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An Emerging Macrolevel Theory of Organizational Communication: Organizations as Virtual Reality Management Systems

James A. Danowski

BACKGROUND

Organizations as Media Systems: An Emerging Perspective

If one were to ask students of communication, "what is a 'media organization'?," their answer would probably be similar to this: "It is a large corporation owing television stations, radio stations, magazines, newspapers, and other media." A less typical answer would be: "All large organizations are media organizations." This chapter perceives the latter perspective as defining an emerging perspective on organizational communication. Consider that no matter what organizations produce—from widgets to wishes—they rely on media systems for their internal management and for their external relations. Many forms of media are used in some combination by nearly all organizations above a small size: corporate video, employee newspapers, information kioskes, elevator music, electronic mail, voice mail, audio and video teleconferencing, databases, fax, and many other forms of media.

Moreover, organizations manage the content of messages they distribute through their media. Organizations are not simply common carriers of some others' messages. Rather, a great deal of corporate attention is given to what messages the organization itself should communicate, with what participants, in what style, through what media, to what ends, and how it should evaluate and tune these communication functions over time. Just one example is the attention given to corporate annual reports. The typical organization spends the better part of a year prepar-

ing the annual report, with the involvement of the most senior management, and often with costs in the hundreds of thousands of dollars.

From this perspective, all large organizations are media organizations. They manufacturer and manage virtual realities. The concept of virtual reality will be treated in more detail later. This section, however, is a brief overview. Virtual realities are mediated representations of nonmediated processes and content. The more virtual the reality, the closer it comes to the real thing. In the extreme, virtual realities involve all the human senses: touch, sight, sound, taste, smell and movement. These enable people to experience the mix of sensory inputs as closely as possible to the nonmediated reality. Less virtual realties range down to the simplest and least complicated technologies, such as printed texts and pictures. No matter how virtual, media systems strive to enable users to move closer to an "as if" experience, as if they were experiencing the reality of others who are the subjects or the producers of the media content and processes. Only recently are theoretical frameworks emerging that can treat organizations in these terms. These offer promise for integrating organizational and mass communication theory.

Chapter Goal

This chapter builds a stronger bridge between the fields of mass communication and organizational communication. The underlying image comes from an early spring backpacking trip in the Porcupine Mountains wilderness of Michigan's Upper Peninsula. After an uneventful, calming trek through virgin timber stands, two friends and I came to the bank of a rushing river. The long, broad log that had served as a bridge in years past was now washed away by the swollen, snow-melt, spring waters. Only fallen trees provided a tangled, slippery path across the torrent below. After studying the situation, we searched far up and down the bank for a better crossing, but found none. So, resolving to strike forward, we inched across the twisted trunks, suppressing fears of falling, and being swept away, and snagged precipitously on branches downstream.

Charting this chapter brought me metaphorically back to this episode. The large, well-traveled woods from which we came is like the organizational communication field: safe, soothing, and serene. The river separates the mass communication territory to the north. Earlier travelers had built a simple bridge linking the two sides through the work on media such as employee publications. Then, the technological torrent unleashed by the computer revolution washed wildly through. New bridges now needed to be built to enable easier travel between the organizational and media sides.

It is clear to see from studies of citation patterns across communication journals (Rice, Borgman, & Reeves, 1988) that the fields of mass and organizational communication, have been only weakly linked. Analysis of communication researchers' divisional affiliations in the International Communication Association finds mass communication and organizational communication in two separate blocks or groups (Barnett & Danowski, 1992). Mass communication together with political communication forms one group. Constituting a different group, organizational communication links with information systems, communication and technology, and public relations.

Paralleling these citation and affiliation patterns are differences in conceptual focus. Historically, and still today, mass communication research has mainly studied the individual audience member. Most research takes as given the content available, media organizations' structure and processes, and relationships with their information suppliers and their clients.

Organizational communication has also centered on individual communicators. Research has examined individuals' perceptions of climate, interpersonal communication, and communication network structures (Farace, Monge, & Russell, 1977; Jablin, 1980; Redding, 1972). Theorists assumed that the content of what communicators said was much more important than the form in which it was delivered. This "media transparency" bias fits well with the traditional message-oriented perspectives in communication studies (Knapp & Miller, 1985; Miller, 1966). Until recently (Fulk & Boyd, 1991; Steinfeld & Fulk, 1990), media in organizations have been ignored, except during a period of atheoretical work on employee publications in the 1950s and 1960s (Jablin, 1980).

Currently, the forbidding torrent between the mass and organizational communication fields is narrowing. On the one side, mass communication research is increasingly concerned with questions that move it in the organizational direction. An example is investigation of boundary-spanning interactions among reporters and public information officers, as journalists select and shape content obtained through organizations' public relations activities (Dunwoody & Ryan, 1983, 1987).

From the organization side, there is intensifying interest in understanding individual managers' choices of media in organizations, and what effects these have. The recent "media richness" research (Daft & Lengel, 1986; Danowski, 1988a; Steinfeld & Fulk, 1987; Trevino, Lengel, & Daft, 1987) has been triggered by the proliferation of new media associated with computers Danowski, 1988b; Rice & Associates, 1984).

"Media richness" (Daft & Lengel, 1986; Trevino, Lengel, & Daft, 1988) research builds from earlier work on the "social presence" of various media (Short, Williams, & Christy, 1976). Organizational mem-

bers are thought to choose media based on their ability to transport information that reduces equivocality, which is uncertainty or variability in potential meanings (Weick, 1979). As well, situational variables associated with task characteristics have been explored (Steinfield & Fulk, 1990). Media richness research provides an abutment for building the mediation bridge. Let's critically examine its composition.

In the media richness literature, media are primarily defined in terms of material hardware/software/messageware features, instead of their social location and functions. Although sociotechnical systems perspectives have argued for moving the locus of conceptualization to social construction (Ellul 1964,1980), communication technology research generally defines media by their concrete product features, not by their social features. This concretization limits abstract theorizing.

Media richness and media effects are conceptualized mainly at the individual level, although media systems fundamentally are organized social systems, not individual creations. Nevertheless, media are defined as individual sense extensions (McLuhan, 1964; Williams, 1982). Moreover, the "social presence" concept is based on sensory information about people. Though Daft and Lengel (1986) move media richness toward more symbolic constructs, such as meaning and equivocality, they still center its definition on media capacity to provide feedback and cues. These are process and signaling functions closer to the sensory recognition domain than to the symbol/referent relational domain. The latter would focus on how people construct linguistic information within the media, or how they attach meanings to media (Hiemstra, 1983). This enables social-level theory development about media, not limiting it to individual differences in sensory-based variables. It avoids the more narrow psychological-level theory.

Media are studied uniplexicly instead of multiplexicly. Many studies focus on a single technology, such as computer-mediated communication. Less common are studies that treat a set of communication technologies in an interrelated fashion. These studies look at various substitutions of one communication technology for another (Dormois, Fioux, & Gensollen, 1978; Picot, Klingensberg, & Kranzel, 1982). They also examine how individuals use clusters of technologies, and how these clusters change with the introduction of newer media (Danowski, 1983; Rice & Bair, 1984). Even when researchers have conceived of channels in multiplex ways, they have tended to conceptualize them on only a single dimension like social presence or media richness. Theoretical progress may be accelerated through conceptualizing media in a multidimensional matrix of attributes. Moreover, viewing media from an organizational-level perspective appears fruitful.

ORGANIZATIONS AS A USEFUL UNIT FOR MEDIA THEORY

In developing an organizational theory of media processes and effects, our focus is on organizations as a key unit of observation and analysis. Media institutions are seen as networks of organizations shaping media content according to various regularities (Anderson & Meyer, 1988; Shoemaker & Reese, 1991). We can conceptualize "institutions" as patterns of interorganizational and intraorganizational relationships. As we define institutions in organizational relations terms, it is analytically valuable to pitch theorizing at the organizational level. As a result, there is an isomorphism between the locus of action theorized and the level at which we unitize the social relations context.

Moreover, "mediation" is fundamentally an organizational activity. The creation and maintenance of the means of information gathering, message creation, packaging, and dissemination require organized social processes (Shoemaker & Reese, 1991). There are social agreements on task differentiation, integration, standards for workmanship or performance, and technical standards for the interfacing of hardware and software for the information processing involved in mediation (Anderson & Meyer, 1988).

Furthermore, at merely the methodological level, there is value in framing organizational-level units of analysis, of sampling, and of observation. Taking a systems view of mediation, theories of mediation would apply to social systems generally, and to their subsystems. By studying organizations as social systems, we have more diverse elements to sample than if we studied whole societies as elements. Moreover, a system view of organizations is consistent with a large body of organizational theorizing over the last three decades (Katz & Kahn, 1978).

ORGANIZATIONS' ATTEMPTS TO CONTROL MEANINGS

Strategic Shifts

A historical look at organizations' strategic orientations provides a backdrop for theorizing about organizations and mediation. In the 1950s, extraordinary economic growth fostered a strategic focus on production. Demand was such that many organizations simply had to produce sufficient quantities of products and their marketing would almost take care of itself. Organizational media were treated as tools to aid production, if treated at all.

Then, increasing competition in the 1960s pushed strategic activity into a marketing perspective through the 1970s and into the 1980s (Hax

& Majluf, 1984; Scherer, 1980). Mediation became more important as an aid to the marketing function.

More recently, observers perceived a shift out of a marketing framework toward a public opinion and public relations framework. This move characterized organizations as moving out of the "share of market" strategic view that accelerated in the 1960s into a "share of mind" view of the 1980s (Cutlip & Center, 1984). Public opinion and public images became the primary target of some large organizations, instead of the by-product of striving for other goals. Strategic business management involves strategic media management through public relations and advertising. The perceived roles of media in organizations evolved from tactical tools toward key strategic components of the business plan.

As this conceptual evolution about media continues, we are moved to characterize organizations in terms of their management of meanings (Eisenberg, 1984, 1986), rather than in terms of market share or of mind shares. Consider how organizations may seek to control how the environment values the organization for its signification processes. Signification is the process of creating signs and symbols. It is the formation of information that is intentionally prepared to refer to something else. In the broadest sense, signification includes producing any sort of message, in whatever medium, including face-to-face. The form and the content of the message is chosen to elicit some intended references in audiences. The aim is to help the receiver create a virtual reality. Mediated signification is any such message production and distribution that delivers messages in other than a face-to-face mode, with no interposed technological device.

MEANINGS AND RESOURCE VALUATION: EFFICIENT MEANING-DRIVEN MARKETS

Organizations seek control over the meanings that interlocking networks of individuals interpret about the organization. As Osgood, Suci, and Tannenbaum (1957) have demonstrated, meaning includes an "evaluative" component. This involves a valuation of a concept. As we place this into a contemporary content, we see individuals as exchanging information about their valuations. As these exchange processes are more organized they form explicit markets in which valuations drive the buying and selling of shares of ownership in organizations.

In a fundamental sense these are "meaning markets." The meanings that individuals create specify a time/space value for the organization. Individuals can exchange money, goods, or services based on these meanings. Individuals generally appear to move their money where

their meaning is. Differences in meanings drive the movement of shares among individuals in social or economic markets.

At any point in time, an economic value is set through individuals' interpretations as to the meaning of an organization's signification. The organization signifies *X*, individuals interpret the meanings of *X*, and can trade on differences in their meanings. Stock, in this sense, can be considered a share of signification production potential. In purchasing stock, an investor buys into an organization's signification potential. The investor assumes that in the future the organization will manage the means of its signification, to sufficiently control the meanings that individuals interpret so that they place higher economic value on the organization. Accordingly, the organization's resources will increase.

Trading on signification shares is in effect trading on expectations of the transactional value of future meanings. Finance scholars widely accept that expectations of future performance are key determinants of stock prices (Modigliani & Cohn, 1979), instead of only a product of the past financial performance of the organization. Moreover, the ubiquitous "efficient markets" hypotheses (Fama, Fisher, Jenson, & Roll, 1969) suggests that a stock's price reflects all available information about a firm. Much of this information pertains to the risk of the return on the investment in the stock. It is useful to view expectations as meanings that evolve as individuals interpret information from the environment, and value it.

Evidence for this view of valuation is that many investment analysts talk about a stock being "undervaluéd" or "overvalued." This means that the stock price is either lower than or higher than the fundamental financial data alone would warrant. Variations in meaning can be considered to account for under and over valuation of an organization's common stock.

Efficient market proponents argue that a stock is always just valued given all available information, whether about financial performance or estimated risk. Some even use daily price changes as an indicator of new information having been available (Arbel & Jaggi, 1982). Explicating these efficient market notions in information terms, Pearce and Roley (1985) posit that "security prices should respond only to the unexpected part of any announcement—that part that is truly news—since the expected part of the announcement should already be embedded in stock prices" (p. 49). They find evidence that reports of aggregate-level economic indicators related to monetary policy whose values deviate from the expectations of money managers significantly effect prices, while expected announcements have no effect.

As well, traditionally conceptualized "hard news" from a journalistic perspective has seen limited investigation. Niederhoffer (1971) analyzed

newspaper headlines about world events and detected a response in stock prices. "True news" need not be considered "hard" factual information only. Davies and Caves (1978) demonstrate that stock analysts' recommendations reported in the "Heard on the Street" column of the *Wall Street Journal* significantly affect daily stock prices upon publication.

Note that while not all organizations are publicly owned and traded in organized financial markets, the theory in its broader expression can account for valuation of any sort of organization. Yet, it is useful to conceptualize meaning valuation in financial terms because publicly owned and traded organizations dominate within the broader network of all organizations. If we accept the assumptions of the efficient market hypothesis, we have available a good measure of an organization's value—its stock price. Such an operationalization of value is a reliable, precise, reproducible, isomorphic with the conceptualization of value, available at low cost, and valid for most the largest world organizations.

Organizations seek to control their economic resources necessary to reach their other goals, whether the organization is privately or publicly held, profit or nonprofit, a socialist state agency or an entrepreneurial venture in a freer-market society. The particular ways it measures economic resources will vary by cultural level and by local organizational factors. Nevertheless, an organization usually tries to optimize its resource control to achieve its other goals.

LOCAL SPACE CONTROL AND INTERPERSONAL INTERACTION

In their most primitive states, organizations try to control meanings that people have for their signification at the most local levels possible. They control what people can do in concrete physical space. They restrict people's behaviors according to physical locations. Certain behaviors are disallowed in certain areas. Movement across spatial boundaries is restricted. As organizations control local physical space, they limit the time width of signification that individuals can connect to space as they interpret it. Narrower opportunities for spatial movement narrow the possible linkage of mediated information to the past and to the future. More spatial control by organizations fosters, among individuals subjected to it, a focus on the present. The less control individuals have over their locations in space, the more present-oriented their interpretations of signification.

Supporting this general point, research has found that individuals with more interlocking personal networks have more restricted spatial locations for their social contacts. In contrast, radial network individuals talk with people who are located over a wider geographic area

(Danowski, 1986). As networks become more interlocking, individuals use the present tense for verbs more as they create messages in an interpersonal context (Danowski, 1987).

In short, the more restricted the space for interpersonal interaction, the more present-oriented the interpretations for signification. If an organization wants a higher degree of control over individuals' interpretations of the meanings of its signification, it first seeks to establish more control over the physical space within which the individuals can interact.

EFFICIENCY LIMITS ON LOCAL CONTROL

While more local space control may be effective, it may not be efficient. Attempted local control of meaning takes intensive resources. Control of space generally requires a high degree of physical control over the movement of people. Whether this control is automated through physical access systems, through rules restricting movement, or through presence of security force personnel, movement control requires intensive local surveillance, enforcement, and costs, as was witnessed in the Soviet bloc for several post-World War II decades. Control must be monolithic because competing social frameworks and contexts erode the ability to maintain meaning control. So, in short, local control of space is costly, and limits the optimality of space control as an efficient means of meaning control.

SIZE LIMITS ON LOCAL CONTROL LEAD TO MEDIATION

Size of the social system is another factor limiting local control. As systems become larger beyond some small level, limits on interpersonally managed meanings quickly reach threshold. These are a result of individual communicators' personal information processing capacities (Miller, 1956). There are well-recognized "span of control" limits on direct interpersonal management. Moreover, as information moves from one interpersonal control agent or manager to another, we know that distortions occur (Allport & Postman, 1947). The longer the interpersonal chain of communication, the more the distortion of the original message due to information leveling, sharpening, and assimilation. So, span of control and distortion problems limit the interpersonal control of signification and interpretation at the local levels.

The system, therefore, is moved to create signification systems that are mediated. This is so more people can be exposed over time to the

same signification. The tradeoff for more direct actual control of interpretation is wider distribution of signification. They move the locus of control from the physical social space to the virtual social space.

So, with increasing system size comes more control over signification, but more apparent diversity in social meanings at local levels. Because size directly relates to ability to obtain, transform, and distribute resources, organizations are moved to become larger. Yet, they are constrained by their ability to control signification so that the local meanings maintain the collective identification with the system. This is an upper limit on signification in terms of how macro it can become.

Organizations are driven to control meanings because these include valuation of its resources. These enable its goal accomplishment. System size limits optimal local control of meanings, which is the control of individual's interactions in space. Increasing size exceeds the limits of span of control and of distortion for effective interpersonal management of meaning. Accordingly, nearly all organizations above a small size must manage mediated signification to sufficiently control identification with the system. As organization size increases, therefore increasing the importance of signification management, we should observe an increase in the status and resources of their communication functions.

COMMUNICATION STATUS

As signification control becomes more important, organizations give communication functions higher intrasystem status. Organizations generally operationalize status according to how close to the top of the organization a unit reports. So, the more important signification control is to the organization, the higher the reporting levels of the communication departments. They more strongly influence attempted meaning control.

Supporting this point, Cook (1983) found that public relations practitioners who report higher in the organization are more involved in decision making, and have higher usage of and preference for mediated communication, and a lower preference for face-to-face interaction. Taking a more departmental unit of analysis, another study found across a sample of 33 organizations that larger organizations had communication departments that report more closely to the top (Danowski, 1988a). This supports the reasoning that the larger the organizational size, the greater its limits for direct space control to manage meanings. So, as size increases, the organization moves the locus of control to mediation. As this signification control is more important, the communication management functions have higher status in the organization.

COMMUNICATION RESOURCES

Another measure of the importance of the communication function is budget amount. As size increases, communication functions have higher relative capitalization. Across the 33 organizations, controlling for effects of communication department size, the larger the organization, the more money in the total communication budget. Expenditures per communication worker increased with organization size. This is consistent with our reasoning that larger organizations place more value on signification for meaning control.

INFLUENCES ON SIGNIFICATION OTHER THAN SIZE

Besides size, there are other limits on local space control that move organizations toward mediated signification control. One is diversification. Although it is related to size, there may also be independent relationships between diversification and attempted meaning control. A key driver of diversification is environmental uncertainty.

Environmental Uncertainty

Management science observers have suggested (Hax & Majluf, 1984; Scherer, 1980) that there have been widespread increases in environmental uncertainty beginning several decades ago. The extraordinary economic growth of the 1950s started to slow in the 1960s, driving up competition in some key American industries. As a result, managers switched primary attention from production to marketing.

Also, sociopolitical forces increased environmental uncertainty. The period of the late 1960s into the 1970s saw environmental, consumer, and social activist groups mobilize and attack some organizations in their sociopolitical environments. In the late 1970s and in the 1980s economic factors again dominated, as global production and marketing competition intensified. This compressed production time frames, and increased volatility in consumers' price-brand purchase decisions. These factors added environmental uncertainty for competing organizations.

In response to environmental uncertainty changes, organizations are thought to change their external and/or internal relationships (Pfeffer, 1972). Some scholars have suggested that increases in environmental uncertainty force organizations to develop and maintain contacts with other organizations. Through such linking, organizations can coordinate action, exchange resources, and/or share information; thereby reducing uncertainty about their relevant environments (Burt, 1983;

Eisenberg et al, 1985; Pennings, 1981). Paralleling the change in relations between organization and environment is the possibility of changing internal structure to deal more effectively with a dynamic environment (Katz & Kahn, 1978; Thompson, 1967), such as segmenting the organization into autonomous "strategic business units (SBUs)" (Rothschild, 1980).

RESPONSE TO ENVIRONMENTAL UNCERTAINTY: DIVERSIFICATION AND MEDIATED SIGNIFICATION

Organizations seek to reduce their environmental uncertainty to maintain stability in their internal structures and in environmental conditions affecting them (Katz & Kahn, 1978; Thompson, 1967). As a strategy for dealing with this uncertainty, long-range planning is less effective as competitive time frames become shorter. To get around this planning problem, one way large organizations attempt to manage environmental uncertainty is to diversify. This enables faster planning and shorter time horizons in each of the diversified units. In contrast, more monolithic organizations require longer time horizons. This can be explained by the notion that their greater control of space requires more intensive energy. It requires longer lead times for its acquisition.

Diversification is a time compressor. While it shortens time horizons, it shrinks the basic social time unit. For example, a yearly time unit reduces to quarterly, monthly, weekly, daily, and so on. Diversification also allows for more polychronic activities (Hall, 1966, 1976) across organizational units, replacing the monochronic activity in the monolithic organizational structure. In other words, multiple time frames can coexist more effectively as diversification increases. This would be possible as some central unit would function as the "master time-base corrector," translating different social times to some standard or mean organizational time to enable synchronization with environmental time.

To diversify, an organization often segments the monolithic structure into a series of autonomous "strategic business units" (Rothschild, 1980). An intermediate option is backward or forward integration of other suppliers' or customers' operations through acquisition or merger. This is like Thompson's (1967) more abstract notion of the organization creating input and output buffers to maintain the certainty needs of its core technology.

More extreme, the organization acquires firms in diverse sectors. It forms a conglomerate of unrelated businesses. The organization then becomes a holding company, monitoring divisions' performance, balancing cash flow, and allocating resources to competing business activities.

In any of these cases, as economic and other market conditions differentially impact on these diverse businesses, the organization can buffer fluctuations and maintain a more steady state. Planning time horizons and response times are shortened for the organization substructures compared to the long-term planning possible with the monolithic organizational structure. So, this is a strategy of optimizing risk by lowering it at the aggregate level (Cyert, Feigenbaum, & March, 1959; Pfeffer & Salancik, 1978).

As organizations diversify in any of these ways, we hypothesize that they become more central between other nodes in information flow networks. Centrality is an inverse function of the average-minimum path distance for a node to reach all other nodes in the network through direct or indirect links. Why do more diversified nodes become more central? Nodes become more similar to one another through the exchange of more common information (Danowski, 1974; Rogers & Kincaid, 1981). Conversely, as nodes exchange more diverse information they become increasingly different from one another. Given the "strength of weak ties" aspects of networks (Granovetter, 1973), nodes in more central positions are linked with more diverse nodes and, hence, process more diverse information. To encode and decode more diverse information requires a more structurally diverse internal system (Ashby, 1956; Galbraith, 1977; Lawrence & Lorsch, 1967; Mintzberg, 1983).

Another reason for the link between diversity and centrality may be that more central organizations are able, if they choose, to control their communication environments more. Research has found more structurally independent organizations engage in more boundary-spanning activity (Kapp & Barnett, 1983). As a particular type of boundary spanning, organizations or their agents may be more able to influence media organizations to cover them.

There are more grounded reasons why diversification may be associated with greater centrality in information-flow networks. One is that with increased market competition (driving diversification), the organization requires more competitive intelligence information, both in terms of richness and timeliness. Public relations, advertising, and market research firms, among others, gather information about the environment and input it to organizations.

With greater market competitiveness, organizations try to differentiate their products more from competitors'. If customers identify unique benefits they are less price sensitive in choosing a product. Public relations product promotion coupled with advertising is the main way in which the organization attempts to position the product in the customers' minds.

An additional reason for diversification being linked to centrality in

information networks is the attempt of the parent organization to influence the investment communities' perceptions of the organization, through investor relations communication. More diversified organizations depend more on valuation of their signification, and on short-term changes in them to influence stock prices. Less diversified, more monolithic organizations not only have longer time horizons. Analysts tie their prices more to economic performance, such as more conservative interpretation of the price/earnings ratio (Rockart, 1979).

A study of the Fortune 100 organizations found support for the hypothesis that the greater the organization's centrality in interorganizational networks, the greater the organizational diversification (Danowski, Barnett, & Friedland, 1987a). Diversification is a key factor that limits organizations' local space control in managing meanings. Greater diversification moves the organization away from local space control and toward more mediated signification control.

ORGANIZATIONAL MEDIA RICHNESS, SPACE, AND TIME SHIFTING

Organizational-level media richness is the extent to which media reduce the equivocality of organizational identity symbols. Media's effectiveness at this equivocality reduction process is a function of their decontextualizing of communication. This is the loosening of space and time binding of the message to the encoding/decoding process. Space and time can be shifted. The less social time is bound to space by the media, the greater their reduction of equivocality about the meanings of organizational signification. Meanings become less locally diverse and more globally unified.

As communication moves from unmediated interpersonal to mediated, both space and time are loosened, but in different magnitudes depending on the type of media. The most concrete loosening is of space. This enables people to communicate who are located in different places. Nevertheless, they still need to be synchronized in time, such as is true for normal telephone communication, or for audio or video teleconferencing. Such communication technologies enable more distance transcendence. They tradeoff synchronous telecommunication for transportation of humans to shared locations (Nilles, Nilles, Carlson, Gray, & Hanneman, 1977).

The work of Innis (1952, 1964, 1972) was an interesting prelude to intensive attention to space and time manipulation that newer media brought. Although Innis confounded space and time aspects in terms of mass media at societal levels, his work heralded a later era in which space and time would be more differentially impacted by newer media, and in which the links between social organization, space, time, and meaning would become clearer.

The trends toward distributed organization, toward virtual reality and virtual organizations, have called into question physical propinquity as a primary predictor of organizational communication network activity (Kriste & Monge, 1974). Pointedly, Korzenny (1978) has suggested "electronic propinquity" as a substitute for physical propinquity when people use communication technologies. So, for these media, the loosening of space binding (i.e., space shifting) is significant.

The other kind of decontextualizing is of a higher order. To space shifting it adds time shifting. The concept most often used to refer to the time binding attribute of media is "synchronous/asynchronous." As media are more asynchronous, they increase the distance in time between the encoding and decoding of messages. Examples of asynchronous organizational media would include: database information systems, electronic mail, voice mail, and traditional print information such as memos, newsletters, newspapers, reports, and so on. Media between the extremes of space- and time-shifting media would include normal video and traditional audiovisual media.

Note that it is conceivable that time shifting need not include space shifting, but normally it does. For example, two people sharing the same office could communicate asynchronously with each other by voice mail, while in the same space during the day. Yet, this is not likely, for the individuals would generally talk face to face if exchange was needed, unless they were trying not to bother one another while working on individual tasks. Normally, time shifting entails space shifting.

In freeing participants from the needs to share space and time for communication, asynchronous communication technologies most fully decontextualize communication processes. As communication processes are decontextualized, people depend less on physical contexts for the framing of their signification and meanings. They depend more on sharing increasingly abstract conceptual frames and symbol/referent systems.

This abstract subtextualization, as it becomes more shared, reduces the need for the observer trying to analyze communication to contextualize it in physical space and time. Rather, he must account more for the signification and meaning networks of communicators. Accordingly, it may be more than coincidental that the use of new media in organizations roughly parallels contemporary attention to organizational culture.

SOCIAL TIME SHIFTING

Asynchronicity is fundamentally a social time variable. It calls into focus the relationships of time, message form, message content, media, and participants, and their differential access to and distribution of messages

over time. Asynchronous media are ones that enable communication between senders and receivers that encode and decode messages at different time frames. So, asynchronous media are time-shifting media. There are at least eight ways in which the concept of time links with the communication process:

1. Time distancing between message encoding and decoding, which ranges from large distances to zero distances, when the encoders and decoders are synchronously communicating.
2. Time marking of the message, made prominent to the decoder, and the inclusion of time in the framing of the message, such as by putting date and/or time codes on message headers (e.g., occurs for newspapers, electronic mail, fax, databases, etc).
3. Tensing of content, the extent to which the text orients to the past, present and future.
4. Time awareness of the decoders.
5. Time unitizing, the size of the social/organizational system interval used for management.
6. Time periodicity versus linearity, whether the system views time as cyclical or moving only forward.
7. Time coding the accessing of messages by social units, making it possible to tell who got messages at what times, and enabling the tracing of diffusion networks over time.
8. Time float compression in interpersonal relations, the normative amount of time people expect between communication initiation and response.

These eight social time variables are not independent. The greater the time distance between encoding and decoding, the greater the time marking of the message itself. As this time-marking increases, tensing of message content becomes both more past and more future oriented, and less oriented to the present. Time awareness of decoders during the communication activity increases with greater time marking of messages. Further externalizing time from the communication experience, time marking and monitoring the time access of social units to messages leaves visible the trace of message movement through the system. Time shifting leads to smaller social time units and to reduced social time float.

Conversely, as communication becomes more synchronous (encoding/decoding time distance approaches zero), and messages are unframed by marking time, and as content is more present tensed, communicators become less time aware and are more subjectively immersed in a process. They "space out" more. There is also an action inversion. Action in the content is increasingly important, while active processing of participants declines.

Because with synchronous media, social units are more likely to simultaneously get the same messages, time coding of the diffusion processes is less relevant. Without reliable time traces, diffusion is difficult for observers to reconstruct.

Time-shifting media "freeze" time for the framing of the message. Time is coded explicitly into the message format, whether in newspapers, electronic mail, voice mail, databases, or like media. As time is fixed in the format of the message, it more freely varies in the content. The past and the future can be addressed in such messages to a greater extent than for messages in which time varies with the framing of the message. These non-time-shifting media, in which time varies in message framing, include telephone, teleconferencing, video, and face-to-face media. Because time varies in the message framing, the process becomes more important relative to the content, compared to freeze-frame media.

Freeze-frame media, more content oriented, foster a wider time horizon in message content. The past and the future take on greater significance relative to the present. There is lower present action orientation. As well, the shifting of content from the present and from action, fosters more abstractness in message content. Abstraction is generalization, and as such, imparts time transcendence to concepts.

In contrast, packaging is important for action. People who take a more passive posture in processing information need to be more stimulated by message form to be aroused to action. Those already activated place more attention on content; slick form turns them away from content or leads them to discount its value (Grunig, 1982; Grunig & Hunt, 1984).

To shift time in these ways requires externalizing it from the communication experiences of participants. Shifting time requires a linear perception of time. A more periodic perception of time, of natural cycles embedded in experiences, would not fit as well with the requirements of managing time: distancing encoding and decoding, marking time frames, tensing content, and monitoring access.

Interestingly, Szamosi (1986) characterizes the classic Greek civilization as having a periodic model of time. This is thought to have lead to the heightened importance that that civilization placed on space and touch, on geometry and sculpture. In contrast, the Judeo-Christian concept of time has been linear. In this civilization, abstract concepts have appeared of more interest than space and touch.

In organizations, higher use of space-shifting media than time-shifting media would be associated with periodicity and seasonality of organizational time perceptions. The system would represent itself as cyclic, ebbing and flowing, changing management activities to fit the season, in touch with its surroundings, waiting till the time is right, farming, and

Table 7.1. Media Time-Structure Correlates

Time-Shifting Media	Space-Shifting Media
• Decontexualized	• Contextualized
• Content important	• Process important
• Packaging aesthetics less valued	• Packaging style high value
• Future and past tensed	• Present tensed
• Linear time perception	• Cyclical time perception
• Longer time horizon	• Shorter time horizons
• Analytically oriented content	• Action-oriented content
• Abstract content	• Concrete content
• Relational content	• Orgocentric content
• Active decoding	• Passive decoding
• Formal environment	• Informal environment
• Stable system functions	• Volatile
• Static visuals	• Motion visuals
• Textual coding	• Oral coding
• Communicators autonomous	• Communicators interdependent
• Status task-based	• Status socioemotionally based
• Acceptance of dominance	• Conflict over domination
• Openness to boundary spanning	• Boundary guarding
• Radial network structure	• Interlocking networks

harvesting markets. On the other hand, high use of time-shifting media should link to more linear perceptions of time. The system would represent itself as progressing, evolving, moving forward, projecting itself, guided by a vision more mechanistic or computer-based than agricultural. Table 7.1 lists some summary distinctions among synchronous and asynchronous media in terms of form, content, and participants.

TIME-SHIFTING AND NETWORK ROUTE DEPENDENCY

Social-time information is route dependent. The more that time is altered in the ways noted, the more that the mediation system is network-dependent for its message distribution. Messages are less likely to be broadcast uniformly to social elements and more likely differentially directed through constrained networks of elements. The distinguishing characteristics of nodes' positions in message distribution networks become more varied as these networks become more differentiated.

On the other hand, the most space-shifting media "glow" information like a light bulb uniformly "fills" an unobstructed space with light. They radiate content uniformly in all directions. In contrast, time-shift media "beam" information like a laser-carried light, switched through a fiber-optic network. Each beam has a specific path it follows in delivering information to the addresses of the intended recipients. The paths are

selective and constrained. Only some small proportion of possible paths in the social matrix are activated by particular messages as they beam through it.

Thought of in another way, messages that are broadcast, rather than routed through specific interpersonal networks, have less interpersonal relational quality. People are less likely to talk about the meanings of broadcasted signification than routed signification because space-shifting signification is less equivocal than time-shifting signification. Space is central to the content. It is directly represented in it.

Space may be shifted from physical location anchors, but it is still quite intact in mediated representations of the space-shifted sort. There is a sense of space and place that people can identify as they process these messages. Physical space itself is often visually presented in visual space-shift media. Physical space is implicit in audio space-shift media like normal telephone conversations. As they communicate, the participants are embedded in their own spaces and are aware that the other party is not in the same space, but another. In short, space-shift media convey a sense of space and place. They shift it in modular ways, instead of radically restructuring and transforming its underlying dimensionality.

In time-shifting media there is more complete decontextualization of space. Messages are differentially available and processed by people in the mediated network. So, they need to interact more to arrive at shared meanings. Time-shifting media give individuals more control over content, interpretations, and the negotiation of meanings.

In short, time-shifting media externalize time from the communication experience, as they explicitly manage this social time. This is seen in the time distancing of encoding and decoding, in marking time in the message frame, in tensing content, in compressing time units, and in monitoring the accessing of messages over time. This externalization and manipulation of social time may point to perhaps the one most important feature of time-shifting media. They enable organizations to reestablish control over a special kind of space for interpersonal communication. This space is not physical. The time-altered space is mediated social space. It is a virtual space, a virtual social reality. It is defined not by proximity of people in physical locations, but by proximity in terms of processing mediated, time-shifting information. It is a shared meaning space. It is a virtual, networked space. It is a virtual reality overlaid onto physical reality.

Social status in the time-shifting system is based on more central positioning within the information flow network over time. This is a virtual spatial positioning. In contrast, in the space-shifting system, social status is based more on individuals' positions within the physical space control system. There, a territorial dominance hierarchy is more impor-

tant. Here, power is the control of physical space, signified in securing the corner office. In contrast, in the time-shifting environment, power is securing an earlier time window in information distribution networks.

In more classic terms, space-shifting systems define power in "position." Time-shifting systems define power in "merit." In physics terms, space-shifting systems define power by the location of a social particle (a person). Time-shifting systems define power by the shape of a wave, the nature of the wave envelope passing through the person as information flow cuts paths through the social matrix over time. Individuals' absorption, transformation, and radiation of valued waves at optimal social times defines power there.

COMMUNICATION CENTRALIZATION AND USES OF TIME-SHIFTED MEDIA

Organizations with more centralized communication structures find the freeze-frame/asynchronous/time-shifting media more useful. Consider that a centralized communication structure has communication departments linking with departments that do not link much with one another. In other words, the communication department is radially positioned in the interdepartmental network.

When communication departments are centrally positioned and other departments do not communicate much with one another, each of these departments has more autonomy. They are likely to develop increasingly different orientations. The departments become more internally homogeneous in intradepartmental identification of members (Danowski, 1980). At the same time, the various departments become more heterogeneous relative to one another in their intradepartmental identification.

As this intradepartmental concentration of identity increases, identification with the organization becomes more tenuous. Equivocality about organizational signification increases. Increased communication is required to reduce this equivocality and to build and maintain identification with the organization. The central communication department is positioned to efficiently manage this organizational identity information through controlling mediated signification.

As centralization of communication and the use of more time-shifting media increases, the semantic networks for organization signification become less differentiated and more integrated. The missing direct links among departments in the present are replaced by the linkages of ideas. The information/energy moves to the more abstract time-transcendent domain of meanings for organizational signification. It is the idea that

substitutes for direct action. The idea of linkage provides coordinated identity. Organizational identity is less formed by direct contact among departments, and more by the contact with compact organizational signification.

So, the organizational structure is inversely related to the structure of meanings for organizational signification. There is a structure/meaning inversion. The greater the centralization of communication departments, the more integrated the meaning network. There is a kind of "conservation of information." It is as if the information contained in the semantic activation networks about organizational signification and the information from the paths of communication traffic among departments come from a common and relatively closed pool of information. As one becomes more structured, the other must become less structured. Communication energy is conserved between the domain of meaning and the domain of message movement. As message traffic networks are more centralized, meanings for organizational signification become more integrated. Concepts are more interlinked.

In other words, meaning is network-route dependent. The more structured the distribution networks for signification, the more intensive the meanings that individuals interpret as they process. In contrast, the more widely and synchronously signification is broadcast through a social system, the less intensive and weaker the meanings. Meaning is a function of differential distribution. The more uniform the distribution of signification, such as with space-shifted media, the less they mean. They are less abstract and more particular to space and time locations in the social matrix.

The communication departments centrally positioned in organizations use the information energy that would have flowed among departments in a process-action present. Central communication departments concentrate this energy and project it into the future. The signification is the lens. As it is more integrated, it enables a tighter beam. Intentionality in controlling resources determines the intensity. It illuminates a path of shared meaning further into the future.

Effective management of organizational identity is enhanced to the extent that message content is more abstract, reaches further into the past, projects further into the future, is actively processed, and stabilizes activity with respect to the organization as an entity. The departments themselves, being more interlocking internally and using more synchronous, space-shifting media, act in the present. What is missing is the past and the future. The central communication department provides the links to these. It couples history and a vision of the future and links them to present action. Time-shifting media are particularly effective at this content tensing. Their decontextualization, the loosening of com-

munication encoding and decoding from time and space bounds, enables the stretching or warping of message content into the past and the future.

Moreover, the time marking of message form in asynchronous media enables central communication departments to be the "timekeepers" of the organization. In marking time, the communication departments are the system clock, the master time-base corrector, the synchronizer, the manager of virtual reality.

STRUCTURAL AND CULTURAL CHANGE

Major changes in organizational structure present challenges for organizations to control meanings through mediated signification control. The uses of media after merger or acquisition in relation to cultural convergence reveal which media are most effective at changing meanings after major structural discontinuities. In a study (Bell, 1989) of Chicago organizations ($n = 56$) which had experienced merger and acquisition employee newspaper and photo use were the only strong correlates of cultural convergence.

SPACE-SHIFTING MEDIA AND FALSE CONSENSUS

A notion of critical theories of organizations and of media is the idea that they promote a false consensus to maintain a system of domination of oppressed minorities by hegemonically inclined capitalist elites. Space-shifting media may foster an illusion of shared meanings among organizational members. Consider space-shifting media like video.

Video and related media present visual images that people take as "real." The idea is "what you see is what you get." They think everyone else sees the same thing that they see. They project their own view onto others. These processes would result in an illusion of agreement, a false sense of shared meaning. Such equivocality would be useful to social systems in which communication management was not centralized, and in which different groups were competing for dominance, yet there was need to mobilize members around the sense of shared meanings for system-level identification. "False" consenses could drive action, which if properly managed, would contribute to system-level goals.

Nevertheless, over the long run, it seems that false consensus induced by video media would be caught in contradictions. As the media became vehicles for communicating different people's interpretations, the lack of shared meaning would become apparent. So, the longer that these media excluded information on alternative interpretations, the longer

that false consensus could survive. It could continue to be useful to system goal attainment when the system has a pluralistic mix of groups with competing agendas and lack of centralized communication management.

Organizational video, and its larger system commercial cousin—broadcast television—do not focus much on showing a diversity of meanings. Mainly at special times when the pressures to control social meaning are greater, such as during system crises, do individual meanings become the content of mediation itself. Here, hyper-meaning management is practiced as an attempt to restabilize a system that is shocked by threats to signification systems themselves (Schramm, 1971). First is coverage of the events, followed by a stage of exploration of the possible causes. Then comes the interpretation stage during which meanings are sought. This interpretation stage leads to reintegration and a return to a normal state. There, interpretations again recede as signification of a more space-shifted content orientation again dominates.

So, individuals usually see only their own meanings as the link between social time and social space. This link becomes the basis for their reflexive view of the signification system. If they look back at the signification system or they try to estimate others' meanings, they tend to project their own. It is usually the only window to look through. Their own process of specifying meaning created a footprint of their local space on social time. This footprint is like a shadow. One cannot see what caused a shadow by looking at the shadow from underneath alone. One needs to know two other things. One is the source of illumination and the other is the object that was illuminated.

This suggests that signification and meaning by themselves are not sufficient to understand mediation. One must also know the source of illumination and the brightness and duration. At the societal level, the source of illumination is organizations seeking resource control. The brightness and duration reflect the strength of their intent as they project their energies through the lens of signification.

At the organizational level, those groups within the organization seeking greater resource control, hence, exhibiting more forceful intentionality, are those illuminating more strongly. The signification system is the lens and image framed. Shared meanings are to some extent like the projected picture illuminated on the social matrix "screen." It reflects some light, depending on its degree of organization and the uniformity of social "surface." Individual meanings are the refracted and absorbed light and the shadows that do not form part of the coherent image of shared meaning.

These processes, then, suggest the possibility of an "illusion of shared meaning." DeLucca (1987) found some evidence for it. In a sample of 56

organizations, use of video and other traditional audio-visual media was associated with higher perceived shared meaning among top, middle, and lower levels in the organization. This relationship was consistent with Beniger's (1983) theory of the effects of television on shared meaning. Yet, paradoxically, the semantic meaning networks were more differentiated and less integrated. False consensus was implicated.

As well, Beniger's theory is questionable. Video media may foster more common recognition of the content of signification, but not more shared meaning for it. Beniger (1983) and Cerulo (1984) measured only the labeling of graphic media content with words. They did not directly measure shared meaning. They only inferred it by a reduction in the use of words to label graphics over time. They observed a correlation between television penetration and reduction in labeling of graphics in the mass media over time, as television diffused in the United States. Instead of inferring shared meaning, we measured it directly.

Meanings can be viewed as networks of referent words evoked by the triggering signification. The system image is represented by a network of word associations constituting perceptions of system identity. Key identity signification is contained in the system logo and slogans. Equivocality of meanings for them is higher as the number of groups in the word association network increases, and as they are less integrated by intergroup linkage by liaison words.

To obtain the texts regarding the meanings of signification, one can ask individuals open-ended questions, such as "when you look at your organization's logo, what comes to mind? When you think of the organization's slogan, what comes to mind?" We can represent the shared meanings embodied in these responses by performing content analysis (Danowski & Harro, 1992).

ORGANIZATIONAL STRUCTURE, MEDIATION, AND NETWORKS OF SHARED MEANINGS

As organizations become larger and more diversified they must foster more uniformity in meanings for system identity through more use of mediated time-control signification than through more local space control. These forces are associated with centralization of communication functions within the system. This enables systems to maintain their social power by reinforcement of simple and appealing signification. To mobilize and maintain uniform behavior with respect to the system as a whole, they must maintain optimal repetition of clear, uniplexic, and unequivocal signification. The opposite pattern—communicating diverse, ambiguous, and varying intensity signification—would lead to system member

demobilization, social diversity, heterogeneity, conflict, and intrasystem focus.

Unlike the social psychology theorists that dominate the current definition of media richness, we define it as the extent to which media reduce the equivocality of organizational-level signification. In semantic network terms, media would foster a simpler semantic network for these signification that would be less differentiated and more integrated. Differentiation is the extent to which there are semantic groups in the network. Integration is the extent to which these groups are interlinked.

Two studies of organizations ($n=33$, $n=56$) found support for the hypothesis that centralization of communication systems in organizations was associated with more time-shifting media. These media were also associated with less differentiated networks of meaning for system-identity signification. These networks were also more integrated as these time-shifting media were used more.

Media Use and Abstractness of Meaning Networks

As more centralized organizations create more time-shifting signification, the meanings for them become more abstract. To test this notion, words in the networks from the study of 56 organizations described were rated by two coders for abstractness. Results were as expected (Kozlowski, 1988). More centralized interdepartmental structures for communication, which we found in two studies to use more time-shifting media, had more abstract words in their shared-meaning networks.

Centralization and Orgo-Centrism versus Relational Orientation

As more centralized communication systems in organizations generate more time-shifting signification, time-shifting signification is "beamed" in more route-dependent ways than is space-shifting content, which is radiated. Relationships among social units defined by the passing of messages through a network are more important to the centralized system.

While this proposition is explained at the organizational level, we can also see parallel supportive reasoning and evidence at the individual network level. The "strength of weak ties" principle (Granovetter, 1973) suggests that radial-network individuals create more emotionally weak links with others as they search for diverse instrumental information. We can infer that to successfully relate to diverse individuals in the pursuit of instrumental goals, radial-network individuals are more flexible, adaptive, and empathic in orienting to others. Radial individuals may be

more "chameleon-like communicators," as they change communication styles to fit the interpersonal surroundings.

In what they said in a computer conference of public relations and marketing professionals, radial individuals had nearly three times higher of a ratio of the word "you" to the word "I" (Danowski, 1987), than did interlocking-network individuals. The latter were more egocentric. Although they said "I" at the same rate as radial individuals, they said "you" much less. As well, interlocking individuals are apparently more suspicious of others. They said the word "trust" 43 times more than did radial individuals. These findings are consistent with the reasoning that radial-network individuals have higher other orientation than interlocking-network individuals. Extending these findings and reasoning to the interdepartmental level, more radial interdepartmental networks were hypothesized to have a more relational orientation, and less orgocentrism in their departmental and organizational image networks.

To test this hypothesis, we took all the words in the semantic network from the study of 56 organizations. Coders rated how much each word in the network was either "relationally oriented" or "node-centric." Node-centric words refer to the node itself and its attributes. Relationally oriented words refer to the links between the node and others, or refer to other nodes themselves. Results showed the expected higher relational orientation for more centralized networks. It was the interlocking, less centralized organization that had more semantic content referring to itself.

In particular, associated with differences in semantic network structures are asynchronous, freeze-frame media with time coding of the message frames, and with abstract and wider tensed content. These media cut across the ages. Old print forms (e.g., newsletters and newspapers), old static visual forms (e.g., slides and photos), and newer computer-based media for electronic mail, computer-based training, and database information management are functionally related tools for the management of shared organizational meanings. Hence, we can conceptualize these media as "orgic" media, as integral to the system-level operation of the organization.

Other media were found unrelated to organizational structure, that is, *aorgic*. Aorgic media included the space-shifting media of telephone, teleconferencing, and video. In a fundamental way these process media, with their present tensing and action orientation, operate largely independently of macrosystem structure and meanings. Structure and process reflect a more basic synchronic and diachronic independence. Synchronicity is action freed from structure and time. Diachronicity is control through the binding of tense and content to message distribution space. In short, systems with more centralized communication manage-

ment structures appear to exert more control over shared meanings through more use of time-shifting media.

Centralized organizations' themes are more compact, less varied, and more integrated. As we listen to the signification strains of more centralized systems, they more actively project their identity in one voice. They sing solo, not as an ensemble.

The findings suggest that the space-shifting media that involve synchronous interaction do not substitute for direct control of space in the management of meanings. Rather, the time-shifting media appear to do so. This may be because time-shifting media establish direct control over a new kind of space, a social space defined through networks of message distribution. This virtual space reestablishes proximity of individuals in interaction, but through a closeness based on message flow, not on physical nearness.

ORGANIZATIONAL STRUCTURE AND MEDIATION AND MARKETPLACE VALUATION

At the beginning of this chapter, valuation of shares in signification potential was proposed as a good way of thinking about the valuations that individuals interpret for organizations. Then, mainly intraorganizational processes were treated. Is there any relationship between internal organizational communication structure, media used, meaning networks, and valuation of organizations in the marketplace?

Intraorganizational centralization of communication management is associated with centrality in interorganizational networks. Interorganizational network centrality, in turn, is related to stock prices. In a study of Fortune 100 organizations, defining centrality based on network analysis of shared public relations firm use, it was found that greater centrality was associated with higher daily stock price fluctuations (Danowski, Barnett, & Friedland, 1987b). This is consistent with the efficient markets hypothesis that stock prices reflect the net valuation of all available information about a company. More central organizations have more microlevel volatility in valuations. An earlier study (Danowski, Barnett, & Friedland, 1987a) found that more central organizations had more signification observable in the business press.

The next study (Danowski, Barnett, & Friedland, 1987b) looked at the associations between specific stories in the *Wall Street Journal* and changes in the stock prices from the close of the previous day to the close of the day the story appeared. More central organizations had more positive relationships to prices and less negative relationships, compared to peripheral organizations. More central organizations' signification

were associated with more of an increase in valuation when the story was positive, and less of a decrease in valuation when the story was negative.

A subsequent study (Danowski, 1988c) addressed the question: Does the environment value companies more that are more internally orientated to signification management? Does the marketplace place a premium on organizations with more time-shifting signification control? A premium valuation was conceptualized to occur as the stock price for a company exceeded its objective measure of shareholder value, as computed by financial indices (Rappaport, 1986). Stock price and shareholder value indices were first standardized. Then the ratio of stock price to shareholder value was computed. A premium occurred to the extent that the relative stock price exceeded relative shareholder value for a firm. We found that higher premiums were associated with:

- more media use, in particular: FAX, computer bulletin boards, employee newspapers, computer-based training, and voice mail.
- less differentiated and more integrated semantic networks for organizational signification.
- less uniform meanings within the lowest levels and between the lowest—middle, and lowest—top.
- greater importance placed on external news.

Metaphoric Messages

This chapter has argued that organizations that use time-shift media more place further attention on meaning management and on symbolism. Evidence supports the proposition that organizations that value communication functions more have more abstract and less orgo-centric images. Nevertheless, there are financial community observers that largely dismiss the importance of what organizations say in their messages, and look only at what they do. For example, behaviors such as stock repurchases are taken as actions about which observers infer the orientations of management. Although evidence presented here has shown that the media that organizations use are related to marketplace valuations, is there any evidence that the content of the messages delivered through media make any difference?

Consider that message abstractness is given relevance and meaning via rhetorical devices such as metaphor. Metaphors provide a linkage across areas of messages that are normally not connected. They link them through narrative constructions. Metaphors are among the most nonliteral, abstract, and figurative of message content features. Metaphors and other nonliteral language provide the interpretive tissue necessary for abstract signification to be assigned meaning and value by

receivers. Without metaphor, abstract messages are more like abstract art. There is no socially shared meaning for such signification, except the most global, primitive, and halting recognition that it is "abstract art."

In a study of organizations' annual reports, we found one type among five others that coders rated as: more artistic, more abstract, and containing more ambiguous graphic material that is not obviously linked with the textual content of the report. We found that organizations that produced such reports had communication departments, which although well funded, were more isolated from other departments in the organization. This suggests that abstractness alone, particularly that generated from the periphery of the organization, may not contribute to effective meaning management. It would appear that when the communication department is isolated, yet responsible for producing organizational signification, the resulting messages fail to tell a coherent story of the organization. For abstractness to be cogent, perhaps the storytellers must be communicatively central in the organization. Otherwise, the stories they produce may look good on face, but be analytically incoherent.

Based on the theory in this chapter, organizations that have more centrally positioned communication departments in the organization use more time-shift media, and the messages they produce are more abstract and decontextualized. As such, they use metaphors more, and these metaphors are associated with higher marketplace valuations of the corporations. We empirically examined metaphor use and effects by searching the letters to shareholders contained in the Compact Disclosure database on 11,000+ corporations, using keywords associated with metaphoric communication (Danowski & Harro, 1992). There were 27 such organizations identified. The stock price-earnings ratio was obtained for each and used as a dependent variable. As the stock price is higher relative to earnings, this indicates that the marketplace is assigning a premium value to the corporation. On the other hand, the lower the ratio, the more the marketplace is discounting the value of the corporation. For a comparison group, we extracted price-earnings ratios for a random sample of 27 other organizations using a skip interval method. We found that metaphor using corporations had significantly higher price-earnings ratios than the control group. Moreover, financial services organizations (e.g., banks, investment companies, and the like) were significantly more prevalent in the metaphor group than in the random group.

This can be understood considering the theory in this chapter. Across the range of organizations, those most deeply involved in time shifting are financial services organizations. In a basic sense, they are providing

transaction services that shift time for buyers and sellers and for savers and borrowers. For example, a lending institution, on behalf of the buyer, gives a lump sum of money to the seller of a property at one point in time, and, in turn, via a mortgage to the buyer, collects the money owed with interest over many years. Given their basic time-shifting activities between buyers and sellers, one would hypothesize that financial services organizations are heavy users of time-shift media. Dealing with such diverse frames of symbolic reference among its relevant stakeholders, financial institutions could be expected to use more abstract, nonliteral ways of constructing messages, so that these diverse stakeholders could more flexibly p. oject their own frames of reference onto the corporation's imagery and feel they understand it.

On face, it may seem strange to think that banking and financial organizations would exert the greatest control over social imagination. Most people think of such institutions as boring, conservative, and numbers oriented. They are not commonly known for their rhetorical skills and expressive powers. Yet, the theory and the evidence on metaphoric language would suggest otherwise. Banks apparently know how to get more bang for their communication bucks. Perhaps they view their economic roles in society as more oriented to managing meanings and perceptions than most other organizations do. Consider the media treatment of economic recession as primarily a problem of consumer perceptions and expectations. Perhaps consideration of financial institutions as the premier time-shift organizations give new meaning to the old adage, "time is money." Organizations that shift time more, create larger meaning differentials about them in the marketplace. Markets enable investors to trade ownership of organizations based on meaning differences calibrated in monetary terms; therefore, time is money. To accumulate money requires shifting time.

SUMMARY

Organizations are in the business of creating virtual realities and charging people money to experience them. Virtual reality is time shifted, mediated space, in which space is not physical but virtual, in that it is defined by networks of message distribution. Virtual reality is shared symbolic reality. Organizations create it as they use time-shift media to stimulate compact and abstract signification and differentially distribute it through social networks. Network distribution, in contrast to broadcasting, creates a more uneven field of meanings across people. Differences in meanings then provide the basis for trading shares of ownership in the organizations that produce the signification.

The most effective messages are metaphoric. These are created by organizations who position their communication functions centrally in the intraorganizational network. When the communicators are at the center, they are more able to spin out stories that capture social imagination. The content is interesting, and the timing is right.

This emerging theory of organizations, as managers of virtual reality explains, links among internal organizational communication structure and processes, media, messages, meanings, markets, and money. While we can still honor the adage that "time is money," we see more clearly that between time and money is a virtual world of media, messages, meanings, and markets. It is a world where nearly all large organizations are media organizations. In a remote region of this world, we walk on this bridge between the banks of organizational and mass communication, a bridge now more firmly based and broad of beam. We can stop in the center, calmly look into the torrent below, and enjoy its refreshing spray.

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