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E-Mail Revealed: What the Research Tells Us

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E-Mail Revealed: What the Research Tells Us

"Richard, we need to talk. I'll e-mail you."[1] This caption from a *New Yorker* cartoon illustrates the dilemma of e-mail: we use it all the time, but rarely think about when and how it should be used. At its best, e-mail is a wonderfully fast and efficient way to exchange information and keep track of communications. At its worse, it is a time sink that can undermine the very benefits it should provide. There are many theories about e-mail; some are supported by research and experience, some are not. A few of these theories are examined below.

"E-Mail Is Like Talking"

As the *New Yorker* cartoon illustrates, e-mail looks like writing but feels like talking. E-mail is so handy and efficient that it is often used in place of the phone or face-to-face meetings. In fact, some organizations actively discourage the use of the telephone at work.[2] Given its ubiquitous nature and increasing familiarity, e-mail appears to be a good substitute for oral communication in many formal and informal settings. This assumption can be tested by comparing some of the similarities and differences between e-mail and face-to-face communications.

One recent study examined management students engaged in negotiations requiring both competition and cooperation. Students were divided into groups, half of which communicated face-to-face while the other half communicated by e-mail. Overall, the outcomes were better with face-to-face communications than with e-mail. In a follow-up study, some of the e-mail groups were given the opportunity to chat with their opponents on the phone, on unrelated issues, before beginning to negotiate. The findings suggest that the groups who "schmoozed" in this way were more successful in their negotiations than those who communicated solely by e-mail. Also, "schmoozers reported significantly higher feelings of rapport . . . than nonschmoozers."[3] The researchers concluded that "the normal ways of building rapport . . . are inhibited in an e-mail interaction."[4]

Similar results were obtained from a study of group dynamics conducted at a large research university where staff relied heavily on e-mail for all their communications. The study

found that increasing the use of online communications decreased the sense of connectedness and community among the staff. The researchers suggested that casual, face-to-face interactions become more important as people spend more time alone at their computers.[5]

Used in the wrong context, e-mail can actually undermine face-to-face communications. For example, Markus, who observed the communications at a risk management organization, describes how meetings were interrupted by the beeps of incoming e-mail. Recipients responded to the sounds automatically, without realizing how this disrupted the conversation and annoyed the others present. An obvious solution was to turn off the beeps; however, staff felt pressured to respond quickly to online messages.[6] Depending on its culture, an organization may see more value in fast responses to e-mail than in face-to-face interactions.

However, even in an organization like Microsoft, where "the phone never rings,"[7] the importance of face-to-face communications is understood. One of my friends who does work for the company has told me that FTWB (Face Time With Bill) is one of the most sought after and bragged about activities. Clearly, things happen when people talk that do not happen with e-mail.

E-mail functions as it does partly because it avoids the nonverbal cues present in phone calls and face-to-face talk. While we all recognize the limitations of working with words on a screen, we may not realize just how much information is normally contained in nonverbal form. In fact, research suggests that up to 93% of the intent of a communication is conveyed by facial expression and tone of voice.[8]

These examples suggest that e-mail is not always an adequate or desirable substitute for talking. Face-to-face communications are necessary to build rapport and to establish a sense of connection among workers.

"E-Mail Builds Social Relationships"

We all know how e-mail can help us keep in close touch with colleagues, friends and relatives. As Baron tells us, "Email is, in many respects, an ideal tool for building or maintaining social relationships."[9] E-mail appears to provide a safe environment in which users can control the information passed along to others and present a clear picture of themselves and their activities. This assumption can be tested by examining some of the effects of e-mail on the recipients.

In an overview of e-mail research, Baron notes that e-mail can raise "a shield between participants that, paradoxically, both facilitates and protects against personal revelation."[10] While e-mail may improve some relationships, it may actually inhibit or undermine others. Markus, who surveyed managers at a large organization, suggests that we may consciously and deliberately hide behind e-mail to avoid unwanted social interactions or to conceal our true emotions when we dislike or feel intimated by others.[11] By continuing to rely on e-mail in these situations, we may never deal with the issues that separate us from others.

E-mail can give us a false sense of security, which not only allows us to hide our emotions but also encourages us to express ideas or to use a tone that we would never bring to a face-to-face meeting. However, e-mail is neither private nor transient; words on a screen may come back to haunt us and may have a lasting impact on the recipient. In her book *The Argument Culture*, Tannen describes how one-way communications such as e-mail can create problems: "You spout off in the heat of anger, there is no way to take back what you said or correct misinterpretations, and there is no response to act as a break."[12] In her research, she has found that many serious conflicts have been set off by one-way communications. If we are angry, we need to communicate in a way that lets us monitor the effect our words have on others.

E-mail can also be deliberately manipulated in a wider political context. Romm and Pliskin conducted a case study at a university during a period when some faculty were criticizing the policies of the administration and using e-mail to make their points. For example, one approach was to store messages and use them for specific purposes at a later date. Another tactic was to send slightly, but significantly different versions of messages to different groups of recipients. Used in this way, e-mail increased the already existing tensions and polarized conflicting groups. The researchers stressed that "email should be considered a technology with strong political potential."[13]

These studies suggest that e-mail can be a powerful tool, both for creating and undermining social relationships. We need to be conscious of how and when we use this tool, both as an individual and as a member of a group.

"E-Mail Breaks Down the Hierarchy"

Given the ease and flexibility of e-mail communication, it appears to be a useful medium for cutting across the usual hierarchy of an organization. This assumption can be tested by studying how often and how effectively this type of communication is used in organizations. A number of studies suggest that online communications do, in fact, help to break down hierarchical structures. Compared with face-to-face communications, which are often dominated by the people with power, e-mail consistently allows more equal participation among members of a group. There is also some evidence that e-mail permits low-status members to exert more influence than they do in traditional settings.[14]

Still, increased participation does not necessarily translate into increased influence. While e-mail allows anyone to contact anyone else, ignoring or circumventing the usual reporting structure, just because "technology provides us with a new method to transmit messages . . . it does not ensure that these messages are heard or even considered."[15] By itself, e-mail will not change the culture of an organization.

Levy and Foster, who interviewed staff in an academy library, report that e-mail communication tends to travel down and laterally more often than up. While those interviewed saw the potential for e-mail to democratize communication, most felt "that any cultural change was not primarily technologically determined but dependent largely on policy and management practice."[16] One researcher analyzed a variety of e-mail messages sent from senior to junior staff in an academic setting and found that subtle clues of phrasing and format emphasized the existing power structure.[17] Even when managers strive to send friendly, informal messages to their staff, these messages rarely escape the inherent hierarchy of the organization.

On a positive note, there is evidence that people who regularly send work-related e-mail feel more committed to their organizations than those who send few or no messages.[18] This suggests that workers should be encouraged to use e-mail, especially if they have few opportunities for face-to-face meetings or feel uncomfortable speaking in a group.

While research suggests that e-mail has the potential for breaking down hierarchies, much depends on the culture of each individual organization. Managers must consciously create an atmosphere that welcomes communication from all levels while maintaining a reporting and

decision-making structure that supports the work of the organization.

"Short Messages are Best"

Many guides to the use of e-mail suggest that each message should focus on a single idea.[19] We have probably all had the experience of including two ideas in a message and having the second one ignored. In a related fashion, I recently received a two-idea message from a colleague; assumed the ideas were connected; contrived a (to me) logical, if erroneous explanation for the connection; and started to act on it. Fortunately, my colleague discovered my mistake before it caused problems.

Following from such experience, we may think that the less we say in e-mail, the less chance we have of being misunderstood. To test this idea, we need to examine how short or abbreviated messages are understood by the recipients. Research suggests that what we omit from an e-mail may be as important as what we include. For example, Lee suggests that even a short e-mail, or one composed of nothing but numeric data, will be mined by its readers for clues to the personality and intentions of the sender. He concludes that "managers who receive e-mail are not passive recipients of data, but active producers of meaning."[20] It therefore follows that if we want to be understood, we must think carefully about the information we include and exclude in e-mail as well as in face-to-face communications.

Some of the methods we use to shorten messages may have unexpected consequences. For example, the book *Better, Faster Email* suggests omitting salutations and using automatic signature files for the sake of efficiency.[21] However, Panteli has discovered that such shortcuts may inadvertently reinforce the power structure in an organization. While close associates may safely omit greetings when communicating with each other, managers who launch directly into their messages risk appearing authoritarian to their subordinates. Likewise, a formal signature file, while helpful for a recipient at another institution, is heavy-handed in messages from managers to their staff.[22]

E-mail messages, whether long or short, need a context in which the recipients can understand both the message and the person who sends it. We need to keep in mind that e-mail takes place between human beings who constantly struggle to understand and be understood.

"E-Mail Saves Time"

E-mail gives us the ability to communicate very quickly, to send and receive messages without leaving our desks, and to continue working on a variety of tasks while we exchange information. This would lead us to expect that e-mail saves us time and allows us to work more efficiently. To test the truth of this assumption, we need to determine how e-mail is actually used and how it fits into the other activities of the workplace.

Some research provides evidence that e-mail can reduce the time spent in face-to-face meetings and promote group productivity without increasing the total amount of communication. If a group uses e-mail to share information ahead of time, and each person reads this information, meetings can be more efficient and effective. Once e-mail has laid the groundwork, meetings can focus more productively on the functions best handled face-to-face.[23]

However, much depends on the people sending the messages and the perceived benefits of shared deadlines. At a recent meeting at my library, one person stated that she expects same-day responses to her e-mail; another admitted that she often waits for two or more weeks before responding to messages. Knowing the style of the people we work with can help us decide when e-mail will speed things up and when it may slow us down.

As we have all discovered, the sheer quantity of e-mail in our inboxes affects the amount of work we can accomplish. Even putting aside the time wasted by spam and messages of marginal interest, reading and responding to legitimate e-mail takes up a significant portion of our day. Part of the problem stems from the disruptive effect of e-mail on other activities. Each time we stop to check our messages, we need time to recover and refocus on our other tasks. The more often we check for mail, the more time we lose from our workday.

One study of software engineers examined the effects of all types of interruptions--phone calls, personal visits and e-mail–on the activities of the company. The researchers found that recovery time was a particular problem when staff were actively engaged in their programming work. Taking into account the time needed to react to, handle and recover from interruptions, the researchers concluded, "If more than 10 interrupts occur during a day, the time between the interrupts becomes too short to accomplish product development work."[24] Writing in 1998, they perceived e-mail as less problematic than other kinds of interruptions because workers could

choose when to respond to those messages.

A more recent study, focusing specifically on e-mail interruptions at an organization in the UK, found that e-mail does indeed have serious disruptive effects. The researchers discovered that although staff had the option to delay their responses to e-mail, few of them exercised this option. In fact, most employees set their software to check for new messages every five minutes, and on average, they responded to incoming mail within six seconds. Employees then took an average of 64 seconds to resume their previous tasks at the same work rate at which they left them.[25] Although the researchers did not examine the psychological effects of these interruptions, they mention other studies which suggest that "interruptions can also affect the personal state, in particular the emotions of the worker."[26]

While e-mail can potentially save us time, it can also waste time and disrupt the other activities of the work environment. Much depends on the people involved and the choices they make about how to spend their time.

"E-Mail Gets Things Done"

Just as e-mail appears to save us time, it also appears to enhance the decision-making process. Given the speed and flexibility of e-mail, stakeholders can be reached quickly and easily without waiting for formal meetings, and issues can be addressed as they arise. To test the effectiveness of e-mail on decision making, we can study the kinds of decisions produced using this medium.

Sproull and Kiesler, in their review of e-mail research, conclude that e-mail can help create a good climate for decision making and reduce the time spent in meetings. However, if people try to make decisions using e-mail exclusively, they may find the process harder and more time-consuming than if they work face-to-face.[27] E-mail does not appear to be the best medium for consensus building.

In addition, the composition of an e-mail group and the tone of its communications can influence its effectiveness. One team of researchers organized students into groups that communicated via e-mail to find solutions to a parking problem. Each group included a member planted by the experimenters: in half the cases, this member supplied nothing but critical remarks; for the other half, the member contributed only supportive comments. The groups with

the supportive member were more satisfied with their work but produced fewer original solutions than the groups with critical members. Interestingly, one group with a supportive member was dropped from the study because the subjects "became infuriated with the consistently positive but nonsubstantive comments of the confederate, and spent much of their time in taunting and abusing him."[28]

Other studies suggest that groups who work together on e-mail are more likely to take risks and to make extreme decisions, especially when rushed. Face-to-face meetings facilitate consensus but also result in more conventional and predictable decisions.[29] It appears that e-mail can have definite effects on decision making, but these effects may not always be desirable. The choice of medium can be crucial; it not only affects a group's productivity but also the nature of its decisions.

"No One Cares How We Write"

Faced with a mountain of e-mail and other pressing work, it is tempting to fire off messages without a second look. In the words of one ISP executive, "It slows down communication if everybody is stopping and thinking about what they write."[30] According to Crystal, in his book *Language and the Internet,* "the credibility of a misspeller or mispunctuator" is not questioned, because everyone understands the pressures these writers are under.[31] It would therefore seem that we can safely relax our standards on e-mail to focus on content rather than form. The test for this is how our messages are perceived by the recipients.

In 2001, ICM Research conducted interviews with 2000 adults to discover their attitudes toward the style and presentation of e-mail messages. The researchers found that 56% of those questioned are annoyed by messages that are over-familiar, have spelling or grammatical errors or omit a greeting.[32] Another research study, focusing on undergraduates, suggests that people who send polite, grammatical e-mail are perceived as more competent than those who do not.[33] Other research, involving software development teams, found that e-mail with correct spelling and grammar was more persuasive than messages that lacked these qualities.[34]

A poorly written e-mail message also runs the risk of being ignored or misunderstood. A study of Fortune 500 companies found a high percentage of badly written and ineffective

messages. In fact, more than 65% of the messages contained insufficient information for the receivers to act appropriately. The research consultant concluded that "'technology often magnifies deficits in communication skills. The bottom line is this: Good e-mail is good writing.'"[35]

It would appear that grammar, spelling and tone are significant factors in e-mail communications. While we may be forgiven the occasional lapse, a poorly composed e-mail runs the risk of undermining the purpose and impact of its message.

What Can We Do?

Much can be done to improve both the quality of e-mail and the way that messages are used in the workplace. By maintaining a realistic awareness of the strengths and weaknesses of e-mail, its benefits can be maximized while its problems are avoided. One of my colleagues has described how she thinks about each e-mail message as she types–if the process takes too long or the issues seem too complex, she moves away from the keyboard and picks up the phone. Markus, in her survey of managers, reports how individuals balance the use of e-mail with other forms of communication. One manager, for example, talks face-to-face with subordinates at least once a week, whether or not there is anything specific to discuss. Others pick up the phone whenever they sense a "negative" tone in an e-mail message.[36]

One approach to improving the quality of e-mail may be to find a middle ground; for example, to write clear and accurate messages without wasting time on endless polishing. Much depends on the audience: an e-mail to a friend is different from an announcement to all faculty on campus. Those who tend to the slapdash might benefit from showing important messages to a colleague before sending them out. The rigidly grammar-bound, on the other hand, may need to relax their standards and forgive the occasional slip. (If you are not sure which category you fall into, any of your colleagues will be delighted to tell you.)

In an article entitled "Beware the Seven Deadly Sins of Tone," Vassallo warns against "Bias, Egotism, Militancy, Ostentation, Anger, Negativity, and Sarcasm."[37] He suggests that we need to think about our motives for sending messages. For example, do we have something particular to contribute to a discussion, or are we just trying to impress our colleagues with our

knowledge or our vocabulary? Are we asking a recipient for specific and constructive action to remedy a problem, or are we writing simply to express anger? Vassallo stresses that the tone of the writer must "ring true," and the message must use "language that includes, respects, and supports readers."[38]

Jackson, Dawson and Wilson, who studied the effects of e-mail interruptions on a company in the UK, included specific suggestions for the organization to improve its use of e-mail. For example, they suggested that users set their e-mail software to check for new messages less frequently and to use an icon rather than a beep to announce incoming mail. They also helped the company develop a Short Message Service for brief, straightforward messages that would fit in a single subject line; when users saw the prefix "SMS," they knew they did not have to open the message to read it. Of the users who tried this system, 80% reported that it saved them time.[39]

Van Solingen, Berghout and Van Latum, who studied interrupts in a software company, also have specific suggestions for avoiding problems. They point out that some interruptions can be eliminated by ensuring that messages go directly to the most appropriate people; therefore, workers need to be informed of each others' areas of responsibility. The researchers also stress that during meetings, all interruptions should be avoided, since these disturb many individuals at once. Raising awareness of the negative effects of interruptions is beneficial in itself. While the researchers were studying the effects of interruptions at the software company, staff became aware of the issue, and "interrupts decreased by 30 percent during the measurement period alone."[40]

Various small, but not insignificant things can be done to reduce the time spent on e-mail. Tunstall, for example, includes these suggestions:

- use form letters or templates when responding to frequently asked questions

- for group work, assign one person to save all the pertinent messages, or organize the correspondence into a folder accessible to all members of the group

- process each message only once. Choose one of four options: delete, save, forward or answer[41]

The sheer volume of e-mail can cause stress to its users. One communications company in Toronto has suggestions to help their employees cut down the quantity of messages:

- avoid sending "thank you" messages to acknowledge routine tasks

- for group edits of a document, send comments only to the originator of the e-mail

- when gathering group feedback on a decision, ask people to respond only if they disagree[42]

Some additional hints:

- avoid sending meeting reminders. If one person consistently misses meetings, remind that person individually

- for long messages with more than one idea, begin with a "Table of Contents." See, for example, the Edupage listserv from Educause[43]

- when requesting input from a group, include an "answer by" date, giving members sufficient time to respond. This will also eliminate the need for follow-up messages

- use the staff Intranet in conjunction with e-mail: as appropriate, send a brief e-mail to alert staff to new information on the Intranet. Be sure to cut and paste any URLs to ensure accuracy.

Conclusion

Clearly, the choice to communicate by e-mail can have wide-ranging consequences. However, if we maintain our awareness of how e-mail can best be used, we can apply it to great effect in our organizations. As Levy and Foster suggest, "electronic communication should complement, rather than substitute for, other forms of communication."[44] Used wisely, e-mail is an excellent means for exchanging straightforward messages, generating ideas, distributing information for discussion, and connecting people who work at a distance.

When all is said and done, e-mail is still a relatively new medium, and best practices are still forming. As Baron reminds us, when the telephone was new, users "worried about not being able to see the person with whom they were speaking."[45] Similar concerns about e-mail may vanish in time as e-mail becomes comfortably and appropriately established among the many forms of communication available to us.

References

1. *New Yorker* 73, no. 32 (Oct. 20, 1997): 180.

2. M. L. Markus, "Finding a Happy Medium: Explaining the Negative Effects of Electronic Communication on Social Life at Work," *ACM Transactions on Information Systems* 12, no. 2 (April 1994): 139.

3. Michael Morris et al., "Schmooze or Lose: Social Friction and Lubrication in E-Mail Negotiations," *Group Dynamics: Theory, Research, and Practice* 6, no. 1 (2002): 95.

4. Ibid., 91.

5. Marjorie Sarbaugh-Thompson and Martha S. Feldman, "Electronic Mail and Organizational Communication: Does Saying 'Hi' Really Matter? *Organization Science* 9, no. 6 (Nov.-Dec. 1998): 685-98.

6. Markus, "Finding a Happy Medium," 141-142.

7. Michael Kingsley, "The Morality & Metaphysics of Email," *Forbes ASAP* 158 no. 13 (Dec. 2, 1996): 113. Accessed Feb. 26, 2003, http://benturner.com/theirs/kinsley.php.

8. Daniel Druckman, Richard M. Rozelle, and James C. Baxter, *Nonverbal Communication: Survey, Theory, and Research,* (Beverly Hills, Calif.: Sage Publications, 1982), 85.

9. Naomi S. Baron, "Letters by Phone or Speech by Other Means: The Linguistics of Email," *Language & Communication* 18, no. 2 (1998): 157.

10. Ibid.

11. Markus, "Finding a Happy Medium," 136.

12. Deborah Tannen, *The Argument Culture: Moving from Debate to Dialogue*, (New York: Random House, 1998), 241.

13. Celia T. Romm and Nava Pliskin, "Electronic Mail as a Coalition-Building Information Technology," *ACM Transactions on Information Systems* 16, no. 1 (Jan. 1998): 94-95.

14. Lee Sproull and Sara Kiesler, *Connections: New Ways of Working in the Networked Organization,* (Cambridge: MIT Press, 1991), 60-62.

15. Nerissa Nelson, "Can Computer-Mediated Communication Democratize the Workplace?" *Information Outlook* 4, no. 6 (2000): 21.

16. Philippa Levy and Allen Foster, "Communicating Effectively in the Networked

Organisation: Using Electronic Mail in Academic Libraries," *Journal of Documentation* 54, no. 5 (Dec. 1998): 573.

17. Niki Panteli, "Richness, Power Cues and Email Text," *Information & Management* 40, no. 2 (2002): 81.

18. Sproull and Kiesler, "Connections," 86.

19. See, for example, Arlene Rinaldi, "The Net: User Guidelines and Netiquette," (1998). Accessed Feb. 26, 2003, http://www.fau.edu/netiquette/net/netiquette.html.

20. Allen S. Lee, "Electronic Mail as a Medium for Rich Communication: An Empirical Investigation Using Hermeneutic Interpretation," *MIS Quarterly* 18, no. 2 (1994): 154.

21. Joan Tunstall, *Better, Faster Email: Getting the Most Out of Email,* (St. Leonards, Australia: Allen & Unwin, 1999), 25.

22. Panteli, "Richness," 81.

23. Sproull and Kiesler, "Connections," 27, 31.

24. Rini van Solingen, Egon Berghout, and Frank van Latum, "Interrupts: Just a Minute Never Is," *IEEE Software* 15, no. 5 (1998): 100.

25. Thomas Jackson, Ray Dawson, and Darren Wilson, "Reducing the Effect of Email Interruptions on Employees," *International Journal of Information Management* 23, no. 1 (2003): 55-65.

26. Ibid., 57.

27. Sproull and Kiesler, "Connections," 65-69.

28. Terry Connolly, Leonard M. Jessup, and Joseph S. Valacich, "Effects of Anonymity and Evaluative Tone on Idea Generation in Computer-Mediated Groups," *Management Science* 36, no. 6 (1990): 696.

29. Sproull and Kiesler, "Connections," 65-74.

30. Amy Harmon, "Corporate Delete Keys Busy as E-Mail Turns up in Court," *New York Times* (Nov. 11, 1998): C2.

31. David Crystal, *Language and the Internet,* (Cambridge: Cambridge University Press, 2001), 112.

32. Mark Ward, "Manners Are Lost in the Net," (March 22, 2001). Accessed Feb. 26, 2003, http://news.bbc.co.uk/1/hi/sci/tech/1234233.stm.

33. Sherri L. Jessmer and David Anderson, "The Effect of Politeness and Grammar on User Perceptions of Electronic Mail," *North American Journal of Psychology* 3, no. 2 (2001): 331-346.

34. E. Vance Wilson, "Email Winners and Losers," *Communications of the ACM* 45, no. 10 (2002): 125.

35. Valerie Frazee, "Is E-Mail Doing More Harm than Good?" *Personnel Journal* 75, no. 5 (May 1996): 23.

36. Markus, "Finding a Happy Medium," 139.

37. Philip Vassallo, "Beware the Seven Deadly Sins of Tone," *ETC* 57, no. 1 (2000): 101.

38. Ibid., 114.

39. Jackson, "Reducing the Effect," 61-63.

40. Van Solingen, "Interrupts," 102.

41. Tunstall, *Better, Faster Email*, 26, 62, 78.

42. Kate Trgovac ktrgovac@infinetcommunications.com, RE: Reduce the Clutter. E-mail to author (6 Dec. 2002).

43. Edupage listserv archives: http://listserv.educause.edu/archives/edupage.html.

44. Levy and Foster, "Communicating Effectively," 580.

45. Baron, "Letters by Phone," 165.