

COMMUNICATING

After reading this chapter, you should be able to:

- A Discuss reasons why communication is important in organizations.
- A Describe techniques that are useful for analysing communication in organizations.
- A Explain the communication process and indicate reasons for communication failures.
- A Discuss ways managers can help ensure that they receive accurate communications.
- A Identify techniques for upward, downward, and horizontal communication in organizations.
- A Recognize important characteristics of communication channels, including the roles of nonverbal channels.
- A Describe the characteristics and consequences of various communication networks.
- A Explain how the grapevine works and why it is important.
- A Discuss how new information technologies are affecting communication in organizations.

Thomas Peters and Robert Waterman (1982) sought in their book, *Search of Excellence: Lessons from America's Best-Run Companies*, to discover the secrets of America's truly excellent companies. Their findings led them to argue that "The nature and uses of communication in the excellent companies are remarkably different from those of their nonexcellent peers." (P. 121) They further concluded, "The intensity of communications is unmistakable in the excellent companies." (P. 12-21) Peters and Waterman found their sample of excellent companies to use a variety of philosophies, practices, and structures to encourage communication. At IBM and Delta Airlines, open-door policies were pervasive. At Hewlett-Packard and United Airlines, versions of "Management by Wandering About" were practiced, in which managers were encouraged to go out of their offices and informally communicate. Corning Glass installed escalators rather than elevators in its new engineering building to increase the chance of face-to-face contact. At Citibank, the desks of operations officers and lending officers were moved to the same floor and intermingled to encourage communication. Intel's new buildings in Silicon Valley were designed to have an excess of little conference rooms filled with blackboards to facilitate communication, where people can talk lunch or do problem solving. What these examples have in common according to Peters and Waterman, are "lots of communication." (P. 121)

This emphasis on communication is not surprising. Communication affects virtually every area of work. Communication to employees)

about plant closings, performance appraisals, organizational goals, probable salary increases and job changes, and the date of the company picnic are essential to the proper functioning of the firm. If communication is inaccurate or inadequate, the likely results are uncertainty, apprehension, errors, and dissatisfaction.

Organizations also must communicate effectively with parties outside their boundaries. Lee Iacocca's televised messages concerning Chrysler's resurgence and Sanford Sigoloff's television commercials declaring the Wickes Cos. to have come back strong were credited with a significant part of the success of those firms. And, companies regularly find themselves communicating with the public to quell rumors—McDonald's, to combat reports that it was putting red worms in its hamburgers; Squibb, to deny that its Bubble Yum contained spiders' eggs; and Procter & Gamble, to fight persistent reports that its corporate logo had hidden satanic meanings.¹

Lee Iacocca has become a visible spokesperson for Chrysler and for America.



Further, a considerable amount of managers' time is spent communicating. Henry Mintzberg's (1973) observations of chief executive officers showed them to spend 78 percent of their time on communication-related activities involving direct contact with others, including scheduled and unscheduled meetings, telephone calls, and tours of facilities. Even the 22 percent of time spent on what Mintzberg called "desk work" included answering mail and was thus related to communication. Mintzberg also found that managers considered activities involving direct communication with others to be more interesting and valuable than more routine activities. As shown in Figure 13-1, Mintzberg's chief executives regularly communicated with peers, clients, suppliers, associates, subordinates, members of the board of directors, and others. And, face-to-

1. See, for instance, R. Rowan, "Where Did 77Mt Rumor Come From?" *Fdrane* ijAugust 13, 1979), 130-37.

Figure 13-1 THE;



Source: Reprinted by permission of the *Harvard Business Review*. Exhibit from "The Manager's Job: Folklore and Fact" by Henry Mintzberg [July/August 1975], Copyright © 1975 by the President and Fellows of Harvard College; all rights reserved.

face communication appears to demand large amounts of time at all managerial levels. Mintzberg estimates such communication to take 59 percent of the time of supervisors and 89 percent of the time of middle managers.

In this chapter we will examine the functions of communication and assess ways communication may be studied in organizations. We will then discuss the nature of the communication process as well as barriers to effective communication and ways to overcome them. We will review various techniques for communicating in organizations and examine communication channels and networks. After a discussion of interpersonal communication, we will conclude with a look at how new information technology is affecting communication.

FUNCTIONS OF COMMUNICATION

Communication is the transfer of information from one person to another. Our discussion to this point suggests that communication serves a number of important purposes. William Scott and Terence

ell (1976) have identified the following four major functions of communication:

- A *Information function*. Communication provides information to be used for decision making. Managers require information concerning alternatives, future events, and potential outcomes of their decisions to make reasoned choices.
- A *Motivational function*. Communication encourages commitment to organizational objectives, thus enhancing motivation. Lee Iacocca's visible role as the spokesperson for the Chrysler Corporation was credited as being motivational both for Chrysler employees and for Americans in general.
- A *Control function*. Communication clarifies duties, authority, and responsibilities, thereby permitting control. If there is ambiguity concerning such things, it is impossible to isolate sources of problems and to take corrective actions.
- A *Emotive function*. Communication permits the expression of feelings and the satisfaction of social needs. It may also help vent frustrations. After the breakup of AT&T, there was a marked increase in the number of customers who yelled at operators, a convenient target for anger.

Communication is also central to many *of the* managerial roles discussed in Chapter I- For instance, the roles of leader, liaison, disseminator, spokesperson, disturbance handler, and negotiator, among others, rely heavily on communication.

ANALYZING COMMUNICATION

An impressive variety of methods have been used to study organizational communication. In addition to methods which have been used elsewhere, such as questionnaires, observation, interviews, and experimental designs, some methods are unique to this area. We will consider four of them.² Together, use of the following techniques can provide information about the nature, channels, sources and recipients, timing, and difficulty of communication.

Activity Sampling

Activity sampling is a method used to make generalizations about communication based on samples drawn in the field at a number of

2. This section is based primarily on P. M. Muchinsky, *Psychology Applied to Work* (Homewood, IL: The Dprsey Press, 1983), 443-46,

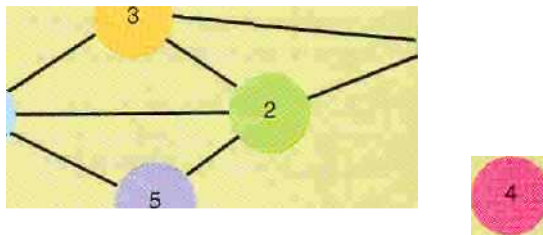
points in time. For example, investigators might somehow specify a point in time—perhaps by ringing a bell—and then ask individuals how they were communicating at that time. Were they using the phone or talking face to face? Were they reading or writing memos? What were they communicating about? By drawing activity samples at a number of points in time, the investigators can get a good picture of communication activities.

Sociogram

A **sociogram** illustrates the pattern of communication in a group. Over a specified period of time, the investigator records interpersonal communication patterns. Then, a sociogram is drawn which illustrates those patterns, showing who is communicating with whom. Figure W. shows a sociogram for a six-person group. Person 2 communicates with¹ everyone in the group except Person 4 and may be the group leader. Person 4 is an isolate, communicating with nobody. Note that the sociogram records only the pattern, not the nature, of communication flows.

re 13-2

SOCIOGRAM OF A SIX-PERSON



Ecco Analysis

Ecco analysis, from "episodic communication channels in organization/" is a questionnaire-based method developed by Davis (1953). It seeks to determine when each person first received a piece of information. Here's the way it works. The researcher chooses some event or piece of information—perhaps a major personnel change. A questionnaire is then sent to each employee to be studied. It might read, "Don Desche has been promoted to head of the Southeast region." The employee is asked, "By 5:00 p.m. yesterday, did you know this information or any part of it?" The employee is instructed to indicate which parts of the information

tion he or she knew, from whom the information was received, and how the information was communicated.

Flesch Index

The above methods consider the nature, pattern, and timing of communication. Another important dimension is ease of understanding. Rudolf Flesch (1948) developed a method (still widely used) to calculate the reading ease of written material. The Flesch index bases reading ease on the number of syllables per 100 words and the average sentence length in words.

Based on his studies, Flesch developed the following equation:

$$\text{Reading Ease} = 207 - 0.846 (\text{Word Length}) - 1.015 [\text{Sentence Length}]$$

Table 13-1 shows patterns of reading ease scores. At one extreme, a score of 0 means that the writing is so difficult that very few people can understand it. At the other extreme, a score of 100 would indicate that the material is easy to read by any literate person.

13-1 PATTERN OF READING EASE SCORES

Description of Style	Average Sentence Length	Average Number of Syllables Per 100 Words	Reading Ease Score	Estimated School Grades Completed	Estimated Percent of U.S. Adults
Very easy	8	123 or less	90 to 100	4th	93
Easy	11	131	80 to 90	5th	91
Fairly easy	14	139	70 to 80	6th	88
Standard	17	147	60 to 70	7th or 8th	83
Fairly Difficult	21	155	50 to 60	Some high school	54
Difficult	25	167	30 to 50	High school or some college	33
Very Difficult	>29	192 or more	Q to 3Q.	College	4-5

Source; Chart on lower half of p. 177 from THE ART OF READABLE WRITING, 25th Anniversary edition, revised and enlarged by Rudolf Flesch- Copyright 1949, 1974 by Rudolf Flesch. Reprinted by Permission of Harper & Row, Publishers, Inc.

The Flesch index has many potential applications in organizations. It can be used, for instance, to check on the reading ease of memos, handbooks, and questionnaires. If the index reveals that the written materials have a difficulty level which is too high for the educational level of affected employees, the materials should be rewritten. Keith

Davis and John Newstrom (1985) have provided several guides for improved readability, shown in Figure 13-3.

Figure 13-3

GUIDES TO READABLE WRITING

- ▲ Use simple words and phrases, such as "improve" instead of "rate" and "like" instead of "in a manner similar to that of."
- ▲ Use short and familiar words, such as "darken" instead of "obfuscate."
- ▲ Use personal pronouns, such as "you" and "them," if the style permits.
- ▲ Use illustrations, examples, and charts. These techniques are even better when they are tied to the reader's experiences;
- ▲ Use short sentences and paragraphs. Big words and thick reports rarely look impressive to people, but the communicator's job is to inform people, not impress them.
- ▲ Use active verbs, such as "The manager said ... i" rather than "It was said: J by the manager that ..."
- ▲ Use only necessary words. For example, in the sentence "Bad weather conditions prevented my trip," the word "conditions" is unnecessary. Say, "Bad weather prevented my trip."

Source: From *Human Behavior at Work: Organizational Behavior* 7th ed. by J. W. Newstrom. Copyright © 1985 by McGraw-Hill Book Company. Reproduced with permission.

THE COMMUNICATION PROCESS

Communication is a process involving several steps. A model of the communication process is presented in Figure 13-4,

Figure 13-4

THE



The process begins when a message sender wants to communicate some fact, problem, idea, or opinion. The message has meaning to the sender, but that meaning cannot be directly transmitted. Instead, an **encoder** is first needed to put the meaning in an appropriate form such as a

words or symbols or body gestures. Next, a transmitter places the message into the message channel, the actual medium of information exchange. For instance, the transmitter may be the mouthpiece of a telephone and the channel may be the phone lines. Then, the receiver picks up the message and the decoder translates the message so that it has meaning to the recipient. Finally, the recipient of the message may, or may not, provide feedback to the sender. As the figure shows, noise—anything that distorts the intended message—can occur at any step of the process.

SOME CAUSES OF COMMUNICATION FAILURE

Unfortunately, many things can interfere with effective communication. Here, are some of the more common.

Semantics

Semantics, or code noise, occurs when the meaning of a message to the sender differs from its meaning to the recipient. Too often, this may be the result of "jargon," involving pretentious terminology and/or language specific to a particular profession or group. As an example of pretentious terminology, *The Wall Street Journal* reported on a tax case on file in federal court. A fire alarm was described as a "combustion enunciator," a door as a "removable partition," a manhole as "equipment access," and windows as "decorative fixtures."³

Distraction

Distraction, or psychological noise, occurs when a recipient does not understand the sender's message because he or she is simply thinking about something else. For instance, the recipient may be distracted by financial worries or upcoming deadlines. Often, of course, recipients don't understand senders' messages because they are thinking about their own replies rather than concentrating on the message to which they are going to reply. Thus, effective listening is an important communication skill.

Misrepresentation

Misrepresentation may also cause the failure of communication and may take various forms. Deliberate lies are an extreme example.

3. *The Wall Street Journal* (November 12, 1982), 1.

Listening is an important part of effective communication.



Quite frankly, people do at times lie on their resumes (sometimes called padding), in their advertising messages (sometimes called puffery), and in their campaign promises (sometimes called politics). More often, information may be subtly distorted to the sender's benefit. A memo that focuses on sales increases but downplays drops in profit, an annual report that attempts to hide changes in accounting format, and a brochure from a drug manufacturer that ignores hazardous side effects would be examples of this kind of misrepresentation.

Information Retention

As we will discuss in greater detail in Chapter 19, information is a valuable resource. Those who control it are in positions of power. Some employees may retain specific sorts of information, such as a formula or a filing system, and thereby make themselves more necessary. Others are in positions that give them the ability to channel—or not channel—information to various individuals inside and outside the organization. Still others are in positions in which they process information, sending only some of it along. Each of these sorts of individuals has the potential to create barriers to proper communication.

Perceptual Factors

Most perceptual errors are directly relevant to communication. Stereotyping, for example, may cause us to ignore or distort the message of people we have classified in certain ways. A manager may, for instance, feel that union representatives are not trustworthy. As a result, the manager may misinterpret conciliatory gestures from the union. Selective perception may cause us to ignore communication that conflicts with

beliefs and expectations. Halo error may lead us to bias our evaluation of a message because of some unrelated characteristic of the message sender such as physical appearance. Projection may lead us to infer information in a message we receive based upon our own feelings. If we are angry, for instance, we may see anger in the message. Primacy and recency effects may cause us to give differing weights to various communications depending on when they are received. At this point, you may want to review the discussion of these and other perceptual errors in Chapter 3.

Other Factors

Several other things can contribute to communication failure. Time pressures and communication overload can each cause us to ignore messages. They may also cause us to focus on information that helps us to make a choice quickly. For instance, a harried employment interviewer may look for reasons to reject many of the job candidates being considered. Noise in the channel, such as static, can distort messages, especially when channels are long or not well shielded from outside influences. Short circuiting, in which a message fails to reach an intended recipient because of an error, can cause confusion, resentment, and mistakes.

Overcoming Communication Problems

Many suggestions have been presented for overcoming the causes of communication failures. For instance, problems due to semantics, selective perception, and distraction may be reduced by use of feedback, repetitions of the messages, use of multiple channels, and simplified language. Communication overload may be reduced by careful review of the material needed by the recipient and by use of the exception principle. The **exception principle** states that only exceptions should be reported—there is no need for messages stating that the production line didn't break down or that absenteeism or competitive conditions are unchanged. Short circuiting may be reduced through careful consideration of who has a "need to know" the material. Electronic data processing techniques that automatically route messages to certain people may also help.

Information retention and misrepresentation are more difficult problems and have led to some very different prescriptions. Some call for tightened formal controls and even organizational audit groups. An **organizational audit group** is specifically designed to ferret out the points at which omissions or distortions are taking place. Others have argued just the opposite, saying that what are needed are fewer formal controls and a more open, trusting organizational climate.

A review of these suggestions indicates that there is no free lunch when dealing with communication. Tilings that alleviate one problem are likely to worsen another. For instance, feedback, redundancy, and

multiple channels may make communication overload worse. The exception principle makes misrepresentation and information retention easier. This does not mean that the situation is hopeless, only that serious attention must be paid to these problems and the resultant tradeoffs carefully weighed.

RECEIVING ACCURATE COMMUNICATION*

Along with seeing that they communicate accurately and effectively to others, it is important for managers to receive communication which is appropriate and undistorted. In this section, we will consider factors known to influence the quality of communication to you as a manager. Along the way, we will make suggestions to help ensure its quality is high.

Is It Good News or Bad News?

Quite simply, bad news is more likely to be distorted or suppressed than is good news. This may be because people don't like to inflict harm on others. Or, it may be because they feel they will be associated with the bad news. In the days of ancient Persia, marathon runners were often associated with the messages they carried. One unfortunate messenger! who arrived to inform the king that his side was losing a battle was slain! This practice almost certainly resulted in some very slow messages, if not unionization attempts. In the organization, failure to receive bad news! can lead to inaccurate assessment of performance, misallocation of resources, and a climate of secrecy and distrust.

How Many Information Sources?

If the information source recognizes that you can check the information, he or she is more likely to provide accurate information in the first place. So, multiple sources for the same information are useful both to decrease the probability of distortion from each source and to serve as validity checks.

Can You Influence the Sender's Career?

The more influence you have over a sender's career, the greater the danger of biasing. If your reactions were unimportant to the messenger,

4. This section is based largely on talks by George Huber, Graduate School of Business, University of Wisconsin-Madison (1981).

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source, there would be relatively little pressure to distort. As those reactions gain importance, pressure to distort increases.

Are You Trustworthy?

If you are not perceived by the message sender to be trustworthy, there is more motivation to distort the message. Further, when you have high influence over the sender's career and you are not trusted, distortion is high.⁵

How Much Discretion Is Allowed?

The more discretion allowed in reporting, the more biasing may occur. This is why courts sometimes force witnesses to answer questions with a simple "yes" or "no." This suggests that to reduce biasing you should take care to:

- A Ask *specific* questions;
- A Indicate that *specific* answers are to be required;
- A Use a *specific* reporting format. Indicate, for instance, whether you want the answer in written form and whether supporting documentation is required.

Is Communicating to You Difficult?

As people find it more difficult to communicate with you, distortion will increase. Such difficulty may be due to physical barriers (such as geographic distance, walls, or computer mediation) or social barriers (such as differences in status or level of education). Some of these cannot be influenced, but others can. For instance, social distance can be reduced by avoiding unnecessary authority trappings and by remaining accessible.

How Heavy Are Workloads?

As the workload of the sender increases, the sender will tend to simplify messages. Such simplification may include the omission of valuable information. The perceived workload of the receiver is also important. People avoid harassing others, especially the boss, when they seem busy. If you are thought to be overloaded already, your subordinates and others will screen out more and more information before sending a message.

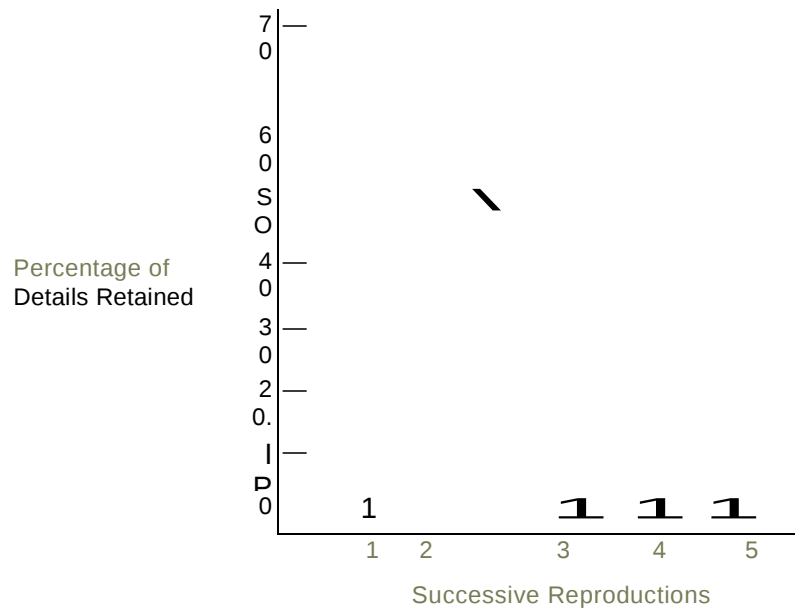
5. W. H. Read, "Upward Communication in Industrial Hierarchies," *Human Relations* 15 (1962): 3-15.

How Many Links in the Communication Chain?

As the number of links in the communication chain increases, the degree of summarizing and distortion of messages increases. In the case of rumors, as shown in Figure 13-5, the fraction of details correctly retained falls below 40 percent after as few as 3 reproductions.

Figure 13-5

RETENTION OF RUMOR DETAILS

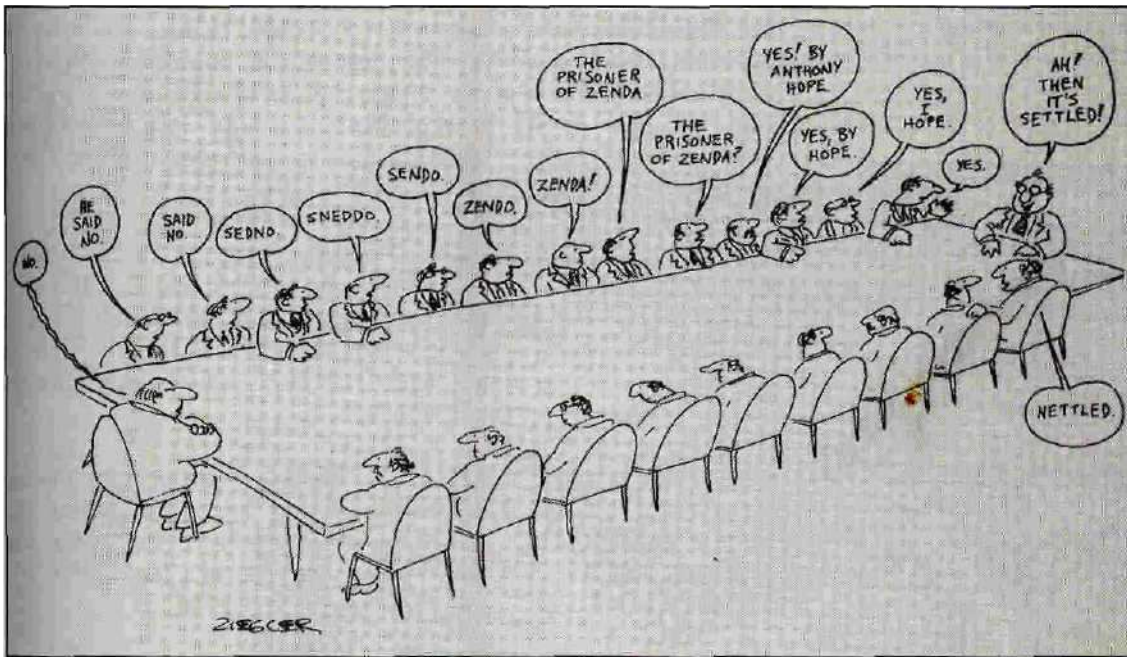


Source: From *The Psychology of Rumor* by Gordon W. Allport and Leo Postmes. Copyright © 1947, 1975 by Henry Holt and Co., Inc. Reprinted by permission of CBS College Publishing.

The lessons here are simple; Keep message chains short. If possible, go directly to the original source of the message.

TECHNIQUES FOR COMMUNICATING IN ORGANIZATIONS

One useful way to classify communication is on the basis of whether messages flow downward, upward, or horizontally through the,



Source: Drawing by Ziegler; © 1982 *The New Yorker Magazine*

organization structure. Each direction of flow has its own purposes and associated techniques.

Downward Communication⁶

Downward communication involves messages from sources relatively high in the organizational structure to receivers in lower level positions such as a supervisor to a subordinate. It is used for such purposes as giving instructions, providing information about policies and procedures, giving feedback about performance, and indoctrinating or motivating.⁷

Letters, Meetings, and the Telephone. Three common methods for communicating downward in organizations are written letters or memos, group meetings, and the telephone. Oral media, including meetings and the telephone, provide personal interchange, are highly adapta-

6. The techniques for downward communication and upward communication are drawn from Muchinsky, *Psychology*, 437-43.

7. L. W. Rue and L. Byars, *Communication in Organizations* (Homewood, IL: Richard D. Irwin, 1980).

ble to a wide variety of situations, and can be used when time is crucial. Written communication is required when the action called for is complex and must be done in a precise way. Further, written communication provides a permanent form of record keeping and can also be used to reach a large number of people easily. Each of these techniques can be overused. Karlene Roberts (1984) has provided reasons for using written messages, the telephone, or personal contact to communicate.

Manuals. A company manual is an integrated system of long-term instructions, brought together between covers, classified, coded, indexed, and otherwise prepared to maximize its reference value.⁸ They have a high degree of authority. Manuals mostly deal with policy, procedure, or organization. Since manuals are technical and complex, employees should be trained to use them.

Handbooks. Handbooks are usually less authoritative, more lengthy than manuals are and generally apply at lower organizational levels. The employee handbook, for example, outlines the duties and privileges of the individual worker. Handbooks generally have a low-key, friendly, personal approach.

Newsletters. Company newsletters are usually issued biweekly or monthly. They are informal and are used to disseminate information with a large number of employees. Newsletters might announce company social functions, contain stories about employees cited for superior performance or attendance, or provide answers about employment issues. Unlike a manual, a newsletter has a mix of personal, social, and work-related information.

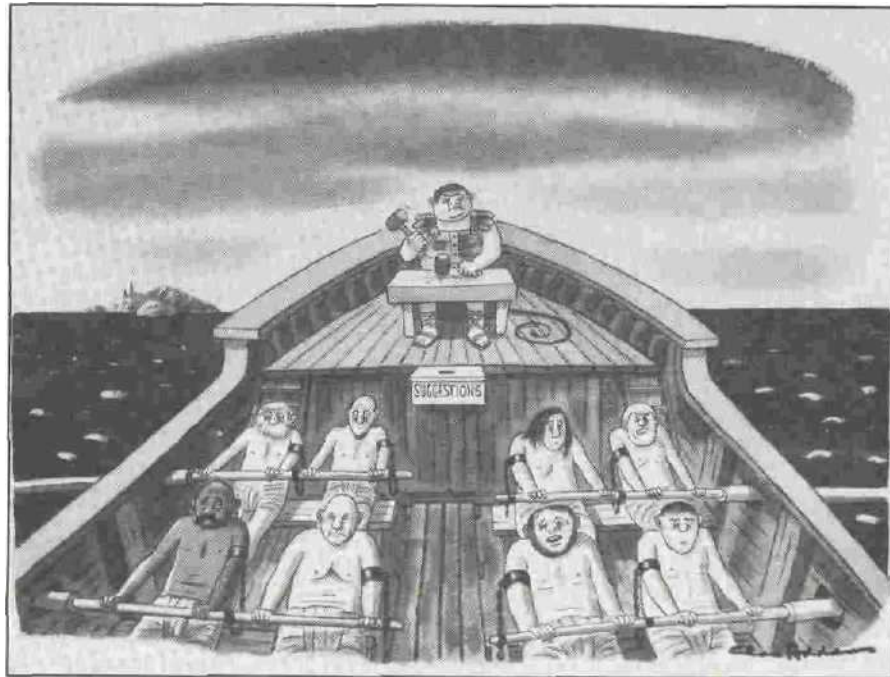
Upward Communication

Upward communication involves communication from sources in lower level positions to receivers in relatively higher positions. It is often used to give information on achievement or progress, to point out problems which are being encountered, to pass on ideas for improvement of activities, and to provide information about feelings on work activities. Three techniques which are especially useful in upward communication include suggestion systems, grievances, and attitude surveys.

Suggestion Systems. A suggestion system permits employees to submit ideas or suggestions for improving company effectiveness. Employees' suggestions are then evaluated, generally by a panel of managers, and then

1953] 8. C. E. Redfield, *Communication in Man* (Chicago: University of Chicago Press, 1953).

valuable ones are acted on. The initiator of the idea may get a cash award, letter of commendation, or insignia. The idea behind a suggestion system is that employees are in the best position to contribute ideas to make their jobs more effective.



Source: Drawing by Chas. Addams; f¹ 1976 *The New Yorker Magazine*

Grievances. Grievances are formal written complaints submitted by employees regarding alleged unfair treatment on the job. They may cover such topics as working conditions, promotions, pay, disciplinary action, supervision, and work assignments. Grievance procedures often involve several steps, in the first step, the grievance is reviewed by the employee's immediate supervisor. Failure to resolve the grievance at that step might lead to appeals at higher levels, perhaps including the company's industrial relations office or an outside mediator. Grievances allow employees to channel their frustrations and feelings of injustice in productive ways.

Attitude Surveys. Attitude surveys are often conducted annually or biannually. The organization uses the survey to learn about employees' feelings and attitudes on many employment issues. The surveys are often administered by an outside consultant and responses are generally anonymous so employees can feel free to speak their minds.

Results of the surveys are tabulated and a report is prepared. The company then acts on the information provided.⁹

Horizontal Communication .

Horizontal communication takes place among individuals or groups at the same organizational level. While horizontal communication tends to be ignored by organizations, it is quite important and common. Horizontal communication is used to coordinate activities, to persuade others at the same level of the organization, and to pass information about activities or feelings. As organizations become more diversified and individual tasks become more specialized, the need for horizontal communication increases.¹⁰ Some of the techniques mentioned above, such as memos, meetings, and the telephone, are appropriate for horizontal communication. Committee meetings, for instance, may be useful for both vertical and horizontal communication. In addition, conferences or retreats may be arranged in which individuals can meet for one or more days away from the pressures and distractions of the workplace. Picnics, dinners, and other social affairs can also encourage horizontal communication.

COMMUNICATION CHANNELS

As we said earlier, a communication channel is the medium through which a message is sent. This would include both human channels, such as speech and body movements, and such mechanical channels as computer networks, the mail, and the telephone. In choosing appropriate channels, managers may want to consider several channel dimensions.¹¹

Capacity

Channel capacity is the amount of information that can be sent through a channel over a given period of time without significant distortion. A telephone, for instance, has greater capacity than a memo since the memo is constrained by reading speed.

9. See R. B. Dunham and F. J. Smith, *Organizational Surveys: An Internal Assessment of Organizational Health* (Glenview, IL: Scott, Foresman & Co., 1979) for a full discussion of organizational surveys.

10. J. Hage, M. Aiken, and C. B. Marrett, "Organization Structure and Communications," *American Sociological Review* 36 (1971): 860-71.

11. This listing of channel characteristics is drawn from R. B. Dunham, *Organizational Behavior: People and Processes in Management* (Homewood, IL: Richard D. Irwin, 1984).

Modifiability

Modifiability is the degree to which the rate of transmission can be varied. Modifiability of a memo or other written message is high; the manager can read at a chosen speed and even set the memo aside for awhile. A televised message is typically less modifiable (though VCRs are changing this).

Duplication

It is sometimes useful to use subchannels to reiterate or elaborate on a message, especially when it is complex or novel. A television commercial, for instance, may use both visual and auditory subchannels to sell a product.

Immediacy

Immediacy is the speed at which a message can be transmitted. Sophisticated computer networks now allow reports and other information to be transmitted almost instantly. The U.S. Postal Service may take a few days, or more, to deliver the same message.

One-Way versus Two-Way

Some channels, such as a memo or a videotaped lecture, are essentially one-way. **One-way communication** gives a message without opportunity for feedback. In contrast, **two-way communication**, such as a telephone or a face-to-face conversation, allows the message recipient to ask questions and provide feedback. Harold Leavitt (1964) has conducted some interesting research on this issue.

This, and other, research shows that:

- ▲ One-way communication is considerably faster than two-way.
- A Two-way communication is more accurate than one-way.
- A Receivers are more sure of themselves and make more correct judgments of how right or wrong they are with two-way communication.
- A The sender may feel less secure in two-way communication. The message recipients can point out errors, interrupt a stream of thought, disagree, and otherwise challenge the sender.
- A Two-way communication is relatively noisy and disorderly. One-way communication appears neat and efficient to an outside observer, but the communication is often less accurate.

Number of Linkages

As we indicated earlier, longer channels invite omission and distortion. Whenever possible, the minimum number of linkages should be used.

Appropriateness

Some channels are "made for" certain types of messages and may be completely inappropriate for others. A billboard may be fine for an advertising message, but it is probably not the place to reprimand an employee.

Selecting Channels

When sending messages, managers should consider the characteristics we have just presented. How much information has to be transmitted? How fast? Does the message require elaboration? Is speed of the essence? Is feedback necessary? Are certain channels unsuited to the nature of the message? The manager may decide after weighing these factors that available channels must be somehow modified, or that multiple channels are needed. Whatever the result, the choice of channels should be carefully weighed.

Nonverbal Communication

We shouldn't leave this discussion of communication channels without mention of nonverbal communication channels. Nonverbal communication includes all communication that either does not use words or that uses words to convey more meaning than is inherent in its strict definition.¹² It may take place through such channels as the body, the face, the tone of voice, and interpersonal distance. A wink, a touch, or a change of body position can all convey worlds of meaning. Further, that meaning can vary markedly depending on the situation, the sex of the parties, the culture, and other factors. Interestingly, as indicated in our definition, nonverbal communication may even involve using verbalization to carry meaning beyond that inherent in the words themselves, for instance, a different overall message is transmitted by the words "They have to drag me out of my position kicking" than by "I won't leave voluntarily."

12. For interesting discussions of nonverbal communication, see M. B. McClellan, "The Hidden Messages Managers Send," *Harvard Business Review* [November-December 1979], 135-48; and K. H. Roberts, *Communicating in Organizations* (Chicago: Science Research Associates, 1984).

Studies often conclude that over 50 percent of the impact of communication comes through facial expressions, another 30 percent from inflection and tone of voice, and less than 10 percent from the content of the message.¹³ Whatever the validity of these specific figures, it does seem clear that nonverbal communication is quite important. And, since it is typically harder to disguise the meaning of nonverbal communication than verbal communication, listeners are likely to pay close attention to it to search for confirmation or contradiction. Figure 13-6 provides a summary of nonverbal communication techniques.

Figure 13-6

NONVERBAL COMMUNICATION

Subsystem	Description
Hand Movements	Three types of hand movements: 1. Emblems are hand movements that are understood in a specific culture or occupation. An example is a thumbs-up gesture. 2. Illustrators are gestures that relate to what is being said, such as pointing or accentuating. 3. Adaptors are touching of oneself or other objects. Self-adaptors are often associated with anxiety, guilt, hostility, and suspicion.
Facial Expression	When used, these are generally understood. Examples are smiling and frowning. Even when people suppress facial expressions, they may make very short expressions lasting only a fraction of a second that reflect their true feelings.
Eye Contact	Eye contact is a major regulator of conversation. Although there are individual differences, eye contact suggests understanding and interest.
Posture	Posture is the way people position their bodies with regard to other people. This can be a closed position with arms crossed to reflect exclusion or the opposite to show inclusion. Asymmetrical positioning reflects agreement or acceptance.
Proxemics	How people use interpersonal space can express intimacy, social distance, and public distance. For example, standing close indicates intimacy, and sitting at the head of a table indicates status. Sitting alongside a desk indicates openness; sitting behind the desk while the other person is in front indicates a superior-subordinate relationship.
Rhythms	How people move in relation to others, frequency of speaking, and speaking turns provide clues to meaning being conveyed. Choice of words can reflect involvement or distance or enthusiasm or lack of it.

source; From *Management Information Systems: Conceptual Foundations, Structure, and Development*, 2nd ed., by C. B. Davis and M. H. Olson. Copyright © 1985 by McGraw-Hill Book Company. Reproduced with permission.

13- See, for instance, R. Harrison, "Nonverbal Communication," ed. [J. H. Campbell and P. W. Harper in *Dimensions in Communication* (Belmont, CA: Wadsworth, 1970)]; and A. Mehrabian, *Non-Verbal Communication* (Chicago: Aldine, 1972).

COMMUNICATION NETWORKS

Communication channels may be linked in a variety of ways to form communication networks.¹⁴ These networks are used to structure the information flows among network members. Communication networks impact on decision quality, member satisfaction, message quality, and other variables. Six commonly used networks are presented in Figure 13-7.

13-7 COMMUNICATION NETWORKS

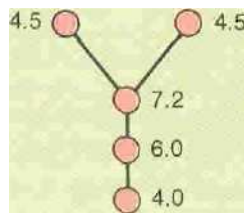
CHAIN 4.0

J5.71

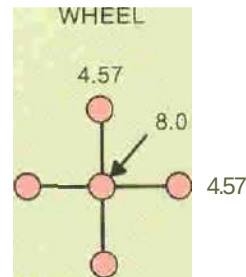
6.67

5.714,0

Centralization = 1.11



Centralization = 1.41

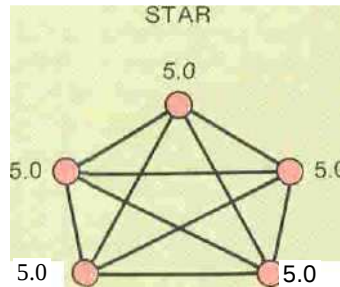
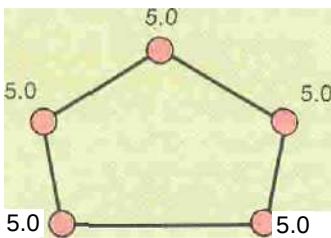


4.57

4.57

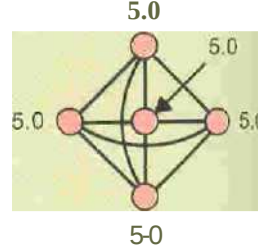
Centralization = 1.88

Centralization = 0



Centralization = 0

COM-CON



Centralization = 0

Note: Member relative centralities are shown next to each member.

Centralization was calculated as the variance of relative centralities.

14. Two key papers relating to communication networks are H. Guetzkow and J. Simon, "The Impact of Certain Communication Nets Upon Organization and Performance in Task-Oriented Groups," *Management Science* 1 [1955]: 233-50; and M. E. Shaw, "Communication Networks," ed. L. Berkowitz in *Advances in Experimental Social Psychology* (New York: Academic Press, 1964), 111-47.

The chain network links members sequentially. The Y network modifies the chain to have one member communicating to three others. With the wheel network, all communication must flow through a central individual. The circle network permits each member to communicate with two others. With the star network, any member can communicate directly with any other. A variant of the star, called the com-con network, permits all members to communicate directly but also has a central member who is considered to be the leader.

These networks clearly differ on a number of dimensions. For instance, with networks such as the chain and the circle, it may be necessary for a message to pass through multiple links to reach its destination. With the star and com-con networks, one link is sufficient. The networks also vary in degree of centralization. The circle and star networks are decentralized—everyone is as central as everyone else. On the other hand, the wheel and the com-con networks clearly have central members.

Relative centrality is the degree of centrality of an individual in a network. It can be calculated by summing the total number of links between the member and each other member in the network and dividing the sum for all members by that sum.¹⁵ For each network, relative centrality scores of each member are presented in Figure 13-7. In the wheel network, there is clearly a central member. Since information more often flows through central members, they are likely to be perceived as leaders and to have high status. They are also likely to be more satisfied than their less central counterparts. In the circle and star networks, all members are equally central.

Along with the degree of relative centrality of members within a network, the overall centralization of the network is also of interest. Centralization is a measure of the variability in member relative centralities. So, the wheel, with one relatively central member and all others much less central, is highly centralized. The star, with equal member relative centralities, is completely decentralized. For each network, network centralization scores are also included in Figure 13-7.

Centralized networks tend to permit rapid decision making, but average member satisfaction is low. Centralized networks may be efficient for simple problems, but as complexity increases, more decentralization (and thus more participation in decision making) is required. So, the wheel network might be appropriate for routine, well-structured tasks, especially if there are time constraints. However, a network such as the circle or star would probably be better for tasks requiring creativity

15. A. Bavelas, "Communication Patterns in Task-Oriented Groups," *Journal of the Acoustical Society of America* 22 (1950): 725-30. For instance, the central member in the star network in Figure 13-7 has a total of four links to the other four members (that is, one to each). Each of the other four members has one link to the central member and two links to each of the other three members—a total of seven links. So, the total number of links in the network is $4 + 7 + 7 + 7 + 7 = 32$. The relative centrality of the central member is $32/4 = 8.0$. For each other member, the relative centrality is $32/7 = 4.57$.

and a wide range of member inputs. We will look more at the issue of appropriate degree of participation in the next chapter,

THE GRAPEVINE"

Our discussion to this point has dealt primarily with formal communication channels in organizations. We all know, of course, that much information in organizations flows in other, officially unrecognized ways. The grapevine consists of information which is communicated informally among employees. The term comes from the Civil War practice of hanging telegraph lines loosely from tree to tree like a grapevine. Messages were often garbled and incorrect information was attributed to the grapevine.

While much grapevine information is transmitted orally, hand-written, typewritten, and even electronic messages may be used. Studies show that over three-fourths of the information transmitted over the grapevine is accurate.¹⁷ However, since even one error can change the overall meaning of a message, such a figure may be misleading. Further, grapevine information is generally incomplete, giving a partial picture. As a result, many people view the grapevine negatively. In one study, for instance, 53 percent of managers and white-collar employees viewed the grapevine as a negative factor, and only 20 percent saw it as a positive factor.¹⁸ In another study, the grapevine was ranked second as a source of information, but only fifteenth as a preferred source.¹⁹

Despite their problems, grapevines do fill some needs. For instance, they often carry messages that formal systems will not. They are fast and flexible, and they provide messages that are understandable to employees. Further, the tendrils of the grapevine wind their ways around often formidable barriers, seeking out needed information from people in the know. Whatever the actual validity of information carried over the grapevine, employees do tend to view it as accurate. As such, grapevine information carries considerable weight.

As shown in Figure 13-8, the grapevine may take many forms. In the most typical, the cluster, one person passes the message on to a number of others. Some of them—perhaps only ten or twenty percent—repeat the message and others do not. As the message gets old and a large percentage of people know it, those who receive it are less likely to repeat it, and it dies out.

16. This section is based primarily on Davis and Newstrom, *Human Work*, 314-24. See that source for a fuller discussion.

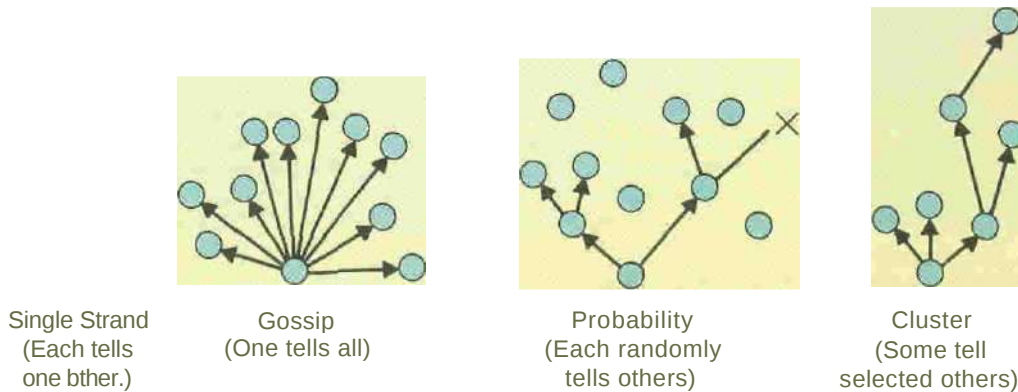
17. W. Newstrom, R. E. Monczka, and W. E. Reil, "Perceptions of the Grapevine: Its Value and Influence," *Journal of Business Communication* (Spring 1974), 12-20.

18. International Association of Business Communications survey reported in *the Washington Post* [November 14, 1982], C-1.

19. Davis and Newstrom, *Human Behavior at Work*, 315.

figure 13-8

TYPES OF GRAPEVINE CHAINS



mice: From *Human Behavior at Work: Organizational Behavior* 7th ed., by K. Davis and J. W. Newrom. Copyright © 1985 by McGraw-Hill Book Company. Reproduced with permission.

As we all know, some people simply like to talk more than others. However, there are other reasons why people become active on the grapevine. For instance, if people have interesting news, they are likely to pass it on. Or, if there is a great deal of excitement and uncertainty, such as when a new boss takes over, the grapevine thrives. Finally, some jobs that allow opportunity for contact and conversation are characterized by high levels of grapevine activity. One study, for instance, found that secretaries to managers were four times as likely to be key communicators on the grapevine as were other employees.²⁰

Whatever managers think of the grapevine, they must accept it as a fact. Smart managers try to learn who is in the grapevine and how it works. They take actions to reduce misunderstandings and, generally, to reduce the negative effects of the grapevine. They may, for instance, carefully provide accurate information to squelch unfounded rumors. They also may try to harvest the grapevine, using it to get feedback about employee attitudes, feelings, and ideas.²¹ Managers may also use the grapevine as a message channel to carry information which is somehow inappropriate for formal channels.

20. K. Davis, "Grapevine Communication among Lower and Middle Managers," *Personnel Journal* (April 1964), 269-72.

21. On this point, see H. B. Vickery, 111, "Tapping into the Employee Grapevine," *Association Management* (January 1984), 59-63.

Academic Profile

KEITH DAVIS



Keith Davis [Ph.D., Ohio State University] is Professor Emeritus of Management at Arizona State University and formerly was a faculty member at Indiana University and the University of Texas. He is past president and a fellow in the Academy of Management and also a fellow in the International Academy of Management. He has been a consultant for a number of public and private organizations. Professor Davis is known internationally for his research on the organizational grapevine, and his other research interests are organizational behavior, human resources management, and social issues in business. He has published six books (four of which have been translated into other languages) and over 150 professional articles.

Q: Your work shows that people in organizations rely very heavily on the grapevine as a source of information. What is the allure of the grapevine?

A: People cannot resist the grapevine. It offers the latest news, and usually that news is reasonably accurate. Much of the news is about people, such as their friendships, conflicts, and experiences. Since formal communication carries very little of this type of information, we *must* listen to the grapevine in order to be fully informed. In addition, much of the grapevine occurs by person-to-person contact, which helps us become a part of social groups and receive social satisfactions.

Q: Many managers view the grapevine as a negative actor. Should managers try to prevent employees from using the grapevine? Should they ignore the grapevine?

A: Managers should not try to keep their employees away from the grapevine. They cannot stop the grapevine, and those who occasionally try end to find that their efforts stir up a larger, often more negative, grapevine. Even if we assume that managers could stop the grapevine, they would not want to do so, because then their employees would become less informed and less interested in their jobs. As an alternative, managers could ignore the grapevine, but that is poor management because they are ignoring an important part of their jobs. A better alternative is to join the grapevine and develop a reputation as a reliable sender and a trusted receiver of information.

Q: Do you see any ethical problems with managers "harvesting" the grapevine to learn what subordinates and others are saying?

A: No ethical problems arise with normal grapevine listening known to employees. They usually expect and want a manager to be in on some of their

grapevines so that they can communicate upward some of the news they want their manager to receive. Of course, secret spies and listening devices are an unethical invasion of privacy and are universally condemned.

Q: If managers are concerned that information passed through the grapevine is inaccurate, what can they do about it?

A: First, they need to build an environment of trust so that employees will believe what managers say. Then, stop inaccurate rumors with the true facts. Nothing defeats rumors better than the truth. In rare instances when true facts are so confidential that they cannot be told, then explain why they are confidential. Face-to-face communication is quicker and allows response to individual employee questions. Furthermore, managers need to walk out of their offices and visit with their employees to establish a climate of trustworthy two-way communication. When managers bring accurate news to their employees, a social transaction is started that obligates employees in return to keep manager informed. This two-way trustworthy communication will substantially reduce inaccurate information.

Q: How will new information technologies affect the role of the grapevine?

A: New information technologies mean that the grapevine can travel much faster and reach many more people at once. In addition, more units of information can be transmitted within a short time. Its patterns also are changing more to those who use various electronic networks. Even the eavesdropped are changing to those who are able to tap secretly into a network. The *electronic grapevine* is becoming more important and is here to stay.

THE IMPACT OF NEW TECHNOLOGIES ON COMMUNICATION

New information technologies are rapidly changing organizational communications.²² Telephone answering devices and services, closed-circuit television systems, and videotaping, for instance, all provide new communication flexibility. The emerging technology of **electronic mail**, the long-distance electronic transmission of written information, provides a very fast, inexpensive, and efficient means of communicating. Situation 1 describes the benefits of electronic mail at Metropolitan Life Insurance Company.

SITUATION 1

Electronic Mail Saves Metropolitan Life More Than \$100,000 Each Year

Metropolitan Life Insurance Company describes its electronic mail system as a "general management tool for supplying information." Using this system helped to streamline message and reporting capabilities. It eliminated the need for duplicate hardware and helped save the company over \$100,000 each year.

According to Vice-President Bruce J. Goodman, Metropolitan Life had to ensure rapid communication within its firm after decentralizing its New York home office functions in 1970. By establishing nine head offices across the country, the \$52 billion company gained an opportunity to enhance customer service and to tap diversified labor markets. Because of cost considerations, these head offices serviced old policies whose historical paper records remained in the New York headquarters.

"It became the responsibility of head offices to administer several million policies issued some 30 to 40 years ago," said Goodman. "Thus, rapid communication between the head offices and New York became crucial in providing a high level of service to our policyholders."

Before instituting its electronic mail service, the head offices requested policy information from New York via a Telex system. Even though the system met the company's basic business needs, it required additional staffing and was prone to mechanical failure and human error. For instance, a correspondent received a request and filled in a form, and someone else cut the Telex paper tape, which was clumsy and occasionally ripped. Others would keypunch and batch multiple messages, which could only be transmitted to the home office at specific times. A total of 39 separate paper-handling steps were required in the overall work flow for one inquiry under the old system.

22. For a good overview of electronic communications, see R. V. Ruch, *Corporate Communications; A Comparison of Japanese and American Practices* (Westport, CT: **Quorum** Books, 1984).

Using an electronic mail system, Metropolitan's head office customer service representatives send requests directly from their terminals. As a result, each head office saved from one-half to one full-time clerk. At the home office, the previous 39 separate paper-handling steps decreased to 22 steps, and the service time lapse improved by one to two days. Twelve clerical positions were no longer needed for processing message requests.

The system was first used to deliver daily operation status reports to head office end users and corporate management from the computer centers located in four cities. Computer center employees previously called in status reports by telephone. Not only did it take time to contact all necessary offices but it usually took more than one phone call to reach the right person. One operator can now key a message, send it simultaneously to several offices, and not be restricted by multiple time zones.

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Further, **teleconferencing**—two-way communication by both video and audio equipment between persons at different locations—offers tremendous savings of time, energy, and money. Many firms are now using teleconferencing for such purposes as sales meetings, editorial conferences, and job interviews. When the CEO of Atlantic Richfield Company (ARCO) complained that he had traveled 600 to 700 miles every day of his life for 35 years, ARCO began a two-year project to build a \$20 million telecommunication network. The network links regional centers, permitting executives to meet with their counterparts elsewhere via wide-screen color television. The executives can use another screen to exchange graphics, statistics, and photographs.²³

We will more thoroughly explore the roles of the new information technology in Chapter 19, "Management Information Systems."

IMPLICATIONS FOR MANAGEMENT

It is hard to imagine one becoming a truly successful manager without having a good grasp of communication skills. Communication is central to virtually all managerial roles and serves a variety of necessary functions.

Think about communication as a crucial skill you need to cultivate, much as you would try to master computer programming or finance

23. *Business Week* (July 7, 1980), 81.

Learning to communicate, to ensure accurate communication from others, and to listen will probably reap greater returns than almost any other skill and will also make life a bit more pleasant.

Develop the ability to analyze organizational communication. Use the tools we have discussed to consider the nature of communication as well as communication channels, sources and recipients, timing, and difficulty. Once each of these factors is assessed, steps toward improvement are possible.

Take into consideration the various causes of communication failure and try to avoid them. Keep language as simple as possible. Recognize that people will retain and distort information. Reward those who provide you with complete and accurate messages, and try to get objective confirmation of information. Beware of perceptual problems. Remember that selective perception, projection, and other perceptual difficulties can interfere with accurate communication. Use redundancy, feedback, and multiple channels as necessary to make sure your message was correctly perceived. And, take the time to listen.

When expecting communications from others, take steps to reduce the likelihood of problems. If possible, use multiple sources. Be clear about precisely what information you want and how and when you want it. Break down unnecessary communication barriers. Keep communication chains short. Create a climate of trust.

Master the array of techniques for communicating in organizations. Try not to overuse a single technique. Instead, fit the method to the needs of the message. Don't forget about the importance of upward communication, and remember that horizontal communication is often useful.

Pit communication channels to your messages. Consider required immediacy, modifiability, capacity, and other channel dimensions, and ask whether feedback is needed. You may decide that multiple channels—such as both a telephone call and a written confirmation—would help, or that channels must be specifically tailored to the purpose. Attend to nonverbal as well as verbal aspects of your communication and keep them consistent. If you develop networks, design them with their required tasks in mind. Centralized networks may be fine for some purposes, but complex tasks demand free flow of information.

Don't assume that communication will, or should, neatly follow the branches of the organization chart. Instead, it may flow in unexpected ways—the grapevine winds everywhere. Pay attention to informal communication. If it seems inaccurate, try to provide corrective information, but don't treat the grapevine as an enemy. Use it as a supplement to formal channels.

Finally, follow developments concerning new communication technologies. Electronic mail, teleconferencing, and other innovations provide new flexibility and power to organizational communication. They promise to change significantly the way much of business is done.

KEY TERMS AND CONCEPTS

activity sampling	message channel
centralization	noise
chain network	nonverbal communication
circle network	one-way communication
code noise	organizational audit group
com-ccm network	psychological noise
communication	receiver
communication networks	relative centrality
decoder	sociogram
downward communication	star network
ecco analysis	teleconferencing
electronic mail	transmitter
encoder	two-way communication
exception principle	upward communication
Hesch index	wheel network
grapevine	Y network
horizontal communication	

REVIEW QUESTIONS

1. What are four key functions of communication?
2. Describe four techniques for analyzing communication in organizations.
3. Cite three causes of communication failure and indicate how each can be alleviated.
4. Identify five things that influence communication received by a manager.
5. Give three techniques for upward communication in organizations.
6. List four key characteristics of communication channels.
7. Define nonverbal communication and give four examples.
8. Draw a star network and a wheel network. How do they differ in terms of centralization and member relative centrality?
9. What is the grapevine? What are its strong and weak points?
10. Identify three ways that new information technologies are influencing communication in organizations.

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CASE 13 A The Electronic In-Basket

The phone rings in the Silicon Valley office of Octel Communications Corp., and a recorded voice takes the caller on a trip into the twilight zone of telecommunications.

"Hi, this is Bob Cohn," begins the greeting from the company's president, who is out of the office.

Then, a formal female voice takes over. "At the tone, please leave your message. When you are done recording, you may hang up or press '1' for more options." It then offers to replay the message, erase it, add to it, send it by urgent or normal delivery, or switch the call to another line. When the caller presses nothing, the voice responds "Are you still there? Sorry you're having trouble. Please try again later. Goodbye." Click.

Business communications may be headed for a radical change. Voice messaging, more commonly known as phone mail, uses advanced recording and routing features to cut down on telephone "tag," idle chatter, and unnecessary memos. It can replace switchboards and pink message slips with recorded personal greetings and detailed messages left in electronic "mail-boxes."

Phone mail systems, which can cost anywhere from \$40,000 to several hundred thousand dollars, aim at solving a problem as old as the telephone. Suppliers say that on the average, only one of four calls gets

through to the right party; the other three get no answer, a busy signal, or a message taker and waste two minutes apiece. About 60 percent of the calls that do get through require only one-way communication, such as a meeting notice or questions that can't be answered immediately.

In St. Petersburg, Florida, vice agents with the Pinellas County Sheriff's Department use a messaging system to keep in touch with their informants. At Perkin-Elmer Corp. in Norwalk, Connecticut, the semiconductor equipment division uses voice mail to get daily updates from 150 service people nationally. Union Pacific Railroad Co. has a system for 750 employees; locomotive crews in the South call it for work schedules and safety updates.

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1. Which of the communication problems discussed in this chapter would probably be alleviated by use of phone mail? Which would probably be made worse?
2. How do you think most people would respond to phone mail? How would you respond?
3. For what sorts of messages would phone mail be most appropriate? Least appropriate?