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EPISTEMOLOGY AND RESPONSIBILITY OF THE MASS MEDIA

Kenneth G. Johnson

Working journalists seldom concern themselves with deeply philosophical questions or with the epistemological assumptions of their own profession. Many operate on the aristotelian assumption that their words reflect (or should reflect) 'reality'. They are disturbed by charges of 'distortion' and incensed by charges of 'bias'. They strive for 'objectivity' while admitting, reluctantly, that it is 'hard to attain'.

With these attitudes common among working newsmen it is not surprising that most news readers (or listeners) hold similar assumptions about the nature of news and are generally uninformed about the newsgathering process.

I believe newsmen have a responsibility to themselves and to their readers, listeners, or viewers to examine their assumptions about how they know what they 'know' and then to share their insights with their readers. I further believe that general semantics provides a methodology for examining those assumptions in the light of modern scientific knowledge.

General semantics is not 'the study of words' or 'the study of meaning' as these terms are ordinarily understood. It is more nearly correct to say that general semantics is concerned with the assumptions underlying symbol systems and the personal and cultural effects of their use. It is concerned with the pervasive problem of the relation of language to reality, of word to fact, of theory to description, and of description to data--of the observer to the observed, of the knower to the knowable. It is concerned with the role of language in relation to predictability and evaluation, and so in relation to the control of events and to personal adjustment and social integration.¹

Let me begin with a brief analysis of the newsgathering process--first a simple local news story, then a more complex international story.

Let us assume that an event has taken place. If it is to be reported 'first hand', a reporter must see it, hear it, touch it, smell it or taste it; that is, in one or more of these ways his senses must be stimulated by the event. His unique sensory apparatus sets the first limits on what he is able to abstract. He may be nearsighted, farsighted, astigmatic, or color blind. His hearing may be insensitive to certain frequencies, acutely sensitive to others. From what we know today about individual differences, we would also expect his sense of touch, taste and smell to be unique.²

The senses, though limited, convey a vast quantity of information to the nervous system which, because of its structure, selectively processes only a small portion of that information. The reporter's semantic reactions--thoughts, feelings, tensions, electro-chemical changes, etc.--are not to the event itself but only to those aspects that made an impact on his senses and were processed by his nervous system.
Then as our reporter tries to formulate his story, he must do it within the limitations of his language. He must 'chop up the continuous spread and flow' of the event according to the categories available to him and relate the elements in ways specified by his language code. Note that he is limited not only by 'the English language' but by his personal subset of 'the English language'. If he is sensitive to his readers, he will further limit himself to that subset of the English language he and his readers have in common.

Whether or not the reporter will perceive the event as a 'news story' at all will depend upon his 'news values'—those guidelines he was taught in journalism school or the newsroom. Lists of 'news values' differ somewhat but most include timeliness, proximity, significance, prominence, conflict, disaster, and human interest. News values serve as filters, separating 'news' from 'non-news'. They may also be a set of blinders, narrowing the reporter's vision.

If he decides this event 'is' news, he selectively abstracts from it those aspects he considers 'newsworthy', probably taking notes as he does so. Later, from his notes, he will further abstract the most important and interesting parts (in his judgment) and integrate them into his news story.

His story then goes to an editor, who may tighten it up a bit, shorten it, combine it with another story, or simply discard it. The editor serves as a gatekeeper in the flow of news. If the story survives, the editor will also decide where to place the story and how large the headline should be. He, or another editor, will write a headline, usually based on the lead paragraph of the story.

Finally it appears in print. Each reader may choose to read or not read the story. Those who read may read only the headline or only the first few paragraphs. Each will abstract from it according to his own needs and interests.

Note that we have here abstractions based on abstractions of abstractions—the reader many steps removed from the event. This is the nature of news and the newsgathering process. Granted the best, most conscientious reporters and editors in the world, the process remains one of abstractions of abstractions of abstractions, etc.

Alfred Korzybski emphasized 'consciousness of abstracting' as a safeguard of personal adjustment and sanity. A similar consciousness is essential for personal adjustment and sane behavior in relation to the media.

Now let us complicate the picture by placing a foreign correspondent in Cairo, Egypt. His task may be to 'cover Egypt'. Obviously he cannot begin to observe Egypt or even a small portion of it. So he will read the newspapers (in the language or languages he knows), talk to important government and business officials (when they are available), and talk to other correspondents. The 'news' that he gets is already filtered through many orders of abstraction. He then writes a 3000 word piece summarizing what he believes is important and sends it to New York. If he is writing for a wire service, the wire editor may decide that the story isn't worth 3000 words, so he cuts it to 1500 and sends it out.
An editor in Green Bay, Wisconsin, takes it off the wire, decides that local residents aren't that interested in Egypt, cuts it to 500 words, and writes a 6-word headline. A reader picks up the Green Bay Press Gazette, reads the headline, and may, if he is not aware of this entire process, believe he 'knows' what is going on in Egypt. But what is the nature of his 'knowledge'?

This news communication chain bears a striking resemblance to a rumor transmission chain. You have probably played the party game in which a story is whispered to one person who relays it to another who relays it to still another, etc. The final story often bears little resemblance to the original.

The news chain, unlike the rumor chain, generally begins with verified information which is transmitted in written form so far fewer distortions creep in, but there is still a tendency toward leveling, sharpening, and assimilation.

In the following paragraphs Gordon Allport and Leo Postman are describing the process of rumor transmissions. I believe they also describe the process of news communication.

As a rumor travels, it tends to grow shorter, more concise, more easily grasped and told. In successive versions, more and more of the original details are leveled out; fewer words are used and fewer items are mentioned.

As leveling of details proceeds, the remaining details are necessarily sharpened. Sharpening denotes the selective perception, retention and reporting of a few details from the originally larger context....those items will be sharpened which are of particular interest to the reporters. There are, however, some determinants of sharpening which are virtually universal: unusual size, for example, and striking, attention-getting phrases.

What is it that leads to the obliteration of some details and the pointing up of others? And what accounts for the transpositions, importations and other falsifications that mark the course of rumor? The answer is to be found in the process of assimilation, which results from the powerful attractive force exerted by habits, interests and sentiments already existing in the listener's mind. In the telling and retelling of a story, for example, there is marked assimilation to the principal theme. Items become sharpened or leveled to fit the leading motif of the story and they become consistent with this motif in such a way as to make the resultant story more coherent, plausible and well rounded.

Simple messages--such as 'The king is dead', or 'The President has resigned'--like simple rumors, generally get through the system undistorted. As the message becomes more complex or subtle, the chances for distortion increase.

Even the original reporter who observes an event must do some 'leveling'--that is, he must abstract from the event, leaving out many of the details that could be reported. He 'sharpens' those elements he considers significant, unusual, exciting, or in some other way 'newsworthy'.
'Assimilation' is involved as he puts the story together 'to fit the leading motif...to make the resultant story more coherent, plausible and well rounded'.

Please understand that I am not judging this process of news communication as 'good' or 'bad'. Leveling, sharpening, and assimilation seem to be aspects of what Korzybski called 'the process of abstraction' and to be inevitable results of the structure of the human nervous system.

Not only the 'man in the street' but our leaders--in government, politics, business, education, etc.--get their news, their picture of the current world situation, almost entirely through this news communication process.

The importance of accurate, dedicated, professional newsmen, with a deep sense of responsibility, cannot be overemphasized. But even with the most capable newsmen on the job, the process means that we will always be many orders of abstraction removed from the event, that many subjective decisions will have been made before the 'news' is presented to us. Our only safeguard seems to be an awareness of the process so that we can, to some degree, allow for it.

Every news editor has far more material pouring into his office--from teletypes, beat reporters, syndicates, feature writers, PR offices--than he can possibly use. *The Milwaukee Journal*, for example, uses only 2 or 3 percent of the copy available to it. *While The New York Times uses more copy, it also has much more available. Its slogan, 'all the news that's fit to print', would be more accurate if changed to 'all the news that fits we print'.

A newspaper editor's decisions depend upon the space available (the 'news hole'), upon the quantity and quality of news that particular day, upon his personal set of news values, and, more subtly, upon his personal interests, values, needs, biases, etc.

The radio news editor is limited not by space, but time. 'The latest world news' may consist of 6 to 10 items crammed into five minutes every hour on the hour.

'Eye appeal' plays a major role in the decisions of TV news editors. The time devoted to an item may depend less on its significance than on the availability of film or tape of the event. Now TV news consultants, using market-research techniques similar to those used to test a new hemorrhoid treatment or deodorant, are telling station managers what the public 'wants'. These consultants generally recommend many, short, highly visual news stories (60 seconds is considered ideal). As a result, complex, non-visual stories are either given short shrift or totally ignored.

The medium also influences the degree of control you, as audience, can exercise. As a newspaper reader you can choose which stories you want to read and in what depth. As a radio or TV listener you must take the news as it comes--serially--and you cannot go back to verify what you thought you heard. On the other hand, television's visual news puts you 'on the scene'. It seems more lifelike and believable than words on paper. You may forget that the cameraman has aimed the camera in a particular direction for a purpose, that the film or tape you are seeing has been edited, just as
newspaper copy is edited, and that the very presence of the cameraman influences the 'news' he is reporting. (Remember the 1968 Democratic Convention in Chicago and the chant 'The whole world is watching'?)

Furthermore, the medium is a meta-message (if not the primary message as McLuhan suggests). The fact that an item appears in a newspaper or on radio or TV carries with it the message 'this is important'. The length of the story, size of headline, tone of voice of the announcer, etc. are additional meta-messages.

Nicholas Johnson points out that the audience, like the editor, must be selective:

The problem is no longer availability but selection. And what one chooses to use depends greatly on the communications system, especially those parts which separate, categorize, and relate information. Man's efficiency and effectiveness is substantially dependent upon his ability to identify that which is relevant in the torrent of current and stored information. We are forced now to make conscious choice of what not to know.5

Almost 50 years earlier, Walter Lippmann said:

For the real environment is altogether too big, too complex, and too fleeting for direct acquaintance. We are not equipped to deal with so much subtlety, so much variety, so many permutations and combinations. And although we have to act in that environment, we have to reconstruct it on a simpler model before we can manage with it. To traverse the world men must have maps of the world. Their persistent difficulty is to secure maps on which their own needs, or someone else's need, has not sketched in the coast of Bohemia.6

Some time ago I read of a child's game designed to teach children about life as it is today--no matter how you put it together, you're wrong.

Every editor must have days when he feels that his newspaper, his newscast, is that game. He cannot do it 'right'. No matter how he does it he can be criticized for his story selection, placement, or length, his choice of headline sizes, use of visuals, etc., etc. And if he is wise, he'll admit that those decisions were made hasty, often intuitively, amid the clatter of teletypes and the organized confusion of the newsroom.

I say this not so much to defend the editor as to put him and the medium he serves in perspective. Human decisions--thousands of individual human decisions--go into the making of each newspaper, magazine, or radio or TV newscast. Suggestions for improving the media must be aimed at individual human beings--reporters, editors, publishers, newscasters, readers and listeners--everyone who influences or is influenced by the media.

Perhaps a word of caution is in order regarding that term 'media'. Let us not forget that the word is plural. A colleague of mine, George Bailey, has a hypothesis:
People who write or say, 'The media is against Nixon', or 'The media exploits children' actually conceptualize the media as a singular, unitary entity—a force, often sinister....

There may be wisdom in finding oneness in everything, but good thinking remains analytical. The media are fantastically diverse in their size, location, context, nature, purpose, audience, content, process and effect. They are more different than they are alike. There is a point where generalization signifies paranoia, where categorical lumping of heterogeneous elements marks ignorance, where disintegrated language reveals disintegrated thought.

In a very real sense, journalists are trained to be extensional—to check their 'maps' with the 'territory'. 'Who, what, when, where, why, and how' are the journalists' extensional devices. For straight news stories they are told to 'stick to the facts'—but often that admonition is given without specifying what is meant by the word 'fact', and with too little attention to the insidious problems of inference.

Journalists generally are not aware of the role of perception, of values, of language in the communication process. They are not likely to examine assumptions (especially their own), to be conscious of abstracting and projecting, to differentiate orders of abstracting, etc. In short, most are not exposed to the kinds of insights found in general semantics, much less trained in their application.

According to Kenneth Boulding, 'Even at the level of simple or supposedly simple sense perception we are increasingly discovering that the message which comes through the senses is itself mediated through a value system.'

We do not perceive our sense data raw; they are mediated through a highly learned process of interpretation and acceptance. When an object apparently increases in size on the retina of the eye, we interpret this not as an increase in size but as movement. Indeed, we only get along in the world because we consistently and persistently disbelieve the plain evidence of our senses. The stick in water is not bent; the movie is not a succession of still pictures; and so on.

What this means is that for any individual organism or organization, there are no such things as 'facts'. There are only messages filtered through a changeable value system.

Abraham Maslow believed that 'the only way we know of preventing contaminations of our perceptions of nature, or society, or of ourselves, by human values, is to be very conscious of these values at all times, to understand their influence on perception, and with the aid of such understanding to make the necessary corrections....'

The study of values, of needs and wishes, of bias, of fears, of interests, and of neurosis must become a basic aspect of all scientific studies. Such a statement must include also the most generalized tendencies of all human beings to abstract, to classify, to see similarities
and differences, and in general, to pay selective attention to reality and to shuffle and reshuffle it in accordance with human interests, needs, wishes, and fears.9

Let us assume for a moment that we had a number of journalists who had (to some degree) internalized the principles of general semantics. What difference might it make in their performance?

General semantics helps one to cultivate what Neil Postman and Charles Weingartner call 'that most "subversive" intellectual instrument--the anthropological perspective.'

This perspective allows one to be part of his own culture and, at the same time, to be out of it. One views the activities of his own group as would an anthropologist, observing its tribal rituals, its fears, its conceits, its ethnocentrism. In this way, one is able to recognize when reality begins to drift too far away from the grasp of the tribe.10

It is just such a perspective that characterizes a professional reporter. He may be personally interested in politics, ecology, or abortion, but in his professional role he observes and describes the 'tribal rituals' with the detachment of an anthropologist.

A GS-oriented reporter would not only report what was said, but would question, doubt, challenge. He would at every opportunity ask 'What do you mean?' 'How do you know?' and 'What difference does it make?' (in more diplomatic terms, perhaps). And he would reveal to his readers when an interviewee refused or was unable to answer these questions. He would listen with a sincere effort to understand how the world looks to the other person.

He would know that he cannot be objective, but he can delineate his observations from his opinions, feelings, inferences, etc. He would, therefore, make sharp distinctions among straight news, interpretive reports, and investigative reports based on the orders of abstraction involved.

'Straight news' involves observing (events, quotations, records, documents) and describing what is observed. The McCarthy era dramatized the limitations of this approach. When Joe McCarthy made wild charges on the Senate floor, his words were duly reported. (It is difficult to ignore serious charges by a U.S. Senator.) In the straight news format there was no provision for pointing out that he had often made charges before that had proven false or exaggerated.

Interpretive reports involve not only observation and description, but interpretation. Since this involves considerable judgment on the part of the reporter he should (a) have some expertise on the subject, (b) support his interpretations as best he can with background data, cases, examples (lower order abstractions) and careful reasoning, and (c) label the story 'interpretive report' to alert the reader.

Investigative reports can (and I believe should) involve scientific method applied to journalism--observe, describe, hypothesize, predict, and check prediction with further observations. An investigative reporter may go
through this cycle several times before he feels that his hypothesis (possibly revised a number of times along the way) is or is not supported.

Perhaps an example will help. Suppose a reporter in his routine coverage of City Hall discovers something that leads him to believe the mayor is profiting from certain real estate transactions by the city (his hypothesis). He might predict that 'if I check transfers of titles I may be able to get some evidence.' He observes—in this case the records. He finds some evidence to support his hypothesis, but not enough to prove it. So he makes another prediction: 'If I interview some of the people involved in these key transactions I may get the material I need.' And so on. When he finally gets enough evidence he will report, not his hypotheses, predictions, interpretations, but what he was able to observe—in the records, the interviews, etc.

These three types of stories seldom occur in as 'pure' a form as I have described them, but I believe the distinctions are useful.

One of the greatest weaknesses of the press, according to Jean-Louis Servan-Schreiber, French editor and media scholar, is that its ability to investigate is used too little.

Most of the 'news' in a newspaper is about what happened the day before as dispatched by a wire service. Creating 'new' news through investigative reporting is still the exception to the rule. From time to time, the great American tradition of the crusading journalist denouncing scandals or social ills does reassert itself. *Life* Magazine exposed big-city corruption; *L'Express* revealed the actual role of the police in the 'kidnapping' of the Algerian Ben Baraka on a Paris street; Jack Anderson published the secret minutes of the National Security Council meetings on the India-Pakistan war, and Woodward and Bernstein of the Washington Post compelled national attention to the Watergate affair.

Our special reporter would be less likely to be taken in by 'explanations' that don't 'explain'. (I recently heard a speaker say, 'If a person behaves thus and so we say he has a "haptic" personality.' A few minutes later he said, 'He behaves thus and so because he has a haptic personality.' Think how many problems we could 'solve' using this kind of word magic!)

In interviewing, the reporter would systematically vary the levels of abstraction. If given generalizations, interpretations, inferences, he would ask for descriptions, data, cases, examples to support them—and vice versa. In other words he would insist that his interviewee not only talk, but say something.

He would be keenly aware of the distinction between statements of observation and statements of inference—not only in his own writing and speaking, but in that of others. Often a reporter does not cover an event in person, but must rely on the reports of eye-witnesses. Here he must sort observations from inferences even though the eye-witnesses are unaware of the distinction. This takes a special kind of sensitivity to language and skill in interviewing.
He would be aware of the multiordinality of words and aware that two people using the same word may mean quite different things by it. (A number of the quotations used in this paper include the word 'reality'.) In each case I have been tempted to put that word in quotation marks to call attention to its multiordinal character. It may refer, among other things, to 'reality' as I perceive it, as you perceive it, as we are able to agree upon it, as described to us by scientists, or to some 'ultimate reality' beyond our ability to comprehend.

Being conscious of the process of abstracting, he would not pretend to know all about anything. He would be aware of the etc. that follows (and, indeed, precedes) every sentence. His generalizations would be qualified to correspond to the evidence—when, where, under what conditions? Knowing something of modern field theory, he would shy away from attributing single causality to complex problems.

He would be on guard against ventriloquizing—that tendency of politicians, preachers and pundits of every variety to speak with the voice of 'God', 'the law', 'the people', 'the majority of right-thinking Americans', etc.

Being aware of the uniqueness of every human being, he would be cautious in assigning labels and attributing characteristics to groups.

He would be flexible in his application of news values—not letting them serve as blinders to events in the environment not generally considered 'news'. (Until recently 'ecology' was not news.) He would be less interested in a 'scoop' than in a well-researched in-depth story.

I asked my advanced general semantics class what a GS-oriented newspaper might look like. They suggested that such a newspaper would clearly spell out for its readers its basic values and assumptions which might include: concern for human survival, interest in encouraging and contributing to the human time-binding process, emphasis on those aspects of the news that concern peace and survival; emphasis on science as a problem-solving method. It would seek to promote harmony, not to polarize issues nor exploit dissension. In its editorial columns it would express views with conviction, supported by evidence, but it would never assume 'our way is the right way'.

It would publish not only content messages, but metamessages that would help the reader interpret the message. For example, articles would be labeled 'interpretive report', 'investigative report', 'column', etc. The extensional devices of Korzybski and the 'special terms' of Wendell Johnson would be used as appropriate throughout the paper. In addition, it would provide background information on writers, particularly those doing interpretation and opinion pieces, and on sources of information. It would reveal to its readers the nature of pseudo-events—events staged for the purpose of getting media coverage.

One student suggested that all inferences in a story would be set in italics or in some other way made to stand out. Another suggested that all reporters would be required to write in E-prime, that language variation proposed by D. David Bourland, Jr., in which all forms of the verb 'to be' are eliminated.
Since the media are only one part of the communication chain, readers, too, must know how perception, language, and the process of communication operate. They must not only be media consumers, but knowledgeable critics. Postman and Weingartner, in Teaching as a Subversive Activity, suggest the kind of education required:

We believe that the schools must serve as the principal medium for developing in youth the attitudes and skills of social, political, and cultural criticism. No. That is not emphatic enough. Try this: In the early 1960s, an interviewer was trying to get Ernest Hemingway to identify the characteristics required for a person to be a 'great writer'. As the interviewer offered a list of various possibilities, Hemingway disparaged each in sequence. Finally, frustrated, the interviewer asked, 'Isn't there any one essential ingredient that you can identify?' Hemingway replied, 'Yes, there is. In order to be a great writer a person must have a built-in, shockproof crap detector.'

It seems to us that, in his response, Hemingway identified an essential survival strategy and the essential function of the schools in today's world. One way of looking at the history of the human group is that it has been a continuing struggle against the veneration of 'crap'. Our intellectual history is a chronicle of the anguish and suffering of men who tried to help contemporaries see that some part of their fondest beliefs were misconceptions, faulty assumptions, superstitions, and even outright lies. The mileposts along the road of our intellectual development signal those points at which some person developed a new perspective, a new meaning, or a new metaphor. We have in mind a new education that would set out to cultivate just such people--experts at 'crap detecting'.

Included in Postman and Weingartner's prescription for helping students to become 'crap detectors' is a generous dose of general semantics. Research by Howard Livingston demonstrated that general semantics instruction does, indeed, improve a student's critical reading ability.

The specifically media-oriented part of such an education would examine each medium--how it works, what it does, how it influences our perceptions, feelings, assumptions and values. Students would be taught to examine the sources of their information--to look for the name of the correspondent, the press service, the authority for the statement. They would learn to look for internal clues to the nature of the story: Is the reporter describing what he saw or relaying information given to him? Does the news source have something to gain by the information he is releasing? Is the story 'straight news' or is the reporter interpreting? Are there clues in his choice of words as to his position on this topic? Are propaganda techniques being used? Has the material been censored at any point? If so, by whom?

They would also learn about the influence of advertising and media ownership on the content of the mass media.

From a holistic point of view, everything in a society is related to everything else. The media both influence and are influenced by the social, political, economic, and psychological changes that take place in the society. I particularly like the term 'media ecology' because it suggests just such a
complex interaction and evolution. Changing any one part of this ecological system will not 'solve the problems' of the system, but an element as central as mass media will certainly play a significant role in the survival or destruction of the eco-system.

In formulating general semantics, Alfred Korzybski emphasized that the structure of language influences the functioning of our nervous systems, our sanity, and ultimately our survival. Those whose language is amplified through the power of the mass media have a special responsibility to understand the role of language structure, the process of communication, and the nature of their 'knowing'. If they then share that understanding with their readers, listeners, and viewers, they may tip the balance toward survival.

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Dr. Johnson has detailed for us the filtering-abstracting process inherent in defining, gathering and packaging a process we label 'news'. One problem he touched on is the difficulty that people involved in newsgathering have in separating 'news' from 'non-news'. Like Dr. Johnson, I assume that training in principles and techniques of general semantics offers an excellent guide for all newsgatherers.

As a member of the Committee on Public Doublespeak of the National Council of Teachers of English, I am especially interested in the process of analyzing public language and communication. Our committee is concerned with such considerations as: identifying 'liars in public places', monitoring the various mass media of communication for bias and distortion, analyzing the public utterances of public figures for sense and non-sense.

Obviously, one major problem facing us is to design ways to distinguish single-speak from doublespeak, that is communication from pseudocommunication. At the moment we don't have the answer, but not having answers has never stopped, or even slowed down, English teachers in the past: consider our 'solutions' to grammar and composition challenges. Here, then, are some attempts to help make some distinction between communication and pseudocommunication:

**IN COMMUNICATION**

1. Control tends to pass from sender to receiver, to be a shared experience with power continually shifting via feedforward and feedback, allowing the meanings of words to be determined by all of those involved in the transaction.

2. The Language tends toward the technical, in that meanings are clearly stated and relatively stable with precision about the use of terms, in that abstractions are based upon concrete examples, and conclusions are supported logically and critically.

3. The Thinking required tends to be individual and critical, in that both sender and receiver are expected to reach their conclusions independently from observing the

**IN PSEUDOCOMMUNICATION**

1. Control tends to remain with the sender in a non-sharing transaction with power held by the message-sender who determines the meanings of the words employed.

2. The Language tends toward the formal, in that meanings are encoded in do's and don't's with little regard for precision of meaning, and a tendency to rely on appeals to authority, high level abstractions and uncritical acceptance of ideas.

3. The Thinking required tends to be collective and non-critical in that the sender tries to control both the information flow available to the re-
same information and by using whatever methods of analysis chosen by each.

4. The Symbol System employed tends toward a close and organic relationship between the symbols used and their referents, with a limited number of possible referents for any symbol with a goal of achieving a higher use of signs than symbols, always noting clearly the differences between signs and symbols.

5. The appeals used are directed toward the rational, with an emphasis on clear relationships between the message and supporting data.

6. The universe is viewed as basically complex and not open to total understanding; large degrees of tentativeness and uncertainty are included in any analysis.

Obviously, these distinctions are neither exact nor complete. They represent only six distinctions of an evolving model that now has fifteen distinctions, which will evolve by changing, growing and contracting. But this is a beginning. Thank you.
Because there are four speakers tonight--each limiting the time for another--I will forego the customary ritual of thanking everyone in sight for having accorded me this honor. I will say only that being in this position means a very great deal to me. I will also forego the ritual of telling you what a great man Alfred Korzybski was. As a matter of fact, not having known him, I have no idea whether he was a great man or not. However, from reading his works, I have concluded that he was a brilliant and courageous explorer who charted some very mysterious and mystifying territory.

Let me fix on the metaphor of exploration for a moment since whenever I think of Korzybski's achievements, Christopher Columbus always comes to my mind. They are alike in several ways. For example, when Columbus embarked on his most famous voyage, it was already well known that the world was round, not flat. At least it was known (if I may pause for a pun) in educated circles. Similarly, when Korzybski embarked on his voyage, the intellectual community of his time was well aware that there were underlying structures to our conventional ways of codifying the world, and that the discovery of these structures would be of the greatest interest. In fact, by the time Manhood of Humanity appeared, Einstein had already offered a complete alternative to the underlying assumptions of traditional physics. And George Boole, who did the same for mathematics, died 15 years before Korzybski was even born.

When Columbus finally arrived on the shores of the Bahamas, he thought he had successfully completed his voyage. Not even the fact that there wasn't a Chinese or Japanese anywhere in sight deterred him from believing he had reached the Orient. Similarly, in reading Korzybski, one always feels he is claiming too much, too soon. He gives the impression, especially in the later editions of Science and Sanity, of believing that he has wrapped things up, leaving only the details for the rest of us to clarify.

Also, Columbus died never knowing that he hadn't reached the Far East, which was perhaps a blessing because he was to be denied the certainly deserved privilege of having this new continent named after him. I have the feeling that Korzybski, too, died not quite knowing where his discoveries would lead; and it is certainly the case that the academic world has done its best to avoid associating anything with Korzybski's name. Finally, and before I wring this comparison dry, Columbus was, after all, the greatest explorer of his day and maybe the best sea captain who had ever lived. He went from Portugal to the Bahamas in 73 days, without charts or decent instruments, with a very nervous crew, and in a ship just about as long as a lifeboat on one of our modern ocean liners. And so it was with Korzybski. Working outside the traditions then revered by the academic establishment--one might say, against the prevailing winds--he came up with the most dynamic map of the sub-structure of symbolic life we now have available.

Now, in trying to improve a map, you can do at least two different things. You can try to give a more detailed, well-focused picture of some small area.
Or, you can try to enlarge the map to make it include more territory. During the past five years, a group of us at New York University has been attempting to do the latter. And in doing so, we believe that we are giving a new direction to General Semantics, one that will add to its power to contribute to an understanding of the technological world in which we live. During the next 20 minutes, I want to tell you about what we are doing, and to tell it in such a way that you will come to believe that the title of my talk is not entirely presumptuous.

Let me begin, then, by saying in an over-simplified but I hope inoffensive way what I think Korzybski did. He began by correctly assuming that people do their thinking and feeling in and through the medium of language. And he assumed further that the quality of their thinking and feelings is controlled not by words but by the structural characteristics of the language they used. To help explain what this means, I want to use a quote by the great physicist, Arthur Eddington, from his *Space, Time, and Gravitation*. The quote is also found in *Science and Sanity*. Eddington said: 'The relativity theory of physics reduces everything to relations; that is to say, it is structure, not material, which counts. The structure cannot be built up without material; but the nature of the material is of no importance.' If I am not mistaken, this is exactly what Korzybski held to be the basis of what we might call his relativity theory of language. He was not particularly interested in the material that most of us call messages or content. To him, such content is like the trail left by an electron in a cloud chamber. It is not the trail we want to know about but the more compelling underlying structure, without which there could be no messages at all. In other words, he teaches us that what is important in the languaging process is the hidden system which generates what most of us call messages. This hidden system (to switch metaphors from physics to biology) is the double helix of human communication; it contains in its structure the essential program on which the variations we call content are built. Korzybski set himself to search out the shape of this double helix, and for his discovery of such 'genes' as multi-ordinality, self-reflexiveness, the IS of identity, and the IS of projection [or predication], Korzybski, in my opinion, should have been awarded a Nobel Prize. In fact, my own bias is such that had it been up to me I would have awarded him the prize simply for having formulated and developed the metaphor of the languaging process as a living environment. He says explicitly in the Introduction to the Second Edition of *Science and Sanity* that General Semantics deals with people's reactions to 'neuro-linguistic environments as environment.' In other words, Korzybski was the founder of 'linguistic ecology.' And that brings us to the beginning of my explanation of media ecology.

Korzybski had a most curious and paradoxical blockage in his vision (it seems to me). I say 'curious and paradoxical' because he accuses Oswald Spengler of having exactly the same blockage. Although he lavishly praises Spengler's awesome but queer book, *The Decline of the West*, he goes on to say that Spengler missed a couple of obvious and important points. In spite of the fact that Spengler was a mathematician, Korzybski asserts that Spengler failed to understand that mathematics must be considered a language; and further, that Spengler did not fully understand the connection between the structure of mathematics and other achievements of an historical epoch. Now, I will be so bold as to admit myself into the Korzybski-Spengler conversation and assert that these are precisely the two points Korzybski missed in relation
to mass media of communication. And not only modern media but ancient technologies, as well. He did not see that media such as writing, print, radio, and film must be considered as languages, and therefore he did not seriously reflect on how their structures influence the perceptions and values of an historical epoch. It is true that he does mention that radio and movies, for example, can be made into important educational instruments. But it is clear from the context that he is talking about the content of these media, not their structure—a most un-korzybskian lapse.

The best example I can give of his failure to see media as structured environments can be found in one of his own examples. In Science and Sanity, he explains that modern mathematics could not be built on the Roman notation for numbers. You simply cannot multiply 683 by 746 unless you have access to a symbol system whose structure will permit the operation; that is, make it conceivable. Korzybski says that the discovery of the principle of positional notation made modern mathematics possible. He concludes by saying, 'Every child today is more skilled in his arithmetics than the experts of those days.' He adds, 'Incidentally, let us notice that positional notation has a definite structure.' Now, let us notice something that Korzybski didn't: namely, that every child doing his or her arithmetics has the use of pencil and paper. This is extremely important because the principle of positional notation presupposes a writing system which will make the structure visible. In fact, I would almost say that positional notation is nothing but a visual structure. You can prove this to yourself by trying to multiply even something simple like 64 and 27, but without using pencil and paper. What you will do, I think, is to convert your finger into a pencil and the space in front of your nose into a piece of paper. Then, you will be ready to calculate. If you make a mistake, you might even convert the tips of your fingers into an eraser to erase the imaginary marks you have made on imaginary paper.

But this is only one illustration of Korzybski's failure to appreciate the role of media as environments. Throughout his work, he makes almost no distinction between speech and writing. He conveys the impression that their neuro-semantic environments are the same. And yet he himself formulates the principle of non-additiveness; that is, when a new factor is added to an environment, you do not have the old environment plus the new factor. You have an entirely different environment. For Korzybski not to have pondered what changes writing, or print, or radio, or the telephone would make on one's neuro-semantic environment is almost incredible. But hold, my friends! There is nothing to fear. It is precisely at this point that media ecology comes into the picture.

Media Ecology is General Semantics writ large. It starts with the assumption that people do their thinking and feeling not only in and through language but in and through all those media which extend, amplify and transform our senses. Further, Media Ecology assumes that what is important in understanding these processes is not so much the content of media but the ways in which they structure our transactions with them. Media ecologists want to know what kind of environment we enter when we talk on the telephone or watch television or read a book. We want to know the answers to such questions as, at what level of abstraction does a medium operate? What aspects of reality does it isolate and amplify? What aspects of reality does it exclude? What is the nature of the information it gives? What are its spatial biases? Its temporal biases?
What does a particular medium require us to do with our bodies and our senses? In what directions does it encourage us to think? And how do such biases determine our relations with others and with ourselves?

To be a bit more specific: consider the case of the speech I am giving now. Would you respond to it in the same way if you were watching a video-tape of me instead of me in the flesh? Would you be more engrossed? Would I seem to speak with more authority? Would you feel freer to talk to the person next to you? Would you feel required to talk to the person next to you? Would you be more or less fidgety? Would your mind be more or less concentrated?

And now suppose that you are not hearing this speech at all but reading its words in the General Semantics Bulletin. Would some of my sentences take on a different meaning? Would meanings you have heard tonight disappear? Would you feel more isolated? Well, of course, you would feel more isolated. Print is the isolating medium par excellence.

It creates a closed space, usually resulting in the suspension of all interest in one's surroundings. Have you ever passed out written material to a group to whom you are talking? It instantly makes them a non-group and transforms them into so many individuals. That is why you cannot keep their coordinated attention and there is no point in telling them not to look at the printed material until you have finished talking. In the competition among media for people's attention, print will win over speech, most of the time. Perhaps that is why most teachers insist on reading aloud to students whatever is contained in printed material they hand out. They must intuitively sense that the only way to maintain control over a print environment is to replicate the content of the environment with their own voice. I might add here, in case you are interested, that in the competition among media for people's attention, the telephone wins hands down in just about every context. We even have testimony to the fact that the act of love can be terminated instantly by the ring of a telephone. In Media Ecology, we call this telephonis interruptis. Less serious but equally revealing is the fact that on two occasions in the past year, bank robbers in the actual process of being surrounded by police took time out to answer phone calls placed by curious reporters. One of the bank robbers actually said, 'Could you call back later. I'm busy now.' I'd like to see Korzybski explain that! Well, not even Media Ecologists can--at least at the moment. But we try, because these matters are, for us, central issues. How does the structure of a medium occupy our minds? How does it intrude upon or limit or expand or even distort our consciousness? Naturally, the search for answers to such questions is a big job. Therefore, you will be surprised to know we have taken on still another. Consider this: if a medium of communication is defined as an environment, and if an environment is a system through which human beings establish a predictable continuity in life, then media include more than language and technologies. They also include those systems we usually call social environments: a classroom, a courtroom, a concert hall, a business office, an oral examination, a hotel lobby, a restaurant. Each of these methods of human congregation is in fact nothing but a complex message system whose structure imposes certain ways of thinking, feeling, and behaving. Just like language and no less than flickering images on a screen.
Incidentally, Korzybski acknowledges this in *Science and Sanity* where he remarks that each person's individual evaluative system is influenced by larger systems of which he is a part, and urges that this level of communication be studied. Consider, for example, this question: what are the subjects of conversation that are permissible between two strangers who find themselves in an apartment-house elevator? Well, they may comment on the weather or, possibly, the efficiency of the elevator. But if one were to turn to the other and ask, 'Are you visiting someone here, and is it for business or pleasure?', well, there is probably going to be some trouble. But why? That question is frequently asked by one stranger of another on airplanes, and almost always receives a polite, sometimes lengthy (even fantastic) reply. And if you say that the difference is accounted for by the fact that an elevator ride usually takes no more than 60 seconds and an airplane ride no less than 60 minutes, you are, of course, giving the beginnings of a media ecological answer. For beyond doubt, the length of time one must be part of a communication environment powerfully shapes the permissible content of the environment. In other words, time is an underlying 'gene' controlling the type and scope of messages produced. But it is not the only one. There is also, for example, space. Among other things, space controls the position of people's bodies. People who are standing say different things from people who are sitting. They also feel different. Long before Edward Hall developed proxemics, Harry Golden observed that the problem of segregation in Southern restaurants could be solved if everyone would just stand while eating. As media ecologists have found out, when people sit, they create exceedingly thick boundary markers—closed systems, if you will. Standing creates a more fluid environment which greatly encourages egalitarian attitudes.

And then, of course, there is also, as an underlying characteristic of all social environments, what may be called its role structure. Two people standing in an elevator for 30 seconds do not have the necessary time and space to develop a structure to support differentiated roles. Two people sitting in an airplane for 2 hours do. When there is no role differentiation, messages must of necessity be neutral and inconsequential.

The exploration of temporal bias, of spatial bias, of sense and body bias, of role bias, of abstraction bias—that is what Media Ecology is. In short, the study of media as environments. For what is language or television or an elevator other than a largely concealed environment which defines how people shall conduct themselves?

And so, we media ecologists peer at the modern world of communication and think that in the years ahead we will see further than Korzybski did. And if we do, well, I remind you of Freud's famous reply when told that one of his students was publicly claiming that he had gone beyond the Master himself. Freud said, a gnat standing on the shoulders of a giant can usually see further than the giant.
And now, a word from the gnat who sits on Neil Postman’s shoulder!

Several years ago, at the height of the popular enthusiasm over Marshall McLuhan, I published an essay in ETC. with the title ‘Will the Real Marshall McLuhan Please Stand Up?’ It tried to point out some of the confusions, sloppiness, and fakery in McLuhan’s pronouncements, as well as to identify the ideas of enduring merit. What I really meant by ‘the Real Marshall McLuhan’ was the parts of McLuhan which were most interesting, useful, and true.

Well, in that sense I believe that ‘the Real Marshall McLuhan’ just sat down. Neil Postman’s concept of media ecology sums up, for my money, what was most penetrating in McLuhan’s message. Neil’s studies, thinking, and teaching in this field over the last several years promise to reveal much about our environment, and ourselves, that we only suspect today. What we have heard tonight is a progress report on one of the most important intellectual enterprises currently afoot in this country.

Now, like the gnat on Freud’s shoulder, I would like to look around at the perspective which Media Ecology opens for us General Semanticists.

I want particularly to call your attention to two areas which I think require our scrutiny. One is the public, the political; the other is intensely personal and phenomenological. In a sense, I want to pick up this concept of media ecology and give it a double twist, turning it left and existential.

First, a quick turn to the left. I want to urge that we keep in the forefront of our minds the fact that the effect on us of media environments goes further than their underlying technological structure. There’s another critical factor at work. These media, these technologies, are owned and controlled by certain people and groups. In this country they are basically money-making enterprises, just in totalitarian countries they are basically agencies of governmental propaganda. Beyond the many unintended effects they have on us, there are many that are quite intended -- and ill-intended.

Our minds and hearts are being massaged to certain ends. And it makes a difference who controls those media and for what purposes. Popular and democratic control of the media is one of the greatest and most neglected civil rights issues of our time. Therefore I urge most strongly that with all our insight, with all our technical sophistication, with all our brilliance at analyzing the impacts of media environments, we not forget that the bottom line is action. Our studies can, must, and should lead to significant improvements in our control over the shaping of our minds. And of course by the media environments I include everything that Neil mentioned. We need popular and democratic control of everything from the content of television broadcasting to the design of our neighborhoods, from the conditions of work to the availability of art.

Secondly, a quite different emphasis. I would like us to get more joy out of our encounters with these media environments. Sure, these media are massaging our minds -- but a massage can be refreshing, stimulating, and strengthening. Once we understand these environments, I think we should be able to get even more delight out of them.

I tried to point one way towards this a few years ago when I published a book of found poems, made entirely out of language materials ‘found’ in the environment. There was no original writing in the book, but it was reviewed rather favorably as poetry.
Since then many people have entered the field and there's a whole anthology of found poetry. And I'm currently a consultant in poetry for Great Britain's Open University, the televised University over there. We're creating a course called Art and Environment, designed to cultivate this kind of awareness and creative response to our entire media environment.

We can't escape this artificial world we have made for ourselves. So we might as well learn to live in it - safely, comfortably, perhaps even joyously.

Well, as I think you have probably discerned, I'm of two minds about media environments. I hate them when they twist the truth, make us malleable, and distract us from needed social reform. I love them for their charm, color, wit and warmth; and for the celebration of shared values which they make possible. What you have on your hands, you see, is a schizophrenic gnat. He looks both ways at once. Perhaps he seems to buzz interminably in your ear, as gnats sometimes do. So now he will end as he began, by noting that he wouldn't have been able to see either way, or have much of anything to say without sitting on so high a shoulder.