What kind of a process is communication? The existence of anything can be said to "communicate" its own existence, so we cannot use the term in such a broad sense without blurring the special significance it should have for a workable definition. We should find some ingredient, some special event embedded in this process we are to call communication, that sets it apart from other processes. That special ingredient is the message or statement.

I look out the window and see a tree; that is not communication (at least by the definition I am proposing). But when I look at a picture of that tree or hear someone say "there is a tree outside the window" that is communication simply because the process included a message o statement as an essential ingredient. A technical definition would be: A message or statement is a specialized, formally coded or symbolic or representational cultural event which makes possible inferences about states, relationships, processes not directly observed.*

The message is what distinguishes communication from other types of social interaction processes, but its existence alone is not sufficient for communication. Let us consider this article. It is a message or statement. Its code is the English language in one of its printed forms; its content (as we shall argue later) is the relationship of this form to the act of communicating. Yet these words on this paper do not add up to communication. They are only one event in a pattern which involves my thinking and writing and your reading and thinking, among other things.

I just referred to two distinguishable dimensions in the process. My principal relationship to the statement is that of producer; your principal relationship to the statement is that of reader. Let us visualize what we have so far by drawing circles for events (broadly interpreted), lines for relationships, and using the vertical and horizontal for our two dimensions. (See Figure 1.)

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*For a more detailed statement see Gerbner, G., "On Content Analysis and Critical Research in Mass Communication," Audio-Visual Communication Review, 6:85-108. Spring 1958.

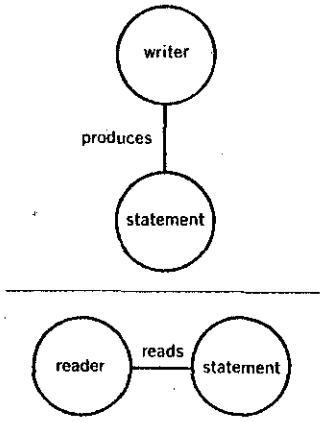


Figure 1

Although the paper and type I use and the paper and type you read are not identical, the "statement" links what I do and what you do in a pattern we call communication.

The processes and consequences of this pattern are different from those of other relationships between people. Most of the differences rest in the nature of the message.

Messages have form as do all other objects and events; but they have content unlike that of other events. This content can be defined only in relation to things not in the message but temporally, culturally, or causally related to the message. These other things may include the state of the source of the message, how the message came about, how the message might be interpreted, and what the message is "about." This last type of relationship--about events and subjects symbolically, or iconically (pictorially) related to the message--requires some elaboration.

If what I write here is "really" only a reflection of my personality, mood and skill (or lack of skill) but has no demonstrable relevance to the communication process as it exists independently of my wishes, then for most practical purposes it is a useless statement (unless you happen to be interested in my personality, skill or wishes, all of which are irrelevant to our present purposes). If this statement is "really" only about me and my use of words, you could only evaluate its expressiveness, its grammar, its pleasing sensory qualities, its efficiency in conveying my thoughts. You could not assess its adequacy or accuracy in the light of independently existing observations and criteria about the process I am trying to describe. If you asked "Why is this so" and I answered "Because I think so" you would have no recourse. A more objective appraisal would be possible only if we specified at the outset that the nature of what we are talking "about" outside of thoughts and wishes is germane to the pattern of communication.

While this might seem an obvious contention, it is an important departure. It is at this point that many conceptions and models of communication, useful as they are for specialized analytical purposes, fail to meet our criteria for a framework in which to study communication. These models lack reference to an event, subject matter, etc., to a segment of reality outside the communicating agents themselves, to the event the communication is "about."

If we omit from our scheme that element of the process which is encoded, symbolized, represented, or "talked about"--no matter how remote it may seem at times--we have limited the range of uses and consequences we can attribute to communication or to its study. Specifically, we have excluded any analysis of statements or of the process in terms other than form, design, structure, subjective associations and the like. We have no way of relating the message, its production, and its uses, to anything existing outside of the mind, the nervous system, the machine, or the institution that comprises the communicating agent or agency. Thus we have no way of explaining, evaluating, or even understanding the message and its functions in the light of independently existing events and points of view; we cannot ask questions about its truth or validity; and we cannot inquire into consequences other than its success in achieving aims and gratifying desires of the communicating parties.

We shall come back later to the significance of being able to establish such relationships and to ask such questions. Now let us apply the argument to our diagram of the communication process. We tried to establish the point that as your attention is directed to the words you are reading, and in them to the events and concepts these words are "about," my attention in writing these words is directed to the events I am trying to describe. That is, the producer of a statement "reads" (i.e. inquires into) events as the receiver of the statement reads the message. So we have two somewhat similar relationships along the horizontal dimension joined in a pattern through the common element, the statement, as illustrated in Figure 2.

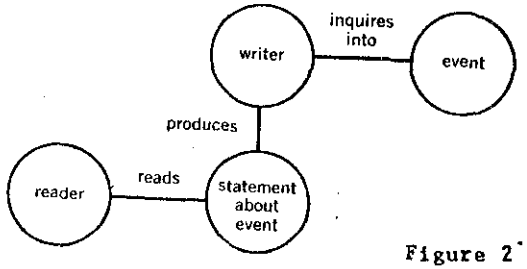


Figure 2

This does not mean that you, the reader, cannot inquire directly into the nature of the events I am describing (althoug most of our communication involves things not directly observed or observable by most parties in the process). What it does mean is that as you read my statement you observe my way of inquiring into and describing the event. Nor does my statement get directly transferred to your mind; you are observing in your own particular way my way of seeing and describing things. I perceive an event in my own way and produce a statement about it; you perceive my statement about the event in your own way--and react accordingly. Thus we need one more element in our diagram to stand for the particular way in which communi

cating agents inquire into, perceive, interpret events and statements. Let a smaller circle inside communicating agents stand for events and statements "as perceived," as shown on Figure 3.

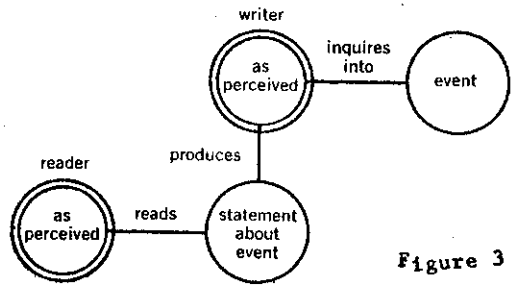


Figure 3

We can, of course, extend the diagram indefinitely.* We can put in any number of communication sources and receivers, indicate multiple statements, or events, etc. But the basic elements and relationships remain the same. So instead of complicating things at this point, let us reduce our diagram to the minimum necessary to a communication act, and give each part a generalized name. Then let us indicate a few other important aspects that play a part in the process but are not easily visualized.

*Such extensions and a variety of applications can be found in Gerbner, G., "Toward a General Model of Communication," Audio-Visual Communication Review, 4:171-199, Summer 1956.

We have identified two basic relationships in our scheme. The horizontal line stands for our relationship with the world of events and statements. No single term can do justice to the complexity of this relationship; it involves ways of observation, conception, inquiry; it implies selection in a certain context. Let us call it the perceptual dimension.

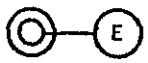
The vertical line represents another type of response to our environment: a reaction that produces a change in the state of affairs outside of ourselves. If the product of this change is a communication event (message, statement), we have the ingredient that distinguishes communication from other processes. Communication events are created when someone uses some means (channels, media, facilities) in some controlled (i.e. non-random) fashion to produce a signal. Let us then call this vertical "production" dimension the means and control dimension.

We also have three kinds of "events" represented by circles in our diagram: non-communication events, communication events and communication agents or agencies. Let us define each of these in general terms.

Non-communication events germane to a communication act can be those perceived by communication sources, or those produced by communication receivers. Let these be single circles marked E in our generalized diagram. Thus an event

perceived could be schematized as on Figure 4, and an event produced as on Figure 5.

Figure 4



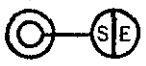
Event (E) perceived

Figure 5

Event (E) produced

Communication events are messages or statements about events. Let us represent them by divided circles marked SE for "statement about event." Below we have diagrammed a message perceived (Figure 6) and a message produced (Figure 7).

Figure 6



Message (S/E) perceived

Figure 7

Message (S/E) produced

Communication agents or agencies are represented by two concentric circles. These stand for sources, receivers, and their terms of "perception." Let us mark communicating agents M (for man or machine--although they can also represent institutions), and indicate the terms of perception by attaching

a prime (') sign to whatever is perceived or attended to as the object of the communication. Thus we have diagrammed in Figure 8 a communication act in which someone (M_1) perceives an event and makes a statement about it which is perceived by someone else (M_2).

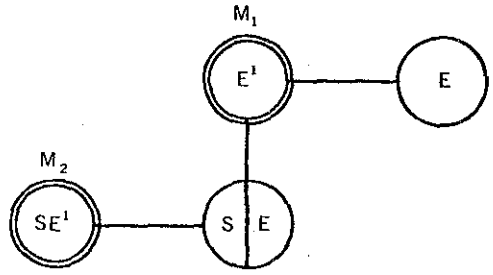


Figure 8

Event (E) is perceived by M_1 as (E'); he makes statement (S which is in turn perceived by M_2 as (S/E')

Awkward as it is, the following verbal "model" of communication has the virtue of noting in a single sentence ten basic elements of the process identified in our discussion:

1 2 3
SOMEONE PERCEIVES AN EVENT (OR STATEMENT) AND REACTS IN A
4 5 6
SITUATION AND THROUGH SOME MEANS TO MAKE AVAILABLE MATERIALS
7 8 9 10
IN SOME FORM AND CONTEXT CONVEYING CONTENT WITH SOME CONSEQUENCE.

In the next section we shall review and describe each of these elements in a more systematic fashion.

A model

We shall use a dramatized diagram of a communication act to trace the ten steps of our verbal model. Then we shall review each of the elements in the process, and cite examples of questions that direct attention to each as a variable for study. We shall also develop a truncated form of the basic diagram to indicate the place of most characteristics of communication within its scope.

Assume that someone notices a house burning across the street and shouts "Fire!" to someone else. This act of communication is illustrated on Figure 9 with each aspect of the process indicated on the diagram.*

Step 1 of our model is illustrated on the diagram as a human head representing someone. This is the M of the generalized diagram, here a communication source.

Next comes the event and its perception. The event, here a burning house, is shown as circle E. Its perception is indicated as Step 2, a line leading horizontally from circle E, the event, to a circle inside M; the inside circle is labeled E'--event E as perceived by M.

In step 3 of our model, M reacts to having perceived the event. (If this reaction involves use of some means to produce a message, it will be represented under Step 5.)

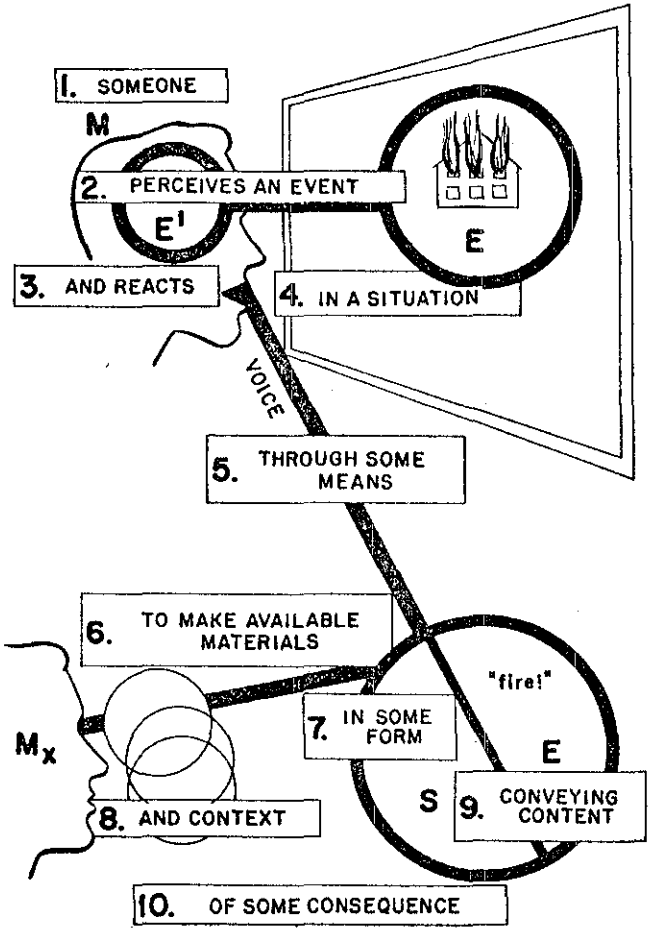


Figure 9

*This illustration is from my earlier article "Toward a General Model of Communication," op. cit.

Step 4 makes note of the fact that all perceptions and reactions occur in a situation. M is shown observing E from behind a window, indicating one feature of the situation. It is usually impractical to schematize a situation on a generalized model.

Step 5 marks the communicative nature of the reaction. It designates the means, the mediating channels and controls transmitting a signal (here "voice"), as a line leading down-ward from the communicating agent, M, to the communication product, SE.

The means serve to make available materials to X designations. Availability for perception is shown as Step 6, a line leading horizontally from the communication product to another person, M_x.

Use of some means becomes a signal only if it is not random; that is, if it is in some form. Step 7 indicates the formal characteristics of the use of the means. It is represented as a half-circle attached to means, labeled S for signal or statement. (Here form might be denoted as a certain language sequence.)

Every signal exists in a context of other signals and statements. The three circles of Step 8 along the horizontal, perceptual, dimension denote context. Again, it is often impractical to schematize context except by considering it an ever-present feature of the perceptual aspect.

The content qualities inherent in M's use of means in S form are marked E to denote those qualities of SE, the communication product, which reflect, represent, symbolize, or refer to the event. Thus the total communication product means signal or statement S about event E, in this case: "Fire

The consequences of this communication event can be appraised only in terms of all other aspects plus time; Step 10, therefore, cannot be adequately visualized.

Now we are ready to characterize each aspect more fully, and to crystallize the basic diagram.

1. "Someone" -- the communicating agent (source or receiver) may be a person, organization, etc., in any communication transaction. The M of our diagram stands for the general physical and social characteristics of the parties involved in the communication process -- senders or destination of messages, communicators and their audiences. When we say "She looked so sincere that they believed her story," or "He is too young to understand that picture" we are pointing to this variable as an important element in the process. When we discuss the structure, history, or method of operation of a communication industry or enterprise or the nature of its audiences, we are dealing with M.

2. "...Perceives an event (or statement)"-- the perceptual -- cognitive (horizontal) dimension of our diagram involves the relationship between events (and statements) and the way these might be recognized, perceived, approached. Perception is selective; we must select from what is avail-

ıble and do so in a certain context of other things also
ıvailable for perception.

What we perceive depends on what is available for selection and in
vhat context. How we perceive depends on the assumptions we have formed
:hrough learning and experience, on the context of our situation and know-
ledge, and on our point of view. These terms of perception and cultivation
will be shown in a smaller circle inside the communication party (M).

In its most general sense, this dimension represents man's cultural orientation to his environment.

3. "...And reacts." Overt reaction to the perception of an event or statement has been assigned to the vertical dimension of our diagram. If this reaction leads to the production of a message, we have SE at the bottom end of the "means and controls" dimension; if it is some other kind of reaction, we can represent its outcome by a non-communication event, E.

When we are dealing with a communicative reaction, we have, of course, the production of a statement. But when we examine the reaction of a communication receiver, we are dealing with communication effects. We usually measure these against the aims of communicators or satisfactions of receivers. (When measured by other criteria, we shall call them "consequences.")

4. ...."In a situation"--All perception and reaction takes place in a situation. Some elements of the situation

are physical. Others are social and cultural. Still others are procedural or temporal.

5...."Through some means,"--the means and controls (vertical dimension of our diagram. Here we deal with choice of channels and media, and with techniques (as well as institutional arrangements) of producing (or mass-producing) messages. New media and new techniques stimulate much discussion and research about relative values. There is no evidence to support claims for the general superiority of any one medium, channel, or mode of perception over all others. But there is evidence to indicate that the choice of means has implications for the meanings of messages, as well as for their perceptual qualities, distribution, and availability.

6. "...To make available materials." Availability is one outcome of the use of means and controls to produce messages. We have assigned it to the perceptual dimension to emphasize that the technical, legal, administrative, politial, etc. functions in communication need to be viewed in the light of what they make available for selection. While the "means and controls" dimension calls attention to production and distribution systems, the "availability" aspect emphasizes administrative and other arrangements determining freedom of access to materials.

7."... In some form." The form of the communication event is represented on the diagram by the S (for signal or statement) portion of SE, the message. Analysis of form may be structural, logical or psychological. Structural and logical analysis of form have to do with such internal relationships as design, style, organization, syntax, sequence, code, statistical properties, etc. Psychological analysis has to do with such external re-

lationships as conventional usage, connotations, associations, feelings or attitudes evoked in users.

8. "... And context." Context is another aspect of the perceptual dimension. It is the spare-time composition of the field in which a particular event or statement is selected for perception. In other words, it is what comes before and after the message, or what surrounds the message in a particular communication situation. The study of context focuses attention not on the general physical and social aspects of the communication situation, nor on the general sequence of activities followed in a presentation, but specifically on the effect of other messages upon the perception of the message selected.

9. "... Conveying content." If we take SE as standing for "statement about event E," then we can interpret the E aspect of message SE as those temporal relationships of the statement which have reference to what the message is "about" (i. e. subject matter) or to other events and functions inferrable from messages taken as objective records of specific communication acts. This view of content is an unusual one, especially for those accustomed to looking at messages only in terms of the structural, logical and psychological aspects of form.

Whether we intend it or not, or are aware of it or not, a specific message is not only a vehicle of signs and symbols but also an objective cultural event. It is not only a report but also a record. As such, its content includes the imprint of historical, social, personal circumstances and points of view which may be unintended and unrecognized but which are nevertheless functional qualities of the communication transaction. Messages viewed as objective cultural events may be a source of inference revealing (at least to the analyst) some things about

the process that produced them and about a range of consequences quite apart from what sources and receivers intend or "mean" by them.

We may analyze a photograph not only to study subjective responses to the conventional forms reported in it but also to determine possible consequences of the objective "points of view" recorded in it (e.g. by means of camera angle or ways of lighting), whether or not the subjects responding to the photograph are aware of these "points of view." We may study a series of whiskey ads not to appraise their design qualities, measure their effects on sales or on ideas about whiskey, but to make inference about some more subtle social relationships recorded and reflected in them (such as the frequency with which their image of the "good life" involves the services of Negro waiters or Filipino houseboys.) Or we might analyze magazine policies or television programming to see how they reflect--regardless of intentions, likes or dislikes,--the state of the industry and the approach of the business to the world of events it communicates about.

Content as a record of objective, unique, temporal-causal relationships is not primarily a matter of skill, talent, craftsmanship or showmanship. It is primarily a matter of where we actually stand in relation to the events, subjects, ideas we communicate about, and of what we actually do in specific communication transaction.

10. "... With some consequences." The intention of the previous category was to broaden the scope of inquiry about communication content. The intention here is to call attention to an area of "effects" outside the scope of those desired, anticipated or recognized at any one time.

The need for this category arises in part from our view of

content as an objective cultural event. Once such an event is brought into being it makes some contribution to certain irreversible processes. The full "meaning" of this contribution rests in the actual consequences inherent in the sum total of changes brought about.

Frequently we are only interested in finding out how changes in behavior, ideas, attitudes, etc. consequent to the perception of a message relate to purposes of communicators, objectives stated in messages, or to needs and desires of receivers. We have classified this type of effect analysis under study of "reaction." Study of the full range of consequences in communication includes the consideration of often unintended or unrecognized effects. We should ask not only "Was I successful," but also "What else has changed, or is likely to change" as the result of the communication. There are no communication "failures" except in terms of specific objectives. Every communication act has consequences; these are never limited to specific objectives; and the parties involved in a communication transaction are often unaware of the full range of significant consequences.

If we analyze a communication "failure" in this light, we might find that we have "succeeded" in communicating an actual relationship to our subject which conflicted with our stated purpose. For instance, some wartime films, which in order to emphasize the danger unwittingly glorified the Nazis had such "boomerang" effects. The same can be true of communication "successes." Some can deliver a 4th of July speech

about democracy in such an authoritarian manner that when the eloquent words are forgotten only a relationship of threat and fear remains. There are teachers who feel that their communication was effective if students pass a rigid examination yet develop a dislike of the subject or even of learning. Absorbing an avalanche of information may narcotize rather than energize people.

Here we are concerned not only with effectiveness but also with the total price to be paid for certain effects. Long range effects are often different from short range; behavior is sometimes in conflict with ideology, or not rationalized at all; no apparent effects may have serious consequences; desired effects, such as making people do the "right things" by manipulative propaganda, may impoverish the bases of self-direction--a consequence too costly for some but serving the purposes of others. Effects, then we shall associate with the assessment of explicit intentions. Other changes or the selective cultivation of existing tendencies consequent to communications we may call consequences. And those consequences that (although they may be unintended or unrecognized) do in fact work out in the interests of the institutions or cultures producing them we shall call symbolic functions.

These terms of presentation, perception, and production, as shown in the diagram below, will lead us to ask about associated values, and to construct a scheme for the analysis of message systems. They also provide the basis for our definition of communication as the exchange through messages bearing notions of what is (assumption), what is important (an element of order or context), what is right (point of view), and what is related to what (another element of context).

Our summary diagram of communication appears below in Figure 10. It includes all those elements of the process which could be assigned to any one aspect or dimension.

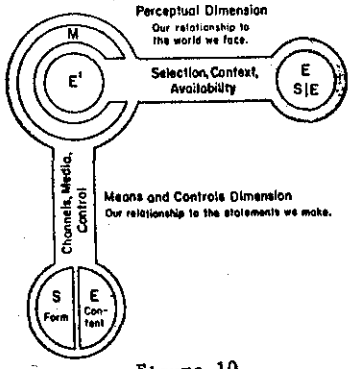


Figure 10

The construction of a framework for the study of communications involves critical choices. We have contended, among other things, that the acts of abstraction, recognition, and representation carry within them--often unwittingly--the seeds of judgment. If I only look up from my chair and gazing upon an object remark "I see a chair," I have done more then simple "sensing." I have abstracted certain characteristics of the object, recognized and named them, recorded a relationship and a vantage point, and thus assigned to that object an approximate role, function, and value in the context of our culture.

Our task would be incomplete without an effort to germinate the seeds of judgment inherent in the much more complex task of building a conceptual framework for the study of communication. We begin with the basic assumption that communication is a cultural "humanizing" process. "Humanizing" Homo Sapiens involves learning about and judging a real world; "humanizing" the environment involves changing reality in the light of changing conceptions of the requirements of survival and welfare.

We can derive certain standards from these premises if we can establish the ideal "humanizing" qualities of communication in social life. And we can arrive at some judgments by applying these standards to communication functions, institutions, and practices.

The structure of freedom: administrative responsibility

The perceptural dimension of our model represents the process of inquiry, the selction and perception of events and statements in some context of availability. The ideal state of affairs in this dimension of communication is, I think, freedom. What we usually ask for along this dimension is the availability of a diversity of events, statements, and points of view, so that we might select in a representative context of pertinent evidence.

But the quality of freedom along the perceptual dimension is neither an absolute quality nor an end in itself. It is physically, socially, and psychologically structured and determined. Its purpose is not merely to provide exercise in choosing, but primarily to provide the setting most favorable for the making of correct choices. Let us then consider how the structure of freedom is determined and what the "rightness" of choices might mean.

The purpose of freedom in communication is to assure public availability of statements and points of view pertinent to decision-making and self-government. The popular definition of this freedom as "the right to say what I please" can lead to its negation if I have access to a loudspeaker but others don't. Freedom to talk might abolish the freedom to be heard. That is why we have assigned freedom to the horizontal dimension of inquiry and perception, and not to the vertical dimension of the use of means, channels, facilities for the production of statements.

The structure of freedom is organized diversity whether it pleases or not. It is determined through the systematic use of means, channels, media, and other facilities for the production (and mass-production) of statements. If these means and facilities are to produce a structure of freedom, they must be organized and used to that end. Freedom to use of facilities (the vertical "production" dimension of our diagram) on behalf of other ends, private or public, serves--other ends. Thus if the structure of inquiry and perception along the horizontal dimension is to be freedom, the essential quality along the vertical production dimension has to be control. Control of means and facilities to promote diversity of availability and freedom of selection is therefore a major administrative and governmental responsibility in communications.

The determination of the structure of freedom in industrial culture as an administrative and governmental function is illustrated on Figure 11 as the social relationship between the production and the perceptual dimensions of our communication model.

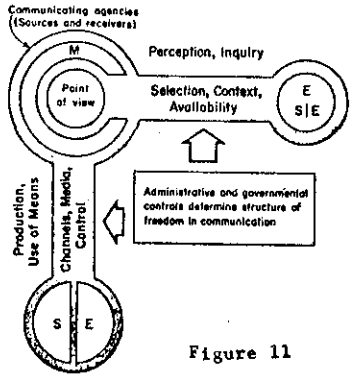


Figure 11

The social responsibility to promote freedom in communications through the organization of means and facilities to that end does not imply that the structure of freedom is an absolute quality, or that it is diversity for its own sake. Freedom of public communications in any society can be considered an index of the extent to which the state of affairs in communications permits public insight to penetrate relevant realities of existence. It is an index of the complexity and diversity of a communications structure organized to enhance opportunities for learning, judgment, and decision-making serving the "humanizing" ends of survival and welfare.

What are standards for judging the quality of those opportunities and the service of those ends in communications? What institutional functions and responsibilities are involved in the cultivation of those standards?

Let me advance a proposition: Communication can help human insight to deal with realities of existence to the extent that its products are true, valid and believable. Now let us develop the meanings and implications of this proposition.

Assessment of truth and validity: science

Truth in communication is a relational attribute of content. It is not a "thing" that exists independently of statements. The truth of a statement is a measure of qualities of correspondence, adequacy and coherence of its relationship to the event the statement is "about"--a relationship asserted or recorded in what we defined as its content. To judge the truth or falsity of a statement (or the proposition for which it stands) we need to examine its correspondence to the event (in the conventional forms of a culture), its adequacy in emphasis, intensity, etc., and its coherence with other statements about the event known to be true or false. The truth quality of a single specific proposition is dichotomous. Such a proposition can only be true or false, in the sense that the proposition 2 plus 2 equals 5 cannot be considered partially true or almost true, but only false. The truth quality of complex statements or of a body of statements can be expressed in terms of the qualities of single specific propositions contained in them.

Truth quality is provisional only in the sense that we might be unable to assess it or might assess it erroneously at any one time. Otherwise it can only be an absolute quality because both events and making statements about events are unique and irreversible occasions whose relationships to one another--with all their qualities--are likewise unique and irreversible.*

We can illustrate this conception of truth as an objective relationship between statements and events on our diagram (see Figure 12).

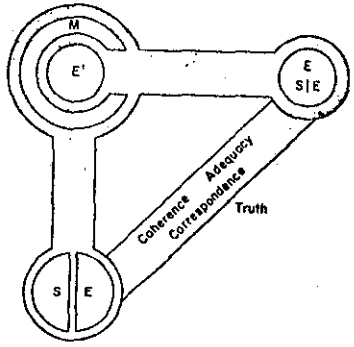


Figure 12

*It might be well to deal here briefly with some misconceptions which often arise at this point and lead to such questions as: "Is this an argument for 'absolutism?'" and "Who is to determine this 'truth quality?'" I think this position is the only ideological defense against "absolutism." For if truth is itself a subjective judgment rather than an objective quality of statements to be appraised more or less successfully, then absolute power over such judgments--i.e. "thought control"--could actually remake reality rather than only our consciousness of reality.

The content of statements, as we defined it, records not only a relationship but also a vantage point from which events are viewed. The judgment of that aspect of content is concerned with validity. The question of validity focuses attention not on the fidelity or accuracy of a statement but on the value attributes imparted through the particular approach or "point of view" apparent in the message. One can photograph the same face in ways that make equally "true" likenesses appear "good" or "evil" (e.g. by making a light cast shadows down or up); one can make two equally factual accounts of murder give the impression of either crime or heroism; one can omit reference to events or claim no factual basis (as in purely persuasive or fictional statements) and still imply an approach to events. Judgment in such cases centers on the question of validity.

The development of standards for the assessment of validity, as of truth, is a social process. The appraisal of the validity of approaches and the truth quality of statements in the light of current standards of reason and evidence is the activity we call science. The "humanizing" function of science in communications is the formulation of true statements about, and of valid approaches to, reality.

Thus it is the relativistic position that becomes an argument for "absolutism" as a viable social order. Our conception of the truth quality of statements as a unique and objective (and only in that sense "absolute") relationship to changing realities of existence makes the structure of freedom a necessary condition for assessment. Assessment by whom? By anyone who satisfies certain criteria for the verification of statements.

Believability: art

Who communicates the human relevance of scientific beliefs to the layman? Who transforms true and valid perceptions of the human condition into moving, imaginative, dramatic representations, into forms most people can grasp, enjoy, believe? That, I think, is the social communication function of art. The "humanizing" role of art in communications is to sensitize us to the perception of relationships and points of view whose appraisal science makes possible.

The summary diagram (Figure 13) illustrates ideal qualities and functions in social communications.

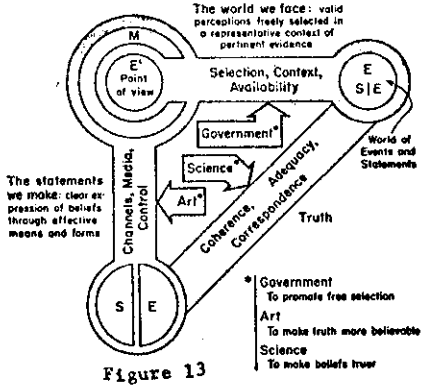


Figure 13

Along the horizontal dimension we see the ideal process as valid perceptions freely selected in a representative context of pertinent evidence. Adding "beliefs" as a controlling factor

in human actions, we find the ideal quality along the vertical dimension as clear expression of beliefs through effective means and forms. Combining these with the hypotenuse of our triangle representing truth, we formulate the ideal qualities in communication as true beliefs reflecting valid points of view freely selected in a representative context of pertinent evidence and clearly presented through effective means and forms. Condensed into a briefer proposition: True beliefs freely acquired and believably presented.

Focusing on institutional responsibilities, we might review our analysis by asking this question: What organized and institutionalized forms of human activity have tended historically to be concerned with the optimization (at least for their purposes) of the values attributed to the different aspects of the communication process?

Along the perceptual (cultivation)dimension, selection, context, and availability are cultural and technological features that require authoritative social organizations to arrange in functional ways. Such organizational functions are performed by managements or administrations or governments which, as communication activities, are primarily concerned with the distributional, contextual, and selection aspects of the cultural field. In order to do that, governments (public or private) exercise production and distributional controls. In other words, the application of controls to that end will determine the extent of any government's or management's ability to promote free selection in a representative context of equitable availability.

This can be represented on our model by showing regulation of means along the vertical dimension to promote the values of the horizontal dimension:

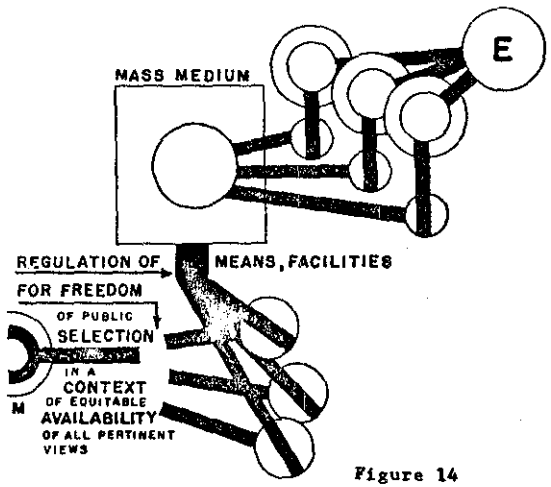


Figure 14

The diagram illustrates the observation of an event by three communicating parties with presumably different points of view. These views are reflected in the statements they produce for the mass medium. The means and facilities by which the medium produces its statements may continue to reflect a diversity of points of view, or homogenize them, or only select for the message-production assembly line what is profitable for the institution and its clients. Much rhetoric to the contrary, there is no historical or empirical evidence for any institution acting in any other but a self-aggrandizing way, even if often in a shortsighted fashion. Whether recent, current, or future media policies are more successful in exercising the control mechanisms for other ends remains to be seen. One task of Cultural Indicators, the scheme of analysis we shall discuss later, is to provide a measure of cultural values actually realized by the institutional exercise of communicative means and controls.

At any rate, it should be clear that since any mass production is a highly structured and closely regulated enterprise, the lack of public

controls in the field of message mass-production means not "freedom" but control by authoritative social agencies that are not publicly accountable. So the real question is not regulation vs. freedom but what kind of regulation can best promote the perceptual organization of message systems (the horizontal dimension) that we associated with "freedom." If wide choice is desirable, controls must be exercised to that end. Otherwise the result is not "freedom" but such absence of meaningful choices as to permit virtually nothing but "desirable" behavior while maintaining the illusion of freedom. Remember that the "researcher's report" from the cannibal country spoke of the free selection of different methods of preparation in the context of all available evidence pertaining to the many ways in which citizens could serve their fellows, and everybody -- including the recalcitrant -- could serve the common good.

The social activity that tends to maximize the values of the vertical dimension (effectiveness, believability, skillful or moving performance, etc.) is art. This statement evokes instant objection from those who think that I want to classify all art in that way. No; I want to say that artfulness has historically been associated with making people respond to, understand, believe, or enjoy symbolic structures whether these were graphic or mathematical, dramatic or musical or other statements or gestures. Statements of artistic intent (or even content) need not be artfully communicated, and statements of strictly prosaic and technical matters may be.

What matters from the point of view of enhancing the values of the vertical dimension of any statement is that special attention, skill, talent be brought to bear upon its production so that it may be as effective, believable, or compelling as possible, regardless of whether the producer is an amateur, a scientist, or an artist.

Finally, the organized communication activity whose specialized task is the assessment of truth qualities of certain types of propositions is called science. So the historical function of science is to make beliefs truer. Art as a normative communication activity should make statements more generally believable. Government (or any organization acting as a government) should promote equitable availability and free selection in a representative context. Although this idealized scheme has mostly been honored in the breach, nevertheless every advance in standards and expectations of human development requires a corresponding advance in the freer acquisition and more believable presentation of a truer set of beliefs. In the normative institutional scheme, government, science, and art complement one another in optimizing their communications value-functions if they make knowledge freer, belief truer, and truths more believable.