UNDERSTANDING AND BEING UNDERSTOOD

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UNDERSTANDING AND BEING UNDERSTOOD

Contents

Section

1. HOW OUR LANGUAGE GOVERNS OUR BEHAVIOR
   Why Look to Language?
   What is General Semantics?
   The Importance of Logical Fate

2. HOW WE REACT TO WORDS AND THINGS
   The Behavior Sequence
   Three Ways in Which We Respond
   Misevaluation: How We Become Confused

3. WHAT DO YOU MEAN?
   Words Don’t Mean, People Mean!
   A Word May Have Many Meanings
   Projection Can Cause Misunderstanding

4. UNDERSTANDING THROUGH AN OPEN MIND
   Avoid the Allness Attitude
   Beware of Either/Or Orientation
   Keep Your Feet on the Ground
   Use Indexing and Dating

5. THE IMPORTANCE OF COMMUNICATION

6. UNDERSTANDING AND BEING UNDERSTOOD

7. THE PHILOSOPHY OF SCIENTIFIC METHODS IN INDUSTRY

8. SUMMARY
   Behavior Should Fit the World of Reality
   Meaning Itself Can Mislead Us
   Non-Allness Leads to Proper Evaluation

9. IRVING J. LEE: THE SEMANTIC MAN

10. SUGGESTED READINGS
HOW OUR LANGUAGE GOVERNS OUR BEHAVIOR

Section One

Good communication is good business. Research findings consistently indicate that free, two-way communication results in improved morale, greater productivity, and smoother relations between supervisor and subordinate. Communication is the basis for understanding, coordination, cooperation, and action.

But recognizing the importance of communication is not the same as practicing good communication. Every day we encounter situations, ranging from the humorous to the tragic, in which something has gone wrong because of poor communication.

WHY LOOK TO LANGUAGE?

A classic example is the plight of the motorist whose car stalled on a main thoroughway in a congested Eastern city.

The battery was dead and all attempts to start the car were in vain. Finally, in desperation, the motorist flagged down a lady driver who agreed to push his car to get it started. The stranded driver carefully explained to the woman that because the car was equipped with automatic transmission, “...you’ll have to get up to 30 or 35 miles an hour to get me started.” The lady nodded wisely and headed for her car. The man climbed into his car and waited for her push. He waited and waited. After a while, he turned around to see where the woman was. She was there all right, and he was just in time to see her coming at him at 30 to 35 miles per hour.
Such misunderstandings are not the prerogative of women. The National Foremen's Institute reports the following example.

A foreman told a machine operator he was passing: "Better clean up around here." It was ten minutes later when the foreman's assistant phoned: "Say, boss, isn't that bearing Spert is working on due up in engineering pronto?" "You bet your sweet life it is. Why?" "He says you told him to drop it and sweep the place up. I thought I'd better make sure." "Listen," the foreman flared into the phone, "get him right back on that job. It's got to be ready in twenty minutes." . . . . What the foreman had in mind was for Spert to gather up the oily waste, which was a fire and accident hazard. This would not have taken more than a couple of minutes, and there would have been plenty of time to finish the bearing.¹

But Spert wasn't geared to understand what the foreman was trying to say.

Many such predicaments arise when our actions are based on false assumptions. The study of general semantics will help us understand what is involved in these communication problems.

WHAT IS GENERAL SEMANTICS?

"Semantics" is the study of the "meaning of words" and of the history of changes in word meanings. Out of this study has grown a new, broader field of interest which is known as "general semantics." General semantics is the study of the relationship between language, thought, and human behavior. It is concerned with the ways in which our language and other symbols can lead us to make assumptions that influence our thinking and behavior.

Whenever we speak, listen, think, observe, or make decisions, we are also making assumptions. While you are reading this manual, you are making the assumption (consciously or unconsciously) that your chair will hold you. I am making the assumption that you are sitting. The noted general semanticist, Alfred Korzybski, has pointed out that wisdom begins when we become conscious of our assumptions.² However, it is not always easy to recognize these, and we are often unaware of the effects of our unconscious assumptions upon our behavior.

THE IMPORTANCE OF LOGICAL FATE

The notion of unconscious assumptions and the concept of logical fate are important to our understanding of general semantics. Logical fate, so-called by the mathematician-philosopher, Cassius Keyser, is a process in which certain conclusions and behavior follow logically from unconscious assumptions. In other words, if you make certain assumptions, your conclusions and behavior will automatically follow a certain logical pattern.

Consider the following story.

Jim Jones was standing on the corner waiting for a bus. The corner was dark and lonely. Jim knew that many robbers were around that neighborhood because he was familiar with it. While he was waiting for a bus, a man sneaked up behind him and hit him on the back. Jim whirled around quickly and socked the man with a hard right squarely on the jaw.

Was Jim right in hitting the man who sneaked up behind him? It all depends on whether Jim's assumption that the man was a robber was correct. In any case, he acted on the basis of this assumption.

The process of logical fate also occurs when we communicate. We act in accordance with what we assume the other person meant. In this way, language factors greatly affect our behavior.

This manual will present some of the findings of general semantics. It will point out the way in which our evaluation of the world around us influences our behavior. It will also indicate how the various meanings of a word can lead to confused communication. Finally, it will explore the dangers of certain common language practices.

¹ The Foreman's Letter (February 8, 1950), published by NFI, a division of VISION Inc.

HOW WE REACT TO WORDS AND THINGS

Section Two

We may think of ourselves as living in two distinct worlds. One is the world of words, the verbal world. The other is the world of things, the non-verbal world. Words may be used to stand for the non-verbal phenomena which surround us, but the words can never actually be the things they represent.

Pinch yourself. What you feel is non-verbal. You can certainly use words to describe what you felt, but you must distinguish between the verbal description and the non-verbal sensation you actually experienced. We often fail to make this distinction. By confusing words with the things they represent, we arrive at conclusions which do not fit the facts.

A lady in Florida entertained a group of people for dinner. Everyone was delighted with the meal although no one could decide exactly what the main course was. After the dinner, a lady approached the hostess and said, “I enjoyed that food so much. I would like to learn to prepare it. Would you please tell me what we had?” The hostess turned to the lady and said, “Yes, of course. You just had the pleasure of eating snake steaks.” Upon hearing that, the lady had the unfortunate experience of seeing her food for the second time.

What was it to which this lady actually responded? It couldn’t have been the non-verbal phenomenon, the snake steak, because she had enjoyed eating it. Instead, she was responding to the word “snake” and all its associations.

Another example of this confusion between the verbal and the non-verbal is the case of the science professor who put in a request for a washroom mirror in his department. His request was denied on the grounds that a mirror was classified as a
“non-scientific item.” The undaunted professor then put in a new request. This time his morror was provided promptly. The only change in his requisition was the use of a more technical terminology. He asked for “one human reflector.”

To understand the reactions in these examples better, let’s take a look at human behavior in its simplest form.

THE BEHAVIOR SEQUENCE

The story of Jim Jones standing on the street corner illustrates the sequence of steps involved in human behavior. In the first place, something happened. In this case, someone crept up behind Jim and hit him on the shoulder. Next, and almost simultaneously, Jim became aware of this happening through the action of his nervous system. He very quickly “sized up” what was going on, and this led to his response of turning about and socking the man in the jaw.

These then are the four steps involved in human behavior:
1. **Something happens** in the non-verbal world.
2. A **nervous impact** creates awareness of the happening.
3. **Evaluation** follows in which the happening is sized up.
4. **Response** occurs, either in words or actions, based on the evaluation.

The third step, evaluation, is the link, therefore, between non-verbal facts as they are and our behavior as it is related to these facts. Our evaluations must fit the facts of the situation if our responses are to be scientifically and intelligent. Suppose that the man behind Jim had been an old friend trying to surprise him. Jim’s violent response would then have been more drastic than the situation demanded. Let’s take a closer look at human responses.

THREE WAYS IN WHICH WE RESPOND

There are three different kinds of responses or reactions which govern our behavior. The first are called “reflex” responses. These are simple acts which are involuntary. Much of our behavior is based upon reflex responses to certain stimuli. For example, what do you do or what happens when someone shines a flashlight into the pupil of your eye? Your eye closes or the pupil constricts. Suppose a physician taps your knee with a rubber hammer. If his aim is good, your leg flies up. What happens when you eat food? First, salivary changes occur, and then various gastric juices are produced to aid the digestive processes. All these are reflex actions.

We normally have no control over a reflex action. The response is immediate, and completely determined by the stimulus. In most cases, we can neither change the response nor prevent it.

We do, however, have some measure of control over the second and third types of response. The second type is what we call a “signal” reaction. This reaction is similar to the reflex response in that it too is almost immediate. But let’s see how it differs.

A bus driver, trying to make a turn in downtown Houston, was stopped by a woman driver who was moving into a dangerous position. The driver whistled sharply at the woman who was apparently unaware of the bus. The woman stopped and looked around while the driver maneuvered his bus into the opening. Asked by a passenger why he had whistled instead of honking, the driver replied, “About half the women drivers in this town won’t pay any attention to somebody honking, but there ain’t a dame in Houston who won’t stop and look when she hears a man whistle.”

The woman’s response was a signal reaction, that is, a learned response. Just as the woman had conditioned herself not to hear honking, she had also developed the habit of looking around when she heard a man whistle.

An enlisted service man provides us with the following illustration of a signal response.

“We enlisted men were at bat in a hotly-contested baseball game with our officers when a private hit what looked like a single to short right field. Instead of stopping at first, however, he foolishly started a wild dash for second. Realizing then, that he couldn’t make it, he scrambled back toward first. Now he was being chased in a rundown between the lieutenant playing first and the colonel playing second. It looked like a sure out, but just as the lieutenant flipped the ball back to the colonel, the private snapped to attention,
saluting the colonel. Automatically, the colonel snapped the salute back and muffed the catch."

This is another example of a conditioned or trained response in which a signal controls a reaction. Animals are trained to behave in response to signals. The Russian scientist Pavlov, in his classic experiments, conditioned dogs to salivate in response to the sound of a bell by ringing the bell every time he was about to give them food. Once conditioned, they would salivate when they heard the bell even though there was no food. The same kind of unquestioning, automatic reaction is seen in an animal's response to certain commands given by its master.

An animal is not capable of controlling his behavior in the face of such stimuli. However, man is, and it is important for him to learn to do so. By responding with a signal reaction, he runs several risks. First, he is likely to misevaluate situations by jumping to conclusions, or by assuming that he knows what someone else means. Secondly, he may never reach true or valid conclusions, because he is bound by a non-scientific method which does not rely upon observation of the facts. And finally, there is the question of ethics. Signal reactions can lead to unjustified action against others.

For these reasons, it is preferable for us to react in a third way. In a symbol reaction, man controls his own behavior. There is a happening, and a person feels its impact. But, during the crucial seconds while he evaluates the situation, he pauses. There is a delay which cannot occur in the case of a reflex reaction and does not occur in a signal reaction. It is at this time that he observes and analyzes the situation. Then he reacts, not before.

MISEVALUATION: HOW WE BECOME CONFUSED

When we fail to take time to observe and analyze, we often find ourselves reacting to an improper evaluation. Misevaluation sets off stupid, immature, and sometimes even destructive behavior. There are several forms which misevaluation can take.

3Cpl. Bill O'Brian in True, quoted in Reader's Digest, May 1958, p. 166.

Identification of Words with Things

One of the most common forms of misevaluation is the identification of words with things. Our present-day culture presents an abundance of instances in which persons fail to distinguish between words and things. The party guest in Florida who became violently ill when she learned that she had consumed snake steak certainly demonstrated this form of misevaluation.

If our behavior is to be mature and intelligent, we must make proper evaluations. We must delay our reactions until we have evaluated the situation as it is. Reactions to words, without regard to the non-verbal things they represent, can lead us to behavior which is inconsistent with the facts.

Misunderstanding

Even when words are not confused with things, they are likely to have different meanings for different persons. This leads to a second common form of misevaluation, misunderstanding. Misunderstanding results from a person's inability to convey his meaning in his efforts to communicate.

Directions and instructions, for example, are frequently misunderstood. The foreman who told the machine operator to “Clean up around here” failed to convey what he meant. The machine operator misevaluated the situation because he did not understand what the foreman meant. The foreman also misevaluated because he assumed that the machinist had comprehended his message.

It is easy to demonstrate the ease with which a message may be misunderstood. Suppose someone tells you to write the word cat on the blackboard. How is this open to misunderstanding? First, it has not been specified when you are to do this. Right now, ten minutes from now, or tomorrow? And how many words are you to write? “The word cat” or simply “cat”? With what tools are you to write? Chalk, lipstick, invisible ink? Which blackboard are you to use? One in this room or one in another room? Because of a host of variables, meanings are always open to misunderstanding.

Acceptance of the Part for the Whole

Finally, acceptance of the part for the whole is a cause of misevaluation. An isolated fact or two does not enable us to fill
in an accurate and complete picture of a situation. Take, for example, the report of an automobile race as released by the Russian press. According to the story which appeared in print, the Russian entry came in second and the American automobile came in next to last. How greatly this picture changes when we learn that there were only two cars competing in the race!

In this case, the facts of the situation were deliberately incomplete. But even where this is not so, people jump to false conclusions because they forget that they have only a selection of facts drawn from the infinite number which exists in the non-verbal world. Our mental pictures will differ greatly according to which facts we select and which ones we overlook.

Am I responding to mere words or is my behavior based on the facts as they are? Do I really know what the other person means? Do I really see the whole picture or do I just think I do? These are three questions we must ask ourselves before we act if we wish to avoid mismevaluation.

WHAT DO YOU MEAN?

Almost daily, we see problems arise because of someone's inability to convey to someone else what he means. A person may know clearly what he means and he may express it accurately, but this is no assurance that the listener will get his message or that he will understand it. Both speaker and listener unconsciously assume that they understand each other. This is not true. The explorations of general semanticists into the nature of meaning have revealed how some characteristics of our language cause behavior which leads to communication problems.

WORDS DON'T MEAN, PEOPLE MEAN!

We often talk about "the meaning of words." The very expression, "the meaning of words," implies that meanings are in words. However, general semanticist Irving J. Lee has explained that this is a false assumption and a major cause of misunderstanding. According to Lee, it is a myth that words contain meaning, and this fallacy has become known as the "container myth." In the same sense that a sugar bowl is empty until someone fills it with sugar, words are devoid of meaning until someone uses them and adds his meanings to them.

4From "Russian Genius" (Editorial), Chicago Daily News, April 7, 1959, p. 16.

Another way of looking at this point is to realize that language is arbitrary. A word is an arbitrary symbol which has been assigned to stand for some non-verbal object.

This fact was obviously not understood by the lady who said to a famous astronomer, “I feel such an admiration for you astronomers because of your wonderful discoveries about the universe. But the most wonderful of all, it seems to me, is your discovery of the names of the planets. How, for instance, did you ever manage to find out that the red planet named Mars really is Mars?”

The notion that the red planet, so conspicuous among the heavenly bodies, was first observed and then arbitrarily named Mars did not occur to this lady. How disillusioned she would be if she knew that the name Mars was attached to this stellar body in much the same way we assign a name to a street.

S. I. Hayakawa has called this “linguistic naiveté.” He says, “Symbols and things symbolized are independent of each other; nevertheless, we all have a way of feeling as if, and sometimes acting as if, there were necessary connections. For example, there is the vague sense we all have that foreign languages are inherently absurd: foreigners have funny names for things, and why can’t they call things by their right names? This feeling exhibits itself most strongly in those English and American tourists who seem to believe that they can make the natives of any country understand English if they shout loud enough... they feel that the symbol is inherently connected in some way with the things symbolized.”6

The arbitrariness of the language is painfully obvious in the example of the visiting American and his English friend who were driving through London when the latter mentioned that his windscreen needed cleaning. “Windshield,” the American corrected. “Well, over here we call it windscreen.” “Then you’re wrong,” argued the American. “After all, we Americans invented the automobile, and we call this a windshield.” “That’s all very well, old boy,” snapped the Englishman, “but who invented the language?”

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**A WORD MAY HAVE MANY MEANINGS**

Another characteristic of our language which causes problems is its ambiguity. Since there is no fixed, one-to-one relationship between words and meanings, a word may have many uses. It may mean many different things.

This little poem is composed of a number of words which are commonly used to represent a variety of objects:

Where can a man buy a cap for his knee?
Or a key for a lock of his hair?
Can your eyes be called an academy
Because there are pupils there?
In the crown of your head
What jewels are found?
Who crosses the bridge of your nose?
Could you use a shingling in the roof of your mouth?
Nails in the end of your toes?
Could the crook in your elbow be sent to jail?
How can you sharpen your shoulder blades?
Could you sit in the shade of the palm of your hand?
Or beat on the drum of your ear?
Does the calf of your leg eat the corn on your toe?
Then why grow corn on the ear?

The 500 most used words in the English language have at least 14,000 different definitions. The fact that a number of meanings may be assigned to a given word explains why messages are subject to misinterpretation and why our communication is open to misunderstandings. With such odds against us, it becomes a real challenge to convey a specific meaning or intent successfully. And there is still one more factor we must consider in this whole discussion of meaning.

**PROJECTION CAN CAUSE MISUNDERSTANDING**

Since words do not contain meanings, it is necessary for us to project meanings into them when we use them. These projections are strongly influenced by each person’s own experiences; consequently, each person may have a unique personal meaning for any given word. Problems arise when we assume that a word has the same meaning for other people as it has for us.
On the basis of their limited experience, children project meaning into the language they hear. The Lord's Prayer, for example, has had to withstand considerable abuse from children trying to learn it from mumbling congregations. One little boy was heard to say, "Harold be they name." The request of another was, "Give us this day our jelly bread." And a New York child petitioned, "Lead us not into Penn Station."

Adults do the same thing, sometimes, on a more sophisticated level. Recently, I rode an airplane from San Francisco to Chicago. I was deeply engrossed in a book on the game of bridge when the stewardess stopped and looked over my shoulder. "That must be a fascinating love story you are reading," she commented. Startled, I looked at the chapter heading with fresh eyes. It was entitled, "Free Responses after the Original Pass."

These discrepancies in interpretation cause some of the greatest communication problems in industry.

For example, we see the superintendent passing through the shop convoyed by the foreman. Being in a jovial mood, he makes a conversational comment that "the girls seem happy this morning, the way they are talking and laughing." The foreman thinks, "Is he hinting that I shouldn't allow them to talk? Does he think I don't keep proper discipline? Those girls ought to have sense enough to stop talking and act busy when he's around. Maybe I better move Mary off by herself because she always get the others started talking." The boss leaves, quite unaware that his comments have been interpreted as criticism. As soon as he is gone, the foreman bawls out the girls for talking and not paying attention to their work; he moves the Marys around, and it is weeks or even months before the final ripples of disturbance have died down.\footnote{Burleigh B. Gardner, and David G. Moore, \textit{Human Relations in Industry} (3rd ed.; Homewood, Illinois: Richard D. Irwin, Inc., 1955).}

In avoiding the misunderstandings which arise from projection, we should keep in mind these suggestions:

1. Remember that meanings are in people, not in words.
2. Be conscious that a word may have more than one meaning (be aware of the ambiguity of language).
3. Be conscious that we learn meanings from past experiences.
4. Be conscious of projecting our own meanings into what others are saying.
5. If you are the speaker, ask the listener if he understands you. If you are the listener, ask the speaker "What do you mean?"
UNDERSTANDING THROUGH AN OPEN MIND

Section Four

In our daily use of language, our attitudes and our ways of thinking can at any time lead us to communication failure. They affect our motivation to communicate, our listening effectiveness, and, ultimately, our behavior. We should be familiar enough with the problems they can cause so that we can recognize and cope with these when they appear.

AVOID THE ALLNESS ATTITUDE

One of the greatest blocks to communication is the "allness" attitude. It manifests itself in people who fail to listen because they're already thinking to themselves. "I know all about that." Because they assume that they know all there is to know about something, these people develop a number of poor thinking, listening, and speaking habits.

People afflicted with an allness attitude (and most of us are) fail to realize that there are many factors which limit our acquaintance with things. Individually, we are bound by the span of our intellectual abilities and our senses. We are bound by the current body of existing knowledge, the confines of time and space, culture, language, and education. Finally, we are limited by our own interests, which determine the way we see the world and the facts we select from the total non-verbal environment. The allness attitude or orientation leads a person to overlook these limitations. It causes him to act as though he knows all about something and to assume more knowledge than he really has.
The following story illustrates the allness attitude.

A young man said in a faint voice, “You don’t want to buy any life insurance, do you?” “I certainly do not,” the sales manager replied. “I thought you didn’t,” the embarrassed solicitor said, and he headed for the door. Then the sales manager called him back and addressed him sternly. “My job is to hire and train salesmen, and you’re about the worst salesman I’ve ever seen. You’ll never sell anything by asking people if they don’t want to buy. But, because you’re apparently just starting out, I’m going to take out $10,000 worth of insurance with you right now. Get an application blank.” Fumbling, the salesman did so. “Another word of advice, young man. Learn a few standard organized sales talks.” “Oh, I’ve already done that,” the salesman replied. “I’ve got a standard talk for every type of prospect. This is my organized approach to sales managers.”

This sales manager thought he knew it all, but this did not prevent him from making a colossal fool of himself. Non-allness on his part might have prevented this.

Non-allness is simply the realization of the limitations of our knowledge. If we realize that we do not know it all, we are much less likely to be misled into faulty thinking and speaking practices. Let’s look at some of these practices which accompany the allness attitude.

**BEWARE OF EITHER/OR ORIENTATION**

The allness orientation tends to distort a person’s sense of values, as well as his way to thinking. Many problems are created when we assume that things are either one extreme or the other, either black or white. Actually, there are four different approaches we can use in our evaluations.

First, and worst, is the one-valued orientation. This leads to the kind of over-generalized evaluations which we know as stereotypes. The one-valued approach admits to the possibility of only one truth. “All lawyers are shysters.” “All cops are crooked.” “All mothers-in-law are difficult.” “All labor leaders are racketeers.” The people who make such statements are using allness language. Words like “all,” “always,” “never,” tend to push our thinking into set, rigid patterns. It is difficult to get agreement when someone not only refuses to see the other sides of the picture, but actually denies the existence of any other side. This kind of thinking is dangerous because we live in a world where things change constantly. When we fail to recognize the fact of change, we begin to misevaluate. For this reason, the one-valued approach can only lead us into trouble.

Next, there are two kinds of two-valued approaches. There are the contradictory two and the contrary two. The “contradictory two” involves an assertion and a denial. In other words, either yes or no, positive or negative. The contradictory two-valued approach is justified when it applies to situations in which there really is no middle ground. Here, the either/or way of thinking and speaking is appropriate. Either you came to work today or you did not. Both extremes cannot possibly be true.

In the case of the “contrary two,” statements are made about things which exist at the opposite ends of a scale. This scale has continuous variations between the two extremes. Therefore, the use of “either/or” language and thinking forces us into a false denial of the existence of the middle ground or continuous variations which extend from one extreme to the other.

Finally, there is the multi-valued approach. Except for the situation of the “contradictory two,” this is the most desirable approach to logical thought and action. The multi-valued approach searches out differences, gradations, and alternatives. It enables us to evaluate every situation anew and to refuse to let previous judgments close our minds to the uniqueness of each particular case. This approach is the basis of the scientific method.

Some examples of two-valued orientation show us just how dangerous this kind of thinking can be. These examples should make the advantages of the multi-valued approach quite evident.

Many of the terms we use in the English language are what we call polar terms. Something is either hot or cold, right or wrong, good or bad, smart or dumb. We are either Democrats or Republicans, labor or management, guilty or innocent. The use of such terms implies that only extremes exist. Yet water may be lukewarm, tepid, room heat, or many other degrees of temperature between the polar extremes of hot and cold. But still we use the terms hot and cold, often implying that there is nothing between these two. By doing this we often preclude the
possibility of reaching agreement with others, and may actually increase the opportunities for disagreement to occur.

Even our non-polar terms tend not to be truly neutral. Many of them seem to lean toward one extreme or the other. What term would you use to describe the exact middle point of temperature between hot and cold? "Tepid" is about as close as we can get, and it implies a slight tendency toward hot. With the exception of scientific terms such as "average" and "median," our language does not supply us with many terms to express a middle point.

A New York Times Linotype operator inadvertently created such a word one day. The story which appeared in the paper concerned a certain public official who is considered to be—or so said the story—a "poor" security risk. The word "poor" dangles in mid-air between good and poor: not too good, not too poor. Many things fall into this category. Shows, sports, cooking, health, parties, and so many others may be "poor." Such a word offers tremendous possibilities.

To return to the dangers of using the two-valued approach, we can conclude that this approach:
1. Pushes us further away from others than we are or ought to be in our disagreements with them.
2. Makes it difficult to take a moderate stand on an issue.
3. Forces us to polar extremes.
4. Makes it difficult for us to turn to a third alternative or possibility.
5. Closes us off from further means of problem-solving.

**KEEP YOUR FEET ON THE GROUND**

Realizing that, within the framework of our own perspectives, we see only some of the non-verbal facts which exist, we are now ready to understand the concept of abstraction. We shall see how high-order abstraction can cause us to misvalue.

Words in our language may be used to represent facts at different levels, some more specific, some more general. As the terminology employed becomes less specific, we may think of it as climbing higher in its level of abstraction. The word "chair," for example, is fairly specific. The word "furniture" is more abstract; it refers to many things besides chairs. And the term "manufactured item" is still more abstract.

Low-order abstractions are words that are specific and concrete. They have direct reference to an individual thing in the real world at a given time. High-order abstractions are words that are ambiguous or vague. They may have many meanings and interpretations, the number increasing as the level of abstraction becomes higher. Contrary to popular belief, high-order abstractions are not meaningless. Rather, they are too meaningful because they can mean all things to all men.

As the order of abstraction becomes higher, the possibility of projection and misunderstanding increases.

"Federalese," the terminology in which many bureaucratic directives are written, provides us with some outstanding illustrations of high-order abstraction leading to chaos. It bowed low to the merits of plain English, however, when a New York City plumber wrote to the Bureau of Standards that he found hydrochloric acid good for cleaning out clogged drain pipes. He received the following response from the Bureau: "The efficacy of hydrochloric acid is indisputable, but the corrosive residue is incompatible with metallic permanence." The plumber wrote back that he was glad that the Bureau agreed with him. To this the Bureau wrote another reply: "We cannot assume responsibility for the production of toxic and noxious residue with hydrochloric acid and suggest that you use an alternative procedure." By return mail, the plumber again expressed his pleasure that the government thought his idea was a good one. In desperation, the Bureau broke down and wrote to the plumber in plain English. Their final message was, "Don't use hydrochloric acid, it eats hell out of the pipes."

It doesn't take much to imagine the catastrophes that could arise from continued use of such high-order abstractions. Where do we find these abstractions? Certainly, they appear often in speeches, orders, directives, and other forms of communication used in industry and the government. Here, for example, is "The Speech for All Occasions," which could be given anywhere, any time, to anyone.

Mr. Chairman, ladies, and gentlemen. It is indeed a great and undeserved privilege to address such an audience as I see before me. At no previous time in the history of civilization have greater problems confronted and challenged the ingenuity of man's intellect than now. Let us look around us. What
do we see on the horizon? What forces are at work? Whither are we drifting? Under what mist of clouds does the future stand obscure? My friends, casting aside the raiment of all human speech, the crucial test for the solution is the sheer and forceful application of those immutable laws which down the corridor of time have always guided the hand of man, groping as it were, for some faint beacon light. Without these great vital principles, we are but puppets responding to human fancy, failing entirely to grasp the hidden meaning of it all. We must address ourselves to these questions which press for answers and solution. The issue cannot be avoided. There they stand. Is it upon you and you, and yes, upon me, that the yoke of responsibility falls. What then is our duty? Shall we continue to drift? No! With all the emphasis of my being, I hurl back the message, "No." Drifting must stop. We must press onward and upward toward the ultimate good to which all must aspire. But I cannot conclude my remarks, dear friends, without touching briefly upon a subject which I know is steeped in your buried conscience. I refer to that spirit which gleams from the eyes of a new-born babe, that animates the tawdry masses, that sways all the hosts of humanity, past and present. Without this energizing principle, all commerce and industry are hushed and will perish from this earth, as surely as the crimson sun follows the golden sunshine. Mark you, I do not seek to unduly alarm or distress the mothers, fathers, sons, and daughters gathered before me in this vast assembly. But I would indeed be recreant to the high resolve which I made as a youth if I did not, at this time and at this place, and with the full realizing sense of responsibility which I assume, publicly declare and affirm my dedication and my concentration to the eternal principles and receipts of simple, ordinary, commonplace justice. For what, in the last analysis, is justice? Whence does it come? Where does it go? Is it ponderable? Is it not. Justice is none of these things. And yet, on the other hand, it is all of these things combined. While I cannot tell you what justice is, this much I can tell you. That without the encircling arms of justice, without her shield, without her guardianship, this ship of state will sail through uncharted seas, narrowly avoiding rocks and shallows, headed inevitably to the harbor of calamity. Justice, justice, justice... to thee we pay homage. To thee we dedicate our laurels of hope. Before thee, we kneel in adoration, mindful of thy great power, mute before thy inscrutable destiny.

Audiences usually burst into gales of applause when this speech is delivered. But, what specifically, does it mean? Nothing! It is so full of high-order abstractions that we can project any meaning we wish into it. The speaker refers repeatedly to justice. But what is justice? He himself says he cannot tell you what it is. The margin for misunderstanding of this speech is tremendous because its abstract, vague terms present little that helps to pinpoint its meaning. This is why general semanticists urge people to keep their feet on the ground verbally. This means giving details, quoting facts and figures, mentioning dates and places, focusing on the visible, the audible, and the measurable, and referring to direct experiences rather than to hazy thoughts, vague opinions, and general ideas.

**USE INDEXING AND DATING**

To be reasonable and intelligent, our thinking and talking must fit the facts in the world of reality. The world of reality is a vast, complex structure, constantly in a state of change. But our language is of a different nature. It implies that the world is static and unchanging. It does not reflect the changes which take place in the world around us. This discrepancy between the nature of the real world and the nature of our language can lead us to misconceptions if we tend to accept words as being truthful representations of the facts.

Two vitally important characteristics of the real world are nonidentity (or differences) and process (or change). Consider the first of these characteristics. As far as we know, there are no two things in the world of reality that are identical. Identical twins are not identical in all respects. Two pieces of sand or two snowflakes are not identical. We can think about identity, but we cannot find it. In other words, differences are characteristic of the structure of reality, while similarities are created by the human intellect. And it is similarities rather than differences that tend to get stressed in our language. We use the single label "Democrat," for example, to refer to millions of people, each of whom cast a Democratic vote in the election. Yet each of these is a uniquely different person who has his own thoughts about labor, civil rights, and local political issues.
How can we overcome this tendency of our language to imply similarity? How can we gear our communication and behavior to the differences which observation reveals? In other words, how can we make our language fit the structure of reality?

We can do this by applying an indexing principle to our language. That is, we can point out differences by adding a subscript or index number to the specific objects covered by a generic term. For instance, worker 1 is not worker 2, boss 1 is not boss 2, and situation 1 is not situation 2. By doing this, we change the structure of our language to fit the world of reality.

Look at the misvaluation that occurs when we fail to do this. Samuel Johnson said, “I am willing to love all mankind, except an American.” A man in Milwaukee who, after walking up to a policeman and socking him on the jaw, said, “I don’t like policemen. I had all this inside of me. Now I guess it’s released.” There’s the case of the small boy in New Britain, Connecticut, who marched up to a department store Santa Claus, punched him in the nose, and yelled, “That’s for not bringing me a bicycle last year.” Finally, there is the young lady who suddenly rushed up to a stranger and started beating him with her umbrella yelling, “How dare you remind me of someone I hate!”

The rewards of seeing differences are great. In any field—science, business, industry, government—the demand is for individuals who can see differences. A man’s earning power is often commensurate with his capacity to produce new ideas, to take chances—in other words, to think and act differently.

The second characteristic of the real world, the fact that it is in a state of change, also requires a form of indexing for reorganizing time differences. Everything in the world is constantly changing. Some of these changes occur at the sub-microscopic level and are not visible to the naked eye. Thus, the chair you are sitting on is changing, the desk you work at is changing, and you too are changing (take a look at a picture of yourself taken 20 years ago). Science 1846 is not science 1962, military defense 1945 is not military defense 1962. By dating things, we indicate that we are aware of the differences between them at given times in history. When we date our evaluations in this way, we will keep our thinking in line with the changing facts of reality. The following episode shows how necessary it is for us to re-evaluate situations continually.

During a heavy flood a little girl was perched on top of a house with a small boy. As they watched articles float along, they noticed a derby hat on the water. Presently the hat turned and came back, then turned again and went downstream. After it went away, it turned and came back again. The little girl said, “Did you see that derby? First it goes downstream, then it turns and comes back.” The boy replied, “Oh, that’s father. He said, ‘Come hell or high water, I’m going to cut the grass today!’”

How often do we run our business or our own lives in this same manner—by refusing to change our ways of thinking to fit the changing facts. One of America’s most important philosophers, Charles Sanders Peirce, said, “The scientific spirit requires a man to be at all times ready to dump his whole cartload of beliefs the moment experience is against him.”
THE IMPORTANCE OF COMMUNICATION

I was pleasantly surprised recently when I met an old friend of mine, a philosophy professor, who immediately remarked, "You know, you certainly are in the right field. Everywhere you go you hear people in business or education talking about communication."

This came as a surprise because this professor has been most critical of General Semantics and the emphasis on communication in earlier books and discussions. As most people are when others agree with them, I was happy to see that this heretofore critical professor "had finally seen the light!"

Almost all of the executives that I lecture to or come in contact with agree that communication is one of the most important areas in business and industry and that their job involves communication, in one way or another, 85 or 90% of the time. And yet, there are dreadfully few courses on communication in the Schools of Business and Industrial Relations Centers at our leading colleges and universities. I am not talking about courses in public speaking and letter writing. While these courses are important, I am referring to the job that we are continually engaged in. And when this kind of a course is presented, we invariably get the response, "I have taken communication courses before. But nothing like this. I thought that it was going to be another course in letter writing."

There are some general communication principles that apply to all kinds of communication which are related to the scientific method or the methods of science. These are general principles that can be applied to human communication.

The first, and one of the most important, is the pause, delay and analysis in our communicating and behavior. Many
misunderstandings and disagreements result from an automatic, trigger-like response to someone else’s words, statements or behavior. If we could but pause and delay a little longer than we normally do—a two-second activity delay—we would not have some of the arguments and disagreements in which we find ourselves.

One of the most common problems in communication is jumping to conclusions or acting on inferences as if they were factual. The scientist knows the difference between his inferences and statements of fact—and we should too. It is the easiest thing in the world to pass off inferences as if they were factual, but it takes a little more wisdom to know the difference between the two and behave accordingly.

Another common barrier to effective communication is the closed mind, the “know-it-all.” We are all subject to this “allness” orientation, in one way or another, for it is extremely subtle. It keeps us from asking questions, from observing, from saying “I don’t know. Let’s see.” We are all subject to its subtlety of not asking questions when we should, of not listening to the other person from his point of view and refusing to change our ways of thinking or behaving when the changing facts indicate that we should.

And, it appears that our educational institutions have not done a very good job either in helping us to recognize and eliminate this “allness” orientation. For we find it among Ph.D.’s, M.D.’s, among men in positions of authority, in all areas and in all degrees. We seem to need special training in the realization of the limitations of our knowledge, in not assuming more knowledge than we really have, in the ability to say, “I don’t know... let’s see.” When we are able to ask questions, we can get on the other person’s channel of communication. But, too often we do not ask questions. We tend to assume more knowledge than we really have, which leads toward misunderstandings, disagreements, accidents and other kinds of problems.

The problem of misunderstanding is one of the most common and pernicious. The amount of time and money that is wasted due to misunderstandings and otherwise poor communication is difficult to estimate. But it is enormous indeed. Why do people have misunderstandings? There are many reasons, of course, but let us mention just a few.

One of the causes is the assumption on the part of the speaker that the listener understands him. Having spoken, speakers often unconsciously assume that the listener understands him. He, therefore, fails to aid the listener in getting on his channel of communication by asking him if he understands.

Listeners, too, unconsciously assume that they understand the speaker. They fail to ask the speaker, “What do you mean?” or “Joe, is this what you meant, or wanted me to do?”

There are two unconscious assumptions that lead toward misunderstandings. First, we unconsciously assume that others use words as we do, that others mean what we would mean if we were doing the talking. Second, we assume that meanings are in words, that words contain meaning. But, words don’t mean—PEOPLE mean. Meanings are not in words, they are in people. As the famous philosopher, Charles Sanders Peirce said, “You do not get meaning, you respond with meaning.”

So, both the speaker and the listener must be conditioned to ask questions. Usually one question will be sufficient. But, it is the assumption that we do understand when we don’t that gets us into so many problems in communication.

There is one last assumption that is, perhaps, the most unfortunate of all and is a major cause of the poor communication that we find today. This is the assumption that we don’t need to improve our communication. Although most people, especially top executives, realize the importance of communication, some of them do not really feel it to be important or, they feel, they do not need to improve their communication. These tend to be the ones who need it the most!

So, the first problem in communication is getting people to realize—to really believe—that it is an important problem. Only then are they ready to improve their communication, to work on themselves. For, improvement in communication does not come from without, but from within.
UNDERSTANDING AND BEING UNDERSTOOD*

Section Six

Let me ask one question. How important is communication in your work? How much of communication do you do on your job? Studies show that upwards of 85% of what executives do is a process of communication. I tried to find out something about the communication structure in your company—something about the working of communication. We find generally a tremendous lack of concern about communication and the teaching of communication in business and industry. What I would like to do this morning is to present four barriers to effective communication and to show you a little bit of the technique that we use in teaching. I am not only concerned with teaching individuals intellectually, some of the principles of communication. The important thing is, how can we be trained that way? There are at least two different kinds of knowledge—by direct experience and by second hand reports. In terms of education, there is a big difference between knowing something intellectually or actually behaving in terms of the principles. From my point of view, we do not know communication until we actually get it into our nervous systems. Therefore, the question is how can we train and not just teach. How can we train executives or individuals generally to behave in the terms of the principles of general semantics or of communication?

Now I have a little quiz here—I will give you a couple of questions just to indicate the technique of teaching or training. I used to give this little quiz that I made about eight years ago before all of my communication courses and then at the end of

*Speech delivered at an International Management Conference.
the course. One of the young ladies said, "You know, this is the only course I have ever taken in which I knew less at the end of the course than I did at the beginning." Now what does that mean? We will see later on. Why did we have some of the misunderstandings in the movie? You will see that some of us get ourselves into difficulty because we sometimes assume more knowledge than we really have.

In this process of communication we cannot assume too much. Basically what we try to do is what we try to do in psychiatry and psychotherapy. This is why, in my particular course in communication, it is a combination of general semantics, psychology, sociology, semantics, even psychoanalysis or psychiatry, because to be effective communicators we must be, obviously, in good mental health. Basically, what we want individuals to do is to be conscious of their assumptions! In other words, asking individuals, "What are you assuming?" What assumptions are you making about the other individual? All of us continue to make assumptions at all times. We make assumptions while we are driving a car. In fact these are some of the principles of general semantics that we are applying at Northwestern University's Traffic Institute. We find that the causes of accidents are not so much mechanical failures but failures in human evaluation—ways of thinking or ways of sizing up a situation.

We teach a course in Communication Skills in Industry at the Industrial Relations Center at the University of Chicago from the point of view of semantics and general semantics. Now, many of you have heard the word semantics, but how many of you know what the word means? It is the study of "meanings of words" and the history of meaning changes. How about general semantics? Have any of you heard of general semantics? This is a comparatively new science. Actually, it was created by a Polish scientist named Alfred Korzybski in 1933 in a large book called Science and Sanity. This is the study of the relationship between language, thought and human behavior. Now, is there a relationship between the kind of language we use and our ways of thinking? Is there? Is there a relationship between the kind of language we use, the thinking we do and the human behavior manifested? In some respects these principles are old stuff, but they are just being touched upon today.

Let us make an analysis of human behavior. There are usually at least four phases involved in human behavior. (1) there is a happening which leads to a (2) nervous reaction which leads to (3) human evaluation later, which in turn usually leads to (4) talk and/or act. All kinds of human behavior, except a simple reflex action that I will talk about will be concerned with these 4 phases. For example, I drop the eraser. This is the happening. There is also a nervous impact and then there is a human evaluation, a way of thinking, or taking a point of view. Were there an awful lot of evaluations going on in the movie? Were there an awful lot of assumptions made, points of view being taken? And while the boss did not think he was communicating, he was communicating. There is a new science which is called kinesics which is the study of bodily movements. In fact all of you are communicating to me right now. This is called non-verbal communication.

How many of you were taught in school that words have meaning? Most of us were. May I say that it is this unconscious assumption that leads toward misunderstanding. I will amplify that. This is why from this point of view of general semantics, a relatively new study, we are concerned with the effect that words have on human behavior and our ways of thinking. So, we will be concerned primarily with human evaluation—your way of thinking, my way of thinking, in all situations. Is it proper or is it improper? We will be concerned, in our course on communication, in training men in what constitutes proper evaluation—in making our evaluations or our ways of thinking fit the facts, fit the structure of the world of reality. Actually, if we think about it, we have an awful lot of misevaluations—misevaluations which do not fit the facts. I will only point out a few of these because I do not have time, obviously, to give demonstrations or to give too many illustrations.

Now, what do we mean by a basic pattern of misevaluation or a misunderstanding? Again, let me illustrate with these little quizzes or little demonstrations because, to me, this is one of the best ways of doing it. I have a piece of chalk and here is a blackboard. Tell me to do something that I cannot possibly misunderstand and I will show you that I can misunderstand any directive that you give me.

Have you ever given what you thought was a simple directive and, for one reason or another, it was misunderstood? I am only illustrating that the moment that you and I use words, don’t be surprised if we will have misunderstanding.

Okay, this is one kind of a mis-evaluation. At the risk of confusing you too much, let me ask you to do one other simple
kind of an illustration, because it has very profound effects on our ways of thinking. Will you pinch your finger and tell me what you felt. You say you felt "pain," "pressure," "the other finger," etc. This man says that he felt "silly." All right. You sir, you say that you cannot tell me what you felt. Good!

Let me say one thing. I am extremely pleased. This man has learned faster than any student I have ever met. I very often, however, get this within the first hour of instruction. They very often change their way of thinking as you will see. This is good.

Now, notice what I am talking about. I am talking about the basic patterns of misevaluation. Are these words what you felt? I am saying that this is not what you felt. Let me go one further—you cannot tell me what you felt. I'll go one further than that. No matter what you say anything is, it isn't! Are you confused? Now the only reason I introduce my courses in this way is because confusion is the beginning of learning.

In other words you are giving me words that stand for the non-verbal feeling—right? Now, what you felt inside of your skin was not the words—right? This is not what you felt. What we are trying to illustrate is the important fact that you and I live in the world of not words or the non-verbal world. If we are going to have proper evaluation we must separate the world of words and the world of not words—the non-verbal world and the world of words that stand for the non-verbal world. Basically, what we are teaching is the application of the scientific method. To what degree do we try to make the world of reality fit the words that we use and the stereotypes inside of our heads rather than trying to make our language fit the structure of the world of reality. Here is one example to illustrate the difference between words and things. Not too long ago there was a lady down in Florida who was having a party for a group of friends. After the dinner, a lady came up to her and said, "My husband enjoyed that food very much—would you please tell me what we had." The hostess turned to the lady and said, "Yes—you just had the pleasure of eating snake steaks." Upon hearing that she had the unfortunate experience of seeing her food for the second time.

Now the question is what was she responding to? Was she responding to the non-verbal facts or was she responding to the words and verbal associations. The general question is, to what degree is your thinking or my thinking, your decision, etc., based upon a response to facts or is it via or in terms of words, verbal association, stereotypes, etc.? We could spend several hours on this one concept alone.

The man who developed this system, Alfred Korzybski, asked the question, "Why do we have so many misunderstandings? Why do we have so many wars? What's the difference between insane people and the sane?" What do "insane" people do? Often, they try to make the world of reality fit what is in their heads. How about sane people? Where do we find sanity at its best? Take engineers, take scientists—what do they do? They analyze the structure of the world of reality—then they try to make their language, their formulae, their thinking, fit the structure of the world of reality. The "insane" people reverse the process. Then Korzybski asked the question, "How about you and me? What do we do?" We are certainly not insane, but we are not too sane sometimes, either. So, Korzybski called you and me, not sane or insane, but unsane. What do we mean by that? We mean that the difference between insanity and sanity is not one of kind, but of degree. We, too, make an awful lot of projections, inferences and jump to conclusions which are exactly the same as insane people although not nearly the degree.

Will you take your pencils and paper? I will not ask for the answers, but I would only like to indicate to you how a communication course is run and what I am after. I am sure that all of you will get it right away. Notice I am after the assumptions of these people in the story. Let me read you a short story. Then I will ask 6 questions and will you answer true, false or don't know.

Jim Jones was standing on the corner waiting for a bus. The corner was dark and lonely. Jim knew that many robbers were around that neighborhood because he was familiar with it. While he was waiting for a bus a man sneaked up behind him and hit him on the back. Jim whirled around quickly and he socked the man with a hard right squarely on the jaw.

All right. Either true—false—or don't know.
(1) The bus Jim was waiting for was late.
(2) Jim was right in hitting the man before he robbed him.
(3) Such intelligent action will always result in capturing more robbers.
(4) This robber should have hit Jim Jones harder before he had a chance to turn around.
(5) The robber landed on the sidewalk and did not succeed in his attempt.

(6) Jim should not have struck the man.

Notice what we are getting at. We have a situation, we have a nervous impact, we have an evaluation (taking a point of view, sizing up the situation, a way of thinking) and finally talk and/or, as in this case, act. I am not only concerned with the assumptions of Jim but of all of us who have different assumptions. This is what we are getting at.

(1) The bus Jim was waiting for was late—don’t know? Notice what an interesting discussion you can have with someone who would answer true. If we would answer true—we may have the tendency of projecting into situations things which are not there and/or acting on inferences instead of fact.

(2) Jim was right in hitting the man before he robbed him. So you think it is a miscalculation in hitting the guy—in turning around and swatting him? He should have hit him? Who should have hit whom? I see—if you are standing on a dark corner and someone comes up and hits you on the back the proper evaluation is to turn around and sock him. You think this is proper evaluation? This is one of the things we will see. A hit to one man is a tap to another. How hard is a hit? So to this one—don’t know.

(3) Such intelligent action will always result in capturing more robbers. False? Don’t know? Was the action intelligent? Notice how you will have different interpretations of such an ambiguous statement or question. I am asking you to do something that you shouldn’t do in the first place—but only as a teaching technique. Obviously, you all see what I am getting at. The individuals that have a tendency of answering true, true, true or of inferring too much.

(4) This robber should have hit Jim Jones harder before he had a chance to turn around. Let me ask the question—is this a robber? You say the question said so. Let me point this out. I said answer in terms of the story—right? Let me illustrate what I am talking about. Let’s visualize that we have a glass container or bottle with a ship inside of it. The question is how do we take the ship out. You can’t break the bottle. There is no string attached so that you can make it smaller and pull it out, you can’t sail it out because the bottle is so big and the end is this big. You can’t burn it—you have to take it out in one piece. We have an answer here—we take it out the way we put it in. This man asks, “Can you say the hell with it?” Yes you can if you don’t want the answer. This is very often what you can do in all kinds of situations if you don’t want the answer.

How do you get it out—the same way you put it in. “Poof”—I just took it out! I put it in verbally, I just took it out verbally. What I am illustrating is the difference between words and things. By my saying that he is a robber does not make him a robber. What I am trying to show you is the tremendous difference between the world of words and the world of not words.

(5) The robber landed on the sidewalk and did not succeed in his attempt. Don’t know? All right.

(6) Jim should not have struck the man. It is a very difficult situation obviously. But one of the reasons that men and women get killed is because they resist too quickly and the other person might well have a gun or knife. I am basically saying that they are losing their heads by responding too quickly and this is the first kind of principle we teach for effective communication.

We must consider this in terms of three different kinds of principles or reactions, there are three different kinds of human reactions. (1) there is a reflex action. I am not going to put this all on the board because actually it will take too much time, but the reflex action is the kind of inborn reaction that we have. You shine a light into the pupil of the eye and what happens? It closes, gets smaller. Okay, this is a reflex action. It is inborn, it’s quick, it’s immediate, it’s automatic, there is not much that you and I can do to change it although psychologists say that some reflex actions can be modified to a degree. When you eat food you have some gastro-intestinal changes, but the important thing is that it is quick and the stimulus controls the reaction.

The kind of reaction that we are concerned with in communication is what we would call a signal reaction. Now whereas the reflex action is not learned or conditioned—it is inborn—a signal reaction is also quick, impulsive, automatic, but again the difference is that this is conditioned or learned. We find that this tendency to respond too quickly is one of the important factors of misunderstanding, arguments and communication failures. For instance, “A lady in our town who may be best described as a perpetual talker was asked by one of her long suffering neighbors if she ever thought about what she was going to say before saying it. “Why no”—said the lady solemnly—“how on earth could I know what I think about a thing until I’ve heard what I have to say on the subject!”
Here is another example of this signal reaction. In driving, for example, if we are on a slippery road and if someone runs out in front of the car what is the impulsive thing to do? Slam on the brake. Is that proper evaluation in that situation? The safety experts also tell us that if we are walking through a very busy thoroughfare and cars are going every which way and someone yells to you, "Look out," if you immediately jump to one side you will get hit 3 out of 5 times. If you pause, delay, analyze and observe you will get hit only 2 out of 5 times!

I am going to conclude with this one example. This is a very quick and impulsive action.

A Houston bus driver was trying to make a turn down town but a woman driver, who was apparently unaware of the bus, was moving into a dangerous position. The driver whistled sharply. The woman driver stopped and looked, and the bus driver jockeyed his bus through the opening. Asked by a passenger why he had whistled instead of honking the driver replied, "About half of the women drivers won't pay attention to someone honking, but there ain't a dame in Houston that won't stop and look when she hears a guy whistle!"

This too is a reflex-like reaction--a stimulus and immediate response. We will see why this signal reaction will lead toward all other kinds of misevaluations.

Basically, forget about the reflex action because there is not much we can do about it. We are concerned with (2) and (3). Signal reactions are quick, impulsive, an automatic kind of reaction. This does not mean that we should not make quick decisions. Very often you and I must make quick decisions, obviously. I mean the distinction between a quick decision and a snap judgment, where we assume too many things, where we jump to conclusions, etc. The 3rd kind of reaction is what we call the symbol reaction. This is where you have the pause, the delay, the observation and an analysis, before you respond. The question may be raised, "Well, isn't this what is meant by the sign "Think"?" Many of you have this sign. To me, and only because I am trained in this particular kind of reaction, the word pause is more operational than the word "think." To me the word think is very ambiguous when I think about "Think." What do you mean by "Think"? The word "pause" tells me what to do or not to do. It is a little bit more operational, but again this may be just a semantic quibble.

The reason I put this principle at the beginning of my course is that the tendency to respond too quickly is an important variable factor in misunderstanding. If you and I could only learn to pause and delay for only 2 seconds longer than we normally do, if we could pause or delay to try to analyze more facts, we would have more of the variables of the situation. With this kind of a symbol reaction, or pause or delay, would we be pressed into inaction or indecision? Not at all. You and I must make decisions--we must act. We try to get as many of the variable factors as possible. Do we try and wait until all the facts are in? Obviously not. Your behavior and my behavior is based on degrees of probability, never on certainty, because we can never be certain about anything. One of the dangers of this kind of signal reaction is that it makes us have what we call habitual reactions. We become creatures of habit. Now is habit good or bad? We can talk about habit No. 1 and habit No. 2. That is why I am using No. 1 and No. 2 because very often words can mean many, many different things as we will see. The first 500 words in the dictionary have over 14,000 dictionary meanings. This is one of the reasons why we have misunderstanding. Habit No. 1--let us call this "good." By habit No. 1, I mean the kind of habitual behavior that saves time and energy when you do a job in a particular way. But the kind of habit that I am concerned with, the one involved with a signal kind of reaction, is a bad kind of habit. It is the kind of habit in which we do a job in the same old way and if the situation changes we do not change our ways of thinking to fit the new fact or changing situation. Drivers of airplanes sometimes get themselves into a lot of trouble. In fact this recent accident, if you have read some of the details on that, state that it was caused by the inability of the pilot to change his old ways of flying the old type of plane to the new jet. Similarly with automobile drivers. When you and I are driving a car, the road is slippery and someone runs out in front of the car, what is the impulsive thing to do? Jam on the brakes? Is that proper evaluation in that situation? This is where habit No. 2 is bad. May I say I don't have time to talk about the tremendously important principles of change. You and I should always be psychologically or emotionally ready to change our ways of thinking or behavior if the facts dictate. The structure of the world of reality is change or process. Basically, what this kind of orientation does is to teach us how to make our ways of thinking fit the structure of the world of reality.

If I were to ask you--is this table changing? It is getting older? Are you changing? What I am basically saying is that the
structure of the world of reality is that of process or change. Leave the table here for 20 years—it won’t be the same. Take a look at a picture of yourself 20 or 30 years ago. You will all have verification of change. If we are going to make our evaluations fit the changing world obviously we must change our ways of thinking to fit the facts. I can think of no more important principle for your job or in business or industry. What happens to business or industry if they do not keep up to date?

Here is an example of a bad kind of signal reaction, a habitual reaction inappropriate for a new situation. “We enlisted men were at bat in a hotly contested baseball game with our officers when a private hit what looked like a single to short right field. Instead of stopping at first, however, he foolishly started a wild dash for second. Realizing then that he couldn’t make it he scrambled back toward first. Now he was being chased in a run down between a lieutenant playing first and a colonel playing second. It looked like a sure out, but just as the lieutenant flipped the ball back to the colonel, the private snapped to attention, saluting the colonel. Automatically the colonel snapped the salute back and muffed the catch!”

This is a kind of stupid and inappropriate reaction in this particular situation. In other words, in a signal reaction, the stimulus controls your behavior, whereas in the symbol reaction you have the pause, you have the delay, you have the observation, you have the analysis and then you have the reaction. You control the situation. The situation does not control you. One of the best examples I can think of is the Orson Welles man from Mars broadcast. Remember that? I just read in the paper they had a similar incident in England. This is what I mean by miscalculation—people who confuse fact with fiction. To what degree, again, can we make our evaluations fit the non-verbal world? Notice how this tendency to respond too quickly can lead to unjustified inferences. “In Vancouver to take a new job, a young woman was searching for a room. She answered several ads, but each time the vacancy had already been filled. Then, on a suburban street, she saw a ‘Room for Rent’ sign and dashed in at the same time as a young man obviously on the same mission. The landlady looked at them and said ‘We don’t take married couples’ and promptly shut the door. The young woman looked at the man, blushed and smiled, and rang the door bell again. The young lady then told the landlady ‘But you don’t understand—I am not married to this man.’ The landlady gave her a brief black look and this time slammed the door in her face!”

Do secretaries make inferences about the boss? How often do bosses make snap judgments toward subordinates? Or workers make inferences about their bosses? George Santayana, the famous philosopher, has said, “The aim of education is the condition of suspended judgment on everything.” How often do you or I assume more knowledge than we really have? We will see that this is one of the reasons why we don’t listen—why we can’t listen because we make up our minds too quickly. In our courses we have police chiefs or army officers and the very first day some of them communicate to me—they come to class and communicate non-verbally as if to say, “Okay boy, show me something I don’t already know!” Sometimes we get university students with this kind of an attitude and they are disappointed because they don’t learn one thing the whole semester. The closed mind is one of the barriers to effective communication. It is not because students can’t learn. It is because of the attitude they bring. Finally, here is one example of how a symbol reaction leads to longevity. One 90 year old man was asked “What was the contributing factor toward your long life?” He replied, “Well, when my wife and I got married we used to argue a lot and so we decided that when we got mad I would take a walk around the block and so one of the reasons for my long life is plenty of fresh air and exercise.” This would be the first principle—to pause and delay. It does us precious little good if we understand it only intellectually. How can you and I, and I include myself at all times, how can we manifest these principles—get them into our nervous systems. This is so important for all levels in business and industry.

Let me start a new principle. You hear something jingling. Can you make a statement of fact that I have money in my pocket? Or can you make a statement of fact that I have car keys? I make a statement that if I push this switch down the lights will go out. Now my question is, “Can I make a statement of fact?” They may go out? All right, let’s try it and see. If I try it and see—then can I make a statement of fact? What I am saying is that there is an important difference between a statement of fact and one involving an inference. How often do you and I try to pass off inferences as if they were statements of fact or how often do other people act on inferences as if they were statements of fact? Did we see a lot of inferential behavior in that movie? So the second principle is training ourselves in knowing the difference between statements of fact and inference. I made the statement that if I push the switch the light
will go off. Is it purely an inference or an assumption? Now let me push the switch up. Now can we make a statement of fact that I pushed the switch and the light went out. This is something we see—right? Let me very quickly then consider a tremendously important principle—what are the differences between a statement of fact and a statement involving an inference.

I should like to consider two different kinds of statements. A statement of fact (by statement of fact we mean a descriptive statement) and a statement involving an inference (by this we mean an opinion, an assumption, etc.). What are some of the differences or criteria of statements of fact and statements involving an inference? (1) A statement of fact can only be made after observation. A statement of fact can only be made after you have observed something, whereas an inference can be made anytime. Before, during or after observation or, as is usually the case, with no observation at all. A statement of fact, by this I mean a description, can only be made after we have observed something. Obviously we cannot describe something until we have observed it. (2) and these are the two most important characteristics of this—No. 2 is especially important. A statement of fact stays with what can be observed. Did the secretary make some inferences about the boss in that phone conversation? Did she act as if they were true, as if they were statements of fact? As we will see, one of the reasons why we get into so many difficulties, not only in communication but in human relations, is because we so often jump to conclusions. We need more of this kind of training in communication because communication lies at the heart of coordination and cooperation. This is why I say we underestimate the importance of communication. The more we have big military organizations, the more we have big business, big government, big industry, the more important will be communication. This is obviously the only way that you can have men working together in coordinating their activities.

Now for the second characteristic of an inference. A statement involving an inference goes beyond observation. What do I mean by that? If I say it is a statement of fact that I have money inside of my pocket, this goes beyond what we have observed. This involves an inference—an assumption. Now I am not saying that we should not make inferences. We should make inferences—we do make inferences. Your life and my life—our lives are lived on the inferential level, but wisdom begins when we know the difference between the two. The good executive, the good scientist, they are the men who know the difference between the two. For example, “My mother rented a room to two boys whom she did not know. She was a little worried at first but in a few days she stopped fretting. They must be nice boys she explained. They have towels from the Y.M.C.A.” This seems like a statement of fact and, as we will see, one of the reasons why we get into so much difficulty is because there is no grammatical difference between a statement of fact and one involving an inference. “They must be nice boys because they have towels from the Y.M.C.A.” What is the statement of fact we can make about this? They have towels from the Y.M.C.A.—that is a fact? They lifted the towels from the Y.M.C.A.—that’s an inference—they might have bought them—right? Notice, there is a sharp and important difference between the two. If you think about most of the misunderstandings and troubles between people it is because they confuse inferences with statements of fact. Okay, how about the statement here—they have towels from the Y.M.C.A. Is that a statement of fact? They have Y.M.C.A. on them or they are marked Y.M.C.A. This is a statement of fact. This does not involve an inference—this is a description—one you can actually see. Think about this kind of an orientation. This does not mean that we willy-nilly agree with everything. I can’t go into the total area of the techniques of agreement. What this does mean, however, is that we teach ourselves the principles of agreement and especially if we must disagree (and we openly invite disagreement) the question is how can you and I learn to disagree agreeably.

There is something wrong with our ways of evaluating when we disagree disagreeably. Notice the two different ways of evaluating here—the same set of facts or circumstances but two different ways of sizing up the situation. “A well-filled bus was proceeding down a Boston thoroughfare when a truck cut sharply into its path and only the bus driver’s quick wits and action prevented disaster. Pale and shaken he voiced his estimate of the vanishing truck driver’s character, origin and mode of life in words appallingly stark. Then, remembering the audience at his back, he turned to face them. A little white-haired woman forestalled his apology. ‘My congratulations,’ she said, ‘upon an admirable presentation of what we may reasonably assume to be the facts.’ ” One situation—two different
ways of evaluating. When you and I get mad or emotionally involved, if you will analyze it, you will see that it is usually in the area of inferences. Human beings have what we call the psychology of momentum. We get mad and the madder we get the more we respond to our own words. We build up the psychology of momentum. Babies and animals can cry or get mad and stop just like that. But human beings perpetuate and magnify their anger and aggressions out of proportion.

Number 3—a third characteristic of the statement of fact and one involving an inference. A statement of fact basically approaches certainty, whereas inferences have low or high degrees of probability. Now obviously, the reason that I say it approaches certainty is because if we are going to apply what we know in physics and sciences there is no such thing as certainty in the world of reality. The moment that we talk, and I am quoting Einstein now in his Sidelights on Relativity, “In my opinion the answer to this question is briefly this: As far as the laws of mathematics refer to reality they are not certain. And as far as they are certain they do not refer to reality.” We can have certainty in logic. We can have the relationship between language and language. The moment we apply our thinking or our language to the world of reality we only have probability. Now trouble lies when we have what I call the assumptions of certainty. If any business or organization tries to go ahead with the assumptions of certainty, and this basically means for example, if I am going to walk or cross the street with the assumption of certainty what do I do? I know I am going to get there—I don’t look every which way. A business or organization can do the same thing. They can be certain, or a man can be certain that he will get to the top. This is a very dangerous kind of a mental attitude. I wish I had more time to explain the difference between expectation and motivation. Too often men in business organizations expect to reach the top with certainty. For good mental health we must learn to lower our expectations but keep our motivations high. We usually expect too much and to the degree that we do not realize our expectations then what we have we call the I.F.D. disease—Idealization, Frustration and Demoralization.

Here is an example of an assumption of certainty, plus acting on an inference as if it were a fact.

When a jealous husband found a man’s billfold in his car he immediately drove to an address shown on an identification card in the wallet. He rang the bell and, when a man answered, gave him a sound thrashing and a warning. Monday the husband was fined and given a suspended 30 day jail sentence in Municipal Court. The owner of the billfold had moved from the address on the identification card.

Police officers are involved in inferences all the time. Some police officers too often act on inferences as if they were statements of fact. It can be a very dangerous kind of an assumption for you and me. Now this doesn’t mean that if they are in a dangerous position and somebody is holding a gun on them they say, “Now let’s see—infrence or fact.” They may have a bullet in them before they decide. They had better act as if it were a statement of fact when they are in a dangerous position. But how often have police officers—have all of us—jumped to conclusions. A man who was bullied by police and handcuffed as a drunk when he was actually suffering from a spastic condition, said “This is the sort of thing that I moved away from Birmingham to get away from. If a spastic or a cerebral palsy victim comes to town the cops swarm all over him.” If they see a cerebral palsy victim walking down the street they assume and jump to conclusions that he is a drunk. Just think about all the behavior involved in the movie. Wasn’t it centered pretty much around this. All of them making unjustified inferences and acting as if their inferences were statements of fact.

And finally, (4) a statement of fact—we can make a relatively limited number whereas inferences—we can make an unlimited number. It’s the easiest thing in the world to make inferences. This is why it is so difficult to stay on the factual level. For instance this is a blackboard eraser. Make a statement of fact about it. I am holding it—all right. That is a statement of fact. It is gray. After a few statements, however, we soon find that we exhaust the descriptive statements and pass off inferences as if they were factual. We can make inferences without any effort. It is so easy to make inferences. Finally, (5) if we stay on the factual or descriptive level or at least know the difference between the two, agreement is more possible. Whereas on the level involving inferences or assumptions this will lead toward disagreement, especially if we confuse the two. Columnists of Confidential Magazine are notorious for passing off inferences as if they were statements of fact. There are many examples. I don’t have to go into that because we are all familiar with it. Here is one example. Notice how factual it sounds but it is
purely an inference. An arrogant red rooster was giving chase to a fluttering little hen. She scrambled onto the highway to escape him and was run down by a truck. Two old maids on a nearby porch witnessed the tragedy. "You see," said one of them with an approving nod, "she would rather die." Notice how factual it sounds. Think back into some of your own statements and notice again how easy it is to assume they are descriptive.

Now for the 3rd basic miscalculation. The first one I talked about was a signal reaction which leads into the 2nd miscalculation of jumping to conclusions or acting on inferences as if they were a fact. Let me ask the question, "Can we ever know all about anything? Do we ever know all about anything?" As far as we know at this time we do not know all about anything. Now my next question is, "Have you ever found someone who acts as if he knows all about something?" This is the third basic miscalculation. It is a very subtle kind of a thing.

Now, let me very quickly ask some questions. Why can't we know all about anything? Or, what are the limiting factors of our acquaintance with things? (1) let us say the physical position. We can only observe this table or anything else from our own physical point of view. (2) our psychological position. (3) time limitations. (4) education. And may I also add, of course, due to the fact that we have men here from many different cultures, one of the most important areas in terms of communication are (5) cultural differences. We can make a very interesting communication or semantic analysis of the difficulties that we have in the U.N. and we will see why. What we basically do in observing and communicating is to abstract, or select some characteristics and eliminate others. This is all that you and I could do. This is why we cannot know all about anything. (6) The human nervous system is another limiting factor. A dog can hear a much higher pitch. We have to have telescopes or microscopes as an extra nervous system to get down to the microscopic level. We can't even get down to the submicroscopic level of electrons, protons, neutrons. No one has ever seen an electron but we see the reaction or the results of it. Here is what we mean by abstracting or selecting.

During a recent economic mission to Greece, Ambassador Porter tells of what took place. "A banquet was given in my honor in Macedonia. When I was finally asked to speak it was past midnight. As I was tired and sleepy I made my remarks brief but cordial. 'It is indeed a pleasure to be here tonight with you good citizens of Greece. You Greeks and we Americans have very much in common. We like to eat, we like to drink and we just like to sit around and talk.' The next day the paper blazed on its front page that I insulted the Greek people. Ambassador Porter, the paper recorded, said that we Greeks were just like Americans—gluttons, drunkards and gossips."

This is a natural process of communication. We abstract and select and we eliminate so many things that we cannot know all about anything. In fact, as psychologists say, what we say tells more about ourselves than what we are talking about.

Here is another example relative to this process of abstraction.

On a Texas golf course a shapely miss, attired in the briefest of shorts, stepped up to the No. 1 tee and prepared to address the ball. Three caddies and five male golfers stepped aside and watched. She swung prettily, hooked the ball and lost sight of it. "Can you tell me where my ball went?" she asked the onlookers. Sheepish grins passed over eight faces. Not one of them had his eye on the ball!

What do we meet when we are not conscious of this abstracting process? We run into a particular kind of an orientation that we call the "allness" orientation. This is the basic third kind of a miscalculation. This is assuming more knowledge than we really have. It is a very subtle kind of a thing. This is not realizing or recognizing the fact that we cannot know all about anything. It is this kind of an orientation—we make a statement, period, exclamation point. I said it—that's it! This is one of the reasons why we misunderstand each other. It is not that people cannot learn but they fall victim to the disease of psychological arteriosclerosis—a sort of hardening of the attitudes! Our desire is to change individuals from the allness orientation to a non-allness orientation. By this we mean the realization of the limitation of one's knowledge. With the allness orientation we sort of unconsciously, (and may I say it is an extremely subtle kind of a thing) say "I know" or "I know all about it." This is not the scientific attitude. The scientific attitude and the non-allness orientation says, "I don't know." I think one of the most important departments of your organization is the Research Department. Research is predicated on the assumption, "I don't know." Because the moment you say "I don't know" something else follows. We usually say "let's see." This
is what leads toward experimentation or product studies, expansion or what have you. Thomas Edison has said “Show me a thoroughly satisfied person and I will show you a failure.” In a thoroughly satisfied man—he has a period or exclamation point after his behavior. But to a man who has a non-allness orientation there is always more to be learned. Instead of a period after his sentence, he puts an ETC. In fact this is the title of our Journal of General Semantics—it is called “Etc.” This means that no matter what you find in the Journal—more could always be said. One of the things we try to train executives and ourselves is in manifesting the etc. How can you and I get this etc. into our nervous system. Charles Kettering has said, “Some minds are like concrete—all mixed up and permanently set!” This is the allness orientation. The mind that is permanently set. The assumption that what was good enough for our company 10 years ago, 5 years ago, is good enough today. If our military organizations had this kind of an allness orientation, non-changing and static orientations, we would be a second class power in three years or less. Things are changing so fast. Your orientation, my orientation, must be in terms of change or process because the structure of the world of reality is change or process.

Notice this subtle kind of allness orientation. The young man said in a faint voice, “You don’t want to buy life insurance, do you.” “I certainly do not,” the sales manager replied. “I thought you didn’t,” the embarrassed solicitor said and headed for the door. Then the sales manager called him back and addressed the confused and frightened young man. “My job is to hire and train salesmen and you are about the worst salesman I have ever seen. You’ll never sell by asking people if they don’t want to buy. But because you are apparently just starting out, I am going to take out $10,000 worth of insurance with you right now. Get out an application blank.” Fumblingly the salesman did so and the deal was closed. Then the sales manager said, “Another word of advice young man—learn a few standard, organized sales talks.” “Oh, I have already done that,” the salesman replied. “I have got a standard talk for every type of prospect. This is my standard organized talk to sales managers.”

Notice how subtle that is—assuming more knowledge than we really have. Socrates said, “Know thy limitations.” Go back to Confucius, to Aristotle, etc. This is old stuff but the point I am making is how do you and I learn to get this into our nervous systems? “Do unto others as you would have others do unto you.” This is what we want to achieve. How do you achieve it? Like the mother said to the little boy, “John, be a good boy—be a good boy.” And John getting pretty exasperated said, “Yeah, but how the hell do I be a good boy?” My main question is, do we have a training device to train men? So far our communication courses have not moved in this direction. From this point of view and I do not know how to communicate until we have it in our nervous system.

Finally, let me conclude with this one example. Notice how tremendously subtle this allness orientation is because it keeps us from listening or observing.

A friend of mine who is the father of 12 volunteered to baby-sit one evening so his wife could have an evening’s relaxation at the movies. “Don’t let a single one of them come downstairs,” his wife instructed him as she went out. He promised to carry out orders to the letter and had just settled down to a book when he heard steps on the stairway. “Get back upstairs and stay there,” he commanded sternly. He read in peace for a few minutes and then again heard soft footsteps. This time he added the threat of a spanking. Soon again he detected stealthy sounds and dashed out just in time to see a small lad disappear up the top steps. He had hardly returned to his book when a neighbor came in distractedly. “Oh, Fred,” she wailed, “I can’t find my Willy anywhere. Have you seen him?” “Here I am, Ma,” said a tearful voice from the top of the stairs. “He won’t let me go home!” Well, this is a kind of a stupid way of thinking or behaving in this situation. It is the kind of orientation that keeps us from looking again. It is the kind of orientation that makes us say, “No—it didn’t work last week, so it wouldn’t work today.” This is not the orientation of the scientist. This is not the orientation of the successful business or organization. Just because it didn’t work last week does not necessarily mean that it won’t work today. This is why pilot studies are so tremendously important in business or in industry. This is the difference between the pre-scientific era and the scientific era. Science began when we had the inductive method—when we had experimentation—when we had pilot studies. The pre-scientific era was the era of reasoning only, argumentation and verbal analysis. Solving problems through discussion and through debate. This is fine, but it has its limitations because we can argue until Doomsday whether something will or will not
work. The only way you can solve a problem is to stop talking and do or see.

For example, the old question: If we blow air through the two rubber balls hanging at the end of strings, will the rubber ball move out or will they move in. If we argue or if we apply logic, which way will they move? Reasoning or “common sense” would tell us that they would move out. But all you have to do is try the experiment and you will see that they move in. Many people said that you could not build a heavier-than-air machine. This is why I say there is a tremendous difference between common sense and uncommon sense. We could talk for hours about the importance of uncommon sense—the difference between an Edison, an Einstein and an average person.

Let me go into the last misunderstanding and let us call this the misunderstanding of projection or by-passing. I have several different quizzes that I give my students because this happens to be the best technique that I know of. You and I are not open to suggestions. We could go into the psychology of motivating workers—the psychology of persuasion. There is a definite technique to be used with different individuals and this happens to be a technique that I think works better than just the didactic approach. If you and I can be shown wherein we mis-evaluate then I think we will do something about it. Will you just take the scratch paper and let me read a couple of these? Will you answer either yes or no? I will not go into all of these but we will get the basis of what I am driving at. Answer either yes or no.

Do you know what or whom I am referring to? I will go quite quickly just as you and I speak in ordinary conversation. I understand that much of your communication is the verbal kind—right? Person to person—and this is why this kind of an orientation is important, because it deals mostly with person to person communication. Okay, do you know who I mean when I say:

1. President Roosevelt
2. President Truman
3. Third strike
4. Time
5. Harper's Magazine
6. Life
7. Star
8. Face
9. Glass
10. Ford
11. Lincoln
12. Washington
13. Elliott Roosevelt
14. Franklin Roosevelt
15. Jack Benny
16. Rochester
17. Lucky Strike
18. Cigarette
19. Camel

Now I am sure that you will recognize that in creating this little test I sort of skewed the facts. Now you will see why the young lady said that she knew less at the end of the course than she did at the beginning. Basically, what she is saying, is that she stopped assuming knowledge that she didn’t have. Let's go over this quickly.

#1. How many of you said “yes” to President Roosevelt? Do you know who I meant? Now notice what I say—do you know of what, of whom I meant. I know that you know who you meant, but in this process of communication, how can we get on the other person’s channel or level? It may be what—a 50-50% here. But we will see that this whole process of communication is involved in terms of probability—never in terms of certainty.

#2. How many of you said yes to President Truman? More? Notice how the probability goes up higher. Did anyone say no? Why sir? Oh, there may be a president Truman of the D.M.A. Bros. or something. Again, we can never be certain. The moment we are certain—this is why we have misunderstanding. Because the moment we are certain in communication we fail to stop and say, “Joe, did you mean such and such?” This is important in orientating our behavior in terms of probability.

#3. Third Strike. What do I mean? Do you know what I mean? Okay, I may have meant baseball. The 3rd strike—the coal strike in 1943. Bowling. It could mean any number of things.

How about #4—Time. Do you know what I mean when I say time? Time magazine—Time Marches On, etc.

#5—Harper’s Magazine. Probability goes up—right? And still we cannot be certain. I was in the service with a man named Harper. He was a machine gunner and we used to talk about
Harper’s magazine. I am kidding. But again, and we will see why, you cannot be certain.

#6—Life. No.
#7—Star. No.
#8—Face. No.
#9—Glass. No.
#10—Ford. No.
#11—Lincoln. No.
#12—Washington. No.
#13—Elliott Roosevelt. Yes. Notice the probability but recently his son got married in Evanston. If he didn’t have a son the probability would be higher in contradistinction to Franklin Roosevelt. No—right? Because it could be either senior or junior.

#15—Jack Benny. The probability higher.
#16—Rochester. No.
#17—Lucky strike. No.
#18—Cigarette. Some of you may answer yes—you are not saying what cigarette.
#19—Camel—No.

How many of you found yourself saying yes, yes, yes, at the beginning and then no, no, no at the end. Were there some of you? Okay. This is why I give this kind of a test, to show us to what degree we have a tendency of projecting too much meaning into other individual’s words. Now I am not saying that we should not project. We must project. In fact, life is a series of projections, but wisdom begins when we are conscious of our projections! Now I wonder if I could have someone come up and read this. Anyone like to try it? Just read it quite quickly, as we read in everyday life. (Several people read it as follows:)

“Bet you a drink you can’t read this aloud correctly. Paris in the Spring—Slow—men at work—Once in a lifetime—Bird in the hand.”

Now let me read it as it is. “Paris in the the Spring—Slow, men at at work—Once in, a a lifetime—Bird in the the hand.”

The words are repeated. I have used this demonstration many times, even going around an entire class two or three times. They projected into the words what they expected to see. This illustrates the psychological phenomenon of projection.

Now let us start learning briefly about language usage. The first thing we learn about language usage is the fact that words are ambiguous.

Words can take many meanings. Words can be used in many, many different senses and we must be conscious of the ambiguity of language. Other individuals can and often do mean different things when they use words. For example, the word “line.” It might be a surname, straight line on the paper, line up, stand in line, course of direction, line of goods, “What’s my Line,” radio network, telephone, hold the line, battle line. We could go on indefinitely. Words are ambiguous. They can mean many, many different things. Now what do I mean by this phenomenon of projection or by-passing? This is when the speaker means one thing and the listener means something else. The speaker means one thing and the listener responds with something else. For example.

A woman who insisted she had a “right to slap any man who is rude to me, even a policeman”—got a choice between a $50.00 fine and 30 days in jail. She screamed, “I’ll take the 30 days.” “That’s okay with me,” replied Magistrate Hyman Bushel after a hectic session with attractive brunette, Mrs. Barbara Rubi. Her husband, however, intervened and paid the fine. Mrs. Rubi, the wife of a banker, was charged with striking a policeman in Central Park after he complained her dog was running unleashed. “All I did was say I intended to write out a summons,” the policeman said, “when clear out of the sky she punched me with her clenched fist.” But Mrs. Rubi said, “He asked me for my credentials and I thought when they ask for credentials you were supposed to hand them $5.00. So when he asked me for my credentials I said, ‘Here is my credentials’ and hit him in the face with my hand. I said, ‘you will not get $5.00 from me, you grafter’”

Why do we have these misunderstandings? Because the speaker means one thing—the listener means something else. There are two unconscious assumptions underlying this mis-evaluation of projection.

(1) We unconsciously assume that other people use language as we would if we were doing the talking. We know that we can use language in many, many different ways because we learn the “meaning of words” from our past experiences and our language is arbitrary. For example, the Lord’s Prayer has had to withstand considerable abuse especially from children’s trying to learn it from murmbling congregations. One little boy was heard to pray “Harold be they name.” Another said, “Give us
this day our jelly bread.” A New York child petitioned “Lead us not into Penn Station.”

(2) Here is the second unconscious assumption. We are taught that words have meaning. From the point of view of general semantics, words don’t mean anything. Words don’t mean—people mean! In this process of communication, we can have two different modes of communicating. We can either have our attention on the words of the other person (and here we stop the process of communication too soon) or we can focus our attention on the person using the word. In order to get on the same channel of communication, we as the listener must have our attention on the speaker. In other words, if there is any degree of misunderstanding, don’t be afraid to ask, “What do you mean, Joe?” The burden of communication is not only on the speaker, to speak specifically and concretely. I wish we had more time to discuss how to speak more specifically and concretely. But the burden is also upon the listener. Sometimes, you as a speaker, you as a man in a position of authority, the listener is afraid to ask you, “Sir, did you mean that I should do such and such.” They then go out and misunderstand your commands. You, as the person in authority, must also aid them in getting on the same channel of communication by saying, “Joe, did you assume that I mean such and such. Do you know what I want you to do?”

In other words, good communication is from the point of view of both speaker and listener. Let me say a quick word about the use of the dictionary, because the dictionary perpetuates the false assumption that meanings are in words. We call this the container myth—the mythical assumption that meanings are in words.

A school teacher told her pupils to listen to their parents’ conversation and if they heard a new word, to look up its meaning in the dictionary and write a sentence using the word properly. The next day she asked Johnny what new word he had learned and he replied that he had heard the word “pregnant” which the dictionary defined as “to carry a child.” The teacher asked, “Johnny, have you a sentence in which you have used the word properly?” He replied, “Yes ma’am. The fireman climbed the ladder into the burning building and came down pregnant.” Now, in terms of dictionary definitions, this is right. Because, “to carry a child” is ambiguous. But, the moment you encounter human uses, you run into difficulty. You can never be certain what another person means.

It was lunch time. The elderly clerk opened his sandwiches, looked at them and exclaimed bitterly, “Cheese sandwiches! Always cheese sandwiches!” “Why don’t you ask your wife to fix you another kind of sandwich,” a colleague asked. “Who’s married?” said the man indignantly. “I make these sandwiches myself!”

Basically, what I am talking about now, is that wisdom begins when you and I are conscious of our projections in human communication. Here is another example of projection. A motorist was driving toward New York when his car stalled. The battery was dead. He flagged a woman driver and she agreed to push his car to get it started. Because his car has an automatic transmission, the driver explained, “You will have to get up to 30 or 35 miles per hour to get me started.” The lady nodded wisely. The driver climbed into his car and waited and waited. Then he turned around to see where the woman was. She was there all right, coming at him at 30 to 35 miles an hour.

Remember, words don’t mean anything—people mean. And finally, the best example to illustrate this, is this little one right here.

“I don’t like Bill,” confided a coed to her roommate. “He knows too many naughty songs.” “Does he sing them to you?” asked the friend. “Well, no—but he whistles them.”

I have covered four basic kinds of miscalculations. (1) The signal reaction, the tendency to respond too quickly. (2) Acting on an inference as if it were a fact. (3) The “illness” orientation, which keeps us from listening, from observing, from keeping an open mind. (4) The miscalculation of projection or by-passing.

Let me just conclude with this one example, to show you that, basically the whole orientation is in trying to get us down to the facts, to the world of reality. Sometimes, however, although facts indicate that we should change our points of view, or our ways of thinking, the Illness orientation is still there and we still insist on maintaining the old ways of thinking.

There was once a man who went around saying, “You know, I think I am dead.” His friends finally persuaded him to consult a psychiatrist. When the patient told the psychiatrist that he thought he was dead, the psychiatrist told him to clench his fists, stand before a mirror and say “Dead men don’t bleed.” He
told the man to repeat this about 6 times each day saying, "Dead men don’t bleed." He told the man to go home and carry out his instructions and return at the end of the month. The patient carried out the psychiatrist's instructions and at the end of the month he returned. The psychiatrist told him once again to go through the motions. The reason he told the man to tighten his fists, was so that the man’s veins would come to the surface of his wrists. The man tightened his fists, and just as he said, "Dead men don’t bleed," the psychiatrist jabbed a scalpel into the man’s wrist. The blood gushed out and the man hollered, "By God—dead men do bleed!"

Let me say one thing. I always end my courses with this final word of advice and I mean this very, very sincerely. Don’t believe one word I have said! Go out and try it. Thank you all very much.

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THE PHILOSOPHY OF SCIENTIFIC METHODS IN INDUSTRY

Section Seven

Scientific Method is closely connected with the social virtues of impartiality.

—Bertrand Russell

Only science, exact science about human nature itself, and the most sincere approach to it by the aid of the most omnipotent scientific method will deliver man from his present gloom and will purge him from his contemporary shame in the sphere of inter-human relations.

—Pavlov

With the advent of space travel and atomic energy it is easy to see that we are living in an age of science. If we would but compare society today against the society of one or two hundred years ago, we would arrive at the conclusion that this is the age of science and the application of the scientific method.

But, what if our successors in the next one hundred years were to analyze our accomplishments and, especially, our behavior? Would we appear scientific to them? Just as the 19th century was not very scientific compared to the 20th century, so the 20th century will appear to be in its infancy compared to the 21st century in science, scientific progress, and the application of science to human betterment.

Science, as an important factor in human life, is relatively recent. It probably best begins with Galileo some three hundred years ago and for the next two hundred years remained the sole province of the academician or the learned of the community.
It did not affect the lives of ordinary men and, in fact, only within the past one hundred years has science played an important and effecting role on the lives of the “average man.”

The influence of science on our lives will become increasingly so in a geometric ratio in the future generations. Not only in terms of what science is able to produce, but in terms of the changes in the nature of man himself, in his self-concept and, therefore, in his ways of thinking, communicating and behaving.

We have seen some changes, for example, of the racial problem in the United States, especially in the South during the past ten or twenty years. There have been many changes in political thinking since the First World War from a nationalistic “America First and Only” philosophy with no international entanglements or alliances to an international foreign policy realizing that nations cannot be separated through space. So rapid has been the scientific progress in space flight, atomic and hydrogen bombs, inter-continental ballistic missiles, transportation and communication, that a drastic change in our outlook has been made mandatory in the past fifty years. The “model T mentality” in the space age has no place in political thinking today.

Science is primarily knowledge and a method of arriving at that knowledge. Through the process of induction it seeks general laws from a number of particular facts. Science as knowledge, however, is not its only important attribute; it is becoming increasingly valuable in changing, modifying or manipulating nature itself and, so, is finding a new and unrealizable importance for the future. Science, in its theoretical and practical sense, has had many important implications and results. It has not only modified science itself, but the societies, governments and cultures within which we find science. It has had a spiralling effect outside itself of which it is only a part.

Man has in the past, and continues to a large degree in the present, been unable to realize his hopes, desires and potentialities because he has largely been ignorant of the means of accomplishment—of the scientific method. But as this lack of knowledge disappeared he has gradually been able to cope with his environment, to change existing institutions, to modify society and himself in the same process.

But, as we are coming to see, insofar as man is wise in the intelligent use of science and the scientific method, this newfound power and knowledge can be of great benefit to himself and future generations. Insofar as he is unwise and ignorant as to the power and potentiality of science for good or evil, the opposite is logically certain to result. We shall need both science and the wisdom in utilizing science if we are to achieve the kind of society capable as a result of the scientific method.

THE SCIENTIFIC METHOD

It must first be realized that there is no such thing as the scientific method. There are many scientific methods, but its similarity is in the approach and testing of knowledge. It basically consists of observing facts, making hypotheses or inferences about these facts and then testing these inferences or generalizations. The scientific method indicates that other observers, using a similar set of facts and technique of testing, would arrive at similar conclusions. The two important stages of the scientific method, observation and generalization, must make itself available to other observers for similar testing.

Facts and hypotheses are not isolated for they both exist within the general body of scientific knowledge. Facts are obviously significant in science because they help to establish or refute some general law. Science, although it starts from observation of the particular, is not only concerned with the particular, but with the general as well.

The scientific method is not a simple process. There are many variables involved. A careful choice of significant facts, as well as a consideration of other means of arriving at laws other than by mere generalization, are important in the scientific method. For many years men said that “You cannot fly a heavier than air machine” or “Unsupported bodies in the air will fall.” But you merely have to look at the airplane, balloons or kites to see the falsity of these generalizations.

The scientific method is practiced consciously and productively by only a minority of men. These minority confine the scientific method, likewise, to only a small number of problems.

But we find a great deal of untested opinions by the majority (and sometimes that minority of scientists) on such complex problems as in religion, politics, economics, psychology, psychoanalysis with a dogmatism that is wholly foreign to the scientific method. It is a curious psychological fact that the
scientist, who has a greater “right” to be certain in his conclusions, is usually tentative. Whereas most of us in our untested opinions, who should be tentative, are usually certain. This is, of course, an interesting psychological corollary. It is an odd fact that subjective certainty is inversely proportional to objective certainty. The less reason a man has to believe he is right the more vehemently and certain is he that he is right.

If we would analyze the behavior of man in many areas we would see that the scientific attitude is foreign to him. He indulges in fantasy, wish fulfillment, false expectations, illogical inferences and invalid conclusions. The difficulty results when these unscientific attitudes are carried over into the important decision-making areas that have far-reaching effects.

GALILEO, KEPLER AND NEWTON

The scientific method came into its own with Galileo (1564-1642) and Kepler (1571-1630). Kepler discovered that the planets move around the sun in ellipses rather than in circles. To the ancient mind it was assumed that the heavenly bodies moved in circles, although modern man has been brought up with the knowledge that the heavenly bodies move in an elliptical fashion.

Kepler and Galileo established the fact, through the scientific method, that the earth and planets go around the sun. Copernicus had first postulated this theory, along with some early Greeks, but they offered no scientific proof. Galileo and Kepler induced from the observation of particular facts, established quantitative laws and predicted future particular facts. This was the scientific method which was particularly shocking to contemporary authorities because it was an important break from the law of authority to the law of observation. Truth was determined, not by some authority who said it to be so, but by the omnipresent and omnipotent authority of observation and the scientific method.

Galileo’s thrust against authority is best exemplified in his contradiction of Aristotle’s Physics, which stated that a body weighing ten pounds would fall through a given distance in one-tenth the time for a body weighing one pound. To prove his theory empirically, he went to the top of the Leaning Tower of Pisa with a ten pound ball and a one pound ball. Just as his fellow professors at the University of Pisa were about to go to their classrooms, he summoned their attention. He dropped the two weights. They hit the ground almost simultaneously. However, the professors, wishing to believe the authority of Aristotle rather than their own eyes, refused to believe that Aristotle could be in error.

Galileo thus discovered the Law of Falling Bodies, according to which, apart from the resistance of the air, bodies fall with a constant acceleration. This was a generalization made from a small number of facts, the actual falling bodies that he had tested. His generalization was confirmed, however, by subsequent experiments like it.

Galileo also made a telescope and invited other professors to look through it at Jupiter’s moon, but they refused because Aristotle did not mention these satellites.

This conflict between authority and investigation is the conflict between deduction and induction, between the unscientific method and the scientific method. Deduction presupposes the finding of the general law or first premise from authority, or that which is “self-evident.” But deduction as a means of obtaining knowledge collapses when its premises are doubted. The wrong or impotent method was used in arriving at the first premise or “general law” upon which the deduction was based, and so the conclusion was no more “true” than the original premise.

This is only one of the many weaknesses of the deductive method or argument from authority. It is inextricably tied up with a certain kind of an attitude. While Socrates said that he was wiser than his contemporaries because he alone knew that he knew nothing, Galileo could have said, with truth, that he knew something, but he knew little. His Aristotelian contemporaries, however, knew little but thought they knew much. This is the unscientific attitude prevalent in many areas today.

Sir Isaac Newton (1642-1727) was born in the year in which Galileo died. His Principia attempted to explain the whole solar system, from the three laws of motion and the law of gravitation, by purely mathematical deduction. However, although Newton’s Principia retains the deductive form of Aristotle and the early Greeks, it is quite different from the purely deductive approaches to knowledge since the law of gravitation is not supposed to be self-evident, but is arrived at inductively from Kepler’s laws. It illustrates the inter-relationship between the
deductive and the inductive. From observation of particular facts, it arrives by induction at a general law, and by deduction from the general law other particular facts are inferred. This is the scientific method, from the specific to the general and from the general to the specific, based upon observation, testing, reasoning, logic—rather than deduction from authority alone.

**SCIENTIFIC TECHNIQUE**

Psychologists have pointed out how a little baby, due to the people around him, will get the feeling of omnipotence when every cry elicits the response he wishes. Piaget indicates how his reasoning is a product of this social sense of others immediately fulfilling his wishes. However, later on, the child is forced to the realization that his wishes may be opposed by others and that his wishes are not necessarily the only important ones, nor the most logical or truthful.

If the child’s wishes are not the only determinant of truth or the best course of action, what other alternatives are available? *Reasoning*, as pointed out by Piaget, develops *as a method of arriving at a social truth upon which men can tend to agree.* This is one of the values of the scientific method. It tends to avoid or solve the disputes which arise when personal emotion is regarded as the test of truth. But the scientific method also gives power over the environment, the power of adapting to the changing situation and thereby controlling and predicting. The latter successes of the scientific method has given it its prestige.

Perhaps the most important characteristic of the scientific technique is that it proceeds from experiment, not from tradition. Where you find the attitude of tradition you will find little or no change, little or no progress. Wherever you find the scientific technique of experimentation and testing of new ideas you will find commensurate progress. It is this spirit which characterizes modern science and modern times, as contrasted with the unscientific thinking and spirit of more than two hundred years ago.

**SCIENTIFIC INDUSTRY**

The scientific method is being applied in modern industry, in fact the Industrial Revolution is a good example of the change to the scientific technique. Scientists and research have become a very important part of the scientific technique in industry.

But, while we have seen the advent of the scientific method in business and industry, it has not been understood and applied on the human level. While it is much easier to apply scientific methods in the natural sciences it is much more difficult to apply in psychology and human relations.

We still, somehow, feel that there is a distinction between pure and applied science, or between science and industry. It is well known in the history of industry, however, that the most theoretical and speculative research has sometimes led to the most important and practical applications in industry. In the last generation, science has rapidly assumed a responsibility of leadership in industry and the problems which confront the top executive involve factors which require scientific assistance or knowledge for their solution. In this age, nearly all of the problems of organization and management involve scientific factors of one kind or another. Companies cannot afford to leave the administrative control in the hands of those who are ignorant of the methods of science!

If an industry were to apply the scientific technique, if management as well as labor were able to be trained in the scientific method, attitude and spirit, it would then come close to being the best and most productive possible. Idealistically, it would be an industry free from the terrors and chains of absolute authority and bureaucracy. Bureaucracy and the scientific method are incompatible in philosophy and practice.

While the scientific attitude emphasizes uncertainty and doubt, authoritative bureaucracy is the theory and practice of political or industrial certainty. We shall always need traffic managers, production managers, bureaus, planners and directors. In any organized society, whether political or industrial, there are many functions which require someone to count, control, delegate, measure and authorize. But bureaucracy, *as an administrative theory of what is good and what is true,* is too often the *sovereignty of the ego that grows out of counting, controlling, delegating, measuring and its inherent authority.*

Bureaucracy, in its deeper and more philosophical sense, is any blind devotion to The System. In psychological terms, it is the belief and expectation that by finding, developing and perfecting the correct techniques of measuring, counting, etc., it will then become possible to turn the administration into a Sure Thing.
But while the Sure Thing or the bureaucratic longing for absolute certainty is a quality of man, the achievement of absolute certainty would be, for any man, the loss of his humanity. For, only in the regions of uncertainty can man function as a human being!

While we need measurements and systems to deal with the objective world, these do not affect the qualitative uncertainty in management or in our lives generally. They seem to work with finality only for those who have ignored the uncertainty in their personal lives—and bureaucracy is the simple answer, the pat solution to the complexity and uncertainty of industrial management or of life’s problems.

SUMMARY

Section Eight

The discussion on the preceding pages has tried to provide an understanding of the relationship between language and behavior. The framework for this discussion has been the principles advanced by the general semanticists. Let’s briefly review some of the points we’ve covered and see how awareness of them can help us to improve our day-to-day communication.

BEHAVIOR SHOULD FIT THE WORLD OF REALITY

First, we saw that there are really two distinct worlds in which we live: the verbal world of words and the non-verbal world of things. The words are merely symbols which represent or stand for the non-verbal realities.

Human behavior may be broken down into four phases. Something happens. A nervous impact creates awareness of the happening. Next, the person sizes up the situation with an evaluation. And then, on the basis of his evaluation, he responds.

We saw that proper evaluations are more likely to be made when we exhibit a symbol reaction—when we pause, observe, and evaluate the situation not merely in terms of the verbal representations which symbolize it but as it really exists. Such evaluations lead us to behave in accordance with the facts of the real non-verbal world.

Misevaluation usually occurs in one of three forms. The first is identification of words with things. Such identification causes us to react to words as if they were things. Soon our behavior no longer fits the facts as they are. Second, there is the problem
of projection, where we unconsciously assume that we know what the other person meant because we know what it means to us. This is a frequent source of misunderstanding. Finally, there is acceptance of the part for the whole, a practice akin to allness. We must never behave as if we know all there is to know because this type of behavior inhibits us from learning additional and perhaps crucial facts.

MEANING ITSELF CAN MISLEAD US

There are characteristics inherent in language which we should be aware of if we are to avoid miscalculating the world around us. One of the most significant of these characteristics lies in the very nature of words. It is easier to respond only to non-verbal stimuli when we are aware of the following qualities of words:

1. Words do not mean. The myth that words contain meaning is based upon incorrect assumptions.
2. Words are arbitrary. Because there is no one-to-one relationship between words and things, words are assigned to certain things by agreement or social convention.
3. Words have many uses. Just as one specific object may be referred to by a number of different words, so too, a specific word may be used to refer to a number of different objects. This multi-usage of words accounts for many misunderstandings.
4. Meanings are in people. Words become meaningful only when we, on the basis of our past experiences, project our own meanings into them.

NON-ALLNESS LEADS TO PROPER EVALUATION

Finally, we saw how certain practices in our communication cause us to develop improper thinking and speaking habits. We looked at three practices which generally go hand-in-hand with the allness attitude, the attitude that we know all there is to know about something.

1. Either/or orientation widens the gaps between people. The undiscriminating use of the “either-it’s-this-way-or-it’s-that-way” approach forces people to take extreme positions in disagreements which might be resolved if handled in some other way.
2. Use of high-order abstractions pushes us farther from, instead of closer to, the non-verbal facts to which we should be responding. Too much abstraction makes our communication vague, ambiguous, and meaningless.
3. Failure to recognize the process of change causes us to overgeneralize and stereotype. These common miscalculations can be avoided when we seek differences and uniqueness instead of similarities in any situation. Indexing and dating help us to do this.

Non-allness is the realization of the limitations of our knowledge. If each of us can develop an open mind, ready to admit new facts and to change its convictions on the basis of new evidence, we are on the way to achieving a non-allness attitude. This attitude, coupled with an awareness of the principles of general semantics, should help us to better understand our own behavior as expressed in our daily communication.
IRVING J. LEE: ‘THE SEMANTIC MAN’

Section Nine

Only a few of those individuals who had the honor of working with Irving J. Lee will know what a truly great man he was. For here was the embodiment of the principles of general semantics—of extensionalization—to the fullest we have known. Irving J. Lee not only understood Alfred Korzybski’s principles as few scholars did, but even more, he applied them to his own behavior in dealing with individuals, situations, problems, and in gaining a deeper insight into the world around him. The ‘semantic man’ is the creation of his own assumptions; he is both the sculptor and the marble.

What is a ‘semantic man’ (or woman) like? If a person were to apply the principles of general semantics to his own behavior what kind of individual would he be? What will he do, for he will not only understand the principles of extensionalization intellectually but he will have internalized these principles in terms of behavior. How, then, shall we draw our profile of the ‘semantic man’?

These are some of the questions raised by Irving Lee. But they did not go unanswered by him. It is the forte of a ‘semantic man’ not only to ask meaningful questions but to look for the answers. So the answers to these questions are those of our semantic man about ‘the semantic man.’ While I am sure Dr. Lee did not look upon himself as the perfect semantic man, he saw in this profile the operations to be performed in order to achieve a closer resemblance to this mythical person. For Dr. Lee was conscious of the fact that this

‗semantic man‘ was a fiction, a mythical creation nowhere to be found in the world of reality. But if he had taken a closer look at himself he would have seen himself as others saw him—as the best example of the ‗semantic man‘ we have had.

What, then, is this ideal man like? How does he behave? What will he do in approaching problems, situations and in dealing with others?

The semantic man will tend to do a good deal of listening and querying—of asking questions. He wants to know what the other fellow means, not what words mean. For he is continually conscious of the fact that words don‘t mean, people mean. He knows of the tremendous ease of oversimplifying the process of communication, and the misevaluation of projection which results whenever people stop this process of communication too soon. He knows of the many conflicts, confusions, arguments and disagreements which result when people pay more attention to words than they do to the people using words. He realizes that words can be used in many different ways according to the experiences or even whims of the user, and in order not to close the channel of communication one must understand the meanings in people, not in words.

Before making an important decision the semantic man will want more facts. In his speaking, listening, reading or behaving he knows of the simplicity and ease—and also the dangers—of acting on too few facts. So he is constantly looking for new facts upon which to base his evaluations. But while he is conscious of other variable factors which might come into play in any situation, he understands that he must act on whatever factual data he has. He knows of the folly of waiting until ‗all the facts are in,‘ for this is not only an impossibility but it will lead toward indecision, procrastination and nonproductivity.

This ideal extensional man will more likely note rather than dismiss any novel or unusual ideas. He knows of the many cases in the history of ideas or scientific advancement where people were too prone to ‗pooh-pooh‘ or criticize ideas which later turned out to be important in man’s advancement. Irving Lee realized but could not always understand why some highly intelligent professors (and others) were so prone to criticize and attack certain ideas without the requisite knowledge upon which to base a scholarly criticism. He invited scholarly criticism based upon accurate knowledge. But he saw around him too many examples of the proclivity of dismissal of novel or unusual ideas. He felt that the new or the novel should neither be accepted nor rejected but tested. Only after adequate testing or scrutiny should the new and the novel be judged.

The ‗semantic man‘ is interested in the important question, ‘Why do we disagree?’ He knows that we very often look for different things or see things differently because of a number of variable factors. And it was one of the desiderata in the teaching and lifework of Dr. Lee to look for and understand those differences. The problem confronting our ‗semantic man‘ is how to come to agreement; not how to win the verbal fight. He is perfectly willing to look for the sources of human disagreement because he understands that disagreement might lead to agreement if we were to ‘look again‘ or try to delimit some of the variable factors. Irving Lee recognized that some disagreements could easily be resolved once the important factors of disagreement were pointed out. But he also recognized that other kinds of disagreement were not so easy to reconcile, and that one of the follies of man is to try to solve these difficult problems too easily and too soon without getting to the heart of the disagreement. In a world of so much disagreement Dr. Lee felt that the ‗principles of universal agreement‘ were necessary and important to teach and apply if man is to achieve a happier life.

The ‘semantic man’ is aware of the difference between a descriptive or factual statement and one involving an inference. He will not confuse his inferences or assumptions with statements of fact. And his behavior will be accordingly. He will be a little less prone to jump to inferences, and when he does so he will know that he did, and he will then retrace his steps. He knows that most of our lives are lived on the inferential level, but wisdom and mature behavior result when one is conscious of the differences between acting on inferences as inferences, and acting on inferences as if they were factual.

So our mythical fully extensional man will continue to test himself against facts. He will not only check his inferences against the facts, but also observe whether or not he is oriented by words or by the non-verbal facts. For he has learned, not only from the wisdom of Confucius, Agassiz, Freud, Pavlov, Korzybski and others, but from experience, that man is more often influenced by words and verbal association than he is by the facts of reality. The ‘semantic man’ manifests an extensional rather than an intensional orientation.
The 'semantic man' will be a little more willing to be both independent and cooperative. Irving Lee did not look upon these characteristics as being contradictory, but complementary. Besides being cooperative with others, this extensional man must also manifest initiative and the free-enterprising spirit which results in the time-binding productivity of a free and open mind. I know of no individual who was more both independent and cooperative than Dr. Lee. He manifested a non-allness independence because he recognized that individuals must believe in and act on their own convictions. And yet they must be willing to change their convictions the moment the facts are against them. He realized that the non-allness orientation did not lead toward vacillation or apathy, as some individuals wrongly assumed. The 'semantic man' has deep convictions, assumptions, values, etc., but he understands that he must not hold these with a dogmatic 'know-it-all' attitude. He is always willing to listen with an open mind to the assumptions and beliefs of others, no matter how contrary they might be to his own. He respects, with dignity, the abstracting processes of others.

Manifesting the extensional orientation, he will use his eyes and ears more than one normally does. He will do more looking and doing than reasoning and talking, for he realizes that scientific advancement and the solution of problems come only when theorizing and talking stop and experimenting begins. His motto is, 'I don't know. Let's see.' He solves problems, therefore, not by talking or verbalizing but by doing. He will keep his eyes and ears open for differences as well as similarities, for he will be far more curious about things and not limited to the similarities implied by the structure of the language he uses. Whenever Dr. Lee was asked if a certain 'idea' was worth trying or if it would work, his answer invariably was, 'I don't know. Let's see.' He was a master of putting ideas to work to see if they were worthy, for this is an important yardstick of the 'semantic man.'

Irving J. Lee was one of the most dynamic individuals who ever lived. His ability to 'get things done' with the highest standards was one of the unique characteristics of this brilliant man. Yet, in another way, he was one of the least hurried and impetuous men one could meet. He realized the importance of manifesting symbol reactions, of taking more time—a 'two second activity delay'—in dealing with life's problems. On one particular occasion a group of psychology students continually interrupted his lectures throughout the hour by asking, 'Is this Professor Evans' class?' or 'Is this Philosophy BIO?', etc. Most other professors probably would have become quite exasperated at such intrusions. Bur Irving Lee, manifesting a symbol reaction each time, did not become irritated. He checked his assumptions until he was informed that this was a psychological experiment to see to what degree he behaved in terms of the principles he taught. Those psychological experimenters and his own students were given an example of these principles in action.

Here we find another important characteristic of the 'semantic man.' He is much more eager to inquire as to the adequacy or proper evaluation he shows when he is angry, irritated, discouraged, fearful, disliking, etc. Irving Lee often maintained that usually some kind of misvaluation is involved in every case of irritation, anger, fear or prejudice and it is the mark of an extensional man to check himself as to the adequacy of his evaluations.

The 'semantic man' engages freely in phatic communion, fiction reading, poetry, etc., but he knows the difference between fiction and fact. He can enjoy or partake in both with equal facility, but he is quick to differentiate between the two and not act on the fictitious as if it were factual. Dr. Lee recognized the psychological importance of 'small talk' and his magnetic personality attracted countless students and others to his office for what, I suspect, very often turned out to be phatic communion. He was one of few professors who always had a string of students and adults waiting outside his office ostensibly to talk over a problem. Upon closer observation, however, one could see that they left his office feeling highly elated and that many of them did not always visit him about their school problems but just to talk with him. His was an indescribable magnetic power that drew all kinds of individuals toward him the moment they were within this orbit.

Irving Lee felt that very little of what general semanticists say runs counter to the great principles of humanity, or ethical, moral, or religious codes. But he felt that in general semantics they are stated more explicitly than in many other statements, and an operational method is given by which to achieve these ends. He believed it important that we keep looking for all sorts
of convictions, faiths and goals, but he always remained aware of the 'etc.'.

The 'semantic man' is also aware of the ease of oversimplifying, the ease of attributing causes to things. He does not think in terms of a cause and effect relationship but in terms of a functional formula where an effect is produced by a number of variable factors. To him the world is not a simple additive affair where variables can be easily dissected and attributed as causes. It is, too often, a non-additive affair where complexity and multiplicity of causes more closely resemble the structure of the world. So, just as it is easy to look for the simple cause and effect relationship, it is also easy to oversimplify the problem-solution nexus by looking for the solution to the problem when there well may be more than one. Such simplistic assumptions he believes are inadequate in a world of complexity, change, variability and non-additivity.

The 'semantic man' is able to achieve degrees of specificity in his talking (when necessary) far more than is now generally done. For he realizes that there are degrees of inclusion, generality, vagueness and ambiguity just as there are degrees of concreteness and specificity, and there are times when he must index, chain-index and date his statements. Agreement and understanding result whenever individuals specify what they are talking about (indexing), at what time (dating) relative to what situation or environment (chain-indexing). Irving Lee was a master at achieving specificity in his own talking and especially in forcing (intellectually) his students to think in terms of indexing, dating and chain-indexing. One of the greatest benefits that a student of general semantics could obtain from conversing with Dr. Lee was in distinguishing between an ambiguous and vague statement (or hazy idea) and a specific and concrete statement. Many Ph.D. candidates had to re-examine and usually revise their ways of thinking due to the penetrating and piercing questions raised by this semantic man. His ability to see the specifics, to draw out further relationships and conclusions, was of the most brilliant kind.

To anyone, therefore, who had been associated with Dr. Lee and had the opportunity to have intellectual discussions with him, this was one of the most rewarding experiences. The ability to examine and re-examine important ideas and questions according to the general semantics discipline is a long and tedious process. But one soon learned this uncommon sense (to a degree) by example not by preaching. Dr. Lee was more interested in teaching others by example than by preaching or by exposing the misevaluations of others. He knew that before an individual could teach the principles to others he must first become extensional himself. As Wendell Johnson says, 'If you want to become a genius find yourself a genius and follow him around.' So it is with the 'semantic man.' His best teaching device is his own behavior, which a semantically oriented observer might profit by. To Irving Lee, only when an individual manifests the principles of general semantics does he know them, for learning is a non-elementalist function.

The 'semantic man' will always be willing to admit when he doesn’t know. 'I don’t know' becomes an intellectual motto for him. He understands the unfortunate results which follow when people assume more knowledge than they really have. The non-

The 'semantic man' keeps reminding himself of the doctrine by re-reading the basic books. Irving Lee used to kidingly say that the good student of general semantics must re-read *Science and Sanity* every six months—but it takes six months to read the book. Of course, this means that the student would constantly be reading *Science and Sanity*. He realized the importance of re-reading the basic books for, as he often stated, each time he would re-read *Science and Sanity* he would learn something new or gain some new insight that might have escaped him in previous readings. The 'semantic man' does not assume that having read the basic literature that he 'knows' it. He must continue to re-read, re-examine and see new relationships and applications with each reading. He realizes, also, that one does not just read *Science and Sanity*. One must study it, for there are many ideas, principles and relationships which are not specifically stated but too often implied or left undefined.
If he had supplied examples of all the principles, Korzybski said, the book would be many times larger than it already was. So much of the material was left to the wisdom of the student. As his abstractions are relative to his own interests and knowledge, and as these are constantly changing, so his abstractions from each re-reading would change, take on new relationships, and lead toward new insights. Learning in an on-going process.

Finally, Irving Lee believed that the ‘semantic man’ doesn’t talk these principles, he does them. He realizes that all that general semantics can do is to provide an attitude or a set with which to approach problems. Dr. Lee believed that one doesn’t apply general semantics, one achieves an extensional attitude, orientation and behavior—in the broadest terms—facts first, then talk or behave.

This, then, is Dr. Lee’s profile of the ‘semantic man.’ This is what he believed such a man would look like were he to behave in terms of the principles of general semantics. But while no individual can be completely extensional at all times, Dr. Lee himself approached this extreme degree of extensionalization as few persons do. His was an unusually brilliant mind. He understood these principles and he knew how to apply them to achieve extensional behavior.

If the ‘semantic man’ is a time-binder, if he is a productive person who leaves more than he took, then Dr. Lee’s many articles and books are a living memento to what an important contribution such a man can make to all humanity. In this day and age there is a need for men to rise above the producers of the past. There is a need to progress in geometric progression if man is to fulfill his human potentiality. Manhood of humanity can only be achieved when great and learned scholars, semantic men of the future, carry on the important work of lessening or eliminating the many conflicts, confusions, disagreements, prejudices and wars which have been a ‘human’ characteristic for so many centuries.

Irving J. Lee played an important role in achieving these ends, for his teaching, lecturing and writing aided many in gaining a better understanding of themselves as well as the world around them. And those who came in contact with him and profited from his wisdom held him highly with a deep and lasting reverence.

SUGGESTED READINGS


Write for a catalogue of all of our publications on semantics and improving communications.

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