

The E-mail is Down!
Using a 1940s Method to Analyze a 21st Century Problem

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Abstract

When the electronic mail system at a university crashed, researchers turned to a methodology developed more than 50 years earlier to examine its impact. Using a modified version of Bernard Berelson “missing the newspaper” survey questionnaire, student researchers collected qualitative comments from 85 faculty and staff members. Like the original, the study found extensive anxiety over the loss of the information source, plus a high degree of habituation and dependence on the new medium.

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It seldom puts lives at risk and almost always is accompanied by viable alternatives. Nevertheless, the brief comment “the e-mail’s down!” has become the 21st century equivalent of the old cowboy movie knuckle-whitener “We’re surrounded!”

While academic rigor requires most researchers to ferret out tangible, quantifiable factors of media use, folk wisdom tells us that it is absence that makes the heart grow fonder. It was that folk philosophy that renowned sociologist and researcher Bernard Berelson used to craft his landmark study of newspaper readership in the late 1940s. His 1949 paper, “What ‘Missing the Newspaper’ Means,” was a reader’s-eye examination of the impact of a 1945 strike that idled the presses at all major New York newspapers.

This paper applies Berelson’s logic and methodology to a blackout of a very modern medium – the electronic mail system that operates on the Internet. It uses a near-identical questionnaire and interviewing procedure to look at users’ social, psychological and personal attachment to e-mail.

Berelson’s 1949 study has both intrigued and bewildered scholars for half a century. Perhaps the most maddening aspect of the study is that it does not fall cleanly into any research methodology, but instead combines aspects of qualitative ethnography, quantitative survey research and journalistic interviewing. When the strike had left New Yorkers without their newspapers for several days, Berelson and his team from the Bureau of Applied Social Research at Columbia University fanned out across the residential neighborhoods of Manhattan. Guided by a list of 18 questions, they probed for emotional cues to their subjects’ attachment to the daily newspaper.

The questionnaire, however, was not simply tallied and statistically analyzed. The research team interviewed just 60 people – far too few for statistical reliability – and concentrated more on collecting detailed quotes than numbers.

And what quotes they were. From statements such as “I am like a fish out of water ... I am lost and nervous” (Berelson, 1949), the researchers painted a picture of newspaper consumers who were far more than just readers. Berelson found emotional attachments to newspapers, social functions for even the non-news content of the paper and deep-seated personal opinions of almost every aspect of the paper.

The timing and a convergence of historical factors made Berelson’s study difficult if not impossible to

completely replicate. He worked at a time of high interest in newspaper -- the Second World War had just ended and Americans were very used to following news from abroad. Metropolitan newspapers were large and abundant, but suburban papers were not as popular as they are today. Radio was popular, but television was just in its infancy. Newspapers would soon lose their clear dominance in the media market and face myriad competitors.

Later strikes, when the competitive picture had changed, would not be so complete in their ability to black out news. However, the methodology was applied to the “everyday” interruption in newspaper reading through delivery problems (Bentley, 2002).

A quirk of modern technology led to the current study. In the spring of 2002, all of the University of Missouri’s approximately 7,000 faculty and staff were connected via a central Microsoft Outlook electronic mail system (Krupa, 2002). The system also is accessed by off-campus faculty and staff via other e-mail systems, such as Eudora or Messenger, which use a different electronic protocol. On March 11, the system developed severe problems due to encrypted messages sent by one of the off-campus e-mail systems. The Outlook system operated only marginally for a day, and then was shut down on March 12 so the university technical staff could run lengthy diagnostic tests and, eventually, install a new system. Most faculty and staff members were unable to use the system until late Wednesday, March 13.

The outage provided a similar environment to Berelson’s newspaper strike. A commonly used medium became totally unavailable. As a practical examination of Berelson’s methodology, the students in a large advertising research class were sent to the various departments of the university to interview affected faculty and staff. The students used a questionnaire that was copied from Berelson’s study with only minor changes – reflecting its focus on e-mail rather than newspapers.

Like the original, this study is an exploration of media use, and may provide more clues to later research than it will provide final answers.

Literature Review

Today, it is hard to imagine what our daily communication would be like with out e-mail. Since the inception of the Internet and computer mediated communication in the 1980’s, e-mail quickly has grown in frequency of use and application capabilities.

Many scholars (Cohen, 1996; Dimmick, Kline, & Stafford, 2000) have cited convenience, informality, rapid transmission, wide geographic reach, and ability to surpass time zones as primary factors for the proliferation of e-mail communication. While some scholars, such as Schaffermeyer and Sewell (1988),

have predicted that e-mail will supplant other more traditional forms of communication—including telephone calls, face-to-face conversations, and facsimiles--other scholars have indicated that e-mail will enhance, rather than replace, more traditional communication methods.

Haythornwaite and Wellman (1998) found in their study of 25 members of a university computer-science research group that the more frequently individuals contacted each other, the more types of information exchange they engaged in and the more medium they used. More importantly to our focus, e-mail was not found to replace other forms of communication, especially face-to-face conversations. Rather, increased e-mail interactions between individuals was found to be positively correlated to increased face-to-face interactions.

Haythornwaite and Wellman also found that unscheduled interactions (either face-to-face or via e-mail) were more frequent than scheduled interactions. This finding refutes the claim of some scholars that e-mail and Internet usage lead to antisocial behaviors and seclusionary tendencies. Indeed, some scholars, such as Hampton and Wellman (Hampton & Wellman, 1999), have correlated social ties to Internet access and usage.

Cohen (1996) found in a survey of 26 U.S. institutions that were members of the Association of Jesuit Colleges and Universities that e-mail encouraged scholars to communicate with more individuals and reinforced group identity and purpose. Furthermore, the informal nature of e-mail communication enabled scholars to keep informed of current developments and exchange ideas. The survey respondents stated that they received more e-mail than they sent and that their most common use of e-mail was communication with other faculty members. Most significantly, the surveyed faculty did not believe that network access would lead to less dependence on other faculty, and they appeared to prefer face-to-face interactions when given the choice.

Dimmick, Kline and Staffpr (2000) have applied niche gratification theory to understand the communication role of e-mail versus telephone calls. In this theory, various media can be evaluated for their unique capabilities, breadth of these capabilities, degree of overlap of gratifications with other media, and benefits over other media. In their telephone survey of Columbus, Ohio residents, Dimmick {, 2000 #794} found that the telephone has a highly affective niche, and is most commonly used to give advice, exchange information, and provide communication. On the other hand, e-mail was found to be superior on a gratification-opportunities scale by better accommodating work schedules, facilitating communication with people from different time zones, and aiding in maintenance of contact with people who live far away and/or

are not seen very often. In sum, the researchers' finding did not indicate that e-mail could replace the telephone, especially long-distance calls, because each medium inhabited a different and unique niche.

Finally, by examining interpersonal relationships – both in-person and via e-mail—Koku, Nazer, and Wellman (2001) found that e-mail is used to speed scholarly exchanges and as a compliment to face-to-face conversations. They discovered that scholars primarily used e-mail to maintain contact with other scholars who they did not have a close relationship with. Their research also indicated that e-mail was frequently used between scholars working close by because it was more convenient for spontaneous communication. However, scholars that were in frequent contact used all modes of communications and selected the most appropriate medium for the message. In addition, Applebee, Clayton, and Pascoe (1997) also studied e-mail usage among university professors, and they found that their subjects primarily used computer networks for e-mail. In addition, scholars wished they had more training on Internet facilities.

Berelson's Approach

A quite different approach to media usage research was pioneered by Columbia University's Bernard Berelson shortly after World War II. In the 1948-49 edition of *Communication Research*, Berelson published a study that was cited in textbooks and other research papers for the next half century. "What 'Missing the Newspaper' Means" was an analysis of the 1945 New York newspaper delivery strike through the eyes of the would-be readers whose access to a daily paper was cut off. The strike drew the interest of several research groups, but Berelson's was the only team to use a non-traditional approach to the media use question (Berelson, 1949, pp. 111-112).

Berelson speculated that "missing the newspaper" was less a statement of physical loss than it was of social and psychological trauma. He wanted to know what people felt when the paper did not arrive, and why. By examining the statements of readers deprived of their daily dose of printed news, he sought to identify the emotions involved in regular newspaper use.

Others later grappled Berelson's issue of emotions. Like Berelson's study, the work of Barnhurst and Wartella (Barnhurst & Wartella, 1991) showed that newspaper use sometime seems to defy logical explanation. The researchers used a qualitative method not dissimilar to Berelson, asking high school students to write life histories of their media experience. Although most initially denied much contact with papers, nearly half the students studied by Barnhurst and Wartella eventually said the newspaper was a constant part of the household background. It was read, but also performed a variety of non-news functions for these families – a source of art projects, a focus for family time, an object of entertainment and a patching

material for shoes.

In part, uses and gratification research evolved to address the question of why people are driven to use media (O'Sullivan, Hartley, Saunders, Montgomery, & Fiske, 1994). This field of study theorizes that the consumption of media output is motivated by the gratification of certain individually experienced needs of audience members, rather than the strength of the media themselves. This approach was a break from the concentration on media effects of the 1930s and 1940s. As Halloran (Halloran, 1970) said, it diverted researchers from the habit of thinking of what media do *to* people – directing instead them to look at what people do *with* the media.

Much of uses and gratification study tries to quantify media use by how it fills four needs: Diversion, personal relationships, personal identity and surveillance (McQuail, Blumler, & Brown, 1972). While uses and gratification tried to look deep into the individual for psychological motivations for media use, the media dependency theory developed to explain the sociological drivers of media use. The central question of media dependency research, is “how did our world become so dependent on mass media, and how do mass mediated messages affect our lives” (Merskin, 1999, pp. 113).

Media dependency theory says that as society has become more urbanized, life has become less organized around traditional social groups like church and family. In their stead, the mass media provide support and guidance to get them through daily life – modern citizens become “dependent” upon the media, including newspapers, television and the Internet. Sandra Ball-Rokeach, one of the pioneers of this theory, stated that the extent of urbanization and the sophistication of the media means there are few, if any, functional alternatives to the media system for the average American to use to “stay in touch with the world.” (Ball-Rokeach, 1985, pp. 503).

Berelson's method

When the delivery workers of eight major New York City newspapers went on strike the afternoon of June 30, 1945, Bernard Berelson of the Bureau of Applied Social Research at Columbia University was at first curious. A week later, when New Yorkers still had no printed news and two scientific polls by national organizations appeared to be unable to address the attitudes of denied readers, Berelson went into action by quickly mobilizing his Columbia University research team. The strike eventually lasted 17 days and was so complete it put a print-media blackout over New York at a time when television was in its infancy and the Internet was not even a fantasy (Berelson, 1949). The Columbia researchers under Berelson elected to use what he called an “exploratory survey” that was quite different from the more traditional surveys launched by

the Elmo Roper agency and by Fact Finders Associates, Inc. Berelson traded

“extensive” for “intensive” by combining qualitative and quantitative techniques (Berelson, 1949, pp. 112).

An important consideration of Berelson’s study that was replicated by this research was the “shock” created when people are in crisis. Berelson said that such a shock makes people more conscious of what media means to them and allows them to be more articulate (Berelson, 1949, pp. 112-113).

Berelson used a questionnaire to frame interviews with 60 people scattered through the rental areas of Manhattan. He said that while it was not a statistically reliable sample, it allowed him to get beneath the “surface facts” that other polls probed. Taken at face value, the 18 questions Berelson crafted for his project could be seen as a fairly standard quantitative survey. However, used as a framework to elicit quotes and comments from the subjects, it produced a much more subjective product that he said focused more on the emotions of the respondents. In his analysis, he grouped the quotes to form a five-point typology that can be linked to the common categories of uses and gratification research. His categories were information about public affairs (see: surveillance), tools for daily living (see: personal identity), respite (see: diversion), social prestige (see: personal relationships), and social contact (see: personal relationships and personal identity).

Return to an old methodology

The 1945 New York newspaper strike and the 2002 e-mail outage at the University of Missouri had several factors in common that inspired the use of Berelson’s methodology. Like the newspaper strike, the e-mail outage was at first seen as a brief interruption in daily life but grew to “crisis” status as the days without service continued. Additionally, the outage was near total: media reports at the time showed that all 7,000 faculty and staff e-mail accounts (and accompanying online calendars and contact lists) were inaccessible due to a problem with the main e-mail software, though the separate student e-mail system was unaffected. The “urbanization” status of the participants also can be compared. While Berelson’s participants were residents of the nation’s largest and most sophisticated media community in the 1940s, the “highly wired” status of a major research university made e-mail a daily aspect of University of Missouri life.

On March 13, the third day of the outage, 43 students from an upper division strategic communications research class were given questionnaires identical to those used by Berelson except that the 18 questions were modified to ask about e-mail use instead of newspaper readership. Each student was asked to interview two faculty or staff members and asked to spread their efforts across the campus. The students

had previously received training in both qualitative interview techniques and in survey methodology.

The result was 85 valid interviews from a population of 10,000 e-mail users. While the sample was neither random nor statistical, it was both proportionally and actually larger than the 60 respondents of Berelson's Manhattan survey.

The respondents represented 29 departments of the university, from agriculture to theater to statistics. Just less than two-thirds of the respondents were females, and slightly more than half the respondents were faculty members as opposed to staff members.

Results:

If one word can summarize the emotions of the respondents, it is "frustrated." Both faculty and staff expressed dismay that they could not carry out their normal routines due to a failure of technology. One faculty member said she "wanted to throw the monitor out the window" as she continually tried to reboot her e-mail account.

A male staff member said he was taken aback by the outage because the people in his department use e-mail so frequently that "I almost forget I have a telephone."

Variants of the general frustration expressed by respondents were their irritation at being inconvenienced and fear that the outage would keep them from performing their job as expected. The latter was especially true of staff members, who often portrayed the outage as the ultimate barrier to their success. One administrative assistant claimed the outage kept her from doing 90% of her normal office work. An administrator in the same office said much the same but with greater emotion:

"My life was lost. I lost all contacts for meetings, my appointment calendar, my contacts lists. It meant a cessation to my ability to perform my duties."

For faculty members, the frustration and inconvenience was focused on their relationships with students. Time and again, faculty members said that it was the students who were hurt most by the outage, as they could no longer maintain a vital cyber relationship with their instructors. One professor said he felt he was "cheating" his students by not responding to their e-mails, while a veteran professor lamented that the timing of the outage was devastating. "Being the week before or of many midterms makes this outage so much worse," he said. "This is the time when students are trying to ask last minute questions before the exams and get extra help."

Just the realization of the burden the outage placed on students amplified the frustration of faculty. As one professor explained, "I was not terribly concerned when I first realized (the e-mail) was down because I

assumed it would be fixed immediately. But now I am very frustrated because my students have been unable to easily contact me about a study guide I posted (on the Web) last week.”

The depth of emotion expressed by the faculty and staff varied greatly, but tended to skew toward the more dramatic. For a handful of faculty and staff, the e-mail outage was just another minor irritation of modern life. Indeed, one young professor found the experience “liberating,” as it freed time to complete many overlooked “little tasks.” Another 30-something professor said the forced personal contact added a new dimension to his classes. “I actually got to know a few (students), which is odd in larger lectures.”

For many, however, the outage was emotionally devastating. The vast majority of respondents said they had great difficulty coping with the outage, many quickly choosing Berelson’s questionnaire statement “I’m simply lost.” Faculty and staff who had no backup of their e-mail addresses and calendar notes were especially dismayed. “Everything was gone one night,” said a 51-year-old male professor. “That is when the fear set in.”

The near panic sometimes hit those who least expected it. One long-time journalism professor bragged that his career started long before the advent of e-mail, so that he thought the outage would be a mere amusing interlude. “I taught here long before the Internet craze and my teaching methods were already set in before any of that stuff came about. I didn’t see a point to changing something that already worked fine.”

Though he tried to “shrug off” the e-mail problem, his attitude quickly changed. He said that he began to worry that he was missing important messages from students or colleagues. He soon found himself asking everyone he met whether they had tried to e-mail him. “For something that I hardly thought of before, it really began to consume my interests.”

Once the e-mail system came back up, the subject was amazed at how much he wanted to use a technology he has previously spurned. “I think I’ve found something new,” he said. “I’ll still depend mainly on the phone, but this is pretty convenient – when it works.”

The professor’s allusion to the tried-and-true technology of the telephone was extremely common. The telephone was by far the most common alternative communications tool for the e-mail-deprived academics, as all had access to a campus voice-mail system. Using the phone was not without costs, however, and many noted that the extra time required to process messages by voice rather than text was taking a toll. One instructor explained that her telephone conversations with other faculty “took a lot of time” because “many faculty friends want” talk about other things as well.” Another found that booking

travel plans – normally a brief e-mail note – became an exercise of an hour or more as he waited on “hold” with airlines and rental car agencies.

Adding to the frustration was the fact, noted by several faculty members, that many people no longer keep a file of telephone numbers on their desk. For off-campus colleagues, an e-mail address kept in a computer file was more common.

Once they dealt with the communication problems with their students, faculty members often realized they were left “out of the loop” with their colleagues at other universities. The failure of the e-mail system meant that they also had no contact with the “list serves” or e-mail mass mailing lists to which many subscribe. They had no means to tell their colleagues – both those on the lists and those who send e-mails to them directly – that they were temporarily incommunicado. An English professor, who works with others in his field around the world, explained: “The only e-mail address my colleagues have to write to me is my university address, so I’m worried they might think I’m being rude by not responding to their e-mails.”

Of less concern was broken e-mail ties to family and local friends. Most noted that they had the telephone or a personal e-mail account to handle that, although one staff member said she was disturbed that she could no longer correspond with her ex-husband through the less-personal means of e-mail. Equally important to the telephone for faculty and staff was the old-fashioned technique of pen and paper. Secretaries reported that they spent hours “running” messages to other offices, and many faculty members returned to their old habit of photocopying material to hand out to students. One professor noted with some pride that he had even hand-written a normal letter to an overseas colleague during the outage.

Interestingly, face-to-face communication was one of the least popular alternatives for both faculty and staff. Several respondents reported that they increased their office hours and made more announcements in class, but most tried to find a mediated method of communicating to students and colleagues. This tendency may be in part due to habit engrained by the increasingly mobile culture of academia. “It’s becoming harder and harder to reach people at their desk and e-mail is just so much faster and easier to use,” said a theater professor. Another professor complained that the outage “made me have more face-to-face interaction with people at work,” but that he used the telephone when he could.

Though their actions and comments about how the e-mail outage affected them varied, the professors, advisers, secretaries and administrators had one near-universal observation: They were shocked at how dependent they had become on e-mail. Some explained it as a new, 21st century type of community. “I can’t believe how much I missed this close type of contact with other faculty members,” said a geology professor.

She speculated that e-mail had evolved from a simple form of communication to a special part of her life. The outage had cast a pall over that specialness. “Though it’s not a necessity to talk to friends via e-mail, (the outage) has ruined the ‘high’ of checking your e-mail just to see who was thinking of you.”

Others were simply shocked that the world of the “@” symbol had stealthily overtaken them. “I’ve taken it for granted,” said a shaken professor. “It has dramatize its value this week.” And a harried student adviser said the outage gave her a traumatic lesson in modern media. “I have realized it is so much better than the alternative. I am tired of calling and leaving messages or getting no answering machine.” The musings of a particularly introspective professor best summarized the feelings of her peers that several days of life “offline” made them realize. “I feel like e-mail is my life,” she said. “I talk to my students, I communicate with them. I send out study guides and a lot of vital information. ... I really feel connected to everyone in my life some way through e-mail.”

Conclusions

The settings for this research and Berelson’s project are not exactly parallel, but nevertheless produce strikingly similar results. As before, the current study found a remarkable amount of dependence upon a medium and a substantial amount of anxiety when that medium was not available. In both cases, a special social role was assigned to the medium by its users, and the medium had been integrated into the respondent’s daily routine.

In past research, many scholars (Cohen, 1996; Dimmick et al., 2000; Haythornthwaite & Wellman, 1998; Koku et al., 2001) have agreed that academics are not dependent on electronic communication to communicate with colleagues, students, friends, and family. Rather, these scholars have indicated that academics use e-mail to complement other forms of communication, including face-to-face and telephone conversations, and that e-mail helps build stronger relationships. While researchers have agreed that electronic communication affords some significant advantages—including informality, rapid transmission, wide geographic reach, and ability to surpass time zones--no previous research has proposed that academics may in fact be underestimating the predominance of e-mail in their daily communication interactions

However, our study provides a starkly different interpretation of the role of electronic communication in academia, implying that e-mail is the primary and preferred mode of communication among academics. Not only has this research found that the vast majority of the faculty and staff interviewed are dependent upon e-mail, but they also feel lost without it. The respondents did not find telephone or face-to-face conversations to be equal replacements for electronic communication. As previously discussed, many of the

interviewees felt lost and panicked when the e-mail system crashed. Though they employed other modes of communication, they did not find these alternatives to be as effective, efficient, or comfortable as e-mail.

The telephone was found to be the most common replacement for e-mail. However, the respondents did not find this mode to be an adequate or equal replacement. Telephone conversations were found to take a lot more time than sending e-mail messages. Another common replacement for the downed e-mail was the pen and paper technique. However, this communication mode also was found to take a lot more time than e-mailing. Perhaps most significantly, the academics seemed to choose face-to-face conversations as a last resort. As previously discussed, this tendency may be a result of the mobile culture of academia and the ease of e-mail. But, this finding also may indicate a negative repercussion of e-mail: a decreased comfort level with direct interaction with students and other faculty. However, this conclusion requires further research for verification as past research (Cohen, 1996) has indicated the exact opposite: academics prefer face-to-face conversations.

Similarly, Berelson found that his subjects also were not able to find equal and viable replacements for the newspaper. Though they initially claimed that they could not find out about the news without reading their daily paper, they later admitted that radio and television did in fact provide them with local, national, and international news. However, the New Yorkers still did not believe that these alternative media sources were adequate and equal replacements for their daily newspapers.

Berelson said newspapers played a vital role to New Yorkers because they were a part of his respondents' daily routine. The morning was not the same without scanning the headlines while sipping a cup of coffee or completing the crossword puzzle while riding the metro to work. Berelson called the "ritualistic and near compulsive character of newspaper reading" (Berelson, 1949, p. 125). Bentley (2002) found a similar "newspaper habit" when he used a similar methodology to examine readers of a small-town paper.

This research also indicated a high level of habituation among e-mail users. Much of the irritation voiced by the respondents can be attributed to the disruption of their daily routine. Many conceded that they had become far more dependent on e-mail than they had realized before the outage. Berelson devised a convenient set of categories of use to analyze his findings. Though more than a half a century and a technological revolution separated the studies, the categories were largely valid for Internet users:

For Information about and Interpretation of Public Affairs. Berelson identified a core of readers who find newspapers indispensable as a source of information about "serious" news (Berelson, 1949, p. 117). This is one area where the e-mail users of the current study did not conform. Almost none of the respondents

reported using e-mail as a “news” medium, although many read news reports on the World Wide Web portion of the Internet.

However, repeated comments that respondents felt “out of touch” point to a similar use for e-mail. Rather than news of public affairs, however, respondents turned to their e-mail for news of private, professional and academic affairs.

The category also rang familiar for what it was *not*. Newspaper readers at first identified “news” as their primary reason for interest in the paper; e-mail users first identified interpersonal communications as their main interest. But in both, the more subtle and emotional uses of their medium described in the other categories surfaced as driving forces of usage.

Tool for Daily Living:. A key question from Berelson’s survey form asked whether readers found there were things they could no longer do as well in the absence of newspapers (Berelson, 1949, p. 118). As Berelson found with newspapers, life was simply not as easy for the Missouri academicians when the e-mail went down. The newspaper readers missed utilitarian features such as movie ads and radio show logs. The e-mail readers missed meeting announcement and calendar notices. Newspaper readers feared they might miss an obituary of an acquaintance; e-mail readers feared they might miss a request for help from a student.

For Respite. Many newspaper readers simply enjoyed leafing through the paper as a means of “escape” (Berelson, 1949, p. 119). E-mail users often said they took momentary breaks from work to chat online with friends and family from their desk. While the respite factor did not appear as strong as it was in the earlier study, the reports of the e-mail users definitely alluded to a feeling of enjoyment.

For Social Prestige. News knowledge is much more than personal intellectual growth, Berelson found. The original study (Berelson, 1949, pp. 119-120) found evidence that some people collected tidbits of information from the press so that they could appear informed in social gatherings. This “conversational value” was also present in the e-mail study, as respondents complained that outage would leave them “out of the loop” with their colleagues. Subscribers to “list serves” or mass mailing lists were particularly concerned that they would miss out on an online conversational “thread.”

For Social Contact. Among newspaper readers, the daily paper was a portal to vicarious living (Berelson, 1949, pp. 120-121). It allowed them to peek in on the social lives of New York’s glitterati and listen in on the gossip about movie stars and other celebrities.

For e-mail users, social contact may be the chief appeal of the medium. Unlike other mass media, however, e-mail allows its users to participate *directly* in an alternate world. Many users expressed concern

that they were cut off from colleagues at universities in other cities or even in other countries. Few seemed willing to protect these long-distance relationships by resorting to the telephone or the postal system, and many said they had fallen into the habit of checking their e-mail almost constantly through the day. As one geology professor said, checking one's e-mail provided a special "high just to see who was thinking of you."

Limitations and Call for Further Research

Berelson's hybrid methodology is not without challenges. The fact that it employs a larger sample than, for instance, a newspaper reporter's story can tempt readers to generalize from the observations. It is, however, still qualitative research that cannot have the validity of a properly done survey.

The fact that the technique uses a large number of interviewers is also a limitation. Even with classroom training and a questionnaire to guide them, 43 interviewers are bound to engage in a variety of types of conversations with their respondents. The intent, however, was much like that of the newspaper reporter: to gather appropriate quotes on the issue from a number of people.

Additionally, any project undertaken during a "crisis" faces special challenges. Research questions, documentation and logistics must be assembled in a very short period of time and often with minimal forethought. In this case, the use of previously tested questions greatly facilitated the administration of the survey in a limited time frame. Scholars who may consider similar projects would be well advised to prepare a questionnaire in advance of a media outage.

In his original research report, Berelson said his technique could offer no scientific proof, but that it produced "a set of useful hypotheses (Berelson, 1949, p. 113). He and his Columbia University team paid homage to traditional survey methodology, but felt their more intensive method could produce questions that other researchers could test by quantitative methods.

This research also produced a set of lingering questions that other researchers could investigate:

Class actions. Do the various classes of employees at universities – faculty, graduate assistants, staff and administrators – view e-mail and the Internet differently?

Students in a new age. The professors interviewed were worried – sometimes to the point of panic – that their students would suffer because of the e-mail outage. But is that concern justified? Do students depend upon e-mail for success, or do they fall back on traditional study methods?

Out of academia. Is the concern about and attraction to e-mail expressed by the faculty and staff unique to academia, or do workers in business and government agencies have the same concerns?

Film at 11. Is the failure of e-mail a legitimate news story, and, if so, was one of the traditional mass media most effective at explaining the problem to those deprived of e-mail?

Nodal dysfunction. When e-mail fails at one university, what is the effect on colleagues at other institutions? In a decentralized Internet system, do communications problems have a ripple effect?

Summary

Bernard Berelson had no computer on his desk when he wrote the findings of his study in 1949. Even the now ubiquitous television was “new media” at that time. It was not, however, technology that he applied so well to detect the emotional linkage between people and their media. It was a basic human skill – deep conversation. His field researchers simply asked people to tell them what “missing the newspaper” means.

The project undertaken at the University of Missouri more than a half century later demonstrates that Berelson’s methodology ably withstood the test of time and technological innovation. In a very short period of time, a group of researchers was able to gain great insight into what it means to “miss e-mail.” We are people of ideas, of words and of habits. When any of those is taken from us, we are quick to use what remains to seek a return to the norm. If this project were repeated after the passing of another half-century and the development of some yet indescribable medium our futuristic colleagues can rest assured that their questions will help reveal, “what it means.”

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*Appendix I – The Questionnaire***J333 E-mail Questionnaire**

This is a very brief study on the e-mail outage at the University of Missouri, using techniques developed during a newspaper strike in the 1940s. The study is completely voluntary, but could produce important data on the use of new media. Your name will not be recorded or used in conjunction with this study, so your answers are anonymous.

If you have questions, contact:

XXXXXXXXXXXX.

XXXXXXXXXXXXXXXXXXXX

XXXXXXXXXXXXXXXXXXXXXXXXXXXX

181D Gannett Hall, University of Missouri

Columbia, Missouri 65211-1200

May we proceed?

1. Do you ordinarily use e-mail regularly?
 - a. Yes
 - b. No

2. Have you been unable to access your e-mail recently?
 - a. Yes
 - b. No

3. (If Yes) By and large, what did not having your e-mail mean to you?

4. How did you feel the very first time you weren't able to access your e-mail? (Interviewer: Reconstruct this first occasion as completely as possible and in as much detail as possible)
 - a. Did you continue to feel that way as time went on or did you change?
 - b. (If change) How did you change?
 - c. When was it that you first missed e-mail (day and period of day)
 - d. What did you do instead of using e-mail?
 - e. Did you do the same thing during the following days?

5. What time of day do you ordinarily read e-mail?
 - a. When?
 - b. What did you do during this time instead?
 - c. Now that you think about it, what would you rather do during that time, read e-mail or something else?

6. Now that you have no e-mail, do you do anything else to communicate with the same people?

7. On the whole, from which of these sources did you prefer to get news and information before the e-mail stoppage?
 - a. Mail
 - b. Telephone
 - c. Newspaper
 - d. Radio
 - e. Television
 - f. Magazines
 - g. Word of mouth

8. Since you haven't been able to get your e-mail, have you changed your opinion about the value of e-mail and/or the Internet?

9. On the whole, which do you think is more trustworthy in giving you information, e-mail or voice-mail?
 - a. E-mail
 - b. Voice-mail

10. Since you haven't been able to use e-mail, do you talk with your family and friends more often or less often than before?
 - a. More often
 - b. Less often

11. Since you haven't been able to use e-mail, do you talk with your academic colleagues more often or less often than before?
 - a. More often
 - b. Less often

12. What *parts* of the e-mail do you miss most?
 - a. Messages to and from academic colleagues
 - b. Messages to and from students
 - c. List servers
 - d. Other (explain)

13. What do you miss most, receiving messages or sending messages?
 - a. Receiving
 - b. Sending
14. Since you haven't been able to get your regular e-mail, have you found some things that you can't do as well without it? Why?
15. Summing up your feelings about the information from e-mail over the past days, which of these statements best describes your overall feeling?
 - a. I was simply "lost" without the information from my e-mail; there is no satisfactory substitute for it fro me
 - b. I missed the e-mail a good deal, I managed all right without it, but I am anxious to have it back.
 - c. I missed the e-mail only a little. I find that I can get along without it.
 - d. I don't miss the e-mail at all. E-mail is not very important for me for getting information.

16. Do you know why you are not getting e-mail?
 - a. Yes
 - b. No
 - c. Can you explain what happened?
17. Have you received adequate information about the outage?
 - a. Yes
 - b. No
 - c. What information would you have liked to receive about the outage

18. Personal characteristics:
 - a. Age
 - i. Up to 24
 - ii. 25-34
 - iii. 35-45
 - iv. 45-54
 - v. 55-64
 - vi. 65 and over
 - b. Staff or faculty
 - c. Length of time at University of Missouri
 - d. If faculty:
 - i. Tenure track?
 - ii. BA, MA or PhD
 - iii. School or college within University of Missouri