How Media Managers Deal with Change:

The Case of HDTV

Douglas A. Ferguson

and

Bruce C. Klopfenstein

Bowling Green State University

Department of Telcommunication

RUNNING HEAD: Managers Deal with Change

Managing the Future of Media

The face of mass media is changing rapidly with the introduction of new communication technologies. Largely because of cable television and the videocassette recorder (VCR), the once-dominant television networks are experiencing decreased audience shares (Ainslie, September 1988). The organizational culture of mass media is also changing. The year 1986 marked a radical turning point for the three networks: ABC, CBS, and NBC. In January, Capital Cities acquired ABC and ushered in a "management philosophy so culturally distinct from freewheeling ABC's that it might have been developed in a different industry entirely" (Baker, 1986, p. 40). Those in charge at Capital Cities deplored "the libertine ways familiar in the entertainment business" (Moore, 1986). In June, General Electric merged with RCA, bringing its offspring NBC a management not trained in broadcasting. Likewise, CBS suffered a change in management direction (though not in ownership) when Laurence Tisch took over in September. Jeri Baker (1986) summarizes the changes wrought by new technologies:

The network system had always thrived on scarcity: scarcity of viewing options, because that delivers hefty ratings by default; scarcity of program buyers, because that keeps program suppliers docile; scarcity of advertising inventory, because that allowed even-higher rates. Now there is no scarcity. (p. 41) After 1986, a blood-letting has transformed the Big Three. All continue to be successful, but on a smaller scale. Notably, NBC diversified with two cable channels (CNBC and MS-NBC) that offer a service targeted to viewers who want news. ABC expanded its ESPN brand into additional channels. CBS created an Eye on People channel that was later transferred to the Discovery Channel. The major assumption of this paper is that mass media managers need new strategies to deal with the growth of new communication technologies and to adjust to evolving corporate cultures. Exploring the way other industries adapt to new technologies is one important strategy. Focusing on organization theory is another, particularly as it relates to changes in corporate cultures, such as that experienced by ABC. Although the print media are also being forced to adjust to the new media, the discussion in this paper will be limited to the electronic media.

Background

The history of contemporary mass media is littered with examples of ill-managed media technology. Some of the more infamous innovations include teletext, videotex, the RCA videoplayer, and AM stereo. These new technologies were unsuccessful in the 1980s not so much for being bad ideas, as they were ill-timed or wrongly executed.

For example, teletext and videotex are clever ideas. Each allows text and/or graphics to be transmitted on a portion of the broadcast or cable television bandwidth. Unfortunately, the huge corporations which launched them

sometimes seemed less interested in fulfilling a public need as winning the race to be first. It may be that videotex and teletext are solutions in search of a problem or an application. Nevertheless, there is something quite heady about being innovative. Stockholders and potential investors are impressed by new ideas. Research and development departments must justify their existence.

In the case of the RCA videoplayer, a corporate founder needed to feed his ego as an innovator (Graham, 1986). Marketing departments often promise more than the scientists and engineers can deliver. Long-term projects suffer at the hands of poor management. Margaret Graham wrote:

Managers whose sole experience has been in more certain environments tend not to believe the unpredictability of research. They try to force research-dependent innovation as they would an engineering program involving just incremental changes . . . they apply pressure and throw money around in ignorance of other stimulating forms of motivation, such as interest, constructive competition, support, and enthusiasm. . . . Many of the rockiest passages in RCA's videoplayer program occurred when managers who did not understand the nature of researchdependent technologies applied premature pressure. (p. 223)

The lesson Graham offers is that research and development needs many years to bear fruit. Therefore, only very large corporations can sustain such an effort. Tushman and Anderson (1986) found empirical support for the idea that firms which initiate technological changes grow more rapidly than other firms. Yet, so many companies have decentralized their effort and effectively killed it off. The

CBS Technology Center closed its doors in 1986 in a cost-cutting effort ("Broadcasters' influence," 1986). The RCA Research Center is a mere shadow of its former self after a merger with General Electric.

AM stereo is a different and particularly tragic case. Here is a technology, often chided as Ancient Modulation, trying to transcend the inherent inferiority of its signal characteristics. The success of FM stations in the 1970s was not entirely linked to stereophonic sound. The painful truth for AM broadcasters is that frequency modulation (FM) produces better sound for music. Rather than adapt, as radio operators were forced to do when television burst on the scene in the 1950s, some chose to whistle in the dark, believing that stereo sound and audience loyalty would save the AM band.

Because the FCC declined to choose a standard, the market for AM stereo receivers remained hopelessly confused. We will never know what might have been, but there is considerable doubt of AM stereo being successful anyway, given its signal characteristics. Anyone who has tried to listen during a thunderstorm or while driving under a bridge can attest to the superiority of FM radio, stereo or not.

Could these innovations have been better managed? Certainly. But how? This paper looks at the various theories of innovations and organizations which may hold the means for better management of new technologies in the future. With HDTV (high-definition television) on the near horizon, regulators and corporations must learn to avoid the mistakes of the past.

Literature Review

Although very little has been written about managing the future of the mass media, several scholars have addressed the management of technological innovation. Cited above, Margaret Graham's <u>RCA & the VideoDisc Player</u> is an excellent case study which makes suggestions for research and development departments. Her research regarding the utmost important of a company's CEO is seconded by Szakonyi (1986). Others have written on a more general level. Pennings and Buitendam (1987) identified three major themes involved in the innovation adoption process in organizations. The first is the <u>innovation decision</u> <u>process</u>, which is the actual successful adoption of new technology. The authors claimed that "failures" to adopt may actually denote a success and they suggest studying such "failures" to further understand the adoption process. Indeed, broadcasters can learn from past mistakes.

The second theme is <u>strategy and policy</u> as the focus of theory and research. Here the emphasis is on getting the firm commitment of senior management; without such support "adoption is likely to flounder" (Pennings and Buitendam, 1987, p. 9). The dilemma is posed as a trade-off between the incompatible needs for both risk-taking/experimentation and strategic control/evaluation. Perhaps the electronic media are just too timid, having been spoiled by 30 to 40% profit margins before the advent of the new media technologies. The final theme is <u>implementation</u>, which includes the recruitment, training, and development of employees into a new organizational culture. Here the problem can center on cultural lag, where people problems are solved more slowly than equipment problems. Traditional mass media organizations find it easier to <u>buy</u> new technology than to <u>integrate</u> new procedures into existing organizational cultures. This points to an increased need to be aware of such cultures and subcultures.

Implementation has received attention from other researchers. Boddie and Buchanan (1986) expand beyond the idea of technological innovation, pointing out that the effective use of new technologies also depends on organizational innovation. Their approach to developing a systematic approach to the effective use of new technologies is based on "a technical change audit process which identifies the key technical and organizational issues that should be analysed" (p. 2) This idea is very similar to the study of organizational cultures discussed later in this paper.

Rydz (1986) stressed the importance of "managing innovation." He detailed the battle between CBS and RCA for the first color television during the 1950s (pp. 37-42). He noted that "innovative managers are not content merely to produce a product that is successful today" (p. 44). Furthermore, innovative managers work toward <u>continual</u> improvements in the company's growth by "stretching" their growth plans. Rydz's recipe called for managers to "know their customers, their competition, and themselves" (p. 45).

Lund and Hansen (1986) made an interesting analogy regarding the "just-in-time" inventory management techniques pioneered by the Japanese. The authors contended that the successful implementation of new technologies into modern industries "will need just-in-time management responses" (p. 239). Until 1986, broadcast companies, much like other monopolistic or oligopolistic industries, had grown too fat and lazy to react quickly to change. With all three television networks under new leadership, and again with CBS and ABC tradiong hands in 1994, it remains to be seen whether or not these new leaders will be able to manage change.

The need to manage change is a recurring theme in Gerstein's book <u>The</u> <u>Technology Connection</u> (1987). He presented ideas for dealing with information technology: effective strategic thinking, use of the CEO as the chief strategic architect of the management of the evolution of information technology, major reorganizations at the level of the work group and the department, and the acknowledgement that change closely linked to an organization's culture may be fiercely resisted.

Gerstein also cited several examples of how head-to-head competition can be effective when the industry leader displays weakness:

For example, Bell Laboratories invented the transistor, but licensed it to Sony for only \$25,000 in the belief that the device would not be ready for commercialization for many years. . . . The American radio manufacturers had not discerned their customers' values, concentrating instead on their own products'

features (p. 44).

Similarly, the Swiss watch manufacturers invented the quartz watch, but allowed Seiko to dominate the mass market. Even Xerox, which had grown when major industries like IBM and General Electric ignored the xerographic process, "allowed the Japanese to enter the low end of the copier market in the mistaken belief that the production of high-volume, low-cost copiers could not yield adequate returns" (p. 45).

Management Models

Looking at management models is another way to improve the media in the future. Robert Townsend (1984) described the ideal corporation as one which lets its employees "have fun on the job" (p. 168). He wrote on the difference between the traditional approach to management (which treats employees as mindless workers) and a more modern model. These two worldviews are borrowed from McGregor (1960) and are called Theory X and Theory Y.

Theory X assumes:

1.People hate work.

2. They have to be driven and threatened with punishment to get them to work toward organizational objectives.

3. They like security, are not ambitious, want to be told what to do, dislike responsibility.

Theory Y rejects these notions. It posits that people find work to be as natural and rest or play. If people commit themselves to mutual objectives, they will drive themselves more effectively than a manager can. The "catch" is that they will only commit themselves as far as they see ways to satisfy their ego and development needs, assuming their lower needs (e.g. food, shelter, safety, social) are satisfied.

Townsend summarized his view on the overemphasis on Theory X in the workplace:

There's nothing fundamentally wrong with our country except that the leaders of all our major organizations are operating on the wrong assumptions. We're in this mess because for the last two hundred years we've been using the Catholic Church and Caesar's legions as our patterns for creating organizations. And until the last forty or fifty years it made sense. The average churchgoer, soldiers and factory worker was uneducated and dependent on orders from above. (p. 165) The key phrase is "until the last forty or fifty years." Like the technical innovations that have revolutionized mass media organizations, the cultural changes have made old styles of management inappropriate for dealing with the future. These changes in culture need to be examined.

Organizational culture and subculture

When examining the workings of organizations, it is often helpful to use

metaphors to guide one's thinking about organizations. Morgan (1986) presents several such metaphors: machines, organisms, brains, cultures, political systems, psychic prisons, self-producing systems, and instruments of exploitation. The way <u>culture</u> may be used to explain or portray organizations is probably the most common metaphor used in "loosely coupled" organizations (Weick 1979). According to Kluckhohn and Kelly (1945), culture is a "historically created system of explicit and implicit designs for living, which tends to be shared by all or specially designated members of a group at a specific point in time." Durkheim (1938) explains culture as being normative and representative of the average of the group mind.

An organization itself is defined by a system of beliefs, ideology, language, ritual and myth (Pettigrew, 1979). Morgan (1986) portrays the cultural metaphor in terms of patterns of social development, with the organization as a cultural phenomenon. Gutknecht (1982) describes three functions of organizational cultures: social legitimation, hierarchical motivation, and integration of social interaction and goal attainment.

As applied to modern corporate cultures, the best informal definition may be: "the way we do things around here" (Deal and Kennedy, 1982). Such a corporate world is variously described by Deal and Kennedy in terms of "tough guy" cultures, "bet your company" cultures, process cultures, and "work hard-play hard" cultures. The traditional broadcasting companies seem to fit the "tough guy" culture, although some (e.g. Group W) are more benevolent. Some writers define an organization's culture in more formal terms, i.e. the attitudes, values, and problem-solving behaviors of its members (Schwartz and Davis, 1981). However, the real key to understanding the culture of a company lies not in the overt behaviors, values and artifacts but in the assumptions which underlie them (Schein, 1983).

At the heart of organizational cultures resides the process of social interaction. The rituals and routines grow out of shared meaning: shared norms, reminiscences, and stories which form a symbolic common ground (Bormann, 1983). Communication thus influences culture just as culture determines how group members communicate (Barnett, 1988). One concern for the diffusion of new technologies in electronic media industries is that social interaction may operate in increasingly less personal ways (e.g. electronic mail, FAX). The idea of process is further emphasized by Pacanowsky and O'Donnell-Trujillo (1983) by looking at organizational communication as cultural performance. They argue that the five cultural performances mentioned in organizational literature --performances of ritual, "passion", sociality, politics, and enculturation -- are starting places for empirical research, in an overall switch from a <u>systems</u> to a <u>cultural</u> metaphor of organizations. They conclude that organizations are less like machines and more like tribes.

These same authors cite Geertz (1973, p. 14) as the source of a goal well-suited to the study of organizational culture: to expand the universe of discourse. They propose that understanding what actually goes on in organizations is the most

important utility of the cultural metaphor (Pacanowsky and O'Donnell-Trujillo, 1982).

Smircich (1983) delineates five major themes in the study of organizational culture: cross-cultural, corporate culture, organizational cognition, organizational symbolism, and unconscious processes and organization. Mass media organizations often are focused on corporate culture and organizational symbolism. The first is the social or normative glue that holds an organization together (Tichy, 1983) and the second deals with sense-making processes via communication (Eisenberg and Riley, 1988).

Organizational Subcultures

At some point, organizations outgrow the "simple structure" level, necessitating the formation of smaller subcultures (Mintzberg, 1983). The resultant division of labor under a hierarchical system defines an organization's culture, although one could question the order of creation in a "chicken-and-egg" sense. Organizations thus go through predictable cycles: stages of birth, growth, maturity, revival and decline (Dobos and Jeffres, 1988). Bureaucracy often becomes more fixed; written communication becomes more commonplace. New and different kinds of subcultures arise as organizations grow in complexity, especially when new technologies arise.

It is important to recognize subcultures; they are more often the rule than the

exception. The distribution of cultures creates social roles for those persons who share understandings across different subcultures. Communication network analysis is a significant area of study in this regard, but beyond the scope of this paper (cf. Wigand, 1988).

Why is culture important in an organization faced with rapid diffusion of new technologies? Primarily it aids in the diagnosis process, the most important step in solving problems in a company's organizational communication. The function of "management by wandering around" (Peters & Waterman, 1982) is not a substitute for using an outside consultant to investigate corporate culture without the blinders that chief executive officers may be wearing.

Often an organizational consultant begins by gathering information which will explicate the details of how the members in a particular culture get things done. Usually this entails identifying each subculture at work and penetrating the particular autonomy which it erects against domination by outsiders (McPhee, 1985). Studying communication calls for consideration of informal and seemingly meaningless conversation among those in the organization. Grapevines are often very powerful channels of communication and are no less common in electronic media companies than other organizations, perhaps more. Morgan (1986) suggests that full awareness of culture requires that the consultant adopt the standpoint of the "cultural stranger" who reserves judgment about the normality of cultures by seeing "organizations, their employees, their practices, and their problems in a refreshingly new perspective" (p. 120). He suggests the

consultant/researcher adopt the role of the anthropologist: to view the organization as an outsider.

In making diagnoses, it is important to bear in mind the context in which any given organizational culture exists. Morgan points out that it would be a grave mistake to transplant a functional culture into a dysfunctional organization without regard to the macrosocietal influences: history, laws, customs, and other attributes of what might be called the meta-culture. Morgan cites the examples of Japan's rice culture and the United States' ethic of competitive individualism. The solutions to problems diagnosed are necessarily aimed at the organization as a group. The consultant can no more prescribe a mechanistic solution at individuals than the leaders of the organization can. Subcultures often develop spontaneously where they are not desired or planned. Awareness of the communication process is an advantage for the consultant who troubleshoots organizational problems. Likewise, an appreciation for the inevitable cultural patterns of communication is more important than for any intended patterns. With the cultural metaphor, the consultant can better account for the selfactualization of members in the organization. When the individual's motivation to excel is merged with the goals of the company, there is a better chance for harmony. Conversely, any approach which ignores the dynamics of communication within and among cultures or subcultures is doomed to failure. Another idea concerns divided loyalties. In the mechanistic metaphor, loyalty to the organization is merely a "given" which can be demanded or manipulated by

those in power. Even in the organism or brain metaphors, group loyalty is usually taken for granted. But the cultural metaphor accounts for the fluid nature of allegiance.

Above all, the ability of the cultural metaphor to get underneath the surface reality is an important idea to learn. It is impossible to truly understand an organization without looking at "what actually goes on" at a mundane level.

These are several questions regarding the cultural metaphor which can be posed by researchers. But first it must be understood that it is not at all clear whether the cultural construct is an objective or a subjective one (Poole, 1985). At the objective level, the researcher would study such artifacts as telephone calls. At the subjective level, measures of communication culture would consider the members' perceptions of communication practices, such as conflict resolution and supervisor openmindedness. There seems to be little evidence of validity reconciliation between the objective and subjective view (Payne and Pugh, 1976). To some extent, overly concerned researchers can obscure the delicate distinctions among the various metaphors in Morgan's book. But regardless of the philosophical considerations, an important starting point for the researcher would be to examine the origins of subcultural units. At what point do organizations develop splinter groups? How does this affect the adoption process? Moreover, given the complexity of an organization, is it subject to a distinct life cycle? Civilizations, empires and companies have all come and gone over the course of history. What can be said about the inevitability of an organization's

movement toward entropy? Do different types of cultures determine in part the rate of development in an organization? Is the adoption of new technology a means of rejuvenating stale organizations, or killing healthy ones? One useful purpose of cultural research may well be a tool for preliminary analysis. "An organizational culture study can serve as necessary, pre-quantitative description for those researchers interested in devising quantitative measures for further research in that same organization" (Pacanowsky and O'Donnell-Trujillo, 1982).

Other research questions might include: How many different types of cultures exist across all the categories of subcultures? What role does communication play in the delineations that define such varied cultures? Under what conditions can an organization be transplanted into other cultural contexts?

As a middle-ground metaphor, the concept of organizational culture could be the best means of deriving middle-range theories. Most would agree that behavioral science needs good theory -- but how overarching? W. C. Redding (1979) makes a plea against grand theories that sink under the weight of their own complexity. The usefulness of organizational metaphors comes from looking at situations in different ways. Therefore, the cultural metaphor should not be employed exclusively in the study of organizations. But it is capable of explaining the most without being too complex.

Synthesis

Based on the considerations above, there are a few strategies which I propose for mass media organizations. Perhaps the application of these prescriptions will enhance the chances of survival for traditional broadcast companies. If organizational culture and subcultures are truly important forces, media companies need to identify their own patterns of organization to determine what is best for the new technology environment. Greater use of organizational consultants to study subcultures would be a first step.

Moving toward Theory Y management is also important for mass media companies to maximize the self-motivational forces within each of their employees. The abolition of Theory X will doubtlessly be a slow evolution. However, the benefits are well-documented and could be explained to stockholders in terms of the number of failing Theory X corporations and winning Theory Y organizations.

Above all, broadcasters should try to position themselves among new technologies. Despite changes in technology, each "old" technology usually has a unique benefit. (If it does not, no amount of legislation or innovation will save it). For example, over-the-air television stations are now beginning to seriously market themselves as <u>Free TV</u> to counter the inroads made by cable and VCRs ("Manning the barricades," 1989).

The typical problem of positioning is being willing to adapt a closely-held positive image. Yet innovations require all kinds of adaptations in the

marketplace. The old TV commercial "You can pay me now, or pay me later" sums it up: Those industries which fail to voluntarily adapt will eventually be forced to change anyway. The important aspect is that the cost of adaptation is less than the cost of forced change. Indeed, the penalty for waiting is sometimes death.

The three television networks are going through a voluntary diversification to other forms of revenue, like cable channels. This may turn out to be a case of adapting when it a better move would be re-positioning.

The real challenge comes in the area of HDTV. Those companies trying to extract a hybrid form of HDTV out of the standard TV channel bandwidth appear to be imitating those who tried to make AM stereo out of a sow's ear.

Conclusions

Evaluating new technologies is a good deal more difficult than it appears. There are many variables to consider, not the least of which is consumer demand. A good example is the case of the home video player (Klopfenstein, 1985). This paper has stressed the importance of managing technological change through careful implementation. Commitment from top management is an absolute must. Equally important is a realistic idea of a company's position in the market. The difference between acting on an opportunity and reacting to a competitive situation is a large one. The media of the future are destined to go through

immense change. However, there seems to be some kind of niche where existing media can find viability (Dimmick and Rothenbuhler, 1984).
More research is needed to discover the relationship between organizational cultures (and subcultures) and how technological change is managed. Some prequantitative case studies must be completed before ideas can be empirically tested.

References

- Ainslie, P. (1988, September). The new TV viewer. Channels, pp. 53-62.
- Baker, J. (1986). Can the cost-cutters beat the system? <u>Channels: Field Guide '87</u>, pp. 40-41.
- Barnett, G. A. (1988). Communication and organizational culture. In G. M.
 Goldhaber and G. A. Barnett (Eds.), <u>Handbook of organizational</u>
 <u>communication</u> Norwood, NJ: Ablex.
- Boddy, D., & Buchanan, D. A. (1986). <u>Managing new technology</u>. Oxford: Basil Blackwell Ltd.
- Bormann, E. G (1983). Symbolic convergence: Organizational communication and culture. In L. Putnam and M. Pacanowsky (Eds.), <u>Communication and</u> <u>organizations: An interpretive approach</u>. Beverly Hills, CA: Sage.
- Broadcasters' influence on technology waning. (1986, October 27). Broadcasting, pp. 70-78.
- Davis, D. D. (1986). <u>Managing technological innovation</u>. San Francisco: Jossey-Bass.
- Deal, T. E., & Kennedy, A. A. (1982). <u>Corporate cultures: The rites and rituals of</u> <u>corporate life</u>. Reading, MA: Addison-Wesley.
- Dimmick, J., & Rothenbuhler, E. (1984). The theory of the niche: Quantifying competition among media industries. <u>Journal of Communication</u>, <u>34</u>(1), 103-119.

- Dobos, J., & Jeffres, L. W. (1988). Channel use, channel choices and organizational life cycle stages. <u>Communication research reports</u>, *5*, 28-37.
- Durkheim, E. (1938). <u>The rites of sociological method</u> (2nd ed.) Glencoe, IL: Free Press.
- Eisenberg, E. M., & Riley, P. (1988). Organizational symbols and sense-making. In G. M. Goldhaber and G. A. Barnett (Eds.), <u>Handbook of organizational</u> <u>communication</u>. Norwood, NJ: Ablex.
- Geertz, C. (1973). The interpretation of cultures. New York: Basic Books.
- Gerstein, M. S. (1987). <u>The technology connection: Strategy and change in the</u> <u>information age</u>. Reading, MA: Addison-Westley.
- Graham, M. (1986). <u>RCA and the videodisc: The business of research</u>. Cambridge: Oxford University Press.
- Gutknecht, D. (1982). Conceptualizing cultures in organizational theory. California Sociologist, 72, 22-47.
- Klopfenstein, B. C. (1985). Forecasting the market for home video players: a retrospective analysis (Doctoral dissertation, Ohio State University, 1985).
 <u>Dissertation Abstracts International</u>, <u>45</u>, 9999A.

Kluckhohn, C. & Kelly, W. H. (1945). The concept of culture. In R. Linton (Ed.), <u>The science of man in the world crisis</u>. New York: Columbia University Press.

Lund, R. T., & Hansen, J. A. (1986). <u>Keeping America at work: Strategies for</u> employing the new technologies. New York: John Wiley & Sons. McGregor, D. (1960). The human side of enterprise. New York: McGraw-Hill.

McPhee, R. D. (1985). Formal instruction and organizational communication. In

R. D. McPhee and P. K. Tompkins (Eds.), <u>Organizational communication:</u> <u>Traditional themes and new directions</u>. Beverly Hills, CA: Sage.

Manning the barricades for free TV. (1989, April 24). Broadcasting, pp. 27-28.

- Mintzberg, H. (1983). <u>Structures in fives: Designing effective organizations</u>. Englewood Cliffs, NJ: Prentice Hall.
- Moore, T. (1986, April 14). Culture shock rattles the TV networks. <u>Fortune</u>, pp. 22-27.

Morgan, G. (1986). Images of organizations. Beverly Hills, CA: Sage.

- Pacanowsky, M. E., & O'Donnell-Trujillo, N. (1983). Organizational communication as cultural performances. <u>Communication Monographs</u>, 50(2), 126-147.
- Pacanowsky, M. E., & O'Donnell-Trujillo, N. (1982). Communication and organizational cultures. <u>Western Journal of Speech Communication, 46(2)</u>, 115-130.
- Payne, R., & Pugh, D. (1976). Organizational structure and climate. In M.Dunnette (Ed.), Handbook of industrial psychology. Chicago: Rand McNally.

Pennings, J. M., & Buitendam, A. (Eds.) (1987). <u>New technology as</u> <u>organizational innovation</u>. Cambridge, MA: Ballinger.

Peters, T. J., & Waterman, R. H. (1982). <u>In search of excellence: Lessons from</u> America's best-run companies. New York: Harper & Row.

Pettigrew, P. M. (1979). On studying organizational culture. <u>Administrative</u> <u>Science Quarterly</u>, <u>24</u>, 570-581.

Poole, M. S. (1985). Communication and organizational climates: Reviews, critique and a new perspective. In R. D. McPhee and P. K. Tompkins (Eds.), Organizational communication: Traditional themes and new directions.
 Beverly Hills, CA: Sage.

- Redding, W. C. (1979). Organizational communication theory and ideology: An overview. <u>ICA Yearbook 3</u>, 309-326.
- Rydz, J. S. (1986). <u>Managing innovation: From the executive suite to the shop</u> <u>floor</u>. Cambridge, MA: Ballinger.
- Schein, E. H. (1983). The role of the founder in creating organizational culture. Organizational Dynamics, <u>12</u>, 13-28.
- Schwartz, H. & Davis, S. M. (1981). Matching corporate culture and business strategy. <u>Organizational Dynamics</u>, <u>10</u>, 30-48.
- Smircich, L. (1983). Implications for management theory. In L. Putnam and M. Pacanowsky (Eds.), <u>Communication and organizations: An interpretive</u> <u>approach</u>. Beverly Hills, CA: Sage.
- Szakonyi, R. (1986, September-October). Don't concentrate on traditional R&D management. <u>Research Management</u>, 6-7.
- Tichy, N. M. (1983). Managing strategic change. New York: McGraw-Hill.

Townsend, R. (1984). Further up the organization. New York: Alfred A. Knopf.

Tushman, M. L., & Anderson, P. (1986). Technological discontinuities and

organizational environments. <u>Administrative Science Quarterly</u>, <u>31</u>, 439-465.

- Weick, K. E. (1979). <u>The social psychology of organizing</u>. New York: Random House.
- Wigand, R. T. (1988). Communication network analysis: History and overview. In G. M. Goldhaber and G. A. Barnett (Eds.), <u>Handbook of organizational</u> <u>communication</u>. Norwood, NJ: Ablex.
- Winston, B. (1986). <u>Misunderstanding media</u>. Cambridge, MA: Harvard University Press.