. Lengel. 1984. Information Richness: A New Approach to Managerial Information Processing and Organizational Design. In B. Staw and L. L. Cummings (eds.), *Research in Organizational Behavior,* Vol. 6, 191-233. Greenwich, CT: JAI Press.

Daft, Richard L., and R. H. Lengel. 1986. Organizational Information Requirements, Media Richness, and Structural Design. *Management Science* 32, 554-571.

Eisenberg, Eric. 1984. Ambiguity as Strategy in Organizational Communication. *Communication Monographs* 51, 227-42.

Hiltz, Starr R., Kenneth Johnson, and Murray Turoff. 1987. Experiments in Group Decision Making: Communication Process and Outcome in Face-To-Face versus Computerized Conferences. *Human Communication Research* 13, 225-52.

Hiltz, Starr R., and Murray Turoff. 1978. *The Network Nation: Human Communication via Computer*. Reading, MA: Addison-Wesley.

Kiesler, S., J. Siegel, and W. McGuire. 1984. Social-Psychological Aspects of Computer-Mediated Communication. *American Psychologist* 39, 1123-34.

Kipnis, D., S. M. Schmidt, and I. Wilkinson. 1980. Intraorganizational Influence Tactics: Explorations in Getting One's Way. *Journal of Applied Psychology*, 65, 4, 440-52.

Markus, Lynne M. 1988. Information Richness Theory, Managers, and Electronic Mail. Paper presented at the meeting of the Academy of Management, Anaheim, California.

Morgan, Gareth. 1986. *Images of Organization*. Beverly Hills: Sage.

Phillips, Stephen R. 1989. Electronic Persuasion: The Uses of Electronic Mail for Interpersonal Influence in Organizations. Unpublished doctoral dissertation, University of Southern California.

Poole, Marshall S., and Gerardine DeSanctis. 1990. Understanding the Use of Group Decision Support Systems: The Theory of Adaptive Structuration. In J. Fulk and C. Steinfield (eds.), *Organizations and Communication Technology*, 173-193. Newbury Park, CA: Sage.

Rice, Ronald E., ed. 1984. *The New Media: Communication, Research, and Technology*. Beverly Hills, CA: Sage.

Rice, Ronald E. 1987. Computer-Mediated Communication and Organizational Innovation. *Journal of Communication* 37, 4, 65-94.

Rice, Ronald E., and Jaimes H. Bair. 1984. New Organizational Media and Productivity. In R. E. Rice (ed.), *The New Media: Communication, Research, and Technology*, 185-215. Beverly Hills, CA: Sage.

Riley, Paul. 1983. A Structurationist Account of Political Cultures. *Administrative Science Quarterly* 28, 414-37.

Rogers, Everett M. 1986. *Communication Technology: The New Media in Society*. NY: Free Press.

Schmitz, Joseph. 1988. Electronic Communication: A Longitudinal View. Paper presented at the meeting of the Academy of Management, Anaheim, California.

Schmitz, Joseph, and Janet Fulk. 1991. Organizational Colleagues, Media Richness, and Electronic Mail: A Test of the Social Influence Model of Technology Use. *Communication Research* 18, 487-523.

Sproull, L., and S. Kiesler. 1986. Reducing Social Context Cues: Electronic Mail in Organizational Communication. *Management Science* 32, 1492-1512.

Trevino, Linda K., Robert H. Lengel, and Richard L. Daft. 1987. Media Symbolism, Media Richness, and Media Choice in Organizations: A Symbolic Interactionist Perspective. *Communication Research* 14, 553-74.