

The Science of HUMAN COMMUNICATION



edited by Schramm

THE SCIENCE OF HUMAN COMMUNI- CATION

*New Directions and New Findings in
Communication Research*

Edited by WILBUR SCHRAMM

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Editor's Foreword

The Voice of America from time to time broadcasts a series of talks by American scholars, intended to sum up authoritatively for foreign listeners some of the latest scholarly insights and research findings on a topic of wide interest. In 1961, I was asked by officials of VOA to serve as chairman of such a series on communication research. The resulting talks were broadcast on the Worldwide English service of VOA in the spring of 1962 and were several times repeated. They aroused broad interest and resulted in a considerable amount of correspondence with listeners. Now Basic Books has gathered all these talks into one volume, so that they can be more readily available.

In planning the series, we made no attempt to prepare a systematic textbook on human communication or to represent all the areas, problems, and findings of communication research. Rather, we selected certain areas where new findings were available which we thought would be widely interesting to listeners and readers, and where outstanding scholars were available to talk about their specialties. Of course, these authors have written at greater length and in more detail about their respective subjects in more technical publications. The most relevant of these writings are listed at the end of each writer's discussion. A few scholars we had hoped to present to VOA's overseas audience were unable to participate. Among these was one of the founders of communication research, Professor Carl Hovland of Yale, who had hoped to take part but became ill and died during the

time the series was being planned, and to whose memory and great career this book would properly be dedicated.

These talks are therefore an introduction to the problems, the findings, and some of the scholars in research on human communication. Obviously, they do not represent *all* the problems, the findings, or the scholars, but each talk is followed by a few suggestions for reading which will help to fill in the gaps.

The great courtesy and helpfulness of the Voice of America personnel, and particularly of Mr. Walter Nichols, director of the Forum Series of which these talks were a part, must be gratefully acknowledged.

WILBUR SCHRAMM

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1 COMMUNICATION RESEARCH IN THE UNITED STATES

Wilbur Schramm

What do we mean by "communication research"? How long has it been in existence? Who started it? What problems does it deal with? And, in broad terms, what has research so far told us about how communication works and produces effects?

These are the kinds of questions taken up in this introductory paper by Wilbur Schramm. The author was born in 1907 in Marietta, Ohio. He earned degrees from Marietta College and Harvard and his Ph.D. in 1932 from the University of Iowa. He has taught at Iowa, at the University of Illinois, where he was founder and director of the Institute of Communications Research and Dean of the Division of Communication, and since 1955 at Stanford, where he is Janet M. Peck Professor of International Communication and Director of the Institute for Communication Research. Among his publications have been Mass Communication (1949, 1960), Process and Effects of Mass Communication (1954), Responsibility in Mass Communication (1957), One Day in the World's Press (1959), and Television in the Lives of Our Children (1961). He has engaged in research or consultative studies on four continents and in many countries.

During the last thirty years an increasing number of scholars in the United States have become interested in studying the process and effects of communication. Communication, of course, has not become an academic discipline, like physics or economics, but it has become an extraordinarily lively area of research and theory. It is one of the busiest crossroads in the study of human behavior, which is understandable because communication is a—perhaps *the*—fundamental social process. Without communication, human groups and societies would not exist. One can hardly make theory or design research in any field of human behavior without making some assumptions about human communication.

Communication theory and research have therefore attracted the interest of psychologists, sociologists, anthropologists, political scientists, economists, mathematicians, historians, and linguists, and men from all these fields and more have made contributions to our understanding of it. It has been an academic crossroad where many have passed, but few have tarried. Psychologists have worked in the problems of communication for a while and then gone back to problems which are more distinctively psychological. Mathematicians developed information theory and then turned to theory and problems more distinctively mathematical. And so with the other disciplines: communication has been an auxiliary study, necessary to the understanding of human and social behavior, and contributory to other theory. Nevertheless, out of the comings and goings at this academic crossroad, and from the comparatively small number of scholars who have devoted their whole careers and energies to the study of human communication, has come an impressive shelf of books and articles, some of which will be reflected in the papers that follow.

Four men have usually been considered the "founding fathers" of communication research in the United States. Two of these were psychologists, one a sociologist, one a political scientist. Two of them were European-born and -educated, but came to this country very early in their careers.

One of the latter was Paul Lazarsfeld, a sociologist trained in Vienna, who came to the United States in 1932 and became deeply interested in the audiences and effects of the new media of mass communication. When he entered mass media research, the broadcasters and advertisers of this country had already begun to measure audiences in order to find out how well the radio was doing—how many listeners it was attracting, and how well they liked what they heard.

To Lazarsfeld, it became immediately apparent that it was just as easy and far more significant to use audience measurements to study the audience as to study the medium.

That is, the programs people select tell us something about the people, as well as about the programs. The next step was to find out *why* they choose what they choose to listen to. And then to find out how they use what they get from the mass media, and what effect the media have on their voting habits, their tastes, and their general orientation toward life and society.

This is the line of research that Lazarsfeld pursued—audience studies, voting studies, studies of campaigns, studies of mass media effect, and studies of personal influence as related to mass media influence. He founded one of the most influential survey research organizations in this country—the Bureau of Applied Social Research at Columbia University—and for more than twenty years that Bureau has continued to produce studies of high quality and to train outstanding young scholars. Two of Lazarsfeld's students, graduates of the Bureau who are now outstanding scholars in their own right—Dr. Elihu Katz and Dr. Joseph T. Klapper—have contributed lectures to this series, and Dr. Lazarsfeld himself, in collaboration with his colleague, Dr. Herbert Menzel—another of his former students—is the author of one of the lectures.

The other European-born member of the “founding fathers” was Kurt Lewin, the Gestalt psychologist, also trained in Vienna, also an immigrant into this country in the early 1930's, who exerted a great influence on students at the University of Iowa and at the Massachusetts Institute of Technology. Lewin's central interests were communication in groups and the effect of group pressures, group norms, and group roles on the behavior and attitudes of their members. He was an extraordinarily ingenious experimenter and had the ability to attract imaginative and brilliant students. The Group Dynamics movement, if it can be called a movement, in the United States is the shadow of Lewin. The nature of his influence on communication research can be judged from the contribution to this series made by Dr. Leon Festinger,

one of his students, who has developed the theory of cognitive dissonance. Lewin himself died at an untimely age, but his influence lives on.

Lazarsfeld was a sociologist, specializing in survey research, interested in the effects of the mass media and their relation to personal influence. Lewin was a psychologist, specializing in experiments, interested in the workings of human groups.

A third member of the "founding fathers" was Harold Lasswell, a political scientist, trained at the University of Chicago, and for many years a teacher there and at Yale. He was neither a survey researcher nor an experimenter; rather, his method was analytic. He pioneered in the study of propaganda, in the large systemic examinations of communication in nations and societies, and in the study of influential political communicators. But perhaps he will be remembered longest in this field because of his development of scientific content analysis. Dr. Lasswell was unable, regrettably, to appear in this series, but it includes a contribution by one of his pupils, Dr. Ithiel de Sola Pool, of M.I.T.

The fourth member of this group was Carl Hovland, who was trained at Yale as a psychologist. Before World War II, he had already made a reputation as an experimental psychologist. Called into the Army research program in 1942, he became deeply interested in communication and attitude change. When the war was over, he abruptly changed the direction of his career, returned to Yale, and organized a research program on communication and attitude change. His colleagues and students in the program were some of the best young psychologists in the field.

Hovland's method was a tight, careful, experimental one, varying a single element at a time, controlling the others, testing hypothesis after hypothesis, building up slowly but surely a systematic theory of communication. What he was doing, in effect, was building a modern scientific rhetoric. Many of the problems he studied were as old as the *Rhetoric*

of Aristotle. He was studying, for example, the effect of having a credible or prestigious communicator, a one-sided or a two-sided message, strong fear appeals vs. weak fear appeals, methods of "inoculating" people against propaganda, and so forth.

The books that came out of this Yale research program between 1950 and 1961 represent the largest single contribution to communication theory any man has made. Let me recall the titles of some of these books: *Experiments on Mass Communication*, *Communication and Persuasion*, *The Order of Presentation*, *Personality and Persuasibility*, *Attitude Organization and Change*.

Hovland died in 1961 of cancer, at the age of forty-eight, but his colleagues and students are carrying on the tradition of his communication research. Dr. Irving L. Janis, who succeeded Hovland as director of the Yale program, has contributed to this series, and Dr. Nathan Maccoby, who was a colleague of Hovland's in the Army research program, discusses in this series the subject which occupied Hovland all his later life—the theory of how to change attitudes by means of communication.

These four strands of influence are still visible in communication research in the United States, but increasingly they have tended to merge. Young researchers in the field now tend to be eclectic. They combine the interests of Hovland and Lewin, or the method of Lazarsfeld with the interests of Lasswell, or form some other combination. But several characteristics of communication research in this country will be evident to any persons who come from another tradition. For one thing, communication research in the United States is quantitative, rather than speculative. Its practitioners are deeply interested in theory, but in theory they can test—and they want to test it. Thus, essentially, they are behavioral researchers: they are trying to find out something about why humans behave as they do, and how communication can make it possible for them to live together more happily and

productively. It is therefore not surprising that a number of our communication researchers lately have turned to the problem of how the nations of the world can communicate efficiently, and how communication can help them understand each other and live in peace.

Another characteristic of the growth of communication research in the United States has been the appearance of research centers. We have already mentioned the Bureau of Applied Social Research at Columbia, and the Communication and Attitude Change Program at Yale. In addition to these, there are now research centers of considerable size and productivity at Stanford, Illinois, M.I.T., Michigan State, and Wisconsin, and smaller ones at several other universities.

Let us turn now from this brief overview of the development and state of communication research in the United States to the substance of the research itself. In this first paper, it seems appropriate to say something about just what we mean by the term communication, and how the communication process works.

Let me hasten to say that we are not talking merely about mass communication as typified by newspapers, television, and so forth. In the United States, communication research is concerned with *all the ways* in which information and ideas are exchanged and shared. Thus we are talking about both mass and interpersonal communication. We are talking about the spoken word, signal, gesture, picture, visual display, print, broadcast, film—all the signs and symbols by which humans try to convey meaning and value one to another.

The process is the same whether the signs are broadcast on a television wave or whispered by a young man into his sweetheart's ear. The mass medium is merely a communicator in which the ratio of output to input is very large. In some individuals—teachers, public speakers, gossips, and rumor-mongers, for example—the ratio of communication output to input is also relatively large; but even compared to these individuals, the output-input ratio of a mass medium is

enormous. Furthermore, the mass medium is a communicating organization—a working group of people trained and organized so as to speak with a single voice and to display a kind of corporate personality. But, except for being more complicated, what happens in the case of the mass medium is precisely parallel to what happens in a communicating individual. They both select and decode messages, encode and transmit messages, and elicit responses.

In its simplest form, the communication process consists of a sender, a message, and a receiver. The sender and the receiver may even be the same person, as happens when an individual thinks, or talks to himself. But the message is at some stage in the process separate from either sender or receiver. There comes a time when whatever we communicate is merely a sign that stands for some meaning to the sender, and that stands to the receiver for whatever meaning he reads into it. That is, at one stage in the communication process the message is merely ink on paper (as in a printed book), or a series of condensations and rarefactions in the air (as in the spoken word), or reflected light waves (as in communication by picture).

These signs have only such meaning as, by agreement and experience, we give them. For example, a printed word in a language we do not know may have little or no meaning for us. A glance from a wife to a husband may have a secret meaning that only those two people can know. On the other hand, a red traffic light will probably have the same meaning to all automobile drivers, and a scream of terror will probably have about the same meaning anywhere.

This is one of the basic principles of general communication theory: that signs can have only such meaning as an individual's experience permits him to read into them. We can make a message only out of signs we know, and we can give those signs only such meaning as we have learned for them. We can decode a message only in terms of the signs we know and the meanings we have learned for them. We call this

collection of experiences and meanings a “frame of reference,” and we say that a person can communicate only in terms of his own frame of reference.

For example, if a primitive man had never seen or heard of an airplane, and one were suddenly to appear, he would have to interpret it only in terms of experiences he had had with flying things. He would probably think of it as a great bird, and the pilot perhaps as a supernatural figure able to tame gigantic birds. An American teacher in Africa told me that the first few times she called the roll of names in class, the students laughed, and she worked desperately hard to learn to pronounce the names correctly, because she thought they were laughing at her unskillful way of saying their names. But when she became very skillful, they laughed all the harder. And finally she learned that they were laughing out of friendliness and pleasure at how hard she was trying and how well she was doing. In *her* frame of reference, a laugh at that point meant derision; in *their* frame of reference it meant something else entirely.

If we recall how different are the experiences of different kinds of people, and especially how different the frames of reference are between countries that are far apart and have different values and cultures, we can readily understand why it is hard to communicate between such senders and receivers, and why misunderstanding often occurs.

Simple as it may seem, a message is a very complicated thing. Not only do its signs have different meanings for different people; they also have two different kinds of meaning. One of these is *denotative* meaning: the common or dictionary meaning, which will be roughly the same for all people who use the same dictionary or go to the same school. Another is *connotative*: the emotional or evaluative meaning—how good, how powerful, how active, how dangerous something is. This varies greatly with individuals, and even with time. Obviously a hammer and sickle will have a different

connotation, although perhaps the same denotation, to a Communist and a non-Communist.

Furthermore, a message has both a surface meaning and a latent meaning. When we say "Good morning," we usually do not mean anything about the blueness of the morning sky or the brightness of the morning sun; rather, we are saying something about our social relationship to the receiver. We are saying, "We are still friends," or, "I am glad to see you," or something like that. Many messages take their important meaning from the context of the relationship of the sender and the receiver, and that is why it is sometimes dangerous to interpret what is said in terms of what the words "mean," without considering the latent meaning.

Another characteristic of a message is that it is usually a number of parallel messages. For example, if you were to hear me speak, you would be hearing not only bits of language called words; you would also be hearing the intonations or pitch patterns I gave the sentences and you would notice what words I said loudly for emphasis, and where I paused. From my accent, you would get a message about where I grew up. From the quality of my voice, you would get some impression of me. If you were to see me on television, you would get still other parallel messages from my gestures, the clothes I wore, the fact that I smiled or frowned, looked serious or amused.

You may say that is all very well if a person is talking to you, but do you get parallel messages like that from, say, a printed page? Yes, you do. You see patterns of ink which you interpret as words. But these patterns have characteristics of their own. Different type faces have connotations: some seem graceful, others strong, some rough and blunt, others brisk and businesslike. The size of the type means something about the importance of what you are reading. The quality of the paper tells you something. The amount of white space makes a difference in the way you interpret the print. If there is a picture along with the text, that carries a separate message. If

there is a headline or title, this is one of the ways by which almost all communication is “indexed” for us, and by which we are given a preview of its meaning.

The point I am making is simply that the impact of any message depends on more than any one single channel, actually on many channels and cues that we hear or see simultaneously. And with every message comes an especially important cue—the knowledge of *who* said it, which helps us to determine whether to accept it and act on it.

Now let us consider what happens when a message is transmitted. Let us suppose that the message has been encoded and sent and exists in the form of ink on paper, or waves in the air, or some other signs in which the sender has tried to communicate certain meanings. It must be pointed out that each of us is surrounded by many more such messages than he can possibly accept. The ratio is at least hundreds to one; it may be millions to one. Therefore, the first question is, will a receiver pay attention to the message? Will he hear the voice, or select the news story to read, or tune his radio set to a certain station at a certain time? This is determined by how readily available the message is, and by what rewards it promises. A music lover might drive fifty miles to hear a great symphony orchestra, rather than watch football at home on his television set. On the other hand, a football fan, given the choice of a game fifty miles away and the same game at home on his television, would probably take the game on television.

So the first obstacle the message must surmount is being selected out of all the competing messages. If it passes that hurdle, it will then either be accepted into or rejected from the cognitive part of the receiver. This will depend on how it is interpreted. We have already said that a message can be interpreted only in terms of the stored experience—the frame of reference—of the receiver. But we have not said enough about how an individual stores the experiences of his life. From the earliest time that he realizes his own individuality,