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IRVING J. LEE as remembered by:

MARTIN MALONEY
The School of Speech, Northwestern University

It is not an easy task, when a good man has died, and his loss has begun to make itself felt, to assess the extent and nature of that loss. Neither are most attempts very successful. Still, the task seems necessary, for we can scarcely hope to compensate or adjust to a loss which we do not understand.

The death of Irving Lee was, I suspect, for most of those who knew him, tragic beyond most deaths. It was not so much that his death was unexpected, or that he was still a young man, or even that his special knowledge and abilities will prove nearly irreplaceable. These are relatively slight considerations.

I can of course speak only for myself, but it seems to me that a source of energy, of humor, of force - and I mean these terms to be roughly synonymous - has escaped from the world with his death, and I fear that many of us may live less effectively without it.

Irving's attack on life was at once stimulating and puzzling to me. I met him for the first time in 1938, when we were, as I recall, both graduate students, and he was about to complete his work for the PhD. He had, of course, become interested in general semantics by that time, was profoundly excited by his work with Korzybski, and was not in the least disturbed that none of his colleagues had heard of the man or his work. My first clear recollection of Irving is a sort of montage which shows him buttonholing everyone available, from the dean of his school on down, to ask with obvious relish, 'Yes, but can you tell me - what is a fact?'

What puzzled me was his unfailing delight in the answers and discussions which followed the question - a delight which appeared as keen at the twentieth repetition of the situation as at the third. It seemed to me at the time that if I knew what a fact was, I shouldn't find any special excitement in learning what other people knew, thought they knew, or didn't know.

I finally realized that, unlike myself, and perhaps unlike most people in the world, Irving was an habitual, indefatigable, highly-skilled teacher. It almost seems to me that teaching constituted his peculiar attack on life, that it was through teaching that he encompassed the universe and imposed order on it. I do not believe that I could give a single example of a situation in which his remarkable creative talent was expressed outside the limits of teaching.

I suspect that it was his almost automatic adherence to these limits, in addition to the great talents which he brought to his profession, which made him so valuable a person.

I recall that Irving's 'What is a fact?' question piqued my curiosity a good deal, and that I read a little about general semantics - The Tyranny of Words beyond doubt, and perhaps a few pages of Science and Sanity. I then wrote an article on the subject, this being my method of discovering what I had read. The article
came to Irving's attention after a time; and when next we met, he invited me to tell him what I thought I had been writing about. I attempted to answer his questions for half an hour or so, and came away admitting to myself that, whatever I had learned, it didn't make much sense.

I remember, too, that not once in our discussion did he point out to me what I could or should have said, and much less what he would have said in my place. And yet, the result of our talk was that I felt obliged to find out these things for myself.

He was a remarkable, almost a unique teacher. In the course of our acquaintance, I can remember talking to him on a great variety of subjects, on everything from his studies with Korzybski to golf and stamp-collecting; I think that I read almost everything he wrote within the last dozen years or so; I heard him speak on various occasions. I don't think that I knew him to change his style or his technique once in that time.

It is this style, I think, which I valued most about him, and which I miss most profoundly in his death: this energetic, humorous, penetrating, interested attack on whatever aspect of the world was brought to his attention.

HARRY WEINBERG
Department of Speech, Temple University

I think I learned from Irving Lee, more than from any other source, the significance and importance of the obvious and techniques -- which are 'obvious' -- for teaching this to others. I remember how often Korzybski used to say that the principles of general semantics are 'baby stuff.' But how can you get intelligent and educated people to listen to and apply this 'baby stuff?' The answer is simple -- concreteness, use of description instead of definition.

This was one of the secrets of Lee's great success as a lecturer. He would take one principle and illustrate it with dozens of examples. Sometimes, as his graduate assistant, when listening to his lectures I would become impatient and say to myself, 'Why doesn't he move faster, give them more theory, more of the philosophical implications and ramifications? No wonder some of the other faculty members look down their noses at G S as being simple, obvious, old stuff.'

My first appreciation of the effectiveness of his method began with an incident during my first year with him. I was asked to give a lecture on 'What is General Semantics?' before a group of adults, having all of twenty minutes to do it. I did it in fifteen. I was quite proud of this feat and told Lee about it the next morning as I trotted after him, expecting words of praise. He slowed down to a canter, turned his eye on me, took his pipe out of his mouth and said, with rising inflection, 'Oh?' -- and walked on.

Lee was famous, and infamous, among his graduate students for that 'Oh?' We came to him expecting answers and the 'Oh?' forced us to find them for ourselves, made us realize that there is always more to be said about any situation and that the most important part of a problem is the formulation of the question. Off and on for many months I pondered that particular 'Oh?' Then I forgot about the incident 'till one day, about six years later, I heard Lee give a lecture at an I G S Seminar at Bard College. His concluding sentence I shall never forget: 'Teaching and learning that lead to no significant change in behavior are practically worthless.' At that moment that 'Oh?' and its significance flashed through my mind. In attempting to tell 'all' about G S in fifteen minutes, I had told them nothing.
IRVING J. LEE...

THOMAS G. MILLER
School of Commerce, Northwestern University

With the death of Professor Irving J. Lee, all who came under his influence will decide what he meant to them. Evaluations of his scholarship, his intellectual gifts, and his speaking and writing skills will, in due time, receive systematic attention. As an undergraduate who heard Lee lecture and who remained to spend four years under his direction in graduate study, I wish to suggest a facet of his complex nature that will continue to linger long in my recollections.

I remember Dr. Lee not so much as a scholar, a thinker, a researcher, or a pioneer in communications, but rather as a teacher peculiarly endowed with a charismatic personality — a teacher whose voice, gestures, movements, and commanding presence pulled students close to him.

This quality of which I speak is very elusive. If I attempted to define it, I would call it a contagious enthusiasm, a ceaseless flow of warmth and spontaneity, and a capacity to convey feelings and ideas so directly that there seemed to be no barriers between him and his students. The term 'charismatic' is a lame attempt to describe the personal magnetism by which he held the complete attention of his listeners and inspired the admiration of his students.

This quality -- this intrinsic gift -- never deserted him in the classroom. It brought students by the hundreds to his beginning course, inconveniently scheduled by Dr. Lee at two-thirty in the afternoon. Graduate students, professional colleagues, and men of affairs -- all were influenced by his charisma. From it he drew his limitless vitality and his abundant strength; by it he made learning an adventure for those who heard him. This charismatic quality brought him to the classroom less than three weeks before the end. It is the raw material from which legends spring.

J. S. BOIS
Bois, McCay & Associates, Montreal

After one year of operations, the Montreal General Semantics Society was bursting at the seams. On September of that year (I think it was in 1948) the membership had tripled. We had a problem on our hands; how to 'indoctrinate' quickly these newcomers.

We wanted a textbook. Lee's Language Habits in Human Affairs was adopted, and it worked beyond our expectations. I found it dry as a skeleton, but the structure was there, hanging together and articulated. The references at the end of the chapters told us where to find the material to put muscles on the skeleton, and bring it to life.

At this point I identified Irving Lee with the textbook. I expected him to be the dried-up professor I had met so many times in my life.

What a surprise when I met Irving Lee at the Denver Congress! We had a good long talk all by ourselves on the steps of the lecture hall one night, while papers were being read that were of no particular interest to either of us. We were approaching the applied field in two slightly divergent directions, but we were exchanging experiences that had very much in common. We were looking forward to more intensive collaboration. He was so much alive, so warm, and so stimulating that I could not help telling him of my map of the dried-up professor. We had a good laugh over it.

At the Great Barrington I G S Seminar in 1950, I saw Irving Lee in action; sparkling, scintillating, electrifying the audience with his quick semantic reactions that generated chain reactions all over the place. I tore to pieces the last shreds of my old map of the dried-up college professor.
At the Cleveland meeting of the American Psychological Association, I saw Irving Lee the sober scientist, reporting to his confreres his experience with a small Chicago firm where he used G S to 'coerce' an executive group into agreement. His story was a marshalling of facts in logical order, demonstrating to a critical audience that a well-conducted experience in the applied field deserves as much attention as a strictly controlled experiment in the laboratory. This time the electrification of the field did not give any sparks; it was more like the ultra-sonic waves that stir deep and lasting.

We meant to see each other more often, leisurely, far away from the hustle and bustle of our daily lives. But we didn't. We invited him to come and address the Montreal Society. It was postponed. When in Chicago on business, I could not find time to see him. It was for the next trip.

Now, he is gone. His writings come to life when I read them in the glow of my memories of him in Denver, Great Barrington, and Cleveland.

O. R. Bontrager
State Teachers College
California, Pennsylvania

Irving Lee exemplified in his life a central principle of general semantics: Apply - apply - apply. He did not stand still; he moved with the stream. He will continue to live in the lives of those who came to know him. In the meantime, as in Matthew Arnold's day, 'the majestic River floated on, . . .'

Elton S. Carter
Department of Speech
Pennsylvania State University

Irving Lee taught me the tragedy of his own death when he spoke to his students about Benjamin Lee Whorf who died at forty-four. And Irving Lee directed my study of C. J. Keyser's doctrines where I found Keyser's address, 'The Significance of Death,' which 'is concerned solely and exclusively with the relation of human death to the life that PRECEDES it.' Complementing this address for me is the passage in Manhood of Humanity (p. 148) where Korzybski (and probably Keyser) wrote: 'The time-binding capacity . . . gives human beings the means of attaining a precious kind of immortality; it enables them to . . . survive everlasting in the fruits of their toil, a perpetual blessing to endless generations of the children of men. This is the truth we instinctively recognize when we call a great man "immortal." We mean that he has done deeds that survive in time for the perpetual weal of mankind.'

Irving Lee accomplished more in half a lifetime than most people are able to accomplish with 'the last of life . . . ' to work in. He established -- no, Lee wouldn't like to have full credit . . . Others helped him establish at Northwestern University one of the largest and one of the best centers for the study of General Semantics, etc., in the world. One does not speak about replacing him at Northwestern. Yet Dean McBurney and Lee's other colleagues will somehow perpetuate this living memorial to Professor Lee. Nor will his teaching be lost with his students; for some of them, at least, are determined to begin where Dr. Lee left off.

It won't be easy. It will take us -- each and all of us -- a few years to catch up, if we ever do catch up. Eventually we must learn from him 'How to Talk with People' and how to continue developing the case method in communications research, teaching and practice. And let us not be deceived by the apparent simplicity and clarity of his language when we know better; for the man was a most skillful writer, and a most able speaker, and a teacher among the few who need not fear judgment by the criterion of what the students learn.

I never worked for Dr. Lee, although I was one of his assistants; he always made me feel that I was working with him. Somehow he advised me better than I knew or know, and he let me find out what a good teacher he was -- though
that was not his purpose at all -- by letting me try teaching whenever he could. It was a courageous thing to do. I used to say -- and I still say -- 'Don't underestimate Lee; it's easy to do.'

I must confess that I had but little awareness of what Irving Lee meant to me until the shock of his death hit me deeper than the passing of relatives. Now I must let John Livingston Lowes remind me that 'the eyes of the great dead yet look through ours, and our past eyes still see.' For Irving Lee has done deeds that survive in time for the perpetual weal of mankind. That is what I mean when I call him immortal.

WENDELL JOHNSON
Speech Pathology and Audiology
State University of Iowa

The late Professor Irving J. Lee was in my opinion one of a very small and distinguished group in American education made up of exceptionally effective teachers. Great teachers are not often glamorized and they are so seldom encountered by most people, that their distinguishing characteristics are neither well known nor commonly appreciated. Professor Lee possessed in abundance many of the distinguishing characteristics of a great teacher. For one thing, he had an uncanny sensitivity to the significant work of others. This is something without which a teacher can never be great. His book, The Language of Wisdom and Folly, is an extraordinary compilation of selections from the more significant thoughts that have been expressed by those who have been creatively preoccupied with problems of language and meaning. Even the casual conversation of Irving Lee was filled with the great thoughts of the ages. He had a feeling for the best in human understanding that was beneficently contagious. In this ambiguously wordy world it is extraordinarily refreshing to come across anyone who can use language as clearly and significantly as Irving Lee did. His was a rare gift and he cultivated it very tenderly. I knew Irving Lee personally as a fellow officer of the International Society for General Semantics, as a fellow member of the Board of the Semantics Book Club, as a colleague in the field of speech, and as a good friend. He was one of the most consistently constructive personalities I have ever known. The world contains less prejudice and more good will and is in general a better place in which to live for his having been here.

KENNETH S. KEYES, JR.
Real Estate Investments
South Miami, Florida

The untimely passing of Irving J. Lee is a great loss. Probably our greatest need today is for those who can effectively present general semantics to the average person. Lee's superb ability to put G S on a practical daily basis that is readily understandable to the man in the street has been of incalculable value. A large proportion of people I meet who are familiar with general semantics have acquired their interest through Lee's books. At this time when his loss is deeply felt, it is comforting to remember that his life was an excellent example of the process of time-binding. For many years to come he will, through his excellently written works, continue to be in the front line of those who are working to give future generations the benefits of general semantics.

ELWOOD MURRAY
School of Speech, University of Denver

Irving J. Lee in his strategic position at Northwestern University was of immense value to persons such as myself in introducing general semantics training. The conservatism of the university environment is such that the instructor hesitates to be the only one undertaking work as potent as general semantics. So effective was his work and so excellent his reputation that our colleagues in this University and other universities would tell us about general semantics. His textbooks leave a continuous contribution to the work which we and other instructors will use for many
years in our classes. The high standards which his publications represent add immeasurably to the stature of the new discipline. His first book came out at a critical time in carrying forward the work. His deep scholarship was embellished by a simple readable style which students of general semantics take as a model.

Dr. Lee’s advice and cautions to students and teachers who were in the throes of re-orienting themselves showed a most penetrating insight into their needs and problems. His generosity in this respect put a vast load of responsibility upon him. Students who came here at his recommendation for more of the work had a balanced and sensible attitude toward Korzybski.

Although this great fountain-head has become inactive the beautiful Mrs. Lee must take satisfaction in the many new fountains which have taken over and which Irving started.

ANATOL RAPPOPORT
Center for Advanced Study
In the Behavioral Sciences

Somewhere I wrote a criticism of the undue emphasis which our schools place on adjusting to our society as it is, to the detriment of developing a critical, searching attitude toward established values. To illustrate, I mentioned the cluttering up of curricula with courses on dating etiquette and public speaking. There was a prompt reply from a public speaking teacher, taking me to task for what she felt was an arrogant attitude toward an important subject. At that time I thought of Irving Lee and of what he made of the School of Speech at Northwestern University.

Indeed, it is not the subject but the attitudes nurtured in its study which determine whether education is to be superficial and opportunistic or profound and challenging. Irving Lee approached speech as the instrument for consummating a most fundamental relation among human beings, namely communication. He understood that a conscientious teaching of the art of communicating must go far beyond the imparting of proficiencies and techniques; that it involves an examination of attitudes, an analysis of one’s own biases, that it cannot be divorced from basic questions of ethics. Thus Irving Lee brought to bear the philosophy underlying general semantics upon a subject which had traditionally been treated in American education as a tool for achieving conventional success.

In Irving Lee’s students, whom one meets everywhere, the results of his extensive and deep influence are often immediately perceived. It is a partial consolation for the loss felt by his friends that his impact on young people will continue to be manifest for many years.

Laura Louise and Irving Lee,
Summer 1954.

At Glacier Park, July 1940.
FRANKLYN S. HAIMAN
The School of Speech, Northwestern University

My first contact with Irving Lee came as a graduate student in his course in General Semantics at Northwestern University. I think it is no exaggeration to say that this was the first classroom experience I had ever had which stimulated me to do endless hours of thinking on my own. Perhaps this is more a sad commentary on the typical education most of us receive than a tribute to Irving Lee, but in any case it does demonstrate that by any ordinary standards Irving Lee was in the very top rung of effectiveness among college professors. The numbers of students who flocked to his courses, and the enthusiasm they showed for what they learned there, verify my own experience on this point.

As colleagues for seven years in the Department of Public Speaking at Northwestern, Irving and I have shared, so to speak, many students. Another testimonial to the effectiveness of his teaching, and perhaps to the discipline of general semantics itself, is the evidence I have seen of the transfer of training from his courses into the work that students have done with me. This is a phenomenon we observe all too seldom, and it restores one's faith in the educational process when we see new knowledge like this becoming a functional part of the students' daily behavior.

The great teacher is one who uses not only the classroom but every channel of communication that is available to him for reaching the minds of men. This was certainly true of Irving Lee, as exemplified particularly by two of his books, Language Habits in Human Affairs, and How to Talk with People. These are volumes that are so clear, so readable, and so keyed to the everyday needs of people that they truly teach themselves. I know from the personal comments of scores of adults with whom I have come in contact that these two books have been among the most helpful they have ever read.

What I have commented on here are but a few small pieces of the work of this man -- pieces that have impressed me the most. Perhaps when these are joined together with the hundreds of other facets of his life which have touched other people we will begin to get a picture of the tremendous impact of his short life.

THOMAS R. NILSEN
Department of Speech, University of Washington, Seattle

To me the most persistent purpose in Irving Lee's teaching -- and he was above all a teacher -- was to bring his students into a more satisfying and productive relationship with the world in which they lived. Since man's introduction to his world, his adjustment to it and control over it are primarily through the symbols he responds to and uses, Lee's interest centered largely on these symbols and their use, most directly on language. He sought with passionate interest to relate man's verbal world more adequately to the world of phenomena it represents. Not that his was the crass view that all human problems are verbal. Lee's was more the view of Walter Lippmann when the latter spoke of the pseudo-environment of pictures inside our heads, verbal pictures Lee would emphasize, that are not only pale copies but often grossly distorted copies of the reality with which man must cope. And here lay the challenge: how to use our language so that we can better cope with this reality. In general semantics Lee felt he had a tool, a method with which to work toward his purpose. He ranged far and wide for ideas to enrich the basic principles of general semantics, and to bring to bear on the problems of evaluation the thinking of many disciplines. It was not by accident that his students made the acquaintance of the Greek science of the pre-Platonic age when science was the handmaiden of the crafts, when the thinker and doer were one, or with the Hippocratic method of 'intimate, habitual, intuitive familiarity with things; systematic knowledge of things; and an effective way of thinking about things. If at times greater theoretical rigor may have been wished
for in parts of Lee's philosophy, his emphasis on observation, on verification, on rigorously relating language to reality, was and is a much needed emphasis for the life of the individual as well as for the life of society. And perhaps no greater tribute need or can be given to him than to say that the innumerable students for whom the scientific method became a part of their thought and feeling as a consequence of Irving Lee's inspired and imaginative teaching now see their world more steadily and whole.

ROBERT T. OLIVER
Department of Speech, Pennsylvania State University

Irving Lee is not a man who will ever be replaced. His enthusiasm, warm sympathy, and keenly inquiring mind endeared him to us all at the same time that he aroused our highest admiration. Through his work we felt renewed and extended our pride in the ancient and honorable field of Speech. His published works will long continue to serve both as a foundation and as a challenge to further intellectual endeavor.

But those of us who knew him personally will miss even more the warmth and humanity of the man himself. He held and holds a place in our hearts as well as a place on our select shelves of distinguished writing.

WILLIAM V. HANEY
Department of Speech and Institute of Industrial Psychology, DePaul University

In his recent book, Power of Words, Stuart Chase referred to Irving J. Lee as 'one of the most successful teachers of general semantics.' If the success of a teacher can be determined from the size of his classes Chase has ample verification for his statement. Dr. Lee offered his basic course in general semantics at Northwestern four times every year. The enrollment was rarely below one hundred and fifty and frequently well over two hundred. Essentially an elective course it attracted students from every school in the University. So popular was the course that Lee sometimes despaired that he would ever have the small class necessary to teach general semantics by his cherished case-method. I recall him deliberately scheduling the course at unattractive hours of the day and at remote locations on the campus - but the students came regardless.

More convincing than class-size as a criterion for successful teaching is the impressive percentage of former students who continually volunteer to anyone who may be interested that 'that was one course that really changed me - for the better.'

What makes a professor eminently successful? Agreement here is quite unlikely. I can only express the view of one former student.

I have often felt that Irving Lee's remarkable ability to capture and hold the attention of his audiences was an important key to his effectiveness. Stated simply, he held attention because he believed in what he taught and he was skillful in teaching it.

It was apparent to all that he had a profound conviction in and a contagious enthusiasm for his subject-matter. Ever dynamic and vigorous he never failed to extend himself - even in ill health. But he never permitted his convictions to interfere with his students' learning processes.
Conviction and enthusiasm are not ordinarily enough to make a thoroughly effective teacher. One must be able to communicate with his students. Lee was capable of expressing himself with exceptional clarity and stimulation. He expertly used gesture, vocal variation, and facial expression to reinforce the meaning of his words - yet never were these devices conspicuous in themselves.

Two particular techniques stand out in my memory of him. One was his incredible ability to fire thought-provoking questions at his classes. Phrasing inquiries rapidly in a half-dozen different ways he was able to get active participation from virtually every member of a class of two hundred. While time permitted only a fraction of the large group to express themselves aloud each student was literally thinking on the edge of his seat.

Another technique, which Lee practiced to perfection, was the use of illustrations to make his general points clear and concrete. It is difficult for me to recall him making a single unsupported generalization. For each assertion he pulled from his brown briefcase a handful of examples. Some of them were humorous, others were serious, but all of them were clearly and compellingly relevant.

Some have known Irving J. Lee as a student, as a scholar, as a lecturer, as a writer, as a director of research, as a business, industrial, and military administration consultant. There is ample evidence of his excellence in each of these pursuits. But thousands knew him as a teacher without peer.

SEYMOUR L. NATHAN
Charles S. Nathan, Incorporated, New York

One week-end about twenty-five years ago, Irv was visiting at my home for some relaxation during the school term. (We were classmates and close friends.) Early Sunday morning we heard strange sounds from the garage. Investigation disclosed that Irving was practicing his technique for an audition the following week, aiming at an announcer's job in radio! He was offered a position, I believe, but turned it down. How different his future might have been!

Diligence and concentration were the keystones of his success. Notable indeed is his collection of stories, news items, etc. describing situations relevant to G S. He used them extensively in speaking, lecturing, writing. The art of 'demonstrating' G S was one in which he was particularly skilled. I recall a Seminar at N Y U in which he made the point that G S cannot be 'applied' with a brush, like paint, but must be 'demonstrated' by action or word so that the student could go through the five steps leading to G S integration-in-the-nervous-system.

In much the same way as Sam Rosen 'learned' his fenestration operation, Irving Lee learned and taught the use of G S principles in daily life. To learn to talk with people, he sat down and talked with people. To dispel racial and religious intolerance, he went to the 'hot spots' of such activity, to see what happened, and to use his particular techniques in easing and solving tense attitudes.

His special interest seemed to be in teaching, not just in the academic world, but in business, government and military circles. His ability to hold his audience, and to bring them into the act, to get them working on the subject at hand, to stimulate and lead, were assets he possessed. In the past few years he had been getting his feet wet in business management. Executives and foremen seemed to take to his presentation and methods, and G S was spreading its techniques in new places.

There are others working in the same general area (Sam Bois, for example). It can only be hoped that the effort will be carried on from where Irving Lee has so suddenly and sadly left off.
MITSUKO SAITO
Northwestern University

About my first visit with Dr. Lee: When I first came to Northwestern University in 1951, many students, when talking to me about Dr. Lee, said, 'No student should leave Northwestern without taking a course under Dr. Lee.' When I asked them why, they told me with enthusiasm, 'All we can say is that Dr. Lee is terrific! When you are unhappy or frustrated, just go to him. By the time you come out of his office, you will feel much encouraged and inspired.'

It was the fall quarter of 1952 when I first took a course in general semantics. I was amazed at Dr. Lee's unique way of handling students in the classroom. Although it was the sleepy hour right after lunch, around 200 students were fascinated with the way he seemed to talk to each one as an individual. That was the first thing I, as a teacher, learned from Dr. Lee in this course, his technique of talking with the student instead of to or above him.

The second thing I learned in that class was so exciting to me that I could hardly sleep that night. It was when Dr. Lee was talking about two-valued orientation. Just like a flash of light, a kind of inspiration went through my mind. I felt the joy of a new discovery on the solution of problems. I was in complete rapture, and the next day, I went to see Dr. Lee. That was my very first visit with him. I told him that I had been in a kind of despair for some time, that I had been feeling the unbreakable barriers between two nations getting higher and higher the longer I stayed in this country and the more I came to know about people and their ways of thinking and living. However, his lecture on two-valued orientation had given me a bright hope on this problem of intercultural communication. That was the day when I realized the specific difference between the pattern of Japanese and English language, and I started to notice some causes for the unfortunate misunderstandings which occurred in the Occupation period when I used to teach in Tokyo. Dr. Lee listened attentively to me, and he said, 'This summer, I went to the University of Hawaii to teach, and I must tell you what I found there. The highest ten percent of the grades I gave out in my classes were given to Japanese students. I would like you to know this too. Several friends of mine have told me that if one could teach general semantics in Japan, it would spread all over Japan much faster than any other place in the world. Now what do you think about that? I want you to keep these things in your mind as you study general semantics and always remember that the study in general semantics will play an important role in the situation of intercultural communication.'

When I left his office, I was full of inspiration, just as the other students said I would be. I was highly motivated by my first visit with Dr. Lee. This first assignment became his last assignment to me, and will become my life-time assignment.

KENJI MORIOKA
Tokyo Women's Christian College, Japan

A touch of international understanding: January 21, 1954, is a day I shall never forget as long as I live. To my extreme amazement, a package of books and pamphlets and other literature was addressed to me from a great scholar whom I knew only by name. I was simply astounded at the interest Dr. Irving J. Lee manifested in a person who was a totally insignificant instructor who had been studying General Semantics in Japan. His only purpose was nothing but to encourage my work in G S. I would like to express my most profound respect for his broad scholarly recognition wherever he found it. I deeply feel that this indicates one incident of Dr. Lee's matchless contribution to the world in the field of general semantics.

David Alfred Lee, Alfred Korzybski and Irving Lee.
August 1949.
One summer afternoon a few years ago, I sat in Irving Lee's garden describing how my business fortunes had reached a rather low ebb. After completing my story, he was thoughtful for a moment, then said, 'Well, Karl, perhaps things don't look too promising just now, but I do recall that from time to time in the past you have told me of certain considerable successes that you have had. You will just have to accept that life is made up of both kinds of experiences and today you have to take the bitter but tomorrow you may again taste the sweet as you have in the past. To think of yourself in terms of either alternative, except at a date, is a serious misevaluation.' That was Irving Lee - an ability to translate into a few easily understood words the Korzybskian formulations which he knew and practiced so well.

I leave to those who are more competent an evaluation of Lee's intellectual and scholarly contributions to our society and to our culture. In any event, time and tomorrow will give the answers and that's the way Irving Lee would want it to be. However, like others in business I found his formulations most helpful in improving my relationships with business associates at every level and with those individuals with whom our organization deals.

But there was about Irving Lee a warmth and friendliness which seemed to me to outshine all his other characteristics. Since I lived fairly close to his home, on occasion I dropped in for a visit. Invariably, his and Laura Louise's friendliness led me to ramble on even though by nature I am a rather shy conversationalist. They were two of the best 'listeners' it has ever been my privilege to know. So while others tell of Lee's intellectual and other contributions, I carry with me through the years memories of his kindness and friendliness. It is a rich legacy and one which all of us who knew him well cannot help but translate into greater warmth and kindness in our relationships with those around us.

KARL G. HAUCH
Cruttenden & Company, Member of New York Stock Exchange

PAUL ARTHUR SCHILPP
Department of Philosophy, Northwestern University

My first acquaintance with Irving J. Lee was as one of the most brilliant graduate students I ever had. Even in that relationship we soon became fast friends, a friendship which not merely lasted but deepened throughout these last 19 years. For most of that time it was my good fortune to have him as a colleague here at Northwestern, where his teaching ability and influence over students was second to none.

Although Lee's major interests lay in general semantics and the area of communication, actually his interests were so broad that 'nothing human was foreign to him.' For years he was wont to come into my office regularly, with the greeting: 'What have you got that's new?' Innumerable new books in philosophy interested and often excited him; and many times he would read such new additions to my library even before I myself had had an opportunity to read them. Moreover, when he had read them, he knew their content, he never just nibbled at them. If there was anything he enjoyed more than a critical analysis and discussion of significant new contributions to knowledge, I do not know what it was (or could have been).

One particular event must be related: just for the record. One noon, a few years ago, one of my students stormed breathlessly into my office and, after catching her breath, related how furious she had become over remarks Dr. Lee had just made in a class about 'philosophy'. His remarks, she claimed, had been 'scandalous'. After class, she had gone up to him and told him what she thought and, at the same time, dared him to make the same statements before his class in my presence. Without a moment's hesitation, Professor Lee had accepted her dare. So, here she was, in my office,
At the home of Professor Paul A. Schilpp, March 1955. Photo by Yul Brynner, who was studying Philosophy with Professor Schilpp at Northwestern during the Chicago run of THE KING AND I.
asking me whether I would come to Dr. Lee's class and debate the issue under discussion with him. I accepted, on condition that Dr. Lee would personally ask me to come to his class for that purpose. Triumphantaly she went back to Dr. Lee and, within minutes, Irv was on the phone inviting me to come to his class. The debate we had before his class was an experience which I shall never forget. As was always the case, Dr. Lee was much more concerned with (1) making precise and clear the exact nature of the issue before us, (2) getting the students to get as clear a comprehension and understanding of the issue, etc., than he was with winning an argument. In brief, he always practiced what he preached: definition of terms, clarity of statement, and the aims of intelligible communication. His passing is a quite irreparable loss.

ERNEST J. WRAGE
The School of Speech, Northwestern University

Irving Lee was an exciting person. He loved life and quickened the lives of others by his own responses to it.

Irving had a probing, inquiring mind. He avidly explored the world in and around himself; he was gifted and disciplined in interpreting what he found. He and I shared an office for nine years. Whenever we both had a break in the business of the day, Irv would light his pipe, swing around in his chair, put his feet on his desk, and ask, 'Well, what do you know? Any new theories?' He could ask even a stock question in such a way that you felt obliged to cudgel your brain and summon flagging energies. Sometimes his question was only a gambit; we were then quickly launched into something he wanted to try out in the give and take of discussion. Few things fell outside the wide range of his interests, but I think his greatest pleasure came from discussing ideas, particularly ideas related to human affairs. I once heard him remark that he found no drama so exciting as 'the drama of ideas.'

Irving's mind was remarkably inventive. We who knew him well in day-to-day associations never stopped being fascinated by his creative intelligence -- his fresh approaches to problems and his ready flow of concrete suggestions. He knew the value of an hypothesis, and in any given situation he could be counted upon to supply one or more. But he didn't stop there. Thought was incomplete until it had been checked against the outside fact. His success as a teacher is explained in part by his consistent practice of evolving theories and principles by reference to abundant cases. The ultimate test of 'the guess', he would say, is the question: 'Does the idea fit the facts?'

Irving was wonderfully articulate. His lively mind, physical resources, and command of language all contributed. He could give life even to the tired topic. He said things cogently, impressively, arrestingy. In Irving intelligence became humane, articulate, effective, and exciting.

ROBERT R. HUME
The Traffic Institute, Northwestern University

I knew Irving Lee as a neighbor, as a friend, and, in a limited way, as a teacher. Each of these is a clearly defined relationship, but I cannot draw lines of distinction very clearly, showing where one relationship began to be more or less important than the others, in time or place. This is perhaps a difficult and artificial thing to do in connection with anyone, but it seems singularly so in connection with Irving Lee.

Leaning over the back fence discussing the problems related to raising satisfactory tomatoes, mutually examining an idea on the way home from the office, or discus-
sing the usefulness of a new analytical technique in the classroom -- Irving Lee was somehow always, and at the same time, neighbor, friend, and teacher.

To me, the common element in all the contacts I had with Irving Lee was enjoyment. There was an abiding competence in him that made his presence in any situation a source of satisfaction and reward. Communion with him, as neighbor, friend, or teacher, was always somehow constructive. The quality of enjoyment that invariably permeated every association with him was not the frivolous kind, though he knew frivolity too; it was the deep enjoyment associated with satisfaction and appreciation.

For me, the rarest and most worthy of all people are best characterized by the term 'seminal'. They feed into life original elements and qualities of constructive growth. They give substance to moral imperatives, and meaning to dignity, esteem, and affection on the human scene. It makes a difference to us as individuals that they have been among us, and it makes a difference to all of us together. Certainly Irving Lee was one of these.

JOHN A. PURINTON, JR.
G. D. Searle & Company (Research in the Service of Medicine), Chicago

My affiliates and I have been privileged to know and work with Dr. Irving Lee over a period of years. The shadow of a truly great man will long fall upon us, for it is his inspiring counsel which continues to make our associations with others more rich and our work together more effective.

The most enduring memorial which we can create to Irving Lee is to crank the seeds of wisdom, which he has so generously sown among us, grow to full fruition.

RUSSELL MEYERS, MD
State University of Iowa Hospitals

In 1946, I came to know personally the Irving J. Lee with whose writings on the application of general semantics to public speaking and other areas of communication I had already been much impressed. We had been released from military duty shortly before and quickly became good friends. During the ensuing nine years my admiration for his broad interests in the world of art, science and general human affairs, great fund of physical energy, sparkling wit and enthusiasm, 'freedom from language', ideas in the areas of general and special education and singular capacities for integrating experiences and communicating them to students and colleagues never ceased to grow. Our last exchanges of correspondence bore on the means by which general semantics principles might be incorporated in the teaching program of a large college of nursing in Iowa. Cogent recommendations in this connection were formulated a few months before he died. Dr. Lee would have been gratified to learn that they are to be operationally implemented at Council Bluffs this Fall.

As is now clear from several sources of information which have been pieced together since his death, Dr. Lee was aware of the likely early fatal outcome of his illness -- especially during the last few weeks. But it was not in him to burden his friends with the inevitable or to abandon work already in process. He was busy almost to the last -- unwilling to lose time in lamenting what might otherwise have been.

If ever there was a 'natural' general semanticist, Irving Lee was it. He was at ease alike presiding at meetings of the Boards of Governors of the International Society for General Semantics and the Institute of General Semantics; chairing panel
IRVING J. LEE...

discussions at the national and regional meetings of the several scholarly societies to which he belonged; conducting classes for police officers at the Northwestern Traffic Safety Institute; organizing courses in G S at the Air War College and supervising research on the effects of G S instruction upon institutionalized psychotic patients. In his personal and professional life he consistently exhibited resourcefulness in applying the scientific method to specific problems-at-hand; openness to the ideas and value-systems of others; ever-ready accessibility to new evidence; candidness wrapped in human kindliness; and the maturity of outlook so warmly urged upon society by the G S discipline to which he was devoted.

Among my contacts with Irving, one memory stands out preeminently. This was the occasion of one of his most memorable (and, regrettably, unpublished) presentations at the banquet of the 1951 Conference on General Semantics held at the University of Chicago. On that evening Dr. Lee shared with an audience of distinguished scholars and investigators his personal vision of THE MAN OF THE FUTURE -- a man who, without the heavy travail with which most of us born in a prescientific culture are burdened in the endeavor, should regularly and gracefully exercise principles of behavior advocated by G S. Dr. Lee depicted the kinds of control over the world-of-self and the world-of-things that such a man might be expected to achieve. He blue-printed the rewarding lives that communities of men like him might realize. The presentation was accomplished within twenty-five minutes -- a model of content, organization and skillful public speaking. His audience had had a rare listening experience, and many left the hall in sober contemplation of the vision so sketched.

Reflecting on the matter later that night, the realization came upon me that Irving Lee himself, quite unwittingly, exemplified the sort of man G S might help fashion. Imagine a community of, say, fifteen thousand persons in which a thousand men like him might cooperate to bring the full impact of their intellectual, esthetic and ethical behavioral patterns upon the education system, business enterprises and political institutions of the locale. Imagine the salutary influence of their views on inept prejudice and propaganda and their technics for 'coercing' agreement in human discourse. What might such a body of high-minded citizens not accomplish? What salutary influences on the world about them might not be brought about by the revised folkways and mores of such a community?

Was this but the dream of an over-imaginative artist? Far from it! Most current students of human engineering are prepared to acknowledge that such a blueprint lies well within the realm of achievement. Thanks to G S, modern communication science, information theory and operational philosophy, the basic tools needed for its implementation are already at hand. To have played a perceptible role in preparing even a fraction of the current generation for so worthy an aspiration is, I venture to guess, all that Irving Lee would have wished of life for himself, for his well beloved wife, Laura Louise, and his little son, David. Those of us who yet remain on the job are deeply sensible of how well he played that role.

As with all great teachers and sound counsellors, Irving Lee lives on today through the hundreds of students and friends he touched. The latter and their progeny may be counted on to perpetuate his cherished principles of action long after his name has been forgotten. As was so well said of Abou Ben Adhem, 'May his tribe increase!'
First, Lee engaged in himself, and directed his students toward, a program of research which was wide, influential and fruitful. At the time of the Third Congress on General Semantics, he outlined in some detail the aspects of general semantics which needed practical and theoretical documentation by development and experiment. His own work and that done under his direction added significantly to the growing body of verified fact underlying the general theory of evaluation. It is to be expected that Lee-trained students will continue this program, thus supplying another example of creative time-binding.

Second, and for me most important of all, Lee's materials were immediately and eminently useful as aids in training a scientific orientation. He directed his teaching to this central concern of general semantics training, both in his books and in his personal appearances before a wide range of audiences and scholarly gatherings. (It has been my good fortune to have heard some of the latter.) His books and the reports of his research functioned as usable tools to place in the hands of students for their own self-training in extensional orientation.

In both these facets of his work, Lee carried on and developed the work of Korzybski. He was concerned with the continued development of a sound and verified theory of evaluation and equally with the training of individuals toward proper evaluation and a scientific outlook.

Any comment upon Irving Lee's work would be incomplete without a mention of his warm personality, his impressive presence and his talent for liking people, since these were both a source and a result of his work. I still recall with great pleasure my first meeting with Irving, in New York during the war. Even then, in the limited horizon of military objectives, he was thinking of ways to teach people not only how to be more efficient pilots but also how to be better citizens and better people. And the same warm friendliness that he gave me spontaneously then was given generously again and again each time that we met and manifested often in the intervals in correspondence and many other ways.

FRANKLIN M. KREML
The Transportation Center, Northwestern University

Taken separately or all together, what Irving Lee gave to the men who have known him as a teacher at the Traffic Institute, to the men on our staff, and to me as director of the Institute, and as a friend, is quite immeasurable.

In general, the law enforcement officers whom Irving Lee taught at the Traffic Institute were rather thoroughly patterned in their thinking and actions in their official assignments. Their guides were principally fixed laws and regulations. Such patterns, of course, tend to give rise to unreasoned generalization, oversimplification, failure to see diversity below the surface of uniformity.

Irving Lee did not try directly to change them or their thinking. He showed them, by his approach to problems, what changing could mean. He pointed to the diversities, and the complexities, and the specifics. He looked at their problems with them. And, in the process, the quality of their looking was changed, and, ultimately, the quality of their thinking and acting, and of their service to their communities.

To his associates on the staff of the Institute, he gave of the vast fund of his special experience. Here too he brought new ways of looking, new attitudes, and a new spirit. He brought these, not as professional paraphernalia, but as part of himself and in his every act.
To me, both as colleague and friend, he was one of the outstanding examples in my experience of the fullest meaning of integrity -- bringing one's fullest resources to bear upon the improvement of human life, finding the measure of worth of every act in its contribution to the whole. Somehow one couldn't separate out any part of him and say, 'That is good.' He was good, and his goodness was in every thing he did.

JAMES SLAVIN
The Traffic Institute, Northwestern University

As you well know, it is extremely difficult to use our language to describe the magnificent personality and intellect of Dr. Lee.

In the field of traffic police administration there are many specifics. To make effective use of the specifics our students must know how to go about thinking about the specifics and about principles in relation to their own community traffic problems; Irving Lee was the prime source of information and methodology in how to go about thinking and talking about problems of human behavior -- related to the traffic problem -- for the more than 700 police officers who have completed our police administration course.

In addition, Dr. Lee's instruction has substantially improved our students' ability in almost every kind of human interaction situation peculiar to police officers, as husbands, parents, commanding officers, etc.

Because of the many requests for his services, we found Dr. Lee frequently weighing one activity against another on the most factual basis he could discover. He, therefore, constructed a questionnaire about the effect of general semantics on the lives of our police administration course students, which we mailed for him. Although he was one of the most popular instructors we had on our teaching staff, and although he was aware of his personal popularity, he insisted that the questionnaire be sent to the students as though the Traffic Institute alone wanted their opinion. He told us that he would consider a 10 percent return as a good sample. We received a return of over 40 percent and every student said that Dr. Lee's presentation had had the most profound effect on him and on his work of any part of the entire course.

Dr. Lee is probably best remembered by our students for the class exercise in which the students would try to tell him to 'draw a straight line between two points, and to open a book of paper matches and ignite one match.' This type of demonstration alone has materially improved the ability of officers to give meaningful verbal directions to their subordinates and thereby increase the effectiveness of police traffic supervision in their respective communities.

Finally, Irving Lee, more than any other single person in my life, has enabled me more fully to enjoy, appreciate and understand God's richest material gift -- association with my fellow creatures. With all due respect to other authorities in the field of general semantics, Irving Lee's absence has dimmed the illumination on the sources of man's misunderstandings of his fellows.

DOUGLAS M. KELLEY, MD
School of Criminology, University of California

In listening to a seminar from Irving Lee, I heard him discuss some years ago the use of general semantics as he applied it to training police at Northwestern Traffic Institute. At that time it was interesting but far afield. When I found myself sudden-
ly in the midst of police training patterns and was asked to present a course at the University of California, School of Criminology, on Criminal Interrogation, I drew heavily on these memories and set up an entire training program based primarily on general semantics theory.

Since that time I have talked with Dr. Lee about the problem, and as a direct result of Irving Lee's stimulating approach, general semantics theory has been taught here at the University of California in the School of Criminology in this course for the past six years. In addition, the same sort of approach has been used in the training of the Berkeley Police Department in techniques of interviewing and of report writing. I think this contribution of Lee's to the police field represents one of his most practical achievements, and in addition has been a personal stimulus which I can never forget.

E. J. DEWITT
Wallace Supplies Manufacturing Company, Chicago

Irving J. Lee was first and foremost a 'Teacher'. His teaching was not limited to his classes at Northwestern University, where Dr. Lee was Chairman of the Department of Public Speaking. Irving J. Lee was a student. He studied almost constantly. The whole world could have been his laboratory. He would never run out of material to be studied because his field was - 'communications between men'.

Each conversation, each order received, each order given, every letter written, all the hundreds of students' answers heard, those TV programs watched, his six-year-old son's endless questions, and equally endless discoveries, the hundreds of committee meetings attended, the endless business conferences observed: these and other actions - too numerous to list - were the never-ending source of his material gathering; his 'observatory' from which he viewed the communications arena.

What happens when people fail to understand each other?

Why did he not 'get' what she 'meant'?

Why can't we, the other members of the committee, convince him of the reasonableness of our point?

How come he made it this way, rather than the way I told him to do it?

I've told that laundress a dozen times that my husband has a fit when his collars aren't starched just so. Why can't she do it right?

What makes him preach hatred of a minority?

Here too, the list of questions concerning similar situations could be extended almost without end. Yet these would be the kinds of questions Dr. Lee worked on by the day.

His interest was not solely academic. Rather, the opposite. He worked with the 'Pentagon'. The Air Force College sought his services. G. E. - A. T. & T. - Pure Oil -
Commonwealth Edison, and many others engaged him to help with their problems of the 'How can we better exchange ideas' type.

He was engaged by community groups to discuss ways and means of combating prejudice. Dental societies hired him to talk about their problems. How does the dentist make the patient understand what he (the dentist) wants him to do?

Our company, a very small thing indeed — by comparison to the industrial giants mentioned, had most of the problems of the bigger companies. Perhaps even more — because, being smaller, we did not have the same barriers of distance between people geographically, nor organization wise from top to bottom.

With us, the day rarely passed during which there was no talking between the Vice-President of Sales and the shipping clerk; the 'President' and the night watchman.

Sometimes information did not go through channels, which frequently resulted in hurt feelings. Sometimes that broke down the checks and balances which trap poor orders -- incomplete thinking.

To Dr. Lee, these were merely extra problems which only tended to complicate the main one on which his interest was focused — 'What happens when people talk with each other, instead of talking to each other?'

All this that I have said up to this point, I feel sure is known to most of the people who knew Dr. Lee.

However, to Irving J. Lee, our company was a little different. In fact it was something special. Here he had a testing ground for his ideas. It was both conveniently close and small.

While Lee did consulting work for a fee, the development work performed with our group was fee free. These were as much his people, as ours. They respected him. They appreciated the definitely discernable differences they could see in those with whom they worked; could feel in themselves.

Here, he could plant the seed of an idea, and watch its growth spread over an entire organization. With us, he could talk to everybody — at any level — at any time.

Because we were his laboratory for the last two years, I saw much of Lee.

Also, Lee during 1954 became interested in golf.

Here the roles were switched. Lee the teacher became, on the golf course, Lee the student. We worked together on a book about golf, which for lack of something better was tentatively called 'The Semantic Side of Golf'.

During the tournaments at Tam-O-Shanter Country Club, in August 1954, we walked around the course together, watching the 'experts' do their best. At the end of the day, Lee commented that he had seen the world's greatest players make almost every error possible to make in spite of their known ability to execute almost any conceivably kind of shot. 'How can we,' he said, 'hope ever to get people to do better in the field of communication than these highly skilled experts do in their special field?'

'How,' he continued, 'would a group of experts in speech or semantics look to someone who would observe them at work as we were now observing these golfers?'

This was not, as I saw it, an indication of discouragement, but rather a statement of his realization of the magnitude of the problem he and others in the communication field faced.
During the last year, much of the time I shared coffee at the breakfast table at the Lee household with his wife Laura, and son David, at least once a week.

One morning Irving said 'Laura, for the first time in my adult life, I find myself playing the role of student, except that it is not "role playing" when I am on the golf course but "real playing".'

'Real playing' was a device Lee hoped to introduce into more of his industrial work - actual doing - rather than trying!

Again at the coffee period, he said 'Laura, the professional golf instructor is as necessary to golf, as the grammar and English teachers are to students of English. But, there are two sides to golf as with writing or speaking.

'Having the skill needed in either is not enough. There is the evaluative side, the area of decision making. The writer, speaker or golfer must, if he would do well, know how to write or speak or golf within the area of satisfactorily predictable results.

'For example,' he continued, 'it is not so much how relatively skilled a golfer or writer is, as much as can he decide how to proceed. Does he know wherein his best interest lies?'

'How often does the golfer try the "one in a thousand" shot, which, when it fails to come off - as a true "one in a thousand" shot seldom does - so demoralizes him, that his game is spoiled for several holes or more.'

Irving Lee's views on this field were very interesting. By practicing them, he brought his own score down to less than 100 in only four months of play. He took up the game in April of '54.

Strict equality (with only an occasional slight modification) of opportunity to speak was the rule. It was easy to see David was learning to express himself while he had attention, and to return that attention.

During the last three weeks, this breakfast occasion was a daily affair. The last two areas of interest in the semantic-communication field to occupy Irv's mind had to do with 'Areas of Un teachability' and 'The Role of the Good Observer'. Both of these had been intended to be the basis of his next book; most of which he had already - 'talked out' - between rounds of golf.

I knew of no occasion when Dr. Lee was not kind, patient and understanding, and simultaneously a great teacher and student. His ability to grasp situations was nothing short of amazing.

ISAAC SCHOUR, DDS
Postgraduate Studies, College of Dentistry
University of Illinois

Lee's sense of responsibility to his fellow man and of concern beyond himself was basic and deep. When he knew his life was numbered in days he took it on himself to help find a substitute for an assignment he had accepted but would not live to carry out.
One of Irving J. Lee's very last and fine efforts was a special project with the Bell Telephone System. The LEE EXPERIMENT, under the auspices of the Illinois Bell Telephone Company, proved to be one of the high points in the history of our management training programs.

Every Thursday afternoon, for nine weeks starting February 10, 1955, Irving Lee conducted a highly stimulating course among 26 representative supervisors. The program was conducted in the Illinois Bell General Office building. The course dealt with seven barriers to communication and Dr. Lee, armed with apples, anecdotes and an uncanny ability to bring ideas out of people, led our supervisors right through the barriers. Irving Lee completed this project just before he passed away. He left, as a heritage, a remarkable course in communications for supervisors. Through our notes, and his editing, the telephone companies now have a training package that we feel constitutes a living memorial to Lee's ideas and freshness in approach.

Dr. Lee was intrigued by the way this project was measured. In fact, it was something he mentioned many times during his last days of illness. The effect of the LEE EXPERIMENT was tested not by participants in the course, but by employees supervised by the participants, some of them twice removed. The measurement, before and after, was by interviews and attitude surveys. Dr. Lee had the satisfaction of knowing that 72 percent of those employees interviewed had observed favorable communicative changes in the course participants. This was the finest testimonial to his ability.

Each of us in the LEE EXPERIMENT felt that we could count Irving Lee as a close personal friend - he had that warmth and understanding. Those of us who worked with him in his home and office felt specially privileged.

The American Telephone and Telegraph Company also featured Mr. Lee as one of their regular speakers at the Bell System Executive Conference, Asbury Park, New Jersey, and engaged him for other special personnel conferences. His effect on our people was astounding. There has seldom been a speaker or consultant who has made such a lasting contribution to an organization.

AUTHOR'S PREFACE: Many individuals have asked, 'What kind of a man was Dr. Lee?' They had heard about him due to his national reputation as a teacher, extremely popular lecturer and one of the nation's leaders in general semantics and communication. There were many who wanted a closer acquaintance with the man they had heard lecture or read about. And so, this essay was written to fulfill two desires. On the one hand, it attempts to present a brief picture of Irving J. Lee and secondly, it attempts to convey Dr. Lee's own description of what a 'semantic man' would look like if he were to apply the principles of general semantics to his own behavior. The following, then, is a profile of Irving J. Lee: 'The Semantic Man'.

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 an 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 non-productivity.

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 life-work of Dr. Lee to look for and understand these 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 associations 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
The 'semantic man' is also aware of the ease of over-simplifying, 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 ideas) and a specific and concrete statement. Many PhD 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 preachment. Dr. Lee was more interested in teaching others by
example than by preaching or by exposing the mis-
evaluations 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-elementalistic
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 under-
stands the unfortunate results which follow when
people assume more knowledge than they really
have. The non-allness orientation, the 'I don't
know' admission, becomes a stimulus to find out,
to search further, to gain more facts and to les-
sen one's sphere of ignorance. He knows that the
'I know it all' assumption is one of the uncon-
scius assumptions that stops learning, hinders
scientific advancement and keeps a man from ful-
filling his time-binding capacities. This real-
ization of the limitation of one's knowledge can
lead toward proper evaluation regarding degrees
of probability in determining future action. One
will then take calculated risks regarding the
laws of probability, in accordance with the facts
at hand, and relative to the situation being
dealt with.

The 'semantic man' keeps reminding himself
of the doctrine by re-reading the basic books.
Irving Lee used to kiddingly 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 Sci-
ence 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 previ-
ous readings. The 'semantic man' does not assume
that having read the basic literature that he
'knows' it. He must continue to re-read, re-ex-
amine 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 inter-
est and knowledge, and as these are constantly
changing, so his abstractions from each re-read-
ing would change, take on new relationships, and
lead toward new insights. Learning is an on-go-
ing process.

Finally, Irving Lee believed that the 'se-
monic 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 seman-
tics,* 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 exten-
sional 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 con-
tribution 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. Man-
hood of humanity can only be achieved when great
and learned scholars, semantic men of the fu-
ture, 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 cen-
turies.

Irving J. Lee played an important role in
achieving these ends, for his teaching, lectur-
ing 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.

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*See a report on an advanced study conference
conducted by Dr. Lee, General Semantics Bul-
etin, Nos. 6 & 7, Spring-Summer 1951, p. 100.
Editor's Note: 1953 marked the 20th anniversary of the publication of Science and Sanity. At their annual meeting, the Trustees of the Institute discussed ways to interest more people in reading the book - especially how to expose scientists and scholars at the universities to Korzybski's formulations at first hand. Among other projects, they proposed to publish a booklet of passages from Science and Sanity that would 'give a taste of some of Korzybski's insights and might persuade [some people] to read more.' As agreed, Dr. Lee contributed a list of some of his favorite passages, and an introduction for this booklet which he called a 'Science and Sanity Sampler.' Publication plans have languished for two years. Perhaps the project will be carried through in preparation for the Korzybski Anniversary in 1958. Meantime I feel that Irving Lee's friends should have this essay. It seems to me as characteristic of his own insights, attitudes and approaches as the passages he selected are of Korzybski. --M. Kendig

'SOME OF MY FAVORITE PASSAGES IN SCIENCE AND SANITY'
Introductory Essay and A List by Irving J. Lee

Here are passages from a 872 page book. They are fair samples. They abound in no felicitous phrases, no witty profundities, no arresting stories. They share few secrets, assure few cash returns, require few commitments.

Why, then, dare I hope they will be inviting, like the smell of fresh bread through a bakery grating? Because they are just a handful of trail markers in Alfred Korzybski's adventure to find what a man must do to make sense; they are small sections of a large guidebook in which he defines the means whereby men might avoid the mis-evaluations and mis-interpretations which so complicate their business and professional activity; the book, Science and Sanity, offers freely some directions by which human beings can escape some of the troublesome disagreements and worrisome confusions which so darken their personal lives.

But hasn't this sort of thing been done? One could say as Terence did, 'You sing the same old song?' One could also reply, 'Il y a fagots et fagots,' that things which look similar may be quite different.

We see things and people. We make assumptions and draw conclusions about them. We feel somehow, and we talk and act. We do all these readily, easily, continuously. Sometimes we do them productively. Sometimes we don't.

How well do we diagnose ourselves when we get into trouble, when tension and conflict arise among us, when we fail to understand others? In the broadest practical terms Alfred Korzybski has tried to tell us how to look at how we're doing and what to look for. He is saying and showing in a host of ways that when a person becomes conscious of the mechanisms of human evaluating then he begins to be ready to make those changes in his seeing-thinking-feeling-talking which make the transition from childishness to maturity, from foolishness to wisdom.

Horace long ago said, 'It is not permitted to know all things.' Korzybski agrees and goes on to ask, 'What happens, however, when a man acts as if he does know all?' 'What are the varieties of arrogance and egotism and by what means may one free himself of them?'

Horace also said, 'It is pleasant to act foolishly in the right place.' Korzybski again agrees and says, 'What if a man acts unwittingly in those same patterns in the wrong place? How does one discover the patterns by which that may be forestalled and he be forewarned?'

Korzybski does not consider he is finished when he asks the questions. He gives some answers, too. He draws from the reservoir of the basic knowledge of the great writers in anthropology, colloidal chemistry, physics, psychology, psychiatry, the foun-
dations of mathematics, not to support any new doctrine of salvation, but to find what 
they say that has human relevance, so that their insights can be translated into advice 
for any man who would live more sensitively and sensibly.

The ultimate test of General Semantics as a discipline for our time is not the 
persuasiveness of its theories, but their sharpness and usableness. If the advice is 
such that one can use it, that is treasure enough. That, many have found.

For certain kinds of people, it must be said, the discipline does not 'take'. To 
wrench oneself from what is comfortable and customary is not easy, and there are those 
who give up quickly. This is, nevertheless, not peculiar to the study of the mechanisms 
of evaluation. When Bertrand Russell set out to write his ABC of Relativity (1925) he 
put this problem in terms which are directly relevant.

What is demanded is a change in our imaginative picture of the world -- 
a picture which has been handed down from remote, perhaps pre-human ances-
tors, and has been learned by each one of us in early childhood. A change 
in our imagination is always difficult, especially when we are no longer 
young. The same sort of change was demanded by Copernicus, when he taught 
that the earth is not stationary and the heavens do not revolve about it 
once a day. To us now there is no difficulty in this idea, because we 
learned it before our mental habits had become fixed. Einstein's ideas 
similarly, will seem easy to a generation which has grown up with them, but 
for our generation a certain effort of imaginative reconstruction is un-
avoidable.

G. M. Trevelyan said, 'Poetry can be sipped like wine, but history is best taken in 
gulps like beer.' I should add: the bits of General Semantics that follow offer only an 
aperitif. What remains is best chewed and savored like beef-steak.

1. Two Analogies in Preface to First Ed.: (from line 6) p. ii - p. iii (through line 19); 
   2nd Ed. pp. lviii-lxi; 3rd Ed. pp. lxii-lxiii [Other numbers same in all editions.]
2. Abstracting: p. 374 (from line 8) - p. 378 (to end of top paragraph)
3. Difference between Descriptions and Inferences: p. 478 (line 15 through line 30)
4. 'Degree' or 'Kind' Language: p. 254 (from line 10) - p. 255 (through line 5)
5. 'An Ideal Observer': p. 444 (from line 3) to p. 445 (to 4th line from bottom)
6. Theory of Agreement: p. 418 (from line 8) - p. 419 - p. 420 (through line 26)
7. The Un-Speakable Objective Level: All of Section B, pp. 34-35
8. Negative Premises: p. 60 (bottom 2 lines) - p. 61 - p. 63 (to 5th line from bottom)
9. Natural Order: p. 450 (all of paragraph 2)
10. Higher Order Abstractions: p. 439 (from paragraph 2) - p. 440 - p. 441 (through top 3 lines)
11. 'Definitions': p. 414 (bottom 4 lines) - p. 415 (to 3rd line from bottom)
12. 'Is' of Identity: p. 408 (bottom 3 lines) - p. 409 (to end of paragraph 2)
13. Conditional Reactions: p. 334 (bottom 3 lines) - p. 335 (to 5th line from bottom)
14. Two Kinds of Words: p. 250 (from line 23) - p. 251 (through line 7)
15. The 'Infinitesimal' and 'Cause and Effect': Chapter XV, p. 214 - p. 219
IRVING J. LEE

BIOGRAPHIC AND BIBLIOGRAPHIC NOTES

The General Semantics Bulletin has carried biographic and bibliographic data about Irving J. Lee and editorial comments on his work in many issues. The 27 preceding pages portray the man, his manifold activities and his contributions from many points of view and with deep and diverse insights. In this context it might seem redundant to record more than the following dates and data about his life and list his writings. But I also want to record some of my own memories of Irving Lee during the sixteen years I knew him insofar as these memories are pertinent to our common association with Korzybski and his work, and insofar as they supplement or perhaps light up some facets of what others have written about him. I am working on such a biographical memoir and regret it is not ready for this printing. Here, at least, I must acknowledge my great debt to Irving Lee for all I learned with him and for his very wise counsel which has sustained me through the difficult years since Alfred Korzybski died. --M. Kendig, Editor


Military Service: From July 1942 to February 1946 served as officer in the U. S. Army Air Forces. Released as Major. Most important responsibility: Executive Officer, Training Aids Division.

Positions Held: Instructor in the Social Sciences, Boonton High School, Boonton, New Jersey, 1931-1934; Appointed Instructor in Public Speaking in School of Speech, Northwestern University, 1937; Assistant Professor, 1942; Associate Professor, 1947; Professor of Public Speaking, 1950; Visiting Professor, University of Hawaii, Summer 1952; Visiting Professor, University of Wyoming, Summer 1954.

Lectures: Some two-hundred lectures under the auspices of the National Lecture Bureau, Chicago, Illinois since 1940. In addition, individual lectures or lecture series at the following colleges and universities: Dartmouth, Denver, Harvard, Minnesota, Pittsburgh, Purdue, Wisconsin. Lecture-conferences, Seminar-Workshops of Institute of General Semantics.

Consultation and Training Activities: Served as Consultant, Lecturer and/or Instructor with the following: Headquarters, U.S. Air Force; Air War College in Air University; Naval Gun Factory; National Safety Council; Northwestern University Traffic Institute; and approximately twenty-five corporations including: American Maine; Commonwealth Edison; G. D. Searle; The People's Gas, Light, and Coke Company; Wallace Supplies Manufacturing Company; Illinois Bell Telephone Company.

Organizational Activities: Member of the Board of Trustees and Executive Committee, Institute of General Semantics, 1947-55, and Fellow of the Institute, 1941-55; Past President and member Board of Directors, International Society for General Semantics; member of the Executive Council, National Society for the Study of Communication; Associate Editor, The Quarterly Journal of Speech.

BIBLIOGRAPHIC: A CHRONOLOGICAL LIST

Books and Pamphlets


Articles

- 'Some Conceptions of Emotional Appeal in Rhetorical Theory,' Speech Monographs, VI (1939), pp. 66-86.
- 'Language for the Living,' Educational Trends, VIII (1940), pp. 1-3.
- 'The Adult in Courses in Speech,' College English, 3 (1941), pp. 170-178.


'Why Discussions Go Astray,' ETC., IV (1947), pp. 81-88.


'Making Phrases at Each Other,' Central States Speech Journal, 3 (1951), pp. 11-14.


'As You Were Saying,' Industrial Supervisor, XX (1952), pp. 12-14.


'Leadership Without Imposition,' Today's Speech, III, 3 (September 1955), pp. 3-5.


A booklet containing the first 30 pages and covers of General Semantics Bulletin, Numbers 18 & 19, 1955-56, as preprinted for the Princeton Meeting of November 1955, organized by the Pro-tem Korzybski 25th Anniversary (1958) Committee, is available. $1.50 per single copy; $1.00 each for 10 copies; $0.75 each for 11 up to 49 copies; $0.50 each for 50 or more copies. Send prepaid orders to Institute of General Semantics, Lakeville, Connecticut, U.S.A.
Editorial

This issue of the GENERAL SEMANTICS BULLETIN is dedicated to Irving J. Lee and is intended to appear at about the time of the first anniversary of his death.

It seems to me that for us who work in general semantics, the commemorative statements in the preceding pages do more than record the many faceted impact of an extraordinary man, his methods and his work. At the first reading one may be struck by the variety, the individuality - the extensionality, if you will - of each remembrance. They build a picture of Irving Lee, the living presence. Read again, we pass to a higher order of significance. We gain insights and encouragements - at least that is the effect on me - from this record of what one man could do without foundation grants or other outside support, inaugurating and carrying on experiments and research in human affairs. Irving Lee seems to me to have had a genius for social engineering in his day by day living. Only at the end of his life, for example in the 'Lee Experiment' at A.T. & T., did he have any set-up specifically created for him. And that opportunity came to him as a result of years of single-handed unassuming investigations made in the regular course of his professional work.

The commemorative statements were collected in the late summer of 1955 in cooperation with William Haney and Laura Louise Lee. They were printed in a separate booklet for a meeting held at Princeton in November. This meeting was organized by the 'Pro-tem Korzybski 25th Anniversary (1958) Committee.' It was 'inspired' by Lee who was a member of the original committee and outlined in a talk we had in Evanston a few weeks before his death. The News section carries a report. At the time we considered distributing the commemorative booklet to Members of the Institute. It seemed more fitting to wait and publish it in a regular issue of the Bulletin.

We are pleased to be able to publish A.H. Maslow's paper in the same issue because, to us, Lee exemplifies the 'self-actualizing people' who form the subject of Dr. Maslow's studies in psychological health.

M. KENDIG

May 1956
DEFICIENCY MOTIVATION AND GROWTH MOTIVATION*

Abraham Maslow
Brandeis University, Waltham, Massachusetts

Hans Zinsser has described the difference between philosophical and scientific theorizing by comparing the latter to a trellis which one builds out just ahead of the growing vine in the direction of its growth and for the sake of its future support. It is this latter task that I have set myself in this paper which is a portion of a larger systematic theory of general psychology. It is based mostly upon clinical and personological researches and experience, rather than upon formal experimentation but will soon be ready, I think, for the experimental test. I must warn you that the demands of system and of theory probably play a considerable role in what follows. To some extent, its existence and its particular shape are called for not only by data but also by theoretical, systematic considerations of which I cannot speak here, and which will be apparent only when the whole structure of theory is seen as a unity.

Another point that I must warn you about is this. This paper is very frankly in a different tradition from the ones you have heard in previous years in this series. For one thing, I am not only the disinterested and impersonal seeker for pure cold truth for its own sake. I am also very definitely interested and concerned with man's fate, with his ends and goals and with his future. I would like to help improve him and to better his prospects. I hope to help teach him how to be brotherly, cooperative, peaceful, courageous and just. I think science is the best hope for achieving this, and of all the sciences I consider psychology the most important to this end. Indeed I sometimes think that the world will either be bryonic it may be.

The concept 'basic need' can be defined in terms of the questions which it answers and the operations which uncover it. My original question was about psychopathogenesis. 'What makes people neurotic?' My answer (a modification of and I think an improvement upon the analytic one) was, in brief, that neurosis seemed at its core, and in its beginning, to be a deficiency disease; that it was born out of being deprived of certain satisfactions which I called needs in the same sense that water and amino acids and calcium are needs, namely that their absence pro-

*Paper presented 13 January 1955 at the Annual Nebraska Symposium on Motivation. Published here by gracious permission of the author; The University of Nebraska Press; the editor, Dr. Marshall R. Jones; and the other authors of the symposium papers and comments, Drs. David C. McClelland, James Olds, Helen Peak, Julian B. Rotter and Paul T. Young. The Nebraska Symposium on Motivation, 1955 (pp. 274 + x, $3.50). The paper contains in substance Dr. Maslow's talk given at the Institute of General Semantics Seminar-Workshop, 20 August, Bard College.
duction of actual experiential data (rather than by fiat, therapists (many of them would not phrase it as I have) by most clinicians, therapists, and child psychologists (many of them would not phrase it as I have) since done, that people who are later healthy are not deficiencies were eliminated, sicknesses tended to disappear. Still another necessary long-time control research was on the effect of replacement therapy which showed, with many complexities, that when these deficiencies were eliminated, sicknesses tended to disappear. Still another necessary long-time control research was on a family background of both neurotic and healthy people establishing, as many others have since done, that people who are later healthy are not deprived of these essential basic-need-satisfactions, i.e., the prophylactic control.

These conclusions, which are now in effect shared by most clinicians, therapists, and child psychologists (many of them would not phrase it as I have) make it more possible year by year to define need, in a natural, easy spontaneous way, as a generalization of actual experiential data (rather than by fiat, arbitrarily and prematurely; prior to the accumulation of knowledge rather than subsequent to it (22) simply for the sake of the sake of greater objectivity.

The long-run deficiency characteristics are then the following. It is a basic or instinctoid need if:

1. its absence breeds illness,
2. its presence prevents illness,
3. its restoration cures illness,
4. under certain (very complex free choice situations, it is preferred by the deprived person over other satisfactions,
5. it is found to be inactive, at a low ebb, or functionally absent in the healthy person.

Two additional characteristics are subjective ones, namely, conscious or unconscious yearning and desire, and feeling of lack or deficiency, as of something missing on the one hand, and, on the other, palatability, ("It tastes good").

One last word on definition. Many of the problems that have plagued the writers in this series as they attempted to define and delimit motivation are a consequence of the exclusive demand for behavioral, externally observable criteria. The original criterion of motivation and the one that is still used by all human beings except behavioral psychologists is the subjective one. I am motivated when I feel desire or want or yearning or wish or lack. No objectively observable state has yet been found that correlates decently with these subjective reports, i.e., no good behavioral definition of motivation has yet been found.

Now of course we ought to keep on seeking for objective correlates of subjective states. On the day when we discover such a public and external indicator of pleasure or of anxiety or of desire, psychology will have jumped forward by a century. But until we find it we ought not make believe that we have. Nor ought we neglect the subjective data that we do have. It is unfortunate that we cannot ask a rat to give subjective reports. Fortunately, however, we can ask the human being, and I see no reason in the world why we should refrain from doing so until we have a better source of data. If the 'objective' psychologists trying to define motivation sometimes seem to be staggering about in the dark, perhaps it is because they have voluntarily blindfolded themselves.

It is these needs which are essentially deficits in the organism, empty holes, so to speak, which must be filled up for health's sake, and furthermore must be filled from without by human beings other than the subject that I shall call deficits or deficiency needs for purposes of this exposition and to set them in contrast to another and very different kind of motivation.

There is not a person in this room to whom it would occur to question the statement that we 'need' iodine or vitamin C. I remind you that the evidence that we 'need' love is of exactly the same type.

In recent years more and more psychologists have found themselves compelled to postulate some tendency to growth or self-perfection to supplement the concepts of equilibrium, homeostasis, tension-reduction, defense and other conserving motivations. This was so for various reasons.

1. Psychotherapy. The pressure toward health makes therapy possible. It is an absolute sine qua non. If there were no such trend, therapy would be inexplicable to the extent that it goes beyond the building of defenses against pain and anxiety. (Rogers, (23), Angyal, (2), et cetera).

2. Brain injured soldiers. Goldstein's work (13) is well known to all. He found it necessary to invent the concept of self-actualization to explain the re-organization of the person's capacities after injury.

3. Psychoanalysis. Some analysts, notably From m (12), and Horney (15), have found it impossible to understand even neuroses unless one postulates an impulse toward growth, toward perfection of development, toward the fulfillment of the person's possibilities.

4. Creativeness. Much light is being thrown on the general subject of creativeness by the study of healthy growing and grown people, especially when contrasted with sick people. Especially does the theory of art and art education call for a concept of growth and spontaneity (26).
5. Child Psychology. Observation of children shows more and more clearly that healthy children enjoy growing and moving forward, gaining new skills, capacities and powers. This is in flat contradiction to that version of Freudian theory which conceives of every child as hanging on desperately to each adjustment that it achieves and to each state of rest or equilibrium. According to this theory, the reluctant and conservative child has continually to be kicked upstairs, out of its comfortable, preferred state of rest into a new frightening situation.

While this Freudian conception is continually confirmed by clinicians as largely true for insecure and frightened children, and while it is a little bit true for all human beings, in the main it is untrue for healthy, happy, secure children. In these children we see clearly an eagerness to grow up, to mature, to drop the old adjustment as outworn, like an old pair of shoes. We see in them with special clarity not only the eagerness for the new skill but also the most obvious delight in repeatedly enjoying it, the so-called Funktionslust of Karl Buhler (8).

For the writers in these various groups, notably Fromm (12), Horney (15), Jung (16), C. Buhler (7), Angyal (2), Rogers (23), and G. Allport (1), and recently some Catholic psychologists (3, 21), growth, individuation, autonomy, self-actualization, self-development, productiveness, self-realization, are all crudely synonymous, designating a vaguely perceived area rather than a sharply defined concept. In my opinion, it is not possible to define this area sharply at the present time. Nor is this desirable, since a definition which does not emerge easily and naturally from well-known facts is apt to be inhibiting and distorting rather than helpful, since it is quite likely to be wrong or mistaken if made by an act of the will on a priori grounds. We just don’t know enough about growth yet to be able to define it well.

Its meaning can be indicated rather than defined, partly by positive pointing, partly by negative contrast, i.e., what it is not. For example, it is not equilibrium, homeostasis, tension-reduction, need-reduction, et cetera.

Its necessity has presented itself to its proponents partly because of dissatisfaction (certain newly noticed phenomena simply were not covered by extant theories); partly by positive needs for theories and concepts which would better serve the new humanistic value systems emerging from the breakdown of the older value systems.

This paper however derives mostly from a direct study of psychologically healthy individuals. This was undertaken not only for reasons of intrinsic and personal interest but also to supply a firmer foundation for the theory of therapy, of pathology and therefore of values. The true goals of education, of family training, of psychotherapy, of self-development, it seems to me, can be discovered only by such a direct attack. The end product of growth teaches us much about the processes of growth. In a recent book (19), I have described what was learned from this study and in addition theorized very freely about various possible consequences for general psychology of this kind of direct study of good rather than bad human beings, of healthy rather than sick people, of the positive as well as the negative. I must warn you that the data cannot be considered reliable until someone else repeats the study. The possibilities of projection are very real in such a study and of course are unlikely to be detected by the investigator himself. Today I should like to crystallize a little more some of the differences that I have observed to exist between the motivational lives of healthy people and of others, i.e., people motivated by growth needs contrasted with those motivated by the basic needs.

So far as motivational status is concerned, healthy people have sufficiently gratified their basic needs for safety, belongingness, love, respect and self-esteem so that they are motivated primarily by trends to self-actualization (defined as ongoing actualization of potential capacities and talents, as fulfillment of mission or call or fate or vocation, as a fuller knowledge of, and acceptance of, the person’s own intrinsic nature, as an unceasing trend toward unity, integration or synergy within the person).

Much to be preferred to this generalized definition would be a descriptive and operational one which I have already published (19). These people are there defined by describing their clinically observed characteristics. These are:

1. Superior perception of reality.
2. Increased acceptance of self, of others and of nature.
3. Increased spontaneity.
4. Increase in problem-centering.
5. Increased detachment and desire for privacy.
6. Increased autonomy, and resistance to enculturation.
7. Greater freshness of appreciation, and richness of emotional reaction.
8. Higher frequency of mystic experiences.
9. Increased identification with the human species.
10. Changed (the clinician would say, improved) interpersonal relations.
11. More democratic character structure.
12. Greatly increased creativeness.
13. Certain changes in the value system.

Furthermore, in this book are described also the limitations imposed upon the definition by unavoidable shortcomings in sampling and in availability of data.
One major difficulty with this conception as so far presented is its somewhat static character. Self-actualization, since I have found it only in older people, tends to be seen as an ultimate or final state of affairs, a far goal, rather than a dynamic process, active throughout life, Being rather than Becoming.

If we define growth as the various processes which bring the person toward ultimate self-actualization, then this conforms better with the observed fact that it is going on all the time in the life history. It discourages also the stepwise, all or none, saltatory conception of motivational progression toward self-actualization in which the basic needs are completely gratified, one by one, before the next higher one emerges into consciousness. Growth is seen then not only as progressive gratification of basic needs to the point where they disappear, but also in the form of specific growth motivations over and above these basic needs, e.g., talents, capacities, creative tendencies, constitutional potentialities. We are thereby helped also to realize that basic needs and self-actualization do not contradict each other any more than do childhood and maturity. One passes into the other and is a necessary prerequisite for it.

The differentiation between these growth-needs and basic needs which we shall explore in this paper is a consequence of the clinical perception of qualitative differences between the motivational lives of self-actualizers and of other people. These differences, listed below, are fairly well though not perfectly described by the names deficiency-needs and growth-needs. For instance, not all physiological needs are deficits, e.g., sex, elimination, sleep and rest.

At a higher level, needs for safety, belongingness, love and for respect are all clearly deficits. But the need for self-respect is a doubtful case. While the cognitive needs for curiosity-satisfaction and for a system of explanation can easily be considered deficits to be satisfied, as can also the hypothetical need for beauty, the need to create is another matter, as is also the need to express. Apparently not all basic needs are deficits but the needs whose frustration is pathogenic are deficits.

In any case, the psychological life of the person, in very many of its aspects, is lived out differently when he is deficiency-need-gratification-bent and when he is growth-dominated or 'metamotivated' or growth-motivated or self-actualizing. The following differences make this clear.

1. Attitude toward impulse: impulse-rejection and impulse-acceptance.

Practically all historical and contemporary theories of motivation unite in regarding needs, drives and motivating states in general as annoying, irritating, unpleasant, undesirable, or something to get rid of. Motivated behavior, goal seeking, consummatory responses are all techniques for reducing these discomforts. This attitude is very explicitly assumed in such widely used descriptions of motivation as need reduction, tension reduction, drive reduction, and anxiety reduction.

This approach is understandable in animal psychology and in the behaviorism which is so heavily based upon work with animals. It may be that animals have only deficiency needs. Whether or not this turns out to be so, in any case we have treated animals as if this were so for the sake of objectivity. A goal object has to be something outside the animal organism so that we can measure the effort put out by the animal in achieving this goal.

It is also understandable that the Freudian psychology should be built upon the same attitude toward motivation that impulses are dangerous and to be fought. After all this whole psychology is based upon experience with sick people, people who in fact suffer from bad experiences with their needs and with their gratifications and frustrations. It is no wonder that such people should fear or even loathe their impulses which have made so much trouble for them and which they handle so badly, and that a usual way of handling them is repression.

This derogation of desire and need has, of course, been a constant theme throughout the history of philosophy, theology and psychology. The Stoics, most hedonists, practically all theologians, many political philosophers and most economic theorists have united in affirming the fact that good or happiness or pleasure is essentially the consequence of amelioration of this unpleasant state of affairs, of wanting, of desiring, of needing.

To put it as succinctly as possible, these people all find desire or impulse to be a nuisance or even a threat and therefore will try generally to get rid of it, to deny it or to avoid it.

This contention is sometimes an accurate report of what is the case. The physiological needs, the needs for safety, for love, for respect, for information are in fact often nuisances for many people, psychic trouble-makers, and problem-creators.

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I was made aware of this mostly by Frances Wilson's work with art education and Gordon Allport's new book on The Course of Becoming, which I was privileged to read in manuscript. I profited also from discussions with my students in a graduate seminar in motivation theory.
especially for those who have had unsuccessful experiences at gratifying them and for those who cannot now count on gratification.

Even with these deficiencies, however, the case is very badly overdrawn: one can accept and enjoy one's needs and welcome them to consciousness if (a) past experience with them has been rewarding, and (b) if present and future gratification can be counted on. For example, if one has in general enjoyed food and if good food is now available, the emergence of appetite into consciousness is welcomed instead of dreaded. ('The trouble with eating is that it kills my appetite.') Something like this is true for thirst, for sleepiness, for sex, for dependency needs and for love needs. However, a far more powerful refutation of the 'need-is-a-nuisance' theory is found in the recently emerging awareness of, and concern with, growth (self-actualization) motivation.

The multitude of idiosyncratic motives which come under the head of 'self-actualization' can hardly be listed since each person has different talents, capacities, potentialities. But some characteristics are general to all of them. And one is that these impulses are desired and welcomed, are enjoyable and pleasant, that the person wants more of them rather than less, and that if they constitute tensions, they are pleasurable tensions. The creator welcomes his creative impulses, the talented person enjoys using and expanding his talents.

It is simply inaccurate to speak in such instances of tension-reduction, implying thereby the getting rid of an annoying state. For these states are not annoying.

2. Differential effects of gratification

Almost always associated with negative attitudes toward the need is the conception that the primary aim of the organism is to get rid of the annoying need and thereby to achieve a cessation of tension, an equilibrium, a homeostasis, a quiescence, a state of rest, a lack of pain.

The drive or need presses toward its own elimination. Its only striving is toward cessation, toward getting rid of itself, toward a state of not wanting. Pushed to its logical extreme, we wind up with Freud's Death-instinct.

Angyal, Goldstein, G. Allport, C. Buhler and others have effectively criticized this essentially circular position. If the motivational life consists essentially of a defensive removal of irritating tensions, and if the only end product of tension-reduction is a state of passive waiting for more unwelcome irritations to arise and in their turn, to be dispelled, then how does change, or development or movement or direction come about? Why do people improve? Get wiser? What does zest in living mean?

Charlotte Buhler (7) has pointed out that the theory of homeostasis is different from the theory of rest. The latter theory speaks simply of removing tension which implies that zero tension is best. Homeostasis means coming not to a zero but to an optimum level. This means sometimes reducing tension, sometimes increasing it, e.g., blood pressure may be too low as well as too high.

In either case the lack of constant direction through a lifespan is obvious. In both cases, growth of the personality, increase in wisdom, self-actualization, strengthening of the character, and the planning of one's life are not and cannot be accounted for. Some long-time vector, or directional tendency, must be invoked to make any sense of development through the lifetime (7).

This theory must be put down as an inadequate description even of deficiency motivation. What is lacking here is awareness of the dynamic principle which ties together and interrelates all these separate motivational episodes. The different basic needs are related to each other in a hierarchical order such that gratification of one need and its consequent removal from the center of the stage brings about not a state of rest or Stoic apathy, but rather the emergence into consciousness of another 'higher' need; wanting and desiring continues but at a 'higher' level. Thus the coming-to-rest theory isn't adequate even for deficiency motivation.

However, when we examine people who are predominantly growth-motivated, the coming-to-rest conception of motivation becomes completely useless. In such people gratification breeds increased rather than decreased motivation, heightened rather than lessened excitement. The appetites become intensified and heightened. They grow upon themselves and instead of wanting less and less, such a person wants more and more of, for instance, education. The person rather than coming to rest becomes more active. The appetite for growth is whetted rather than allayed by gratification. Growth is, in itself, a rewarding and exciting process, e.g., the fulfilling of yearnings and ambitions, like that of being a good doctor; the acquisition of admired skills, like playing the violin or being a good carpenter; the steady increase of understanding about people or about the universe, or about oneself; the development of creativeness in whatever field, or, most important, simply the ambition to be a good human being.

Wertheimer (27) long ago stressed another aspect of this same differentiation by claiming, in a seeming paradox, that true goal-seeking activity took up less than 10% of his time. Activity can be enjoyed either intrinsically, for its own sake, or else have
worth and value only because it is instrumental in bringing about a desired gratification. In the latter case it loses its value and is no longer pleasurable when it is no longer successful or efficient. More frequently, it is simply not enjoyed at all, but only the goal is enjoyed. This is similar to that attitude toward life which values it less for its own sake than because one goes to Heaven at the end of it. The observation upon which this generalization is based is that self-actualizing people enjoy life in general and in practically all its aspects, while most other people enjoy only stray moments of triumph, of achievement or of climax.

Partly this intrinsic validity of living comes from the pleasurableness inherent in growing and in being grown. But it also comes from the ability of healthy people to transform means-activity into end-experience, so that even instrumental activity is enjoyed as if it were end activity (19). Growth motivation may be long-term in character. Most of a lifetime may be involved in becoming a good psychologist or a good artist. All equilibrium or homeostasis or rest theories deal only with short-term episodes, each of which have nothing to do with each other. Allport particularly has stressed this point. Plan-fulness and looking into the future, he points out, are of the central stuff of healthy human nature. He agrees (1) that 'Deficit motives do, in fact, call for the reduction of tension and restoration of equilibrium. Growth motives, on the other hand, maintain tension in the interest of distant and often unattainable goals. As such they distinguish human from animal becoming, and adult from infant becoming.'

3. Clinical effects of gratification

Deficit-need gratifications and growth-need gratifications have differential subjective and objective effects upon the personality. If I may phrase what I am groping for here in a very generalized way, it is this: Satisfying deficiencies avoids illness; growth satisfactions produce positive health. I must grant that this will be difficult to pin down for research purposes at this time. And yet there is a real clinical difference between fending off threat or attack and positive triumph and achievement, between protecting, defending and preserving oneself and reaching out for fulfillment, for excitement and for enlargement. I have tried to express this as a contrast between living fully and preparing to live fully, between growing up and being grown.

4. Different kinds of pleasure

Erich Fromm (12, p. 186) has made an interesting and important effort to distinguish higher from lower pleasures, as have so many others before him. This is a crucial necessity for breaking through subjective ethical relativity and is a prerequisite for a scientific value theory.

He distinguishes scarcity-pleasure from abundance-pleasure, the 'lower' pleasure of satiation of a need from the 'higher' pleasure of production, creation and growth of insight. The glut, the relaxation, and the loss of tension that follows deficiency-satisfaction can at best be called 'relief' by contrast with the Funktionsslaut, the ecstasy, the serenity that one experiences when functioning easily, perfectly and at the peak of one's powers — in overdrive, so to speak.

'Relief', depending so strongly on something that disappears, is itself more likely to disappear. It must be less stable, less enduring, less constant than the pleasure accompanying growth, which can go on forever.

5. Attainable and unattainable goal states

Deficiency-need gratification tends to be episodic and climactic. The most frequent schema here begins with an instigating, motivating state which sets off motivated behavior designed to achieve a goal-state, which, mounting gradually and steadily in desire and excitement, finally reaches a peak in a moment of success and consummation. From this peak curve of desire, excitement and pleasure fall rapidly to a plateau of quiet tension-release, and lack of motivation.

This schema, though not universally applicable, in any case contrasts very sharply with the situation in growth-motivation, for here characteristically there is no climax or consummation, no orgasmic moment, no end-state, even no goal if this be defined climactically. Growth is instead a continued, more or less steady upward or forward development. The more one gets, the more one wants so that this kind of wanting is endless and can never be attained or satisfied.

It is for this reason that the usual separation between instigation, goal-seeking behavior, the goal object and the accompanying affect breaks down completely. The behaving is itself the goal, and to differentiate the goal of growth from the instigation to growth is impossible. They too are the same.

6. Species-wide goals and idiosyncratic goals

The deficit-needs are shared by all members of the human species and to some extent by other species as well. Self-actualization is idiosyncratic since every person is different. The deficits, i.e., the species requirements, must ordinarily be fairly well satisfied before real individuality can develop fully.

Just as all trees need sun, water and foods from the environment, so do all people need safety, love and status from their environment. However, in both cases this is just where real development of individuality can begin, for once satisfied with these elementary, species-wide necessities, each tree and
each person proceeds to develop in his own style, uniquely, using these necessities for his own private purposes. In a very tangible sense, development then becomes more determined from within rather than from without.

7. Dependence and independence of the environment

The needs for safety, belongingness, love relations and for respect can be satisfied only by other people, i.e., only from outside the person. This means considerable dependence on the environment. A person in this dependent position cannot really be said to be governing himself, or in control of his own fate. He must be beholden to the sources of supply of needed gratifications. Their wishes, their whims, their rules and laws govern him and must be appeased lest he jeopardize his sources of supply. He must be to an extent 'other-directed' and must be sensitive to other people's approval, affection and good will. This is the same as saying that he must adapt and adjust by being flexible and responsive and by changing himself to fit the external situation. He is the dependent variable; the environment is the fixed, independent variable.

Because of this, the deficiency-motivated man must be more afraid of the environment, since there is always the possibility that it may fail or disappoint him. We now know that this kind of anxious dependence breeds hostility as well. All of which adds up to a lack of freedom, more or less, depending on the good fortune or bad fortune of the individual.

In contrast, the self-actualizing individual, by definition gratified in his basic needs, is far less dependent, far less beholden, far more autonomous and self-directed. Far from needing other people, growth-motivated people may actually be hampered by them. I have already reported their special liking for privacy, for detachment and for meditativeness.

Such people become far more self-sufficient and self-contained. The determinants which govern them are now primarily inner ones, rather than social or environmental. They are the laws of their own inner nature, their potentialities and capacities, their talents, their latent resources, their creative impulses, their needs to know themselves and to become more and more integrated and unified, more and more aware of what they really are, of what they really want, of what their call or vocation or fate is to be.

Since they depend less on other people, they are less ambivalent about them, less anxious and also less hostile, less needful of their praise and their affection. They are less anxious for honors, prestige and rewards.

Autonomy or relative independence of environment means also relative independence of adverse external circumstances, such as ill fortune, hard knocks, tragedy, stress, deprivation. As Allport has stressed, the notion of the human being as essentially reactive, the S-R man we might call him, who is set into motion by external stimuli, becomes completely ridiculous and untenable for self-actualizing people. The sources of their actions are internal rather than external. This relative independence of the outside world and its wishes and pressures, does not mean of course lack of intercourse with it. It means only that in these contacts, the self-actualizer's wishes and plans are the primary determiners, and that the environment becomes more and more a means to his ends. This I have called psychological freedom, contrasting it with geographical freedom.

Allport's very expressive contrast (1) between 'opportunistic' and 'propriate' determination of behavior parallels very closely our outer-determined, inner-determined opposition. It reminds us also of the uniform agreement among biological theorists in considering increasing autonomy and independence of environmental stimuli as the defining characteristics of full individuality, of true freedom, of the whole evolutionary process (29).

8. Interested and disinterested interpersonal relations

In essence, the deficit-motivated man is far more dependent upon other people than is the man who is predominantly growth-motivated. He is more 'interested,' more needful, more attached, more desirous.

This dependency colors and limits interpersonal relations. To see people primarily as need-gratifying or as sources of supply is an abstractive act. They are seen not as wholes, as complicated, unique individuals, but rather from the point of view of usefulness. What in them is not related to the perceiver's needs is either overlooked altogether, or else bores, irritates, or threatens. This parallels our relations with cows, horses and sheep, as well as with waiters, taxicab drivers, porters, policemen or others whom we use.

Fully disinterested, desireless, objective and holistic perception of another human being becomes possible only when nothing is needed from him, only when he is not needed. Idiographic, aesthetic perception of the whole person is far more possible for self-actualizing people, and furthermore approval, admiration, and love are based less upon gratitude for usefulness and more upon the objective, intrinsic qualities of the perceived person. He is admired for objectively admirable qualities rather than because he flatters or praises. He is loved because he is love-worthy rather than because he gives out love. This is what will be discussed below as unneeded love.

One characteristic of 'interested' and need-gratifying relations to other people is that to a very large extent these need-gratifying persons are
interchangeable. Since, for instance, the adolescent girl needs admiration per se, it therefore makes little difference who supplies this admiration; one admiration-supplier is about as good as another. So also for the love-supplier or the safety-supplier.

Disinterested, unrewarded, useless, desireless perception of the other as unique, as independent, as end-in-himself, in other words as a person rather than as a tool is the more difficult, the more hungry the perceiver is for deficit satisfaction. A 'high-ceiling' interpersonal psychology, i.e., an understanding of the highest possible development of human relationships, cannot base itself on deficit theory of motivation.

9. Ego-centering and ego-transcendence

We are confronted with a difficult paradox when we attempt to describe the complex attitude toward the self or ego of the growth-oriented, self-actualized person. It is just this person, in whom ego-strength is at its height, who most easily forgets or transcends the ego, who can be most problem-centered, most self-forgetful, most spontaneous in his activities, most homonomous, to use Angyal's term (2). In such people, absorption in perceiving, in doing, in enjoying, in creating can be very complete, very integrated and very pure.

This ability to center upon the world rather than to be self-conscious, egocentric and gratification-oriented becomes the more difficult the more need-deficits the person has. The more growth-motivated the person is the more problem-centered can he be, and the more he can leave self-consciousness behind him as he deals with the objective world.

10. Interpersonal psychotherapy and intrapersonal psychogogy

A major characteristic of people who seek psychotherapy is a former and/or present deficiency of basic-need gratification. To a larger extent than the Freudians are yet willing to admit, neurosis is a deficiency-disease. Because this is so, a basic necessity for cure is supplying what has been lacking or making it possible for the patient to do this himself. Since these supplies come from other people, ordinary therapy must be interpersonal.

But this fact has been very badly over-generalized. It is true that people whose deficiency needs have been gratified and who are primarily growth-motivated are by no means exempt from conflict, unhappiness, anxiety, and confusion. In such moments they too are apt to seek help and may very well turn to interpersonal therapy. And yet it is unwise to forget that more frequently the problems and the conflicts of the growth-motivated person are customarily solved by himself by turning inward in a meditative way, i.e., self-searching rather than seeking for help from someone. Even in principle, many of the tasks of self-actualization are largely intrapersonal, such as the making of plans, the discovery of self, the selection of potentialities to develop, the construction of a life-outlook.

In the theory of personality improvement a place must be reserved for self-improvement and self-searching contemplation and meditation. In the later stages of growth the person is essentially alone and can reply only upon himself. This improvement of an already well person Oswald Schwarz has called psychogogy. If psychotherapy makes sick people not-sick and removes symptoms, then psychogogy takes up where therapy leaves off and tries to make not-sick people healthy. I was interested to notice in Rogers' recent book (23) that successful therapy raised the patients' average score in The Willoughby Maturity Scale from the twenty-fifth to the fiftieth percentile. Who shall then lift him to the seventy-fifth percentile? Or the one hundredth? And are we not likely to need new principles and techniques to do this with?

11. Instrumental learning and personality change

So-called learning theory in this country has based itself almost entirely on deficit-motivation with goal objects usually external to the organism, i.e., learning the best way to satisfy a need. For this reason, among others, our psychology of learning is a very limited body of knowledge, useful only in small areas of life and of real interest only to other 'learning theorists.'

This is of very little help in solving the problems of growth and self-actualization. Here the techniques of repeatedly acquiring from the outside world satisfactions of motivational deficiencies are much less needed. Associative learning and canalizations give way more to perceptual learning (20), to the increase of insight and understanding, to knowledge of self and to the steady growth of personality, i.e., increased synergy, integration and inner consistency. Change becomes much less an acquisition of habits or associations one by one, and much more a total change of the total person, i.e., a new person rather than the same person with some habits added like new external possessions.

This kind of character-change-learning means changing a very complex, highly integrated, holistic organism, which in turn means that many impacts will make no change at all because more and more such impacts will be rejected as the person becomes more stable and more autonomous.

The most important learning experiences reported to me by my subjects were very frequently single life experiences such as tragedies, deaths, traumata, conversions, sudden insights, which forced change in the life-outlook of the person and consequently in everything that he did. (Of course the so-called
tools. We dislike being used'.

We dislike being perceived as useful objects or as for ourselves, as complete and whole individuals. When we ourselves are perceived in this way, e.g., determined way. But we certainly are aware of it when we.

A is A and everything else is not A in the Aristotelian logic, and never the twain shall meet. But seen by self-actualizing people is the fact that A and not-A interpenetrate and are one, that any person is simultaneously good and bad, male and female, selfish-unselfish, adult-child, angel-devil, kind-cruel, good-bad. A is A and everything else.

For instance, I think that our understanding of perception and therefore of the perceived world will be very much changed and enlarged if we study carefully the distinction between need-interested and need-disinterested or desireless perception. Because the latter is so much more concrete and less abstracted and selective, it is possible for such a person to see more easily the intrinsic nature of the percept. He can perceive simultaneously the opposites, the dichotomies, the polarities, the contradictions and the incompatibles, (19, pp. 232-4). It is as if less developed people lived in an Aristotelian world in which classes and concepts have sharp boundaries and are mutually exclusive and incompatible, e.g., male-female, selfish-unselfish, adult-child, angel-devil, kind-cruel, good-bad. A is A and everything else is not A in the Aristotelian logic, and never the twain shall meet. But seen by self-actualizing people is the fact that A and not-A interpenetrate and are one, that any person is simultaneously good and bad, male and female, adult and child. One can not place a whole person on a continuum, only an abstracted aspect of a person.

We may not be aware when we perceive in a need-determined way. But we certainly are aware of it when we ourselves are perceived in this way, e.g., simply as a money-giver, a food-supplier, a safety-giver, someone to depend on, or as a waiter or other anonymous servant or means-object. When this happens we don't like it at all. We want to be taken for ourselves, as complete and whole individuals. We dislike being perceived as useful objects or as tools. We dislike being 'used'.

Because self-actualizing people ordinarily do not have to abstract need-gratifying qualities nor see the person as a tool, it is much more possible for them to take a non-valuing, non-judging, non-interfering, non-condemning attitude towards others, a desirelessness, a 'choiceless awareness' (17). This permits much clearer and more insightful perception and understanding of what is there. This is the kind of untangled, uninvolved, detached perception that surgeons and therapists are supposed to try for and which self-actualizing people attain without trying for.

Especially when the structure of the person or object seen is difficult, subtle and not obvious is this difference in style of perception most important. Especially then must the perceiver have respect for the nature of the object. Perception must then be gentle, delicate, unintruding, undemanding, able to fit itself passively to the nature of things as water gently soaks into crevices. It must not be the need-motivated kind of perception which shapes things in a blustering, overriding, exploiting, purposeful fashion, in the manner of a butcher chopping apart a carcass.

The most efficient way to perceive the intrinsic nature of the world is to be more passive than active, determined as much as possible by the intrinsic organization of that which is perceived and as little as possible by the nature of the perceiver. This kind of detached, Taoist, passive, non-interfering awareness of all the simultaneously existing aspects of the concrete, has much in common with some descriptions of the aesthetic experience and of the mystic experience. The stress is the same. Do we see the real, concrete world or do we see our own system of rubrics, motives, expectations and abstractions which we have projected onto the real world? Or, to put it very bluntly, do we see or are we blind?

Needed Love and Unneeded Love

The love need as ordinarily studied, for instance by Bowlby (5), Spitz (24), and Levy (18), is a deficit need. It is a hole which has to be filled, an emptiness into which love is poured. If this healing necessity is not available, severe pathology results (5, 18); if it is available at the right time, in the right quantities and with proper style, then pathology is averted. Intermediate states of pathology and health follow upon intermediate states of thwarting or satiation. If the pathology is not too severe and if it is caught early enough, replacement therapy can cure. That is to say, the sickness, 'love-hunger', can be cured in certain cases by making up the pathological deficiency. Love hunger is a deficiency disease exactly as is salt hunger or the avitaminoses.
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The healthy person, not having this deficiency, does not need to give or to receive love except in steady, small maintenance doses and he may even do without these for periods of time. But if motivation is entirely a matter of satisfying deficits and thus getting rid of needs, then a crucial paradox results. Satisfaction of the need should cause it to disappear, which is to say that people who have stood in satisfying love relationships are precisely the people who should be less likely to give and to receive love! But clinical study of very healthy people, who have been love-need-satiated, shows that they are far more—not less—loving people than others.

This finding in itself exposes very clearly the inadequacy of ordinary (deficiency-need-centered) motivation theory and indicates how inescapable is the necessity for ‘metamotivation theory’ (or growth-motivation, or self-actualization theory).

I have already described in a preliminary fashion (19) the contrasting dynamics of B-love (love for the Being of another person, unneeded love, unselfish love) and D-love (deficiency-love, love need, selfish love) and further findings will be set forth in detail in a future publication. At this point, I wish only to use these two contrasting groups of people to exemplify and illustrate some of the generalizations made in this paper.

1. B-love is welcomed into consciousness, and is completely enjoyed. Since it is non-possessive, and is admiring rather than needing, it makes no trouble and is practically always gratifiable.

2. It can never be sated; it may be enjoyed without end. It usually grows greater rather than disappearing. It is intrinsically enjoyable. It is end rather than means.

3. The B-love experience is often described as being the same as and having the same effects as the aesthetic experience or the mystic experience.

4. The therapeutic and psychogogic effects of experiencing B-love are very profound and widespread. Similar are the characterological effects of the relatively pure love of a healthy mother for her baby, or the perfect love of their God that some mystics have described. The details are too complex for description here.

5. B-love is, beyond the shadow of a doubt, a richer, ‘higher,’ more valuable subjective experience than D-love (which all B-lovers have also previously experienced.) This preference is also reported by my other older, more average subjects, many of whom experience both kinds of love simultaneously in varying combinations.

6. D-love can be gratified. The concept ‘gratification’ hardly applies at all to admiration-love for another person’s admiration-worthiness and love-worthiness.

7. In B-love there is a minimum of anxiety-hostility. For all practical human purposes, it may even be considered to be absent. There can, of course, be anxiety-for-the-other. In D-love one must always expect some degree of anxiety-hostility.

8. B-lovers are more independent of each other, more autonomous, less jealous or threatened, less needful, more individual, more disinterested, but also simultaneously more eager to help the other toward self-actualization, more proud of his triumphs, more altruistic, generous and fostering.

9. The truest, most penetrating perception of the other is made possible by B-love. It is as much a cognitive as an emotional-conative reaction, as I have already emphasized (19, pp. 257, 260). So impressive is this, and so often validated by other people’s later experience, that, far from accepting the common platitude that love makes people blind, I become more and more inclined to think of the opposite as true, namely that non-love makes us blind.

10. Finally I may say that B-love, in a profound but testable sense, creates the partner. It gives him a self-image, it gives him self-acceptance, a feeling of love-worthiness and respect-worthiness, all of which permit him to grow. It is a real question whether the full development of the human being is possible without it.

REFERENCES

A. H. Maslow, now professor of psychology, Brandeis University, was born in Brooklyn, New York. He attended the University of Wisconsin where he received the BA (1930), MA (1931), and PhD (1934). At Wisconsin, he was successively assistant to W. H. Sheldon (famous for his work on the varieties of human physique and temperament) and instructor and teaching fellow in the psychology department. After two years as a Carnegie Fellow at Teachers College, Columbia, Maslow joined the faculty of Brooklyn College in 1937. There he wrote the Principles of Abnormal Psychology with Bela Mittleman. Many of his papers since 1935 are cited in Motivation and Personality (1954), and twelve chapters of the book had appeared previously in psychological journals. However, the name Maslow first became significant to me in 1950 when I read his 'Self-actualization: A Study in Psychological Health' (Personality Symposium, No. 1, 1950) and found his viewpoints and work were structurally consistent with the Korzybskian view of man and human time-binding potentialities. Finally, I met Dr. Maslow in March 1955 at his Newtonville home, and in August he gave one of the lecture-conferences for our seminar-workshop at Bard. Happily, Buckminster Fuller was with us the same week-end, speaking on his synergetic geometry and general structural investigations. Maslow and Fuller had not met before. Neither knew the other's work, but they gave us a dramatic example of intertwining and convergence of two seemingly disparate fields - via their common non-aristotelian (non-elementalist) viewpoints.

Maslow's Preface to Motivation and Personality provides an insightful introduction to the man and his work. He mentions his studies in comparative and experimental psychology and in biology and neurophysiology at Wisconsin and a 'long series of researches on individual and group psychotherapy (1941 and 1942), some of them very definitely unconventional.' But principally I was interested in (Continued on page 84)
'A scientist may be very much up to date in his line of work, let us say, in biology; but his physico-mathematical structural knowledge may be somewhere in the eighteenth or nineteenth century and his epistemology, metaphysics, and structure of language 300 B.C. This classification by years gives a fairly good picture of his semantic status.'

Alfred Korzybski (1, p. 148)

'A person who exhibits different ages in his semantic development, as, for instance, 1933 in some respects, sixteenth century in others, and 300, or even 5000 B.C. in still others, cannot be a well co-ordinated individual.'

Alfred Korzybski (1, p. 149)

'Others again - and these are the majority - do not worry about the questions of epistemology, and in their utterances there is implicit a complex mixture of epistemological premises derived from all stages of occidental thought in the last two thousand years.'

Gregory Bateson (2, p. 230)

'We may distinguish three periods of human development as characterized by their standards of evaluation:

1) The pre-human and primitive period of literal, general, and unrestricted identification.
2) The infantile, or K period of partial or restricted evaluation.
3) The adult, or K, or scientific period based on the complete elimination of identification.

Alfred Korzybski (1, p. 194)
In the passages quoted at the beginning of this paper, Korzybski implies that a man 'cannot be a well co-ordinated individual' if he exhibits simultaneously 'different ages in his semantic development.' We are yet to find this ideal 'well co-ordinated individual.' When Bachelard analyzes the epistemological profile of his own semantic reactions to such basic words as mass and energy, he recognizes that it spreads all the way from stage 1 to stage 5, as we shall see. Our experience is similar: when we analyze any of the terms most frequently used in management parlance, for instance, problem, objective, organization, we find that no one reacts to them exclusively at one level of sophistication. The best we can do is to be aware of the spread of the profile and to shift its central tendency towards the stage that is most appropriate for the case at hand.

THE EPISTEMOLOGICAL PROFILE

Primitive realism, or sensing stage. This stage is characterized by unquestioned identification. Man's perception is the measure of things and of their qualities. The 'is' of identity is taken as the adequate formulation of what is going on. Subjective experience (total organismic semantic reaction) goes unchecked and un-analyzed; it is taken as the revelation and the measure of the event. There is a low degree of conditionality. There are signal reactions, 'copying' of animals, no consciousness of abstracting. Whatever abstraction takes place is animistic, mythological, or purely verbal-reifying (projective). Mathematics is limited to the sensory span: 'one, two, three....infinity.' Unsophisticated semantic reaction to what happens, labelled with the traditionally accepted term, without any critical examination of either the event or the term. The event is what the term says it is. Classification is still hiding. Man thinks that he is looking at the world through the distorting windows of his language and syntax, of his symbol systems that he takes as self-evident.

Simple experiments show that there is in most of us some remnants of primitive semantic reactions: If you describe the sucking of a lemon, my mouth waters. If I lift three cans of equal weight and different sizes, I feel that the biggest is the lightest; I can't bring myself to cut the eyes of my mother in a photo, etc., etc. 'The water is cold, because I feel it cold.' 'Pancakes cause indigestion, because they once gave me indigestion.'

In Science and Sanity (page 512, line 15 from bottom, to page 526, line 17 from top) you will find comments on this stage and on some aspects of the next one.

Empiricism, or classifying stage. With the Greek philosophers comes a new era. There is a check and an analysis of naive experience. Things are classified according to their 'nature'. The principle of identity becomes central: a thing is identical with itself; it has an essence which is permanent, and qualities that can be differentiated.

Events are not triggered off by the whims of the gods, but they are determined by the 'nature' of things: a stone falls down to its 'natural' place because of its 'inherent' quality of heaviness; a feather floats in the air because it has the quality of lightness.

Observation becomes systematic, and the consistency of the thinking processes is safeguarded by the rules of logic. Nature is broken down into elements that can be counted, measured, and compared. Experimentation comes later as differentiation, classification, and counting (Gallup polls, Kinsey reports, correlation). Statistical counting shifts the emphasis from 'essence' or 'natural' to the 'typical' case, to the 'average' or 'normal', but the classificatory orientation remains.

This is the stage of elementalism, of democracy in the sense of counting noses, of deciding an issue by striking a balance between the pros and cons, of rugged individualism, of the pride in 'the biggest in the world,' of 'time is money,' of 'get down to facts,' of the digest 'in a nutshell,' of 'the more we teach, the more they learn,' etc., etc.

In medicine, we classify diseases in terms of infectious agents; in science as in business, we seek 'the' cause of 'the' problem.

Behind this panoply of 'scientific' tools and rigorous rules of logic, primitive identification is still hiding. Man thinks that he is 'objective', that his mental constructs match the structure of the world. He does not realize that he is looking at the world through the distorting windows of his language and syntax, of his symbol systems that he takes as self-evident.

From the crude 'is' of identity, we have passed to the more subtle but equally dangerous 'is' of predication. Man's symbolic systems are the measure of all things knowable; what lies beyond is supernatural, miraculous, impossible, not worthy of scientific investigation. Read how Kurt Lewin describes this state of affairs when he contrasts the Aristotelian and the Galilean modes of thought (7).

Classical Science or Relating Stage. From the study of things and of their inherent qualities, we pass to the study of active relations. We do not theorize on 'heavy' or 'light' bodies, we experiment with 'falling in free space,' with 'rolling down an inclined plane.'
'Aristotle was a realist,' writes Morris Kline, 'and he taught what observations actually do suggest. Galileo's method, however, was more sophisticated and consequently more successful. Galileo approached the problem as a mathematician. He idealized the phenomenon. . . . and by imagining motion taking place in a pure Euclidean vacuum he discovered the correct fundamental principle. His trick was to geometrize the problem and then obtain the law.' (8)

This is the glorious reign of mathematics, of relations expressed in formulas that tell us how the properties and actions of things follow from a few basic principles. These open new vistas into the unknown: it is sufficient to know a few points of the orbit of a comet to trace it completely; Neptune is discovered by the pencil of the astronomer before it is located in the sky with a telescope. Mendeleev determines the atomic weight and the chemical properties of elements unknown in his days, the 'laws' of nature are discovered one after the other; science has achieved predictability, and determinism is accepted as the normal closure of man's theory of the universe.

We pass from elementalistic and additive thinking to relational and multi-dimensional thinking. There is no single cause, but an interaction of factors. The whole is not the sum of its parts. We speak of group dynamics, of 'functional' leadership, of psycho-somatic medicine, of operations research, of symbolic logic. Abstraction is not nominalistic any more (Cow, Cow2, Cow3, etc.); it is relational (a²=b²+c²).

It is the phase of full-handed 'science' emptying upon an avid world the cornucopia of its riches.

But we are left with 'matter', 'space', and 'time', and, according to Korzybski, we are not yet free from the shackles of Aristotelianism.

Modern Science or Postulating Stage. Modern Science is born of the reactivation of logic and mathematics by a more searching epistemology. Instead of contenting himself with the success he was obtaining by handling his mental tools, man, prompted in some cases by baffling experiments, working in other cases on a ruthless re-examination of his long-accepted assumptions, set himself to the task of testing the tools themselves. And he found that 'mathematics is but a storeroom of conceptual patterns.' (9) He questioned these patterns, looked more closely at notions considered simple up to that time, and asked himself if the formula that had already given such spectacular results could not be re-analyzed. Is the equi-distant parallel a necessary adjunct to the straight line? Is the simultaneity of two events an acceptable fact? These questions bring to mind the new geometries and Einsteinian physics. By being aware that scientizing is postulating, the scientist has opened a new and vaster world of possibilities.

From classical science to modern science, the jump is no less spectacular than from stage 2 to stage 3. 'There is no transition from the system of Newton to that of Einstein,' writes Bachelard. 'We did not pass from the first to the second by piling up detailed information, by measuring with double accuracy, by sharpening the fine edge of accepted principles. Quite the contrary, nothing short of a great effort at self-renewal made it possible. The passage from classical science to relativistic science is a process of transcendental, not of amplifying, induction. Naturally, once this induction is achieved, we can, by reduction, bring out of it the Newtonian system. The astronomy of Newton is in the end a particular case of Einstein's pan-astronomy, as the geometry of Euclid is a particular case of the pan-geometry of Lobatchevsky.' (5, p. 42)

The noumenon, refined by epistemology, reverts to the world of phenomena. It discovers and creates in this world events that primitive realism, empiricism, and classical science could not even suspect. From the physico-mathematical sciences, this postulating stage is reaching into the social sciences, as can be seen by the event-structure theory of Floyd H. Allport (10).

Many pages of Science and Sanity deal with various aspects of this stage, particularly Chapter VII, 'Linguistic Revision' (pp. 85-93), and Sections C and D of Chapter XVII (pp. 239-244).

Advancing Science or Unifying Stage. For a non-mathematician the last stage is most difficult to describe. I see it as different in degree from the fourth stage, and Bachelard himself declares that the difference between the two is not easy to define (5, p. 57). It might be possible to sharpen the picture by reviewing the experience of creative contemplation at the silent level (12, p. xliv) and the mystical feeling of immediacy beyond symbols. This would require a full treatment well beyond the scope of the present essay.

In his progress from primitive realism onwards, man has dematerialized his concepts, emptied them of their experiential contents, disengaged their formal structure. As he goes forward he questions more and more the validity of sensory perceptions as a criterion, and he demands more and more on the logical consistency of his mental constructs, remaining aware all the while that these constructs are working hypotheses, nothing more. This is the stage of 'as if': 'If so . . . then so.' It extends all the way from stage 3 (classical science) through
stage 4 (modem science). Little by little 'as if' becomes 'why not?'. 'Homo mathematicus' resolutely breaks through the wall of determinism and faces the glaring vistas of the universe of possibilities. This universe is of his own creation; it may contradict at first sight his primitive or his educated experience. But he learns to live in it, within the intense fire of Olympian summits, brought into existence by his faith in his own intellectual-esthetic capacities. At this stage Bachelard becomes lyrical; he quotes the hermetic poet Mallarme, and exclaims: 'The possible is homogeneous with Reality itself.' (5, p. 56) Elsewhere he says: 'Reality is only one particular case of the possible.' (Ibid., p. 581)

SEMANTIC PSYCHOANALYSIS

As an illustration of semantic psychoanalysis by means of the epistemological profile, Bachelard describes his own notion of mass.

At the level of primitive realism mass is identified with bigness. Mass is not distinguished by weight. We speak of masses of clouds, of massive emotional reactions, of masses of people. Mass and smallness are contradictory notions. When sophisticated people are invited to weigh three cans of different size but equal weight, they expect the large one to be heavier. Their whole muscular system prepares itself to a greater effort, and in their disappointment they judge it as the lightest of the three. Their semantic reaction involves an element of primitive realism.

At the level of empiricism the notion of mass is differentiated by means of the scale. Mass is not bigness any more, it is weight. There is a first check on primitive experience, a simple analysis of the fact itself. Observation has become controlled to a degree. Archimedes and specific gravity belong here. We are at the level of so-called facts considered as the final criteria of 'objective knowledge'. 'To such a simple and positive use of an instrument (whether complicated or not) corresponds a thinking that is empirical, solid, clear, positive, static.' (3, p. 26)

At the level of classical science, the notion of mass gets further away from experience. It becomes related to other notions, i.e. force and acceleration. Mass varies. Of course, mass is mass. It is an absolute notion, one of the keystones of our basic trilogy: space, time, and matter. But it is not independent any more; it is not a measured quantity always equal to itself. We pass from the realism of experiential knowledge to the realism of the discovered 'laws' of nature. The law, expressed in a mathematical formula, is more 'true' than the observable facts. 'The notion of mass, so clearly realistic in its early stages, becomes somewhat emptied of its material contents when we pass, with Newton, from its static to its dynamic aspect.' (3, p. 28) At this stage, man has learned algebra, he has witnessed the experiments of the high school physics laboratory.

At the modern science stage, the fundamental notions of space, mass, and time, which are the basis of our measuring system (centimeter, gram, second), are split open as it were, not so much by experiment as by the sharp tools of mathematical analysis. When this simple notion is analyzed, we discover that mass and energy are not heterogeneous to each other. The notion is complex. 'It can be simplified in certain applied cases, by neglecting some fine distinctions, by smoothing, as it were, some more delicate variations.' (5, p. 31) 'Laws' of nature remain, but there is no one law for one notion. Relativity has done away with thinking in terms of absolutes.

In the fifth stage, which I admit is beyond my grasp, Bachelard speaks of Dirac's concept of propagation, which, I understand, involves a negative mass. And this, asserts Bachelard, is a notion that none of the previous philosophies can assimilate.

Following the verbal description of the stages of development of a scientific concept, Bachelard gives us two histograms to illustrate his own working concepts of mass and energy. The central tendencies of these profiles are evident, and their differences are noticeable (see

It is interesting to read the brief comments made by Bachelard himself on the comparative semantic analysis of his concepts of mass and energy in the light of these two profiles. First he notes that at levels 3 and 4, the two profiles are similar. He concludes that his cultural outlook is mostly homogeneous with respect to these two notions. He remarks, however, that such is not the case for all notions, and he claims that a searching analysis of particular concepts would reveal strange incongruities in the better trained minds. 'It goes without saying that all notions that are logically clear are not equally clear in the psychological sense. A systematic study of epistemological profiles would bring to light many subtle shades.' (3, p. 46)

At level 5 there is a slight difference between the two profiles. For Bachelard, Dirac's theories make more sense when related to energy than when related to mass.

In what he calls the 'infra-red' part of the semantic spectrum, at levels 1 and 2, the two notions reveal great differences. His per-
personal experience with the scale, when he worked for years as a postal clerk weighing letters and parcels, has made him keenly aware of weight and specific gravity. His personal experience with the dynamometer, as an instrument measuring energy use, is very limited. This accounts for the differences at level 2.

At level 1 he notes that energy as physical or psychological pressure has a strong semantic value that distorts many of his reactions. He recognizes within himself a blending of obstinacy, rage, courage, and stubbornness, an Adlerian will to power that asserts itself frequently. 'It would be interesting to delimit this concept of victorious energy; we would discover that it gives to certain thoughts an assurance, a certainty, a feeling that heightens their validity to the point of deception. The epistemological profile of Nietzsche's notion of energy, for instance, might account for his lack of logical consistency. On the basis of a false notion, it is possible to build up a towering doctrine.' (3, p. 47)

My experience has been that, without going so deep into the analysis of a concept, we can use the epistemological profile to remove semantic blockages that have resisted other techniques of re-education. Here are two examples taken from general semantics training.

I have found that many people have difficulty with Korzybski's third premise: 'The map is self-reflexive.' It seems that their epistemological profile of the term 'map' is too rich on the left side, at levels 1 and 2. Once they recognize this and consciously destroy these primitive mental structures by saying for instance: 'This map is not a map,' the map-analogy becomes a flexible abstract form with which self-reflexiveness and circularity do not clash any more.

REFERENCES

10. Allport, Floyd H., Theories of Perception and the Concept of Structure (John Wiley, 1955).
LEADERSHIP WITHOUT IMPOSITION*
Irving J. Lee

My first systematic acquaintance with the use of cases outside the classroom came as a happy by-product of my innocence and ignorance.

I had been cataloguing the kinds of communication situations supervisors face during the day. Because the Baxter Company was undergoing some basic changes, I became aware of the process of assignment-making, and especially of the way some of the men went about it. I remember well that on two occasions a foreman made assignments in what struck me as a perfunctory, unimpressive manner when the work to be performed was of considerable significance. Should not an important task be assigned in a comparably important way?

This seemed worth studying. However, a change in my own activities forced a reduction in the time available for visits. And there was no way to arrange the assignment-situations to fit my schedule. I then did the next best thing. I asked a foreman to tell me about the last assignment he had made, where it happened, what he said, how long it took, what the employee said and did, how he thought the employee felt about doing it, etc.

By the time I had notes on 18 such episodes with 7 foremen I had found a fair range of methods and effectiveness. There were examples of adequate and incomplete understanding, of action sometimes cooperative and sometimes at cross-purposes, of sufficient and insufficient information and motivation, of clearness and vagueness—all in varying degrees. The feelings of the employees toward the assignments went all the way from reluctance and unwillingness through uncertainty to interest and enthusiasm.

Using a few simple criteria relating to the attitude and understanding of the employee and the care taken by the supervisor, and going only on what I was told, I was able to separate the inept from the adept communications in 11 of the episodes. I could point to the difference in what was either omitted or committed. However, 7 of the cases were not so readily classifiable. The assignments seemed effective, the work involved relatively routine, yet the situation was anything but happy from the point of view of the employee. In three of the cases everything went smoothly even though the effect should have been something less than that according to the analysis.

The Plant Manager had been following these explorations with interest. I recall his jesting pleasure at my inability to account for all the cases. Nevertheless, he suggested that he would be willing to call a supervisor's group to a meeting to hear what I had learned about assignment-making. He thought their questions and comments might be helpful.

I had intended to give an example of a poor assignment, an effective one and one I couldn't explain with an analysis of each in turn. I never got to do that. Before I reached the second case the foremen literally took over. They by no means agreed that the assignment was ineptly made. They had much to say about the depth and adequacy of my description of the episode itself. They pointed to elements in the interaction of the men, in the work relationships, in the background circumstances I had not even dimly perceived.

I came from that meeting somewhat chagrined at the revelations of my own lack of perceptiveness but stimulated by the insight and enthusiasm of the foremen. They stayed beyond the scheduled hour and they seemed to be having a good time. The damage to my pride was corrected on my next visit. The Plant Manager wondered whether I cared to bring another case for discussion sometime. He was sure the men would appreciate it. At the second session I made one change. I gave each a copy of the case and then simply asked them what and how they thought about it.

THE BAXTER EXPERIENCE

There is now a Baxter supervisory group which meets monthly and is self-directing. They began by considering cases involving communication situations I had observed and written up. Later they prepared their own. They now will discuss any case of interest to anyone who will write up the details of a real though suitably disguised situation. They take turns preparing the cases and moderating the discussions. Copies are distributed at least a week in advance.

They took readily to the view that there is a reservoir of wisdom and experience in their people which should be tapped. They have developed a fair amount of skill in the style of leadership that does not impose a pattern on the group's thinking. They try to avoid the asking of 'forcing' questions like 'Why did he do that?' or 'What reason did the man give?' or 'What exactly did he say?' on the ground that

*Reprinted by permission, Today's Speech, September 1955, Vol. III, No. 3. This is, so far as we know, the last paper written by Dr. Lee.
these might inhibit participation. They will only occasionally set the agenda or the objectives of the discussion. They start the talk by a 'non-forcing' question such as, 'How do you feel about what happened?' or 'Does anyone see anything in the case?'

The Baxter group rarely needs to be prodded to talk. Since most of the restraining formalities have been removed they tend to talk easily and freely. There are noticeably strong centripetal tendencies in their discussions. They rarely wander afield in their comments. The minographic pages seem to be a mooring point, a base which keeps the talk swirling around rather than away from it.

Now and then a leader feels an impulse to sum up the points made or to 'wrap up' the views. I have seen signs of impatience as if the members felt, 'No one had to tell us how to think. No one has to put it in a capsule either.'

I have some evidence (mostly anecdotal) that these meetings are not without after-effects. The talk seems to have moved some of the men to take another look at what they do as supervisors. The cases themselves have tended to sensitize the rest of the management hierarchy to matters they should not have thought important. When, for example, a case seemed to be complicated by a particular Baxter policy, it became the subject of top-management action not too long after.

THE CASE METHOD

For the teacher of Public Speaking, Interpretation, Acting, or any discipline in which classroom performance by students is possible, many of the elements and variants of the case method are familiar. In a sense every time a class considers a student's effort, something of the case approach will be found.

It is all too easy to write about 'the case-method' as if it were some well-defined unity or agreed upon set of procedures. Indeed, 'a case' will be something quite different in form and use in law, Medicine, and Business - and from teacher to teacher and writer to writer. Nevertheless, I see the use of cases in terms of the following:

1. A group is concerned with some phenomena or a written report of some happenings rather than with generalized rules, findings, principles, advice;

2. A group is given an opportunity to indicate whatever relationships and interactions it sees and whatever feelings it has about what is in the case without immediate concern for the views of others, especially those said to be scholars and experts;

3. An effort is made to throw responsibility for observing, generalizing and learning from the experiences with and in the cases on the students rather than on the teacher;

4. An effort is made to check the students' conclusions and principles (which may have been developed elsewhere) against the concrete details of the case at hand;

5. A group is provided with readings giving theoretical positions and conceptual schemes with a view to a consideration of their relevance to the cases being discussed, rather than in an attempt to develop skill in the handling of theoretical constructions. The opinions of scholars and experts are thus drawn upon but not depended upon or dealt with apart from the assigned cases.

ONE MAN'S OPINION

The experience with cases in the Baxter Company and in a course I teach on problems in communication has led me to ask some questions about my own role in the classroom. To what extent have I undertaken to give students what they should have been encouraged to get for themselves? Of course, they might not get the kind of data or synthesis I might provide. But does it make any fundamental difference in the over-all development of the student's capacity if he does or does not have my specific materials and conclusions? And if he does have mine, have I not impoverished him to the extent that he has come to be dependent on others instead of himself? And does not the desire to give the student what you have necessarily leave little time for the discovery of what he has to give himself?

It is with this sort of prodding question in the background that I spend much more time than ever before searching for case materials and ways of helping to set the stage in the classroom so that students can freely think about them. I am no longer taken aback when students see elements in the cases which do not fit my own tidy formulations.

I wish to venture one more view in the hope that some reader may be moved to wonder along with me. By beginning with cases, with reports of what happened to specific people in particular situations, I have come to have some reservations about the content of the first course in public speaking. After almost three years of surveying the kinds of speeches, conversations and communication activities a supervisor has to concern himself with in the Baxter Company and elsewhere, I should now find it hard to believe that the range of exercises offered in many of our contemporary texts are directly relevant to the needs of supervisors. I recognize that exercises and assignments are given to prepare students for a wider variety of purposes and for all sorts of occasions. Nevertheless, would it not be fruitful to do a series of extended studies of men and women in a number of vocational, professional and avocational situations to see whether our reliance on our traditional subject matter is justified by the kinds of communications these people have and make? It might well be a source of comfort to the writers and users of the texts if they knew rather than guessed at what might be found. It is the burden of my experience that the collection and use of cases might help get such a determination under way.
MEASURING RESEARCH APTITUDE AND ABILITY*

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There is no reason to doubt that the shortage of technical personnel is posing a severe problem for both military and civilian industries - and one that bids fair to continue for several years. But there is reason to believe that the problem itself has not been adequately studied either by industry or by the universities. Even the phrase 'shortage of engineers' is so broad as to convey little or no usable meaning. There are research engineers, design engineers, production engineers, etc.; but above all, there is the great range in the degrees of ability of the individuals within each of these categories. Actually, there is probably a greater handicap caused by the misalignment of the men and positions that do exist than that brought about by a shortage of technical people.

It is a curious fact that the selection of manpower to fill vacancies in the sports categories is more scientific and accurate than the selection of manpower for technical positions. For example, a baseball executive never complains that there is a shortage of baseball players. He may complain that there is a shortage of pitchers, but by this he would assume that it is understood that the reference is to twenty-game winners - not just ball players. He is aware of the existence of a sizeable pool of ambitious youngsters anxious to make their mark in the profession. But for him, quality is the important factor - not the total number. Of course, these statements are equally applicable to the problem of the engineering executive. But there is one important difference - in this case, there is no simple and accurate measure of the aptitude of the student nor of the proficiency of the graduate. This is especially true in the fields of research and engineering development. Men of mature business judgment will accept the label 'graduate engineer' as being a measure of the contents of the package. This, of course, is not the fault of the schools. No reputable institution of learning pretends that the number of years a man remains in school, or the label placed upon him, or even the grades he may earn, is a measure of his ability to achieve success in the technical fields. In fact, the responsibility rests mostly with industry. By offering premiums for labels, they have unwittingly spurred on an increasing number of those poorly fitted to earn these labels. It is the function of the schools and colleges to recognize and cultivate the scientific attitude in students. But this is an expensive process. It is not being accomplished by today's mass production methods. The schools are aware of this fact but unless more money is made available, they cannot hope to supply industry with the people they, in turn, cannot afford to do without. A close examination of almost any research organization would reveal a misuse of manpower and a waste of funds.

It might seem that such a situation would be a simple matter to discover and correct, but this is not always so. A manager of a development organization of an aircraft company employing several thousand engineers stated that even after six months' employment, it would still be nearly impossible to evaluate the potential of an individual. No one can pretend to be a ball player but, unfortunately, it is possible - often unwittingly - to masquerade as a research scientist and perhaps no area in the technical field offers greater sanctuary for incompetence than does research.

At first, this may seem paradoxical because of the inherent difficulty of the subject matter and the unquestioned excellence of the people who are leaders in this profession. In the area of research that may reasonably be described as basic, perhaps only 10 percent of the total effort leads directly to a positive successful conclusion. Nine-tenths of the effort, although perhaps conducted on an equally high level, yields negative results. In one sense, this is not wasted effort since it has at least resolved the question of the need for exploration in the particular area. However, it is difficult to distinguish in many cases, between incompetence and inherent impossibility of the solution.

A fast growing group of those not well fitted for the task of research is made up of people, usually with excellent academic background, who have become so engrossed in the tools of their trade that they have lost all contact with reality. In this group, we might find one who, describing himself as an applied mathematician, could prove, for example, that a bicycle cannot be ridden. When called to his attention that experience was contrary to his conclusion, he is not the least impressed. It is only the beauty and symmetry of his symbolism that is important.

*This article originally appeared in The Journal of Engineering Education under the title 'The Shortage of Technical Personnel,' and is published here with the kind permission of the author and the Journal.
He has taken flight from reality. He is a scientific schizophrenic, happy in the world of his own making. Sometimes, in defense of these people, examples are recalled from history which show that great benefits were derived from the apparently aimless meanderings of some earlier genius. This is true. But research is a luxury and it must be purchased with great care. It would be no more logical for an organization to invest a large proportion of its funds in research because of the possibility of great returns than it would for a business man to invest most of his funds in a sweepstakes race merely because it has paid the highest returns on a given investment.

Complicating the problem still further is the existence of another group who have learned that the actions and sounds of competent research people can be readily imitated. They propound ideas and write papers that serve mainly to distract their more competent associates from more useful pursuits. This is strikingly analogous to the example of two locomotives hauling a train of cars. One locomotive may be completely inoperative yet it will look exactly like its mate and perhaps even make the same noises; yet, it is riding dead-head, contributing nothing to the effort. It is really impossible from a superficial examination to determine which one is genuine in either case. An erroneous statement made most casually by one such individual may occupy hours of time to disprove. It is a tribute to the technical stability of this country that it has been able to survive the avalanche of pseudo-scientific papers and reports inspired in many cases by the somewhat frantic efforts of the colleges to maintain favorable publicity ratings.

It would seem to be one function of education to help reduce the magnitude of this problem of misfits by improved selection and training of its recruits. But some phases of modern methods of education are themselves both overly expensive and wasteful. For example, at one engineering school, an attempt was made to devise a measure of the efficiency of a lecture. This consisted in defining the efficiency of a lecture as the ratio of the number of man-minutes during which new information was given to the student (which he could not have obtained on his own initiative) to the total number of man-minutes involved during the lecture. Estimates of the efficiency to be expected ranged as high as 75 percent but the actual results did not exceed one percent for the cases tested.

A suggested remedy for this situation is the elimination of lectures. The teacher could then be used as a consultant to the student but only when the latter needs help and is able clearly to state his problem. This is a most revealing method of appraising the student's ability and establishing an atmosphere most favorable for the transmission of ideas from teacher to student. Implied in this approach is the employment of dedicated teachers and few students per teacher. This is expensive. But the added costs would be returned many times in the overall economy. Everyone agrees that in the face of the ever-growing complexity of today's technical problems that industry's pressing need is for greater technical competence. The attempt to supply this need by graduating greater numbers of what must statistically be poorer average quality is even now pressing industry hard. For example, the successfull accomplishment of the design, construction and testing of an intercontinental bomber involves the expenditure of many millions of dollars and the best efforts of several thousands of technical people. A director of research at a large aircraft company has stated that he could afford to pay ten times the salary to those who could proceed along beaten paths under their own power until a job was completed as compared to men who required constant supervision in their work; but to the rare individual who could proceed along untired paths with maturity of judgment and persistence of effort to a worthwhile goal, he could afford to pay ten times as much again. Max Borne, the famous German psychologist, has said that in a group of one million men, only one thousand could be described as having done some thinking which leads to logical conclusions, and of this latter group, only one will do original thinking. These examples may be exaggerated, nevertheless, they serve the useful purpose of bringing out in the open a problem that must be faced.

Most everyone is born with some semblance of a research instinct. This is apparent in the relentless questioning with which children approach any new ideas. Unfortunately, some have learned to stifle this instinct so well that long before their college training is over, they will accept almost any high-sounding statement or written document without question. A direct result of this unhappy situation is the development of the single characteristic that is fatal to the attainment of the research attitude; namely, a class of individual 'who doesn't know that he doesn't know.' They have so stifled the still, small voice of the questioning instinct that they are able to read a technical statement without being aware that it is not understood by them. Education, which should have the function of cultivating the scientific attitude, often serves instead, like the over-watering of a plant, to anesthetize this instinct.

No one expects the schools to create mental giants. All that can be done is recognition, encouragement and some moderate exercising of the important characteristics. In practice, however, our colleges are more concerned with the mass production methods and the setting up of artificial hurdles which, although having
some value, can never justify total abandonment of a more logical approach. Not infrequently, the student comes away with a sense of accomplishment because of the truly formidable tasks which he has been required to perform in his four to seven years of schooling. Because of this, he has mistaken the training routine for the actual battle and when he enters industry, it is sometimes a shock to him to find that he is now only at the beginning; that he has picked up a few shiny tools (some of which may be beginning to rust) and that now he must learn the trade. This is the complaint most frequently raised by industry today. This disagreeable situation could be avoided if these facts were to be kept constantly before the student during his training period. Sometimes the argument is advanced that if a school were to recognize and adopt this completely intellectually honest course, it could not possibly survive in today's strongly competitive atmosphere. But this is merely an abused cliché. There is no evidence to the contrary that with sufficient courage and money, an effort in education that would be a whole order of magnitude better could be accomplished. The following items are suggested as a basis for discussion:

1. Following a common freshman year, the distinction should be clearly made between those who wish to follow a truly technical career and those whose concern will be chiefly with man-made problems. No effort should be made to attract men to the advanced technical field by so-called 'inspirational' talks, financial reward, etc. Rather, the student should be given factual unvarnished information about his chosen field and the purpose of the training he is receiving.

2. During the second and third years, the course content should be common to all the technical students and with no options permitted. The amount of material covered should be reduced to one-half that which it is now pretended to teach and replaced by rigor, thoroughness, and drill in semantics.

3. For the fourth year, the student should be permitted to select an area of interest but no options within that area.

4. The student would be given the right to earn the degree of research engineer but only after completion of a specified time in industry. During this critical period, a special effort must be maintained to obtain a measure of his ability. With the maturity of judgment that it is assumed he has now attained, the student should be permitted to select options for his post-graduate work.

Such a program as outlined here, if followed according to the spirit intended, rather than giving mere lip service to it, would be costly and difficult to administer. Whether it is worth the effort should be measured against the contribution it can make toward maintaining economic and military leadership for this country.

Hundreds of men are interviewed daily for positions in the technical field. The process is little more than a ritual. The individual's own opinion of himself, and even his references are notoriously inaccurate technically. Nevertheless, people do get hired and jobs get done. But this may not be enough in an age wherein a few dozen men may solve the problem of pinpointing a hundred of our cities with powerfully destructive guided missiles from a distance of 5,000 miles. The men we pick to compete in this contest of high stakes must be the top dozens. Only a few misfits and the results could be fatal. The same reasoning applies, only with lesser force, in our commercial economy. As technical advances become more profound and fewer men are involved, it becomes proportionately more important that those selected be really qualified. Offering high salaries is no easy out since it merely invites competition between the man of words and the man of deeds in a contest whose rules, as most commonly applied, favor the former. Like, for example, picking the best mile runners by insisting they swim the distance.

Qualities characteristic of successful research people are: (1) Intellectual courage; a kind of boldness in thinking but not recklessness. (2) The peculiar ability for sustained mental concentration; in effect, mental experimentation. This factor is not entirely subordinate to the will, hence, cannot be demonstrated at will. It responds under favorable environment and gains momentum after mental probing reveals a likely path of attack on a problem. (3) The ability to translate the essential factors of a physical phenomenon into mathematical language. This must not be confused with skill in mathematical manipulation. Mathematics is only a tool. The mental process of the scientist may be likened to the coarse adjustment of a microscope. It feels its way probing a whole area for study, while the mathematical tool, like the microscope vernier, serves to sharpen the field of view. There is little more reason to assume that a mathematician should have this ability than to assume that a chauffeur could design an automobile. (4) The ability - most difficult to achieve - to maintain a proper balance of effort between the several phases of a project. For example, when theory leads to an impasse, then an appeal is made to experiment and vice versa. Knowing when to advance, and when to retreat from an untenable position, husbanding resources and maintaining interest until a useful conclusion is reached is a most valuable asset. None of these qualities can be revealed (Continued on page 84)
TEA IS THE KEY

E. A. Lanier
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Whatever definition may be formulated for man, one thing about him is indisputable and unique: he is a symbol-creating class of life. He alone among living things creates symbols — linguistic, religious, artistic; and he lives — and dies — by his symbols.

This being so, the people of Japan offer the student of mankind an unparalleled opportunity: in Japan symbolism — in language, in art, in nature, and in daily life — has reached its epitome.

In the complex simplicity of the Tea Ceremony, above all, the essence of the national spirit is symbolically distilled and democratized. In its simple ritual the national symbols are actualized in daily life.

As I understand it so far (and there is much, much more to learn), the symbolized meaning of the Ceremony is this:

In the quiet of the Tea-room and its adjoining garden, in the slow, deliberate performance of the simple act of making a cup of tea, life becomes one with art and nature in that untrammeled and untranslatable mood called yugen. The beauty of simplicity and the simplicity of beauty are revealed and made available in a medium in which all may participate. This is the indigenous democracy of Japan — the democracy of art.

The quiet of the Tea-room is a quiet one shares with the quiet, the timelessness of old temples and old shrines, old trees, and old stones. Indeed, in the Ceremony, as in certain aspects of the language, and elsewhere, there is symbolized the timelessness of time, the spacelessness of space, the oneness of space and time. It is one with the quiet Keats perceived frozen in the artistry of an ancient Grecian urn — that ‘bride of quietness, [and] foster child of silence and slow time.’ And yet different. As the dynamic differs from the static.

The shibui taste of the thick ceremonial green tea, the rich, lusterless shibumi of the natural unpainted wood of the room and of the clothes of the participants express one of the most characteristic, one of the most elusive and undesignatable qualities of the national character, of the people themselves.

The complexity of the technique employed, which requires years of study and application to learn to perform well, symbolizes the complexity — physical, metaphysical, physiological, psychological — which lies behind our every act, behind the surface aspects of all life, nature, art. The implication goes far beyond the making of tea. ‘The lyf so short, the craft so long to lerne’ is the way our English Chaucer expressed it — in words. The Romans too had words for it: ‘Ars longa; vita brevis est.’

The tempo of the slow deliberation of movement in the Ceremony is one with the underlying rhythm of the action and the music of the Noh play; it is implicit in the chastening rigor and the precision employed in writing the Chinese characters; it is the mainspring of the ceremonial, polite ojigi. There is a certain dynamic balance between dreamlike poise and, in some situations, the incisive, finely calculated thrust of action of the stroke of the samurai’s sword, with infinite degrees of relative inaction and action in between. It is a subtle rhythm that somehow pervades all Japanese life, all Japanese dance and art. Shibumi, makoto, yugen? All of these and more.

And in ‘the wind blowing through the pine trees,’ in the singing kettle, in the sound of the woodcutter’s axe in the subdued ‘clump’ of the chasen striking the edge of the tea bowl, and in much more of nature symbolized in the Ceremony there is the characteristic indigenous mood of mono no aware, of sabi — of the pathos of human existence.

The basic thing underlying all this symbolism is the principle of suggesting the great in the small, much in little — a forest in a bonsai, a mountain in one stone, or, in painting, in the brush stroke of a single line. Suggestion, nuance — in language and in art — is all.
The ancient Chinese character for Japan means harmony; choice of it for the name of the island kingdom was prophetic of the culture which ultimately developed where Buddhism, Shintoism, Confucianism, Taoism—all the religious and philosophical currents of the Orient—have mingled harmoniously in one unified culture-complex, and these, in turn, with Western science, economics, and political science as nowhere else in the East or in the world.

Much of all this harmony is inextricably interwoven in the Ceremony of Tea through which it fructifies in the harmony and peace of mind of its individual initiates.

Knowledge of Tea is the open sesame to social intercourse in Japan, the first and indispensable step toward an appreciation of its many-faceted culture and of its people.
AN APPLICATION OF SEMANTIC (EXTENSIONAL) TECHNIQUES TO
THE LANGUAGE ARTS ACTIVITIES OF A FIFTH GRADE CLASS*
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STATEMENT OF PROBLEM

From the beginnings of my study of general semantics one notion repeatedly suggested itself to me: Here was a theory that possibly could do more than merely improve language teaching.

This is not to imply that I accepted Korzybski's discipline as a humanistic philosophy capable of producing a world Utopia. Philosophic questions raised by Korzybski are not within the scope of this paper. There were, I felt, definite semantic techniques that might improve communication, reduce some tensions, and ease, somewhat, children's learning difficulties in the classroom.

Beliefs of this type, as I view them today, verged on 'educational Utopia'. These idealistic views held four years ago were of such nature that scientific proof, at least of the physical science variety, would have been virtually impossible to collect for their affirmation or denial. This was the project and its problems as I visualized it in the summer of 1950.

Soon there were other problems that faced me. The Korean War began in the early part of that summer. I was drafted into the Army after teaching only two months at Mechanicsville School; nothing had been accomplished on my planned project. My tour of duty in the Army lasted twenty-six months. Some portion of this time was spent as a supervisor-instructor in Seventh Army Clerk-Typist School, Stuttgart, Germany. Experience in this school gave me many opportunities to observe the linguistic and/or semantic problems present in the attempted communication between teachers and students. It may be over-simplification, but I began to see teachers' problems as a result of the malfunction of the communicative process.

The time in Germany presented the opportunity to consider more fully and begin the applications of semantic techniques to the teaching situation. Although I was applying these techniques in an army school, I was planning applications that could be used in the teaching of elementary school children.

I define my objectives in the teaching of language arts in the intermediate grades as follows:

1) To provide an enriched and meaningful language arts program. 2) To teach language by methods that psychologically correspond to actual life situations. 3) Facilitate better communication by the individual child. 4) Point out the effects language has upon the life of each individual. 5) Teach children to manipulate language for their own use. The obverse would be to illustrate how language can and does manipulate some people. 6) Give the children an awareness of the levels of language. This should include the attempt to raise, if necessary, the child's level so his language might be appropriate to the particular situations in which he finds himself.

7) Encourage in the children a 'scientific' approach to the study of language. 8) Provide for the children a democratic classroom, not by mere word-definition, but by actual practices that encourage them to think and express themselves freely. An operational definition of democracy should be presented as the environment in which the children move, live and work.

I avoided objectives such as 'teach the children how to think,' and 'attempt to show the relationship between language and thought.' I felt the children would profit most if they were allowed to discover and understand those general semantic principles that could be comprehended by them because of their experience and abilities.

SETTING OF THE PROBLEM: TIME, PLACE & CHILDREN

I began teaching at Charles Carroll School in January 1953. This project was begun about the middle of January, and continued until school closed in June. Charles Carroll School could be considered the most 'rural' of all the schools in Carroll County. Most of the children attending come from farms surrounding two small communities, Union Mills and Silver Run.

Checking the school records gave me the educational achievements of the parents of the children in my class. The highest of any of the parents was the basis I used for classifying the families into educational level categories.

*In partial fulfillment of the requirements for the degree of Master of Education, Department of Education, Western Maryland College.
I went over the school records of the children, talked with the school nurse and former teachers. The records were not very impressive; more than one-fourth of the class had been retarded at some time in their school experience. Their former teachers classified them as 'slow' and 'dull'. Although the records did not indicate any serious auditory, physical or visual problems, actual observation disclosed some children handicapped by their vision.

Their language contained a number of errors. The most often heard errors were the use of 'ain't' and the pronouncing of the word picture as pix-ture. In addition to this there was some trace of the Pennsylvania Dutch dialect influences. It was not my main objective to remove language 'errors' of this nature from the children's speech. My objectives, as previously stated, went deeper than this.

THE DISCUSSION TECHNIQUE

One of the activities which I used extensively was discussion. In discussions, the children were encouraged to communicate their thoughts and feelings. It was language used, as it is in life, with a purpose. Interest was a factor that could overcome their initial reluctance to express themselves. The children were free to communicate and, finally, they became anxious to do so.

When they began communicating in their habitual manner, it became possible for me to use these discussions as a diagnostic technique. It soon became apparent that it was impossible to take careful notes of the speech of each child. In addition to these physical restrictions it soon became obvious that these fifth-grade children needed a contributor and guide to keep the discussion going in profitable channels.

I found it possible to overcome these difficulties by using a tape-recorder. The tape-recording of many discussions provided an easy method for checking language of the class and the individual child. It was also useful for the opportunity it provided to detect my own language defects. These defects, if continued, would have provided an inadequate speech model for the children.

Recording was a technique that I believe helped me establish stronger rapport with the children. Establishment of rapport was the first step toward a free flow of language, which was a primary objective. I did not believe this could be accomplished by having the children 'talk about talk'. These fifth-grade children, capable as they were of abstracting on their own level, would have considered such work as 'stuff and nonsense'.

The children's initial curiosity and interests seemed to make them anxious to discover meanings and develop understandings, which I believed could best be developed if they were related to the children's experience.

Although tape-recording was a mechanical activity that interested some children because of its novelty, there were other factors involved. When the class was recording, the recording machine provided some jobs that the children could perform. Eventually, all the children had an opportunity to do these jobs. At first, however, I used four boys: Carl, Jim, Ray and Danny. This was done so that these slow learners might have some definite contribution to make while the other children were participating orally.

When I began teaching these children their former teacher had just resigned; they had heard that their new teacher was to be a man recently discharged from the Army. It was to be their first experience with a male teacher. It is possible that this might have been the reason for their initial unwillingness to speak freely. The ten year-olds I had observed outside the classroom had seldom exhibited such inhibitions. Even after the children had accepted me the situation was not greatly improved. I began to wonder if they had ever been allowed to express their opinions. Had they ever been challenged to think and express their thoughts? Had their interests ever been aroused enough to challenge them to think? These questions did not condemn any particular teacher or teachers. It was a condemnation of a method or atmosphere present in some school situations. Unfortunately, there is no mechanical recording device that could be placed in a classroom to provide the answers.

The children did not join in free discussion upon any subject that pertained to school studies. It is true they would exchange opinions of television programs and movies, but even in these short discussions they seemed restrained. They showed no willingness to discuss subjects from their social studies work. Many of them were unwilling to respond even when asked direct questions.

I did not interpret this lack of response as indicating that the children knew nothing. I also refrained from the labels others had attached to these children -- 'poor class', 'slow group', etc.

Instead of merely talking about the children and applying labels, it seemed more practical to place them in situations where their reactions and comments might be freely expressed. Mere placement in such situations was not enough. Purposeful activities had to be devised to arouse their interest. I attempted to arouse their interest in language by showing them the pleasure that might be derived from it. I read to the children a half hour each day for the first three weeks of my teaching. Then I decreased the time allotment for this.

The reading of these first three weeks included Mark Twain's Huckleberry Finn, Lewis Carroll's Alice in Wonderland, and some poetry. I read several chapters from each of these books to the children. The poems that I selected...
were: Carroll's 'Walrus and the Carpenter,' Poe's 'The Bells,' Riley's 'The Ole Swimmin' Hole,' Little Orphant Annie,' 'When the Frost Is On the Punkin',' and many of Edward Lear's nonsense rhymes.

These selections gave examples of what language could do. Some words could tell a funny story. Words could be grouped in such a way as to bring back to us scenes remembered from our own experience. These were the notions I wanted the children to recognize. Even if all the children did not gain them, it would still be beneficial if they had been able to realize some of the pleasures to be found in stories and poems.

The poems that greatly aroused the children's interest, and certainly, brought the most amusement were the nonsense rhymes of Edward Lear. They laughed at the 'funny' use of words, as well as the funny situations the poems described.

It is difficult to determine whether or not my reading to the children and the pleasure they had from it had any motivating influence on them to increase their reading. It was evident from their comments, however, a new consciousness of language and a desire on their part to communicate was developing. These were encouraging signs.

Prior to this time there had been no extensive discussion of the meanings of words. The opportunity for which I was looking presented itself in the form of a question asked by one of the boys. The question might have come from Humpty Dumpty's habit of paying words over-time that had double meanings.

The question was one demanding a semantic answer. Gene asked, 'What does the word ball mean? I don't mean what does it look like or what you do with it. I want to know what does it mean?' The question came as unexpected good luck; it could not have been better timed if it had been pre-arranged. It was my opinion, at this time, that the children had developed some interest in 'meaning,' but there was no reason to believe they would ask a question of such semantic nature.

There were several children who offered answers for Gene's question. Nancy and Virginia offered dictionary definitions and some boys told what a ball was used for. Gene considered none of them satisfactory. 'They didn't answer my question.' I told Gene that if we thought about language and discussed it, there was some possibility that we could find an answer to his question. I told them that there were some activities they could do which might give an answer.

Language was beginning to interest them.

The interest seemed to transform the classroom into a place where most children insisted upon expressing themselves. It was at this time that I brought my tape-recorder to class.

It has been previously mentioned that four boys were given jobs as the operators of the recording machine. Carl, Jim, Roy and Danny were exceptions to the statement that the children had found great interest in language; they had shown very little. They listened to what the other children were saying, but they made no comments. These boys had been characterized as 'slow-learners'. It seemed that the class had begun speaking on a level that was above these boys.

It was necessary that they would be given an opportunity to 'contribute' to the class. The tape-recorder presented some mechanical operations that they could perform as their contribution, such as holding the microphone, keeping the microphone cable straight, checking the recording-level indicator light and regulating the volume-control knob. These four boys became the regular 'recording experts' of the class. They were able to tell the other children how it should be done to receive best results. By making a definite contribution to the class, these boys did not create the disturbances which so often result when children are unable to assume positive contributing roles in a class, or are unable to operate on the level required by the activity. It was encouraging to see that these boys did not limit themselves to a purely mechanical contribution.

After the class had been recording discussions for about a month, Danny said, 'Mr. Sies, I want to keep on helping with the recording all right, but sometimes I'd like to say something.' I, who was attempting to give the children free expression, had kept some from expressing themselves, the 'slow learners' operating the recorder. These were the boys who needed it most. Were there others, like Danny, who were not content to make mechanical contributions?

I told the boys that if any of them helping with the recorder wanted to make a contribution, they should signal as the other children did, by raising their hands. The boy holding the microphone was careful to watch for such signals from these boys.

Carl decided that more drastic steps would have to be taken in order that he might contribute. His words were to the effect that, helping to record was fun but someone else should be given a chance. He preferred, now, to 'just listen and talk.'

Carl and Danny in later discussions did make frequent contributions. It was more difficult to bring Roy and Jim into active oral participation. They did make some comments, but they were not as numerous as those of the other two boys. The problem presented by these boys emphasized the need for a variety of levels of materials and written exercises to be furnished the class.

Since this was a fifth grade class, I thought it best to limit language discussions to 15 or 20 minutes. Longer sessions, I felt, would impose undue hardship upon children of this age. After this period of discussion they listened to a play-back of the tape just recorded a few min-
utes previously. Their interest at first was in hearing their own voices. Later, they began to listen for errors in speech. I tried to stimulate this listening habit by commenting upon some pronunciation or speech habit of my own that needed improvement. The children started, possibly as an imitation, to listen for their own weaknesses.

After the children had heard their mistakes, I gave them an opportunity for additional discussion. Some of the comments they made were like these: 'I said “hissself”. It should be “hisself”.’ 'I'm still saying pix-ture.' 'The reason I talk so fast is that I get nervous.' Some children were making adequate criticisms of their own speech. That is, they were adequate when considering they came from fifth-grade children.

Some others made self-criticism that was harsh and unreasonable; I began to feel that such a technique was worthless in this form. It had been emphasized that each child was to criticize only his own speech. Soon, this overly harsh self-criticism was beginning to become a problem. These young children did not have adequate standards for self-criticism. There were other reasons as well, which could be found in the individual child.

It was my impression that Barbara was using the self-criticism period as a means of decreasing the surface differences between herself and the other children. This, she must have believed, would enhance her in the eyes of the other children. The harsh self-criticism was unjustified; her language habits were good. For example, one day, unable to think of anything else, she said, 'There's still that terrible southern accent when I talk.' (Her southern accent is so faint that it can hardly be noticed.) Some other examples of her attempts to increase her popularity with the group can be given. She would often refuse to make a full answer to a direct question, or make a comment on some simple topic. Later sections of this paper will show the progress that was made in Barbara's case in encouraging her to contribute more fully to the class.

Rita, Nancy, Pat, Virginia and Lois were other children who indulged in this harsh criticism of their own speech. Their situations were different from that of Barbara's. It was not easy to discover the basis for their behavior in this activity. The only answer could be given in such general terms as insecurity, desire for attention, etc. I was certain that the realization of the differences of the children was the starting point from which teaching must begin.

The method that seemed best suited to meet such apparent needs of the children, in both a linguistic and psychological sense, consisted of many individual interviews. How to accomplish this created a time problem.

I found it possible to talk each day with a few children following the oral language activity. After the children had heard the play-back of the discussion, I provided them with some written exercises requiring them to apply the principles discussed. The work was always directly related to the preceding discussion. This avoided the danger that the discussion had merely been 'talk about talk' and unrelated generalities. The written work served to relate the principles with actual situations. For example, if the class had been discussing synonyms I would either devise an exercise or locate one in their text which called for practical application. The written work, I found, was most successful when it provided for the various language and ability levels of the children.

While the children were working these exercises a few interviews could be held. These interviews enabled me to give the children individual guidance in language skills or whatever other problems that arose in the classroom.

The interviews, as I have shown in Barbara's case, sometimes showed language problems to be rooted in psychological factors. It could be seen that the abstraction, language, exists as a separate entity only by the artificial label man places upon it. It seemed to be an inseparable part of the 'warp and woof' of the child's life.

I do not believe that the language consciousness of the children in any way nearly approached that possible from an adult. On their own level, however, they appeared to be developing an increased awareness of its importance.

Gene, after hearing the play-back of the second recording said, 'You talked too much, Mr. Sies.' The children had responded to the opportunity for free expression. The criticism had been a valid one. I answered by saying that I hoped the class would do more talking so there would be less of mine. This answer seemed to satisfy most children. It appeared that this criticism was leveled by the children at most of their teachers.

A long discussion developed from this incident. The question was: Do your teachers talk too much? The amount of comments that were given indicated that it was a vital subject for most children, and one on which they all held an opinion.

The almost unanimous agreement was that teachers did talk too much. Some of the comments were: 'Miss ___ was a good teacher....but she talked too much.' 'I learned a lot from Mrs. ___ but she talked all the time.' 'Miss ___ never let us talk. We just had to listen to her.'

Such comments may have been justified; they may have been the expression of pre-adolescent revolt against authority. Regardless of this, it had been interesting what this fifth-grade class had been doing. They had been discussing the working conditions of a group, dabbling in group dynamics.

There was no reason to believe that this discussion would improve my particular situa-
tion. The following day's discussion was recorded as usual. Once more it seemed that I had talked too much. It surprised me to learn that there was proof of this.

Three children had gotten the idea of keeping a tally of the number of times each person contributed to the discussion. This was entirely their own plan. They reported the findings to the class. The tally showed that 15 persons had taken part, less than 50 percent of the class. I had spoken 8 times. From that time on, two children kept a record of participation. They showed especial zeal in keeping my record. This new interest in participation improved the situation. The percentage of children taking part increased rapidly. The best effort was achieved one day when 28 out of 34 children participated; this was a percentage of 82 percent. These group-dynamic techniques were not my suggestions. The experiment seemed to have been a profitable one.

The discussions themselves were not abstract. When they were not purposeful and concrete the children's responses were discouraging. They were appropriate to the level when they contained specifics. It was through the medium of discussion that many of my semantic applications to the teaching of language could be attempted. I tried to utilize whatever means were available such as films, records, pictures, charts, etc., to make language study more specific and direct.

**GENERAL SEMANTICS ON THE FIFTH GRADE LEVEL**

**Symbolism of Language**

The children's initial interest in 'meaning' had been displayed in Gene's question seeking the 'real meaning' of the word ball. This was an encouragement to attempt semantic applications in the language activities.

By hearing foreign language records, the children had become aware that peoples of other nations used words to communicate in a system of language similar in some ways to our own. I wrote on the board the German phrase, 'Guten Morgen'. Below these words, I wrote 'Good Morning'. The word 'Guten' was connected to the word 'Good' with a line. The same thing was done with the words 'Morning' and 'Morgen'. These German and English words had the same meaning. One of the boys in the class was named 'John'. I gave some different forms the name would have if it were used in different foreign countries: 'Juan', 'Johann', etc. Barbara, presenting an example from her knowledge of movie stars, said one of her favorite actors (Jon Hall) spelled his name, J-O-N. This discussion seemed to present an appropriate time to introduce the notion of symbolism: The word is a symbol for the thing.

**Non-Identity**

A chart prepared with colored ink amused the children and presented symbolism in graphic form. It showed the interior of a school room, where the children were watching the actions of the teacher. The teacher was pointing to a live tiger which had been brought into the classroom. The caption on the chart was: 'A word is a symbol for a thing.'

In the discussion that followed the introduction of this chart, I defined the word-symbol as 'something that represents a thing or object.' One of the children said that it was more convenient to use the symbol than 'the real thing everytime you wanted to talk about something.'

Danny, one of the 'slow-learners', said to me, 'Mr. Sies, if you want to teach about elephants use the symbol. Don't bring the real elephant.' It seemed that even the slower learners had understood the notion of symbolizing.

The next day I brought another chart that illustrated symbolization in a different manner. The chart depicted a scene from Swift's Gulliver's Travels. Two men in oriental costumes carried a bulging bag. They stood facing each other; one was holding a model house up before the eyes of the second man. The caption was: 'The wise men have a talk.'

The children looked at the chart and asked many questions about it. They could read the words but they did not understand what they symbolized. I said the words would have meaning for them only if they knew the story of the situation. (The context determines the meaning.) Swift had written about the strange, oriental country of Laputa. The philosophers of this country had revolutionized its language. They had formulated the theory that speaking was damaging to the lungs of the speaker, eventually it would cause premature death. With this theory as a base, they instituted a new method of communication without speech. They would carry with them a bag of 'things', which would be a substitute for the words. They had no need for words now, for when a man wanted to talk about something he would look into his bag, locate the object and hold it up in the air so other persons could understand him by seeing 'what he was talking about'.

This story greatly amused the children. It seemed to have illustrated for them that symbols were used to represent actual objects in our language. Michael, a small child, said, 'If we had that system here, I couldn't talk as much as I do now.' Barbara said, 'I wonder if a teacher in that country ever punished a child for holding something in his hands during school time.'

The children were ready to go a bit further.

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1. This chart was suggested to me by a cartoon by Virgil Partch printed in General Semantics Bulletin, Nos. 8 & 9, p. 32, Winter-Spring 1952.

2. This chart was suggested by an illustration in General Semantics Bulletin, Nos. 8 & 9, p. 66, Winter-Spring 1952.
into the notion of non-identity, that is, a symbol is not the same as the thing it represents. (This principle, as formulated by Korzybski, negates the 'is of identity', one of the uses of the verb to be.)

Non-Identity is a principle easily illustrated. I placed a chair at the front of the room. The word chair was written on the blackboard. I blocked the word from view with one hand; this action of mine did not cause the disappearance of the real chair. Covering the symbol, crossing it out or erasing it entirely did not remove, alter or destroy the physical chair. During this activity, one child said you could safely place your hands on the letters, t-i-g-e-r, but not on the real thing.

Abstracting Process

These illustrations showing that the symbol is not the thing represented, were the beginnings of my attempt to demonstrate Korzybski's 'levels of abstractions'. It should be repeated once more, that the children were not given the labels for these principles. I felt it was enough if they were made part of their experience. There was no reason to believe word-magic that equates 'naming' with 'understanding'.

At this age level many children seem unable to state their assumptions or reasoning steps adequately. The children were encouraged to express their opinions and the reasons for them if they felt able to do so. After a time they began to preface their remarks with 'I think' or 'It seems to me.' These words meant something far different than 'This is so' or 'It is like this.' From their study of science they began to compare scientific facts with personal opinions. I do not wish to imply that all the children were able to make this fine distinction; some were unable to do so.

Allowing children freedom of expression did involve one problem of discipline. One boy in my class seemed to enjoy inserting comments that distracted the class from the discussion. In order that the boy would not be unfairly judged, I allowed this to continue for several days. After concluding that he was not attempting to help the class, I mentioned it to him during one of my interviews. We talked about the situation, and it seemed that he was not able to follow the class-discussion properly. After this I let him work on the tape-recorder for some time. He did not make any more disrupting comments, and later he was able to make progress in understanding the class discussions.

(Thus question of disrupting comments is one that the teacher who desires free discussion and frank expression must face. The perplexing question is, how shall he judge the child fairly? It might be that the child is attempting to aid the class with comments which the teacher interprets as foolish. Is it appropriate to consider any statement or question to be irrelevant and foolish? It is a complex question that defies a facile explanation.)

Buttons were useful in presenting to the children the principle of 'levels of abstracting'. I gave each child a button, making sure that each button was different from that of the other children. I told them to look at the button they were holding.

I wrote the word button on the board. One child pronounced the word. Nancy said that the word was a symbol. It was a symbol that represented the 'thing' which each child had been given. The word button could be erased and the thing they held in their hands would not be changed. (This is similar to the principle of non-identity example.)

Similarities and Differences

'Do you all have the same kind of button?' Robert said, 'Yes, a button is a button.' This was a statement that needed clarification. The situation gave an opportunity to stress the differences between objects of the same class.

Several children described their button. Each child told of the characteristics of his button that made it different from the others. Some buttons were round in shape, others square and a few six-sided. They differed in color, material, markings and number of holes. There were many physical differences. They differed as to purpose for which they were intended as well as in physical construction. Barbara had a highly decorated button, apparently intended for ornamentation purposes. She said, 'This button isn't for holding a dress shut. This one's for making it pretty.' Pat added that men had buttons on their clothes for decoration as well as women. She used the buttons on the sleeve of my jacket as an example.

It was true that each pupil's button was different from each other button. They were not alike in appearance; some of them had different purposes. There remained, however, some characteristics in which they were all alike. It was because of these likenesses that we could use one symbol, button, to represent them.

I called to their attention the fact that not all boys and girls are alike, but still they were enough alike to make the symbols boy and girl meaningful. Presented in adult language, this appears to be highly complex. The children did not have difficulty in understanding it when they could experience it with concrete materials. In semantic terms, they had used a verbal symbol (the word button) to represent an object of the non-verbal macroscopic level (the physical object, button).

I wrote these questions on the board to emphasize the differences of the buttons:

- What color is the button?
- What size is it?
- What shape is the button?
- How many holes does it have?
- What is it made of?
- What do you think is its purpose?

I repeated the same activity a week later using sea-shells. The differences of the sea-
shells made them effective materials to use in this work. Working with sea-shells, the children showed that some understanding of this abstracting process had been gained.

Higher Order Abstractions

These activities had dealt with 'lower-order' or 'first-order' abstractions. Their experience with 'higher-order' abstractions grew from their daily opening exercises. Each morning they said 'The Pledge of Allegiance.' Obviously, it was a rote memory performance. It provided the opportunity to illustrate higher-order abstractions for the children.

'What does the 'Pledge of Allegiance' mean? What do the words mean that you just recited?' The questions surprised the children; it was something that they, apparently, had never considered. The best answers were those that suggested that they were 'doing something' to the United States government. The words pledge and allegiance meant little or nothing at all to them. John said that the 'Pledge of Allegiance' had meaning for me because I was older and had more experience with the words. 'The class agreed with his statement. Its failure was that it was not sufficiently specific. Some children volunteered to work together to seek the meaning of the 'Pledge of Allegiance.' The task was a difficult one for fifth-grade children. It involved not only an attempt to discover definitions, but the historical explanation as well. The job of defining the words was one factor that had doomed the children's original attempts to explain the meaning of the pledge.

I introduced higher-order abstractions to the children by using the word allegiance. How much help can a dictionary give to explain the meaning of the word allegiance? The children found out for themselves.

Once more I had the class refer to their dictionaries. To make the task easier, I circled the words 'tie,' 'fealty' and 'fidelity.' They looked for these three words in the dictionary.

tie n., ..........bond, obligation
fealty n., ..........loyalty; fidelity
fidelity n., ..........integrity; loyalty; adherence to obligation

These definitions were practically worthless to the children. Even if they were able to understand some of the words, they could see from the words appearing over and over, that the definition moved in a circle. Circle definitions are valueless if there is no knowledge or experience in the beginning from which to start. The children's spelling book contained a small dictionary in which there were many examples of circle definitions. I pointed out several of them.

This type of activity did not teach that the dictionary was worthless; instead, it served to begin introducing the kinds of information that could be found there. So many pupils began referring to the dictionary for checking pronunciations and meanings, it was most practical to give each a copy to keep in his desk. It should not be inferred that this new-found dictionary interest was caused solely by their language consciousness. I gave them frequent exercises to strengthen their dictionary skills, but these exercises never were the type that required the children to look up lists of words that had nothing whatsoever to do with their school work. They responded very well to those exercises consisting of words drawn from, or related to, some phase of their studies or activities.

Non-Aline

Their first introduction to higher-order abstractions had gone off on a tangent. The tangent, however, had seemed to provide worthwhile experience. Returning to the subject, I believed that the children could gain some understanding from consideration of such abstractions as 'good,' 'bad,' 'up,' and 'down'.

Words such as 'good,' 'bad,' etc., when introduced into a classroom situation, can cause considerable disagreement. It was my intention to cause an argument. Anyone familiar with the 'is-isn't' form of such arguments of pre-adolescents will appreciate the noise that can accompany such disagreements. Realizing what the situation was going to be and knowing that the principal was out of hearing distance, I asked a simple question: 'Is softball a good game?'

The question brought immediate results. There were answers of 'Yes', 'No' and 'of course' booming within the room. I quieted the group, and asked what the argument was about. They discussed the argument, and discovered that it was not about a game at all; it was about the 'likes' and 'dislikes' of each individual. What was a 'good' game for one, was a 'bad' game for someone else. It reverted to each individual's interpretation of a word, in this case - 'good'. It was during this discussion that Francis first made the comment, one that he would repeat numerous times in other situation. 'It all depends on how you look at it.' This needed clarification, although it made me believe that he understood the principle involved. Finally, the children seemed to understand the principle. There was no indication that this understanding lessened the number of disagreements on the playground, but in the classroom it did provide a tool to untangle some of the disagreements arising from conflicting opinions expressed about books, stories, poems, television programs and motion pictures.

I tried to test their understanding by saying, 'Rita is a bad girl. Is it satisfactory for me to say that?' (Rita was chosen because, in my opinion, she would understand the intent underlying such a statement. This judgment proved to be correct.) Answers to the question came quickly. Rita's brother said, 'You might be able to say Rita was bad in school.' Virginia said, 'Just because you said it, doesn't make it true.'

Virginia's comment stated the difference
between the symbol and the object represented. It also involves the semantic notion that 'old-man authority' is not always making statements that correspond to fact. Just because something is written down, or spoken by the 'voice of authority' does not necessarily mean it should be accepted as an 'absolute' statement of fact. In order to emphasize this point once more, this question was asked: 'Did I make Rita bad, by saying she was bad?'

'You didn't change her any by saying that,' said Carl. Gene didn't agree with this. 'If you told somebody else, you might change his mind about Rita,' Gene continued, 'To find out how she behaves, a person should go where she is and watch her. Then he could get his own opinion.'

Many times in previous discussions I had asked these questions: 'Are we trying to solve this problem the way a scientist would?' 'Are we being scientific?'

I had discussed with the children the scientific method in the science classes also. They had attempted to apply it to explain some experiments with air pressure and magnetism.

Each individual perceives in an unique way, never exactly like anyone else. There were some ways in which I showed the children this principle of perception. A pencil was used in one experiment, a chair in the other. Both experiments were performed in the same manner. There was an empty central area in the classroom, around which the children sat. The object was placed in the center. If it was a pencil it had to be held, giving the children different viewing angles. The different viewing angles gave each child an unique visual impression of the object.

I pointed out to the children these experiments were similar to those of the buttons and sea-shells. In both cases, the differences of the item were apparent, yet there were enough similarities (like-qualities) to class them together by giving them one symbol or name-word. Experiments of this kind may have brought to their attention the necessity for recognizing likenesses and differences. Both are important in establishing a semantic awareness.

Map-Territory

The map-territory formulation is an important one in general semantics. I wanted to present it to the children on a level that was understandable for them. Two charts were helpful in this presentation. If the children were to grasp this map-territory principle, they would have to rely upon many of the notions previously presented to them.

These children enjoyed working with maps. In their social studies activities I planned many occasions for them to do this.

The fifth-grade social studies' program included the study of the geography of Maryland. Some of the children made maps of Maryland and of Carroll County which were attractive and reasonably accurate for indicating the relative positions of towns and roads.

The groups, in making these maps, had to decide upon the symbols that would be used to denote certain features of the territory. Michael made this comment, 'This is like language. We're working with symbols.' This statement led to other worthwhile comparisons.

The symbols used on the maps were indicated in the key. I used their Maryland geography book to provide exercises for working with keys of maps. This geography book was a very old one and its age was useful. It contained many maps giving such information as population, wheat raised, tobacco grown, wooded areas, cattle raised, etc. The children had to use the map's key to obtain this information. The same symbol, most often a dot, on one map might denote a thousand men, while on another it might mean a thousand cattle. The denotation of a certain symbol had to be derived from the key to discover in what manner (context) it was used on this particular map. This context notion, actually, was one of the basic principles underlying many of these semantic language activities. The children were introduced to it in various forms, at various levels. In the later work, involving shifts of meaning, it was the basis for explanation of the changes. The children found the search for changed contexts of words while reading one of the most interesting phases of all the language work. The importance of context awareness has been stressed by semanticists, linguists and reading specialists.

The various types of maps given in the geography book illustrated for the children the diverse information obtainable from them. Each map gave a different type of information. Barbara said, 'You won't get all the information from one map. It would be a mess if they tried to put everything on it.' This is another important semantic principle. A word, when used to represent a condition or object (process of abstracting), is usable because it does not include everything. There is always something omitted. Even though the omission of some characteristics is necessary, it is essential to be conscious of the features omitted in the abstracting process. The semantic device of using the abbreviation etc. is a reminder that calls attention to the principle of non-allness, that is, some features have been omitted.

Map scales were another important subject that helped present the map-territory notion. Many different activities were planned to allow the children to become familiar with map scales. They made maps of the school room, playground and their homes. Making maps required the children to utilize numerous arithmetic skills. I stressed that the map should accurately represent the territory. It was suggested, also, that their language maps should be accurate. If their language maps were wrong, I said, it might cause trouble.

A chart was used to illustrate this also.
It showed a man driving his car up a steep hill. Unknown to him, the road on the other side of the hill had been washed away. If he continued driving up the hill, his car was certain to fall over the steep edge. The caption was: This man is using an incorrect map. It does not represent the territory.

The children offered some interesting explanations of how the man might have gotten this incorrect map. Several suggested that the map was an old one that was not up to date, since it failed to record the washed-out road. Maps must represent any changes in the territory. Language maps must reflect the changes as well. (This suggests the semantic device of dating to indicate differences and changes that could improve evaluations about persons, places, things, situations, etc.) The children suggested that sometimes persons are ill, and they behave in ways that are unexpected. 'When Mom has a headache - she's hard to get along with.' This was only one of the suggestions offered to illustrate changes in people.

The notion of change was well illustrated by using the old geography book. I told the children to turn to the map showing the population of Maryland. I asked them to find the population of Carroll County. After they had counted the dots and given me the answer, they found it was the wrong one. They could not understand where they had made an error.

I suggested they look at the pictures of the automobiles given in the book. This was a sufficient clue for some of the children. Michael, of his own volition, checked the publication date of the text; it was 1936. The population figures did not represent the change in population that the years had brought; therefore, the map was incorrect. It did not accurately represent the actual situation in the world, in this case - the population of Carroll County.

The map-territory formulation was further developed by using a scrambled map-chart. I had located all the towns of Carroll County in an incorrect position. The children, by straightening the map out, were making the 'map fit the territory'. It might have increased their geographical knowledge at the same time. Again, comparisons were made to stress the importance of an accurate language map of the territory.

Importance of Context

The difficulties that words can cause had been demonstrated previously in many activities. Many of these difficulties were due to changes of word meanings. Examples of these 'shifts of meaning' could be pointed out in their speech, reading, spelling, and social studies activities. New words were not added in this particular activity; new uses were added to 'old' words serving to extend the children's range of usage.

A good example of abstractions with several meanings are the ambivalent 'up' and 'down'. The discussion of these words brought considerable response from the children. One of the first explanations was that 'up' referred to something above the ground. Robert negated this definition by saying that when his family went shopping, they went 'up to Westminster'. This statement brought many others of similar nature: 'down to Westminster', 'in to Westminster', 'out to Westminster' and 'in to town'. Rodney said his family 'went to Westminster'. 'To town' for them meant going to Hanover, Pennsylvania. The children thought these confusions highly amusing but felt it necessary to clarify the situation.

Each person, or each family, had its 'special' method of expressing the same idea. It showed that our language was a changing, often confusing, medium by which we tried to express ourselves. It was always necessary to keep language as clear as possible.

Some children made sketches to represent in picture form such words as 'up', 'down', 'in' and 'out'. The most elaborate drawing was that of Darlene. She drew a beautifully colored picture explaining the 'up's' and 'down's' of visiting her neighbor's houses.

Barbara attempted to explain her own meaning of 'up-down' by referring to a map, on which a town lying north of another would be considered 'up'. The introduction of a world globe did strengthen her representation. According to this, from the South Pole every geographical location would be 'up', while from the North Pole, each one would be 'down'.

Darlene considered 'up' a question of elevation above sea-level. Charles Carroll School was conveniently located to contradict the interpretations of both girls. The dilemma resulted from the school being located north of the town of Union Mills, yet it was situated at the foot of a hill at a lower elevation than the town.

Barbara said you went 'down' to Union Mills; Darlene said you went 'up'. The key to the problem was the different definition of the words 'up' and 'down'. The argument could be settled by saying 'go to Union Mills'. Barbara could say, to be precise, 'I go South to Union Mills,' Darlene could say, 'I go up the hill to Union Mills.'

The children began to look in their work for words that changed meaning. They found many examples in their reading, and seemed to enjoy this search. Another activity they enjoyed was taking a word and attempting to list all the uses it could have. Often, I would let them list the various uses of some of the words found in their spelling lessons. This led to an understanding of meaning, as well as an ability to spell the words.

Operational Definitions

All the discussions and activities had not answered Gene's question that had been asked a long time ago, 'What is a ball?' To stimulate them, I brought in several types of balls, a football, softball, golf ball, dodge ball and a basketball. The children recognized
them and were able to supply the symbol (name) for each of them. The 'roundness' of shape, present in all of them, made it possible to attach the label, ball. However, each one was intended for a different purpose.

I asked the children to describe what was done with each of the balls. Then I asked them about the appearance of each ball, and the material of which it was made. It seemed that there was nothing else that they could say about the ball. (They had given several operational definitions.) The ball was an actual, physical object; the words (symbols) used to define it told our notion of the ball. It was possible to describe the appearance and use. Other than this, there was no way to define it. Experience with a ball - seeing it, touching it, playing with it and then talking about it - was the best way to get the meaning. Gene agreed that this (operational) definition was a suitable answer to his original question.

Several times after this, I brought different objects into the classroom and let the children write, and best they could, (operational) definitions of them. They seemed to consider these definitions a game.

EVALUATIONS OF SEMANTIC APPLICATIONS IN TEACHING

It is my opinion that many semantic applications and principles have been utilized in the language teaching of these fifth-grade children. It is possible that this could be the first extensive application and presentation of these principles to such young children in a public school system. Semantics is a field still in its infancy; many years of controlled experimentation and research will be necessary before its contributions to education can be demonstrated.

My work with these children was concerned in teaching them - or giving them experience with - such semantic formulations as:

- Symbolism of Language
- Non-Allness
- Non-Identity
- Importance of Context
- Map-Territory
- Abstracting Process
- Multiordinality
- Similarities and Differences
- Operational Definitions

Each one of these is in accord with modern linguistic and psychological theories of language. I believe they provide a basis for such modern theories as the most recent formulations of language levels and perception.

General semantics provides a methodology, a discipline, that enables the individual to adjust to new conditions, both in himself and his physical environment, brought about by the process of change. This can be useful for the teacher who desires his approach and methods to be as up to date as it is possible to make them. The problems confronting the American citizen this year (1954) are not identical with those he faced in 1944. In 1964 additional diverse factors will alter the nature of problems faced by the American people. Static inflexible linguistic and evaluative habits that fail to take the process of change into account will deter successful problem-solving behavior.

The general semantics methodology was useful for me, as a teacher, by increasing my awareness in several important areas. Some of these were:

1. Increased recognition of individual differences of the children.
2. Increased awareness of the use of language in the learning process (the problem of communication).
3. Understanding of the interrelatedness of the school 'subjects'.
4. Realization of the important role language plays in all phases of life.

These awarenesses, I believe, helped me in my teaching. They gave me a new viewpoint which seemed to be more in accord with newer psychological and scientific knowledge than my former viewpoint.

The effect of these scientific techniques upon the children is more difficult to state. For the purpose of this evaluation, these effects will be considered only in terms of language development. The discussion will be handicapped because this is an artificial classification, one that does not consider the interrelatedness present in all things. There is nothing that is absolutely isolated from everything else.

These fifth-grade children had seemed to develop considerable language interest. It may have been that my own enthusiasm could have effected this. There were other factors operating to cause this language interest as well. The tape-recorder gave the children opportunities to hear their own voices. The desire for improvement and the fact that they could hear it, if it occurred, made the tape-recording technique a popular one with the children.

When I first began teaching these children, they displayed a great reluctance to communicate their feelings or opinions. Indeed, it seemed at the beginning that they had no ideas to communicate. It was not difficult to see how these children had been incorrectly labelled as 'slow' and 'dull'. It appeared that the freedom of the classroom in combination with a developing interest in language were the factors responsible for breaking the language blocks that had inhibited their communication. (I am well aware of the fallacies that over-simplifications can produce in the form of facile generalizations. These are intended to be tentative generalizations.)

The children's beginning to express themselves freely did not occur until after they had passed judgment upon me. The children's desire to express themselves freely appeared to be an expression of their willingness to trust the
teacher. These pre-adolescents insisted that the classroom teacher be 'fair' to every child. This attempt to establish rapport — a communication technique in itself — is an undertaking whose success or failure depends upon complex psychological factors.

When I had established rapport and finally induced the children to express themselves freely, it was possible to attempt the improvement of their language. I found the most efficient technique for accomplishing this to be that of the personal interview. It appeared that the children who most desired to improve their communication were the most successful ones in doing so.

I believe the semantic applications gave the children some valuable insights into the nature of language. One important insight which they gained was that of levels of language. If Watt's findings and theories are accepted, these children have shown by test results that they have gained some preciseness of language, and a keen awareness of social contexts as well. This may indicate that some children have accepted language as the flexible instrument it is, and realize that it must be changed to fit different situations. If most of the children had obtained this important understanding, the whole program has been worth the time and energy expended.

Semantic methods of teaching language are successful, I believe, because they correspond more closely to the actual life situation as it actually exists. The activities were not handicapped by any artificial compartmentalization; they were not broken up into 'arithmetic work', 'language work', 'social studies work', etc. No such compartmentalization exists in the actual world; the children seemed to enjoy their work most, when no such compartmentalization occurred in the classroom.

The close correspondence of activities to real life situations made the work of more purposeful nature. This project makes me conclude that purposeful activities are more willingly accepted by the children, and do produce more effective learning on their part.

In many instances the children seemed to enjoy work that involved some amount of evaluating and expressing of opinions, but such situations seemed to be most effective when the children were challenged. The language activities offered many challenges to the students. Some of the statements included in this paper present evidences of their ability to meet these challenges and express opinions that may be considered a form of verbal behavior characteristic of a particular form of critical thought.

The flexibility of language and the attempted applications of the scientific method to life situations, perhaps, are the basic assumptions that underlie semantically oriented language arts teaching. The rejection of absolute answers and the quest for tentative explanations reflecting a 'grayness' in evaluation provided, I believe, a wholesome and challenging classroom atmosphere for the children. All these things may serve as an incentive to encourage pupils to think for themselves.

Questions Suggested by This Work

During the period this work has been in progress it has become apparent that my thinking has changed somewhat. Language and semantics have ceased to be abstract words. When I use the term semantics here I am including especially the methodology and techniques of general semantics. They have become more concrete through the language arts program I planned and completed with these fifth-grade children. In my evaluating, these words moved from an abstract level to a more concrete, observable level. This shift of levels has raised many questions. I believe these questions have arisen as the result of my attempt to utilize semantic principles 'operationally' in the teaching of children. I am aware that this work represents merely a minute preliminary application of semantic techniques to child education. If it can be accepted that semantics and semantic techniques offer worthwhile benefits to the child, then how might these methods be more efficiently utilized throughout the educational program? This question is not intended to evoke a complete answer. Instead, it will be most effective to stimulate further experimentation through application and evaluation.

My own work has included reading tests and social-language testing to measure change in the children exposed to extensional (general semantics) techniques. They must be considered as measures of relatively short-period changes. There still remains the question as to the results, if any, this semantic training will have upon their later performances. The question, 'What will happen to the children?', is the most important of all. What will be their later educational achievements? It should be questioned if number or letter grades will provide an adequate measure of their achievement. Success indicated by grades that are an evaluation of an efficient rote-learning performance and lacking in understanding is a verbal, not an intellectual achievement of the children.

How can the influences of semantic conditioning be evaluated? The solution of this problem cannot be supplied at this time. A possible solution, I believe, would be in developing in the future teachers of these children an awareness of and sufficient knowledge of extensional (general semantics) techniques. Then valid evaluations may be made.

I have previously stated my interest in the progress of these children as they complete elementary school and go to junior and senior high school.

school. Some of the questions that come to me concerning their later achievements and reactions are:

1. What effect, if any, will this semantic orientation have upon the future school achievement of these children?

2. How many of the children in the class will continue to find reading such a pleasurable experience?

3. How much of their language consciousness and understanding has been lost or forgotten by them?

4. Will the future teachers of these children be resentful of the fact that they have had an introduction to semantic orientation?

5. What would be the reactions of these children if they were placed in a classroom where they would receive 'traditional' language teaching?

6. Will the children continue to improve their language skills in the future at a rate comparable to that of the past five months?

I have avoided, as far as possible, references to 'social behavior' and 'social attitudes.' Terms such as 'success' or 'failure', 'adjustment' or 'maladjustment' must be accepted as words. These words take on meaning by a relative interpretation of individual comparison and eventual evaluation in a particular social context or setting. It is along this line, however, that my thinking has changed. I begin to see applications of semantic principles that may be valuable in educational and philosophical evaluations. Semantics has suggested to me previously unrecognized techniques for attempting critical evaluating. Although this change in thinking has been stated in general terms, I believe it has been a greatly beneficial one for me, especially in increasing my desire to go further in this work.

There are still other questions that have come to me. Of these many apparently definitive questions that have arisen, there have been few satisfactory answers thus far. Some general questions are these:

1. How can the teaching of the language arts be made more life-like, more extensional (general semantics)?

2. What other semantic techniques might be utilized in the teaching of this important area of skills?

3. How can the communication process, which essentially characterizes so much of the teaching-learning process, be made more effective?

These general questions are ones that will serve to provide me with incentives and goals in my future classroom activities. I realize that this work so far represents little more than basic knowledge and elementary applications of semantics and recent linguistic research. The surface has only been scratched. These small beginnings have developed in me beliefs that semantic applications may have beneficial effects upon young children. The work has increased my desire to seek new applications and observe the children's reactions to them. In order to broaden my personal knowledge of semantics, I am planning to study and compare the behavior of Korzybski, Ogden and Richards, Morris and others in using certain terms such as sign, symbol and other similar semantic (semiotic) labels.

BIBLIOGRAPHY


Witty, Paul, Reading in Modern Education (Boston: Heath, 1949).

A---GENERAL


---LANGUAGE AND LINGUISTICS

Ernst, Margaret, Words: English Roots and How They Grow (New York: Knopf, 1937).


LaRue, Lou, We Teach English (New York: Harcourt, Brace, 1951).

Lewis, M.M., Language in Society: The Linguistic Revolution and Change (New York: Social Science Pub-
LUTHER FRANK SIES is currently a staff member of the Hearing and Speech Clinic of the Children's Hospital, Washington, D.C. He is a 'Marylander' with a German family background. He was born in Westminster, Md., where he attended high school and Western Maryland College (BA 1948), specializing in English and Social Sciences. He studied elementary teaching methods for a BS in education (1950) at the State Teachers College, Towson, Md., and began teaching fourth grade at Mechanicsville School. He was in the army for two years, most of which he spent in Germany as an instructor at the Headquarters, Seventh Army School, Stuttgart. He returned to Westminster College for the MEd (1954) and taught fifth grade at the Charles Carroll School, the scene of the 'experiment' reported in his paper. He has also been a speech correctionist in the Loudon County (Virginia) Public Schools. Along with his work at the Hearing and Speech Clinic he is now completing the academic requirements for a doctorate in educational psychology (New York: Heath, 1944).
WHAT'S WRONG WITH JOHNNY'S READING?: A SEMANTIC LOOK AT THE PROBLEM

Madeline Semmelmeyer, Chicago

EDITOR'S NOTE: In general semantics circles, Madeline Semmelmeyer is well-known for her writings and the experimental work she did in teaching reading in the first and sixth grades at Reilley Elementary School, Chicago. Miss Semmelmeyer's present paper was received when we were going to press with this issue. We are pleased to publish these timely comments on Why Johnny Can't Read with the following explanations which are quoted from the author's accompanying letter: 'No doubt you are aware of the commotion that the recent book on reading by Rudolph Flesch is arousing...the May number of Education Magazine will devote the entire issue to reading. Dr. Emmett Betts will be the editor. I have written an article entitled "Can Johnny Read? A Semantic Look at the Problem" which he asked me to send him...I have also written another article with practically the same material. It is somewhat longer and has more emphasis on general semantics. I thought you might want to use this longer article in the next issue of the Bulletin...Editors are asking for articles that are simple enough to interest parents and teachers, and are not too technical. I have tried to make mine so simple that even those who have never heard of general semantics will understand the applications I am making.' M.K.

Let us all seek truth as if none of us had possession of it.

Constantin Francois Volney

A sensational book (1) on reading appeared recently which has already attracted nation-wide attention. It is also a highly controversial book because of the uncompromising position taken by the author, Rudolph Flesch, and his blanket condemnation of the reading 'experts', the publishers of textbooks, and the current method of teaching reading. Flesch claims that the teaching of reading - all over the United States, in all the schools, in all the textbooks - is totally wrong and flies in the face of all logic and common sense.'

The title of the book is Why Johnny Can't Read. And What You Can Do About It. By Johnny, Flesch means every boy and every girl who is taught to read by the so-called word-method. He says that the system is so ineffective that 'third-graders can't read a single blessed book and are unable to decipher a single note to the milkman.'

Flesch has written this book primarily for the parents and his purpose is to show that it is possible to free the child from his reading difficulties by teaching the Flesch system at home. Since the children 'never really learn to read' by the methods taught in the schools, the parents must undertake the job before the child gets into the hands of the educators.

Have We Failed in the Teaching of Reading?

Flesch is not the first one to call our attention to the fact that we have a reading problem. That we are not getting the results that we should is common knowledge. Anyone who has followed the current literature on the subject of reading failures, is well aware of the fact that one of the most baffling problems confronting educators is the inadequacy of our reading programs to develop mature, intelligent readers. The problem seems to be universal. Dr. William S. Gray, head of the UNESCO committee on reading, says that 'practically every country in the world faces the same issue.'

Critics of the results we are getting are coming both from within and without the school systems. I.A. Richards (2) presents this discouraging picture: 'If people's reading is really as inefficient as it seems when carefully examined, the main staff of education is hardly worth leaning on.' Schuster (3) adds, 'College students who cannot read constitute a major indictment of American education.'

One large college reports that 'practically all students present reading problems in one form or another.' Knight and Traxler (4) are of the opinion that 'few, if any students in the high school have arrived at their maximum reading ability.' After Gates (5) had made a survey of the New York city schools, he came to the conclusion that 'half or more than half of our pupils never really read in the first three grades.'

To offset these and other criticisms, remedial classes have sprung up all over the country. Such classes are found at every level, from the elementary school to the graduate school of the
There is no doubt that some progress is being made in these remedial classes. The efforts to eliminate word by word reading, to increase rate, and to develop rhythmic eye movements are all steps in the right direction. But after a student has been trained in reading for approximately twelve years, it would seem to be an economic waste to teach these skills at the college level. There are other reading skills which should receive attention at the upper levels.

There are also a real danger in some of these remedial classes, especially those for the more advanced students. In many a premium seems to be placed on speed. Students are urged to read faster and faster, and progress is too often measured in terms of the number of words read per minute.

Although there are many readers who need to increase their rate of reading, speed is of little importance as a measure of one's reading ability. Speed is only relative. It varies from reader to reader, from one type of material to another type, from one subject to another subject, and from one purpose in reading to another purpose. Then, too, what may require intensive reading on the part of one reader, may be rapid reading for another reader who is well versed in the subject.

E.T. McSwain (6), a noted educator, has this to say about speed: 'Speed in reading is an important objective provided the methods used to increase speed do not produce a lower quality of meaningful interpretation.' Clifton Fadiman (7), the well-known literary critic, believes that 'tripe should be read with the speed of light, and let us say Toynbee's A Study of History with tortoise deliberation.'

In a recent article on reading, Bishop Fulton J. Sheen (8) sums up the whole matter when he says, 'For the complete development of the mind there should be serious and intelligent reading - not just reading. . . . After a time, useless reading weakens the mind rather than strengthens it; then reading becomes an excuse for the mind to lie dormant, while thoughts are poured over it like chocolate over ice cream.'

It is our failure to get the kind of mature reading that these writers refer to that is our chief difficulty in teaching reading at all levels. That we are not getting it is generally recognized. In the introduction to the Proceedings of the 1951 Conference on Reading (9) at the University of Chicago, the editor says:

'... no aspect of reading has received more persistent and vigorous attention during the preceding conferences than how to promote increased ability to interpret what is read... but the results in terms of increased competence in youth and adults are wholly inadequate.'

Some Claims Made by Flesch

And now Flesch believes that he has discovered a solution to the whole problem. He says that Johnny can't read because nobody ever showed him how. What we need to do is to teach reading by the Flesch method which is as simple as this: 'All it amounts to is teaching your child the meaning of twenty-six letters and some fifty letter combinations. Teach the child what each letter stands for and he can read.' He goes on to say that if we follow his method, we can have 'perfect readers at the end of the second grade.'

It is difficult to imagine in what aspect or aspects of reading any second-grade child could achieve perfection. Learning to read is a never-ending process which parallels growth in maturity and in depth of understanding. When he was eighty, Goethe, the great German poet and dramatist, said, 'Learning to read is a life-long process. I have been at it all my life and I cannot say that I have reached the goal.'

But Flesch says that his phonics-trained child quickly learns chicken, and elephant, and hippopotamus, and inter-nationalism, and every other word in the English language. 'He comes across a word for the first time, he recalls his knowledge of letters and sounds, and something clicks in his mind.' Flesch doesn't tell us what it is that clicks. But one thing is certain. It isn't the meaning of inter-nationalism. Some of our top diplomats would like to have the meaning of that word click!

Those who advocate our present method of teaching reading have no quarrel with the teaching of phonics. Most educators agree that skill in word perception is a fundamental part of a good reading program. They regard phonics as one of several ways in which a pupil learns to recognize words, but they also stress the fact that all children do not learn equally well by the same method. It is extremely important and essential that a child learns to recognize words readily in order to leave more time for interpretation, which is the main business in reading.

It is not what we are doing in reading that is responsible for our reading problems. It is what we are failing to do. The primary factor in reading is meaning, but that is just what we
are not getting. To many pupils, at all levels, reading has become an impossible task of untangling a jumble of abstract words.

No amount of emphasis on words alone will ever result in meaning. The procedures which Flesch advocates would only increase the problem of getting meaning since it is directed primarily at pronunciation skill. As Betts (10) says, 'It is entirely possible to develop a group of excellent word pronouncers who cannot read!'

When Flesch says 'you can give the children a little primer and then proceed immediately to anything from the Reader's Digest to Treasure Island,' he is substituting the pronunciation of words for meaning. This must be his conception of reading, for in speaking about his own ability to read a Czech newspaper he said, 'No, I don't understand a word of it. I can only read it.' What he means is that he can pronounce the words. He does not seem to realize that facility at the verbal level and facility at the level of experience are two entirely different aspects of reading.

General Semantics and The Problem of 'Meaning'

For some time writers on semantics (11) and others interested in linguistic issues have emphasized the fact that words have no meanings in themselves; that the child does not get meaning 'off the page' as Flesch indicates so often. Words 'have meaning' only when someone gives them meanings. It is only when a child has an adequate background of experience that he is able to put 'meaning' in the symbols (words). We have no right to assume that because a child pronounces the words correctly, he understands what he is reading.

Experience is the source of meaning - not ink marks on a sheet of paper. Malinowski (12), a distinguished anthropologist, found that he could not understand the language of a primitive people until he had lived with them. He had to experience their way of life before he could understand their language. The Foreign Service Institute of our State Department has found this to be true in dealing with people of other lands. The officers of this service must not only be able to translate what an Arab or a Chinese says, but they must also be able to understand what he means when he says it.

If the pupil does not have a background of experience to help him interpret what he reads, the only thing he can do is to resort to memorizing and to the use of meaningless words. Since this is what many of the pupils are forced to do, we are developing verbalizers, not readers.

Ernest Horn (13) says that 'Verbalism is not a thing of the remote past . . . it is wide-spread, at every level from the kindergarten to the graduate school, as well as in society at large.' Santayana (14) made a similar observation when he said, 'Words and things were never so far apart as they are in our uneducated times . . . by uneducated times I mean that we are over educated verbally and without roots in Mother Earth.'

In education, as in every other field, methods cannot remain static. Changes must constantly be made to keep practices in harmony with modern scientific methods and knowledge. In the general semantics of Korzybski (15), we have a modern scientific method of dealing with language and meaning, and a method of getting the kind of semantic reactions that reading calls for. When we adopt his methods, the teaching of reading must take into account what we now know about language and how it works.

In harmony with this point of view, Korzybski has defined reading as 'the reconstruction of the facts behind the symbols.' In terms of modern science this means that reading should bear the same relationship to the life facts that an accurate map bears to the territory which it represents. That is, our word-maps should fit the fact-territory (that is be similar in structure).

We have the word-maps. It is the life facts or the territory that we leave out. As the 'general semanticist' sees it, the chief problem in reading is to help the child reconstruct the territory which the word-maps represent. To enable him to do this, Korzybski has given us a very simple method, which he calls the extensional method - a sound educational method which is fundamental in teaching every subject. When a pupil is trained in this method he looks for the extensional 'meaning' of a word; that is, he tries to find out what the word points to or represents in the extensional world, objects, persons, actions, happenings, etc.

Some of our present difficulties are due to the fact that in teaching reading we do not take into account what has been discovered about language structure during recent years. Korzybski has clarified our thinking in regard to this problem. He points out that the symbols in our language have come into being through a process of abstraction. Even the simplest words, like chair and apple are abstractions. The word apple, for example, is not a name for a particular apple one may have eaten for lunch, but it is a general name used to designate a whole class of objects, namely, 'all' the apples there are.

The word apple, or the abstraction, places the emphasis on similarities. The differences are eliminated in order to arrive at the general
The definition of apple found in a simplified dictionary (16) for children shows the extent to which this generalizing process has been carried: 'apple - the round, fleshy fruit of a well-known tree.' This definition does not tell the child that there are red apples, sour apples, cooking apples, yellow apples, sweet apples, etc.

When we apply the extensional method, we emphasize differences as well as similarities, thereby giving the child a true picture of what is implied in the meaning of the word. He learns that all the different kinds of apples he has experienced are covered by one general term, apple, and he begins to think in terms of a symbolic world that is similar to his living world.

In general semantics, words like apple and chair are called lower-order abstractions because they are names for actual objects. We can always make the meaning of such words clear by introducing the actual objects; for example, different kinds of apples, different types of chairs, etc. But there are other abstractions which are farther removed from the object, and are, therefore, more difficult to understand. Such words are called higher-order abstractions. We should think of them as being words with higher degrees of abstractness. The word fruit would be of a higher order of abstraction because it includes, not only apples, but pears, bananas, peaches, and all the rest which we lump together and call fruit. A child who knew only apples would not have a very clear understanding of the meaning of fruit.*

One of the greatest responsibilities the school has is to teach the relation that words have to things; that is, to build up the territory or the life-facts that the word-maps represent. When children are oriented in this way, they become sensitive to differences, and soon begin to realize that they never know all about the meanings of a word. It is the kind of orientation that fits the requirements of a sound education.

Flesch has criticized the word-method because he claims that 'words are learned by endless repetition.' There is little justification in repeating a word over and over just to get another 'look' at it; but any amount of repetition is justified if something new is added each time to give the reader a more complete understanding of the differences implied, and enable him to put new values into the symbol.

If the story is about a dog, other types of dogs should be introduced so that the young reader will not get the idea that dog means the Fido in the story. Stories about different types of dogs would serve the same purpose. In this way a child would learn that dog means a collie, a bulldog, a shepherd dog, a scotch terrier, a pekingese, etc. When we do this, we make our word-maps fit the life-facts or the real world.

Unfortunately, the textbooks are not built around this conception of language structure. There are workbooks for young children with an entire page of an outline (not a true picture) of the same dog, the same cat, the same boy, the same duck, etc. Such an approach misses the opportunity of extensionalizing the child by showing him different types of dogs, etc.

The Problem of Higher-Order Abstractions

It is a simple matter to build up an experiential background when we are dealing with lower-order abstractions. All we need is more time and a great deal of extensional material, such as objects, picture books, true-to-life pictures, films, film strips, etc. But the problem really begins when the pupil has to supply the background for higher-order abstractions. Up to date the schools have done very little, if anything, with this problem. We still teach definitions, generalizations, and other higher-order abstractions before the pupils have had first-hand knowledge of the many facts and experiences behind them. Too often these formulations are far beyond the maturity of the pupils who are expected to cope with them. It is also a reversal of the natural order. The facts came first, and the words or labels next.

McKee (17) found that 'the understanding which 80 per cent of the pupils in an average class achieve in reading the textbook in any content subject is almost unbelievably vague and incorrect.' Furthermore, he says that 'the situation grows more and more critical as the educational level advances.' This is not surprising, for the amount of abstract material also increases as the textbooks become more advanced.

The farther the abstractions are removed from direct experience, the greater the amount of background that has to be supplied. Teachers and writers of textbooks should keep this fact constantly in mind. But the background that is necessary to an understanding of the abstractions isn't in the textbooks, and the teachers find it impossible to fill in all the gaps. Betts found that two out of five pupils were forced to read material that was too difficult for them at the time.

Since the abstractions connect with little or nothing in the pupil's experience, no meaning comes through. Take arithmetic, for example. Definitions, like the following, found in modern

*For more details, see O.R. Bontrager, 'On Higher-Order Abstractions,' GSB Nos. 4 & 5, 1950-51, pp. 3-5.
textbooks, convey little, if anything, to the pupil:

'The word area conveys the idea of space on a plane surface within the limits of a boundary as the area of a floor or a garden.'

'The volume of a solid is the volume of the space inclosed by the surface.'

The difficulty in these definitions is not in the words themselves. It is in the remoteness of the mathematical generalizations from the pupil's experience. If we must teach definitions, why not try the operational or extensional type of definition? Although it is more difficult to formulate, it succeeds most effectively in connecting abstract words with experience . . . In some cases only an operational definition can bridge the gap between words and experience.'

Connecting the thing to be learned with the pupil's background, or building up such a background is the main business in teaching any subject. If we followed the extensional method in teaching a subject like area, we would break down the abstraction into the experiences from which it was evolved.

This is not difficult, for life abounds in area situations. The range of applications is practically unlimited. An experiment (19) conducted by the writer, in which the extensional techniques were used, shows the superiority of this method, both in arousing a keen interest in the subject, and in making it possible for the pupils to arrive at an understanding of the abstract terms. The pupil also learned to evaluate in terms of extensional facts instead of definitions.

Many of the abstractions found in textbooks are even more difficult to understand than those already mentioned. Such words as liberty, rights, capital (wealth), democracy, aggression, justice, etc., fall into this class. There will probably be as many interpretations of such words as there are people using them, since they refer to highly complex sets of ideas and situations, and not to definite objects or situations.

The League of Nations tried for twenty years to define the term aggression, and the United Nations has had no better luck. Just recently, Herbert Hoover, in a speech on the revision of the United Nations charter, called for a new definition of aggression. Perhaps Flesch's perfect second-grade reader could pronounce the word. But what would he do about the meaning? Flesch doesn't say. The dictionary is of little help in clarifying the meaning of these higher-order abstractions. Take the word democracy, for example. The Oxford Dictionary defines a democracy as 'that form of government in which the sovereign power is in the hands of the people and is exercised directly by them or by officers elected by them.' This may seem to be a very simple definition, but when we examine it carefully, we find that all the differences have been left out.

For example, what is meant by sovereign power in a particular democracy, and who are the people who are going to exercise it? Ancient Greece was regarded as a democracy, but only a privileged few had any rights, or took any part in the affairs of the government.

Neither is there anything in the definition to help us understand why both the United States and Russia claim to be democracies. The word democracy is used by both countries, but the experiences which give the word meaning are entirely different. Altick (20) says, 'Only when the meaning of democracy is made clear and concrete, in terms of actual values and ways of life, does the vast difference between what the United States and Russia mean by the word appear.'

Bringing words like democracy and rights down from their high levels of abstraction to the objective, actional and descriptive levels is not difficult. A recent book entitled What Is Democracy? (21) is an excellent illustration of what is meant by 'getting meaning' through extensionalization. Instead of dealing with abstract words and definitions, this book gives a vivid picture and text explanation of democracy at work in the United States and in other parts of the world. This type of approach suggests what we could do for the pupils to help them build up an understanding of higher-order abstractions.

The abstract mental activity which is becoming so general in modern life indicates that we shall have an ever-increasing number of abstractions to deal with, and the pupils will be called upon to interpret them more often in their reading. The solution does not lie in eliminating such words from the materials used in the schools, but in explaining them in terms of actions and ways of life. In order to do this, educators must realize the tremendous gap there is between these words and the life facts and situations which they represent.

In order to have the pupils prepared to meet the problems that arise in interpretation, the extensional training should begin as early as possible. Flesch is greatly concerned over the fact that we wait until the child is six
years of age before we begin formal instruction in reading. It isn't the reading that should start earlier. It is the extensional training. This should begin as soon as the child shows an interest in the world about him. It is the best preparation for reading that there is. It is also the way in which the parents can contribute the most to the child's success in school, not only in reading, but in every other subject.

Children of pre-school age should be given every opportunity to extend their contacts and enlarge their areas of experience. (22) Parents should provide them with experiences and with materials in which they will find the meanings of words. They should have opportunities for exploring and investigating their world, for visiting interesting places, for examining objects, pictures, and story books, and for wholesome relations with other children. In this way they will build up the background of experiences that reading calls for.

It is generally agreed that the child's readiness for any of the school's activities depends upon the opportunities he has had for expansion. The child who has had a barren background and whose activities have been curtailed will have difficulty in adjusting himself to the school situation. It is evident that the school must provide a broader background of experience before these less-favored children can begin a systematic study of reading. (22) Flesch does not take any of these factors into account when he says that 'readiness for reading simply means the readiness of the teacher to let the child start reading.'

Some Textbook Problems

The conditions for making reading an effective instrument in learning depend upon a number of important factors. One of these factors is the suitability of the textbooks. In spite of the fact that textbooks have improved greatly in many respects, teachers at all levels and in all subjects find that many pupils have difficulty in understanding the material presented. This applies not only to remedial cases, but to pupils of average and above average intelligence, and to many who reach or exceed the grade norms on standardized reading tests.

What do we find when we examine some of these textbooks? In the first place there is usually too much condensation, and not enough in the way of expansion by giving simple and detailed explanations and illustrations. New subjects and new ideas are introduced in such rapid succession that the material is quite indigestible.

Authors of textbooks cannot assume that what is easy for them is easy for the pupil. They have probably spent years in building up the meanings of the generalizations which they introduce. In a single page of one of the histories used in the seventh and eighth grades, the following topics appeared with little or no explanation by the author: doctrine of nullification, Tariff of Abominations, Ordinance of Nullification, compromise tariff, and protective tariff. There is enough material here for several chapters if the ideas involved were expanded as they should be.

One of the claims made by a publisher in support of a textbook is the fact that the vocabulary has been checked for difficulty with one of the word lists. The one commonly used is the Thorndike (23) list which is based on the frequency of occurrence of a word. When one examines this list carefully, he will readily see that it has little value as a check on abstraction difficulty. That is probably the reason why so many difficult words get into the textbooks.

To illustrate: The word book is rated as a word of the highest frequency, and so is the word government. Such highly abstract words as liberty and justice have the same rating as the simple and concrete words, cat and basket. Difficult words like democracy, decree, and charter have the same rating as chocolate, toast, and pitcher; civilization has the same rating as the word handkerchief, and so on. What we need is a list that will indicate the degree of difficulty of a word in communicating meaning. If we had such a list, textbook writers and teachers would not lead the pupils into these word traps.

Many of our textbooks also give erroneous and misleading ideas about countries, people, and nationalities. In a recent survey, conducted by Howard E. Wilson, on the materials on Latin America which are used in our schools, frequent distortions were found. This was largely due to the fact that too much emphasis was placed on the exotic and picturesque, while life in the large cities was neglected. Such a partial and 'slanted' treatment of a country or a people naturally leads to the development of stereotypes. What we need are textbooks that give an accurate picture of current life in the different countries, Latin America or in any other country.

Simplicity is the beginning of all good writing, and nowhere is it of more importance than in books written for use in the schools. An author cannot assume that pupils know what they don't know. In introducing a new subject, he must take it for granted that the reader, in the large majority of cases, does not understand the simplest words used in that subject. When the textbooks are written so that the pupils are able to understand what they read, we shall have less need for remedial classes.
A Concluding Word

The scope of this discussion does not make it possible to give a complete or an adequate analysis of the possibilities offered by general semantics to develop mature, intelligent readers. An attempt has been made, however, to show that a child will arrive at understanding if we adopt the methods of evaluation which have been outlined.

The semantic type of training which has been suggested will probably take more time than it takes for the 'parrot-like reproduction' of the words of the textbook, but the child will no longer pronounce words without having the slightest idea of what they mean. Fewer topics must of necessity be treated in order to provide opportunities for expansion.

REFERENCES


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This type of expansion will necessitate changes in courses of study, in methods of teaching, and in the writing of textbooks. To illustrate: History in the elementary school should be largely the social history of the people, since abstractions that deal with political ideas and economic significance connect with nothing in the experiences of children at that age level.

Time is important only as it offers opportunities for experience. But the results will be worth the effort. In his recent book, Power of Words, Stuart Chase says that when he applied general semantics in his thinking, 'Doors which had been closed began to open; the world took on a new dimension.' When Johnny begins to understand what he reads, the world will take on a new dimension for him, for he will put the breath of life into his reading.
Introduction

In 1953, the General Semantics Bulletin published a paper I presented at the Denver (1949) Congress on 'Executive Training and General Semantics' with a post-script where I reported on the development of our program up to that date.

In her introduction to the paper, M. Kendig wrote: 'This in-process view may serve a time-binding function in helping others by-pass some "trial and error".' (GSB Nos. 14 & 15, p. 45)

This training of executives by means of General Semantics has ceased (1956) to be the personal enterprise of a single individual. In the last two years ten consultants from Montreal, Toronto, Chicago, New York, San Francisco, and Los Angeles, have worked together in this field. They have lost count of the executives with whom they have discussed the basic notions of the Korzybian methodology, in conferences, at work, and in counseling interviews. Some of these executives belong to very large organizations, some to much smaller ones; some have applied G S for years, some are just beginning to try it; some are members of teams where everyone has undergone the same training, some are isolated in an aristotelian business world; some live in communities where G S cultural groups are functioning, some are far away from G S centers; one lives in the Far East, and one in the Middle East.

From these executives the consultants of the Executive Methods Group have received comments and suggestions of all kinds. Techniques have been tested, modified, dropped, or replaced. Key notions have been re-examined. Standard practices have been evolved. New areas of human behavior have been surveyed. Recent findings and formulations of social scientists have been put to use. Two or three times a year, the consultants spend two or three days together in quiet surroundings to review their experience, pool their information, and plan new developments.

This is a trial-and-error process, indeed. The amount of slag is tremendous compared to the pure metal we get out of the crucible of experience. Of what we consider valuable, how much can be helpful to semanticians whose fields of endeavor are very different from ours? We do not know.

However, we feel that the readers of the Bulletin might find it worthwhile to re-examine, in the light of our experience and theirs, two key-notions that are not much emphasized in the books and the articles that I have read, or in the meetings that I have attended as a member. These are: a) semantic reactions, and b) multiordinality.

'The term semantic reaction is fundamental for the present work and for non-elementalistic systems,' wrote Korzybski (S & S, p. 19). Elsewhere he asserts: 'Up to the undertaking of the present analysis, the problems of s.r. (semantic reactions) were not formulated, their psychophysiological mechanisms were not discovered, and so, to the detriment of all of us, we have had no workable educational means by which to handle them effectively.' (S & S, p. 28) No wonder that 'The present work is written entirely from the s.r point of view.' (S & S, p. 25)

We have come to agree with him that 'The non-el study of the s.r becomes an extremely general scientific discipline.' (S & S, p. 25) We can report from countless cases that the study of s.r and the practice of s.r awareness have proved to be the most powerful means of making G S work in our nervous systems and in those of executives who accept our program.

Section A of Chapter II of S & S (pp. 19-34), On Semantic Reactions, became clear to me and easily teachable once I could translate into a diagram the paragraph that starts with:

'It follows from these considerations that any psycho-logical occurrence has a number of aspects, an 'affec-
tive', and an 'intellectual', a physiological, a colloidal, and what not. For the science of psychophysiology, resulting in a theory of sanity, the above four aspects are of most importance. As our actual lives are lived on objective, un-speakable levels, and not on verbal levels, it appears, as a problem of evaluation, that the objective level, including, of course, our un-speakable feelings, 'emotions', is the most important, and that the verbal levels are only auxiliary, sometimes useful, but at present often harmful, because of the disregard of the s.r. The role of the auxiliary verbal lev-
els is only fulfilled if these verbal processes are translated back into first order effects. Thus, through verbal intercourse, in the main, scientists discover useful first order abstractions (objective), and by verbal intercourse again, culture is built; but this only when the verbal processes affect the unspeakable psychological manifestations, such as our feelings, 'emotions'.

This experience, and many similar ones, have convinced me of the truth of another Korzybskian statement: 'Visualization represents one of the most beneficial and efficient forms of human "thought".' (S & S, p. 452) The map is not the territory, indeed; but with a map it is so much easier to survey a territory!

The following text is a revision of a paper presented at the Annual Meeting of the Canadian Psychological Association in Montreal, May 1954.

**Man's Activities**

Let us represent the many activities of man (Smith) by drawing four ellipses that overlap to some extent (Fig. 1). Three of these ellipses cover activities that are within the range of common observation: we shall label them C, B, and A. The fourth deals with activities that are revealed by scientific instruments and techniques; they remain somewhat mysterious for the casual observer. We label it X.

In the top ellipse (C), we include all activities that go under the term thinking. As I am writing this, I think; you also think as you read. In thinking I include 'ideas', language, symbols, writing, reading, talking, listening, figuring out problems, planning, etc. A financial statement, a newspaper, a sales graph, a letter, a telegram, etc., are things that we use to think and to communicate our 'thoughts'.

In the next ellipse (B), we include activities that go under the term feeling. We can recognize differences between thinking and feeling. Feeling refers to pleasure, joy, anger, fear, desires, purposes, moods, regrets, wishes, worries, disappointment, enthusiasm, curiosity, boredom, etc., etc. There is feeling associated with a family gathering at Christmas, a date with a girl, a raise in salary, the sudden illness of a loved one, a handshake of appreciation, a kiss, the discovery of a fire in the basement, stage fright, the expectation of an interesting trip, the planning of a new house, etc.

Ellipse (A) includes what we choose to call the self-moving activities. This covers the autonomous functioning of our organs and the voluntary movements of our bodies. The heart pumps, the lungs expand and contract, the whole body...
A man works with his hands, he walks, speaks, shouts, sings, cries, laughs, eats, drinks, marches in a parade, dances, drives a car, grows pale or is flushed, etc.

Ellipse (X) covers the electro-chemical activities that have been discovered and measured by scientists. This represents the field of electro-cardiograms, electro-encephalograms, electro-myograms; of anaesthetics, insulin, vitamins, hormones; of narco-analysis, electro-shocks; of the psycho-galvanic reflex, etc., etc.

These various activities overlap and they interact: when happenings are going on in one section, something happens in all others. When you think hard you become tense; when you are emotionally upset your thinking goes awry; when you are given an anaesthetic you stop thinking and moving; you bring about feelings of friendship by inviting people to lunch or to cocktails; Hitler made his people march in parades to indoctrinate them and direct their feelings; worries may produce ulcers; insulin shocks clear up the confused thinking of some patients, etc., etc. This can be illustrated by arrows that criss-cross from one ellipse to the others (Fig. II). Man's organism works as-a-whole.

Finally, we realize that we cannot divorce this organism from its environment considered in both time and space. A man may be born with a native ability comparable to that of Einstein, but if he grows up among Australian aborigines he has little chance of improving the theory of relativity; a genius born in the fourth century before Christ could not produce Mendeleeff's table of chemical elements. An adult has been molded by his earlier life, by his cultural milieu, his work, his experience, etc., etc. Moreover, man modifies his environment and changes it as he goes along. Generations of men have transferred the Nieuw Amsterdam of the Dutch settlers into the New York City of today. We show this complex environment by surrounding the four ellipses with a freely drawn boundary (Fig. III). A three-dimensional drawing conveys the notion of both the organism and the environment extending in time (Fig. IV).

This brings us to a description of human beings which could replace the standard definition: 'Man is a rational animal.' We may say: 'Man can be described as a thinking, feeling, self-moving, electro-chemical organism in continuous interaction with a space-time environment.'

Semantic Reactions

This organism-as-a-whole reacts to whatever goes on within itself or outside. He reacts to events distributed on the time line. He may react at this moment to something that went on years ago, goes on now, or that he feels may
happen tomorrow or in the distant future. His reactions reach out in space. By instrumental means (radio, television, written messages, etc.), he reacts to and influences events that are distant in time-space. As he reacts, he interprets and evaluates each single happening against his individual experience and anticipation. His reactions are semantic reactions. He lives in a world of happenings-meanings.

This can be illustrated by a diagram (Fig. V). Let us represent three persons by as many diagrams as we described in the preceding paragraphs. The first one represents a physician, the second, his patient; the third, a research technician who keeps records in a hospital. Let us label them S (Specialist), P (Patient), and T (Technician).

Above these diagrams we write a statement from the pathologist. It contains a very simple message: 'IT IS CANCER'. The word 'cancer' is clear enough. We may assume that all three persons agree as to what it 'means'. But do they react to it in the same manner? Evidently not. The condition that the word describes does not mean the same thing to all three. It is easy to realize that their semantic reactions are different at all levels of activity (C, B, A, & X). What the physician does is mostly thinking; the patient is in the throes of depressive feelings; the technician simply moves his pencil to make a tally on a statistical chart.

The dictionary meanings of words and our semantic reactions to words are not the same. The first belongs to the 'world of symbols'; the second to the 'world of happenings'. These two worlds overlap when a word is taken into the stream of life and assumes a unique meaning (or value) for the person hearing it or using it at a particular moment under particular circumstances.

Semantics deals with the world of symbols and their meanings (the ways they have been used historically). General Semantics deals with the world of human reactions to symbols and happenings as evaluated by a total organism at a particular moment of contact. It deals with 'happenings-meanings'.

Conclusions and Applications

There are many conclusions that can be drawn from what has been described so far. Here are a few:

a) No two persons react to any word or symbol in exactly the same manner. We can agree on an average meaning (or value) of a word or statement. But what the word or statement means
to the other fellow at a certain moment is never exactly what it means to me at the corresponding moment. The four areas of activity (C, B, A, X) and the space-time environment of two individuals never coincide.

b) Our own semantic reactions never repeat themselves in exactly the same manner. The dynamic balance of the C, B, A, and X areas varies constantly and the environment changes also. A word or a statement cannot mean to me today what it meant last month under different circumstances. If I try to be rigorously 'consistent', I may fail to adjust to change.

c) There is no reaction that is purely 'physical' or purely 'psycho-logical'. The organism reacts as-a-whole. If I hurt your feelings, I hurt you in all areas. If I oppose your views, I am fighting you at all levels.

d) Whatever happens that is behaviorally significant involves more than the verbal level. The words and symbols we think with, pronounce, hear, or write, are part of the event. But their effective meanings depend on the total (space-time) human experience in which they are inserted.

e) The important thing in human relations is not to know what words 'mean', to be clever at putting them together in a neat and logical manner, etc. Rather we need to be skillful in dealing with many sorts of people under many sorts of conditions. A superior person is not necessarily an expert in words. He is a person who has developed an awareness of what is going on within himself and within his environment.

f) Bodily processes of the other person - his postures, tensions, flushings, and the like - convey messages that may be more potent than words. Shakespeare calls this 'A kind of excellent dumb discourse.' (The Tempest)

g) When we try to solve a problem by ourselves, we are not juggling with disembodied 'ideas' that are true or false, right or wrong. We are tossed about by our own semantic reactions that are alive, sensitive, dynamic, and responsive to space-time pressures, of which we are not always conscious. Problem-solving may be a laborious process that wears us out if we don't know how to manage it at all four of the levels described above.

h) When two or more people engage in the study of a practical or theoretical issue, they are not simply fitting together the pieces of a jig-saw puzzle, each of which has a pre-determined place that will be recognized by all once it is found. They are huddling together in a fenced-in area a crowd of semantic reactions, each of which comes in with its acquired momentum and direction. These reactions push one another, clash or join momentarily, rearrange themselves in a variety of dynamic patterns, line up for an accepted purpose, stop the struggle in a compromise, or leave the scene, hurt and mangled by a fight where no quarter was given nor received. Unless we are aware of what is going on in such an encounter, we cannot deal adequately with the situation.

NOTE: Dr. Sam Bois needs no further introductions to readers of the Bulletin. In the last issue, see pages 67 and 85 for brief biographic and bibliographic data. He has recently completed a book, Explorations in Awareness, which Harpers will publish late in 1956. He will lead several lecture-conferences during the second week of our Seminar-Workshop, 17 August - 2 September. Mrs. Georgette Nadas made the drawings for this article. -Editor

'Full Session' at a Seminar-Workshop. Students from Washington, D.C., Johannesburg, South Africa, San Francisco and New York, in the social room, South Hall, Bard College.
THE MATFIELD EXPERIMENT

A report on a series of six lecture-discussions on General Semantics, led by Reverend Denis Lawson-Wood at Matfield Vicarage, Kent, England, on the invitation of the Vicar, the Reverend E.L. Howland.

On April 30th 1955, in the Free Church Hall at Tunbridge Wells, Kent, a public lecture on General Semantics was given by Denis Lawson-Wood, minister of the Tunbridge Wells Christian Free Church. The main purpose of the lecture was to awaken sufficient local interest in General Semantics to get some study groups going.

Among those who attended the lecture was the Reverend E.L. Howland, Vicar of Matfield. He discussed with Mr. Lawson-Wood the idea of starting a preliminary group in his parish as a 'try-out'. Mr. Lawson-Wood gave him his spare copy of G S BULLETIN 6 & 7, and lent him his spare copy of Science and Sanity, together with a copy of Catherine Minteer's Words and What They Do To You. These two met fairly regularly during the summer to discuss the project further.

On Wednesday, October 5th 1955, the first of the series of six group meetings was held; a total of nine persons forming the group.

I.
The first meeting was opened by the group leader reading out a long list of what he personally felt to come into the category of 'Unsatisfactories', either in his own personal experience or observed in his surroundings. It was pointed out that the list should not be considered as a full list, and no attempt was made to be grammatical. The notes read as follows:

'UNSATISFACTORIES'
In personal relationships
Arguments
Misunderstandings
Jealousies
Envies
Inability to make and/or keep friends
Partnership difficulties
(eespecially marital)
Attitudes of intolerance, dogmatism, rigidity, impatience, arrogance, etc.
General social relationships
Gossip and 'tittle-tattle'
Snobbishness
Class feelings
Ruthless competition, etc.
Personal relationships with one's self
Anxieties of all kinds
Worries
Fears, shyness, embarrassment (fear of being thought stupid, etc.)
Hopelessness, fits of gloom and depression, etc.
General sense of being a failure
Without clear goal or aim in life
Lack of confidence in own judgment
Feeling of not being loved
Difficulty in remembering, concentration, clear thinking, etc.
Feeling of being ruled by habit patterns, bad luck, etc.
Health
Various illnesses, 'nerves', sleeplessness, inability to relax, shocks and upsets, etc., etc.
General Systems (1955) of Politics, Dictatorships, Welfare States, etc.
of Economics, Education, Commerce, Medicine, Law, Religion, etc.
Vice, Crime, War, and many others not listed.

The question was then put to the group, 'Is any one of you personally satisfied that the conditions we now live in (1955) do not need any improvement, and/or cannot be improved?' There was unhesitating and unanimous agreement that a long list of 'unsatisfactories' could be named by each one present. Each member was therefore invited to write for the next meeting such list, naming conditions felt to be unsatisfactory which he/she would like to see altered, improved, etc., in self and in others; also to note (a) any 'problem' or 'evil' considered so hopeless that nothing can be done about it; and (b) any object or circumstance considered already so perfect that improvement is not possible.

The group was then asked, 'If a simple, easy to understand, workable method can be found to alter some/all/most of the "unsatisfactories", unravel tangles, etc., do you think it worthwhile spending a short time examining it?' It was further suggested that, before answering, each be quite 'selfish' and consider the matter from a can-I-benefit point of view. All agreed that it did appear worthwhile - most expressed their agreement quite vehemently.

The group leader then said, 'In my own case, after years and years of dissatisfaction and searching, I came across a method from which (after trial and practice) I derived so much benefit that I feel it to be worth passing on; I feel even more strongly that I have a duty to pass it on to as many as will listen and work with me. We meet today, and for a further five
Wednesday, to examine, and give some initial try-out of the particular method called General Semantics.

At this point was shown an enlarged, and somewhat crude copy of the diagram 'The Worlds in Which We Live.' The copy was made from G S BUL-LETIN 14 & 15, page 47; copyright design J.S.A. Bois. The chart was explained in terms closely following Dr. Bois' written words (GBB 14 & 15, p. 45, paragraphs 1-6).

After some lively discussion on the 'meaning of Progress' we agreed, on this occasion, to use the term 'progress' to indicate the process of living becoming or being made more efficient, happier, fuller, etc.

Instances were given of ways in which progress has been assisted by, or brought about by the appearance of new ways of doing things, e.g. fire, explosives, steam, compass, anesthetics, positional notation, etc., and the question put: 'Might this not also apply to the appearance of new ways of thinking?'

The method of thinking now (1955) general in the west was briefly explained, drawing freely from Wendell Johnson's book, People in Quandaries, pp. 7-9.

The first meeting closed with the indication that at our next meeting we would examine a different (non-aristotelian) system of thinking, and homework was set. A sealed envelope, containing two objects was handed to each member with instructions: Look at, handle, examine carefully each object, and after examination describe each in great detail (measurement, colour, texture, etc.) and, if you wish, name each object. Bring the objects and your lengthy writings to the next meeting.

Each group member was also asked to write on a sheet of paper his/her ordinary signature at least fifty times.

II.

At the opening of the second group meeting the questions were put: 'How many of you have done all the homework set? 'How many have done none of it?' and 'How many have put name and date on their homework?' No one had done all the homework set; two had done none; and no one had put name and date.

The students were asked to read aloud their descriptions of homework object 1; with only one exception each had begun the 'description' with the words 'This is an acorn,' and then gone on to express opinions, speculations and whatnot. To the one who had written, 'Object number one is about 3/8" long, 1/2" wide, greenish,...' the question was directed, 'Did you measure it?' 'Oh dear no - only guessed it!'

Long before the last member had read out the notes, all appeared to hit on the idea that (a) they had not described the object, and (b) if they had, any description made at the time they wrote would not fit the object now. This practical demonstration of instructions not being carried out registered so thoroughly that the last two members were unwilling to read their own words, and considerable persuasion was needed to overcome the resistance.

We had a few laughs over object 2. Again each had first labelled it, 'This is a tomato.' One student, however, had labelled the object 'This is a potato-apple,' and then continued with 'informative notes on the habits, etc., of potato-apples.'

Two weeks had elapsed since the objects were handed to the students, and obvious changes had taken place, especially to the tomatoes. Thus the subject of the process nature of the world introduced itself, as it were. The usefulness of dating and indexing was readily appreciated.

We then went on to consider the Heraclitian way of thinking-speaking-evaluating; and some inadequacies of aristotelian logic were examined.

Members were challenged to name any object or circumstance that does not change; and asked to give many instances illustrative of change. When the notion 'everything changes' appeared clear to all, they agreed that it would be much sounder to talk as if things changed, instead of as if they do not.

On examining their sheet of 'signatures', and finding each 'signature' in some respects different from all the others, it was readily agreed - as 'too obvious for words' - that, although each signature was different, they had been content to label each one 'my signature'. The labels 'acorn', 'tomato', 'my signature', etc., do not label one unalterable static thing, but such labels stand for an indefinite number of things having significant similarities.

This led on to the 'impossibility of saying all'; the use of symbols (words, drawings, signs, etc.) as maps which can be used to help us find our way about. All felt that it would be of great value to them if some diagram were devised to serve as a constant reminder of (a) the nature of the world we live in, and (b) the kind of map we must make if we want the map to fit the territory. Here the Structural Differential was used to illustrate how such a diagram had been devised by Korzybski. Some of the points made during the first two meetings were summarized, using the S.D.

A small polished wooden label, about 2-1/2" x 1-1/4" x 1/8", on a short length of string was given to each member: '... an emblem to carry about with you, to look at, to feel, to think about, to remind you constantly that THE WORD IS NOT THE OBJECT IT STANDS FOR.'

Homework was set.
1. Examine, without destroying it, the object in the envelope, and, quite briefly, (a) make a few factual statements about it, (b) express a few opinions about it, and (c) give it a name.
2. Write, in not more than 100 words, 'My opinion of myself.'
3. Write a few words about someone you dislike and (4) admire.

5. Express in writing a question to which you would like to have an answer.

III.

At the opening of the third meeting the previous two were briefly recapitulated, and the homework gone over. In spite of instructions, most members named the object at an early stage. An object had been chosen which, in the leader's view, was unlikely to be of a kind familiar, so the names chosen amounted to 'guess-work'. There were two exceptions. In the one a name was invented to fit an unique object (and the inventor congratulated). In the other case the student said, 'Having seen many such things in the course of my travels I at once labelled the object "Seed pod from an eucalyptus tree".'

We had no fan for demonstration purposes, and a 'toy' had been put together for the occasion to be used to illustrate that 'what we see is not necessarily what is happening' (diagram below).

![Diagram of disc experiment](image)

The disc, when stationary, appears irregularly covered with dots of various sizes; but when the disc is revolved, and the reflection viewed through the slots cut in the disc, it appears as a stationary disc with dots moving in regular and intricate patterns over the surface. This apparatus was later used to illustrate difference between dynamic and static abstractions. (Science and Sanity, p. 292, 3rd ed.)

Abstracting (selecting) processes were discussed, and certain conclusions generally agreed, e.g.: To an animal his objective world 'is his all' - he does not know that he selects - he behaves as if Event and Object were identical - for him this evaluation is adequate for survival - his make-up is suited to this. Man can be aware that he selects - human behaviour is such that E & O are not treated as identical - man uses symbols to represent E & O, etc. Consequences likely to result from identifying and confusing orders were illustrated by numerous examples. Projection and to-me-ness also came into this meeting's discussions.

As a brief 'digression' it was discussed among members that human hunger for the static (something that does not change in a changing world) appears natural to man, and may be considered as a basic human urge; and that many 'religions' might well be considered as expressions of this urge and attempts to satisfy a natural human hunger. It was pointed out that man appears to be endowed with the necessary mechanism or means to achieve satisfaction, and, provided man fulfills his human destiny, he will find satisfaction for this hunger - but not if he 'walks the pre-scientific path through confusion to perdition.'

For homework a sheet of paper was handed to each member with the following written thereon:

At our next meeting we shall consider differences between sense and nonsense. Can you recognize nonsense when you come across it? Please deal with these 'questions' in writing, as briefly as you can and NOTE CAREFULLY HOW LONG YOU SPEND ON EACH.

1. What is the secret of success? 2. Can religion conquer communism? 3. Will Christianity survive? 4. If the temperature of some water is 60 degrees Fahr., what is the temperature of the atoms of hydrogen and oxygen which go to make up that water? 5. If the 3.24 from Victoria was two minutes late on Friday what is the point duty policeman's name? 6. Should the death sentence be abolished? 7. How long is a piece of string? 8. Can you think of any circumstances in which this recorded extract from a conversation might make sense? 'Then a screw nicks my snout and puts me in pete.'

IV.

It was felt as gratifying to the group leader to find that most of the members had treated nearly all the 'questions' as nonsense. One had given a 'Roland for an Oliver' by making blatant nonsense remarks; others had written remarks such as, 'I cannot answer the question until I know what you mean by...'

A few, however, treated 'questions' 1, 2, 3, 6, as sense. With two exceptions the members labelled 8 as 'possibly underworld, spiv, or prison slang'. The leader interpreted the conversation extract thus 'Then a prison warder confiscated my tobacco and locked me in my cell.'
The relaxing effect of answered questions was contrasted with the continued states of tension arising from unanswered and unanswerable questions.

An apple was passed around for the members to handle, smell, look at, feel. The apple was then placed in the centre of a diagram, adapted from O.R. Bontrager's diagram on page 5, G S BULLETIN 4 & 5. The apple was labelled Apple1. The process of abstracting in higher orders was illustrated. For homework the members were asked to devise a diagram in a similar manner - STARTING WITH AN ACTUAL OBJECT to place in the centre. It was intimated that at the next meeting we would continue our consideration of nonsense. This meeting was rounded off with the following reading from Shakespeare:

(Macbeth, Act III, Sc. 1)

First Murderer: We are men, my liege.

Macbeth:

Aye, in the catalogue ye go for men; as hounds and greyhounds, mongrels, spaniels, curs, shoughs, water-rugs, and demi-wolves, are cleft all by the name of dogs: the valu'd file distinguishes the swift, the slow, the subtle, the housekeeper, the hunter, everyone according to the gift which bounteous nature hath in him clos'd; whereby he does receive particular addition, from the bill that writes them all alike; and so of men.

At the fifth meeting, some diagrams were produced that appeared so excellent to the leader that they will be used at other courses in the place of his own crude drawings.

With a general show of enthusiasm, we passed on to the main topic for this meeting, 'more nonsense'. The Plogglies story was read from Wendell Johnson's People in Quandaries, and a brief resume given of the Brownian movement, also based on Wendell Johnson, pages 76, 71-72. After this, a home-made model of the apparatus illustrated and described on page 75, G S BULLETIN 12 & 13, was demonstrated.

After SILENT demonstration several times, it was put to the vote: 'Will you be content if we explain this by saying that there are plogglies in the double cone?'

Restricting effects of the plogglie type of explanation for happenings was discussed at considerable length; the pre-scientific and scientific constructs were contrasted. Material was drawn largely from Wendell Johnson's People in Quandaries, pp. 71-75, 80-85.

We also had some discussion on objectification of higher order abstractions. This was illustrated on the Structural Differential and by the diagram in Time-Binding: The General Theory (1949), page 44. It was again urged that each member make a model S.D. and USE IT.

For homework the members were asked to write information about practical advantages these sessions had for them (if any).

VI.

The last of the series of meetings opened with a practical experiment. Two volunteers were asked for to 'perform some simple operations on sheets of newspaper'.

Volunteer1 was handed a long strip of newspaper and a pair of scissors with the instructions, 'I would like you to start by snipping off two pieces to begin building a pile: at each operation I should like you to snip off two more and add these two to your pile. Thus your pile will grow at the rate of plus two at each operation.'

Volunteer2 was handed a whole sheet of newspaper with the instructions, 'At each operation will you fold your sheet, thus each time doubling the thickness.'

By the time V1 and V2 had each performed seven operations it had become impracticable for V2 to perform any more. The thin pile made by V1 and the thick wad made by V2 were passed around for inspection. The different rates of growth were further demonstrated by calculation showing that, if the thickness of the paper were 1/54 of an inch, 48 operations would be needed to bring the first pile up to 1-1/2", but if the same number of operations were performed on the second the resultant wad of paper would not fit in between this globe and the sun. The acceleration can be shown by comparing these figures. In six operations pile number two, 1" thick, in 12 a yard thick, in 24 about 4 miles, in 36 halfway around this globe, and in 48 greater than the distance between this earth and the sun.

Once the difference between arithmetical and geometrical rates of progress had been clearly appreciated through observation, we read a short extract from Manhood of Humanity, p. 15:

Because we are human beings - we are all of us interested in what we call progress - progress in law, government, jurisprudence, ethics, philosophy, natural sciences, economics, fine arts, practical arts, production and distribution of wealth, in all the affairs affecting the welfare of mankind. All these great matters are interdependent and interlocking; it is therefore a fact of the utmost importance that progress in each of the
cardinal matters must keep abreast of progress in the other cardinal matters in order to keep a just equilibrium, a proper balance, and so to maintain the integrity and continued prosperity of the whole complex body of our social life.

The urgent present (1955) demand for a new ethical wisdom, a new legal wisdom, a new economic wisdom, a new political wisdom, etc., was discussed at length, until all were convinced that such new wisdom must conform to the natural laws of human nature.

Colloidal behaviour was briefly touched on, paying particular attention to the characteristically human factor able to affect colloidal equilibrium.

The closing discussion of the series was devoted to members relating instances of their own observed change of behaviour, etc. Two members expressed their determination to continue the study of General Semantics, and to apply the benefits in daily life.

MEASURING RESEARCH APTITUDE AND ABILITY
Continued from page 52

by superficial tests or interviews. However, methods are under study which, when applied over substantial periods of time, appear to be conclusive.

As remarked at the beginning, there is a shortage of engineers; but, as engineering executives know, the talent that is available is our most ineffectively used resource. Here is a promising field of study which can yield important returns to the security and economy of this country.

* * *

WILLIAM J. MORELAND is chief, Mechanics Research Branch, Aeronautical Research Laboratory Directorate of Research. He was engaged as an engineering research consultant and teacher for a period of twenty-five years preceding 1950. In that year he obtained leave of absence from his position as professor of mechanical engineering at Rensselaer Polytechnic Institute to devote full time to research for the U.S. Air Force. The latter position has allowed him to have close contact with the research personnel and facilities of a number of American and European universities, as well as industrial and non-profit research organizations. From these sources the material for the continuing study of research personnel and research methods has been drawn.

A.H. MASLOW - Continued from page 42

his account of the sources of his ideational and methodologic orientations after he left Wisconsin. The following is excerpted from the Preface, not only for what he says but how he says it:

'New York of the late thirties was the center of the psychological universe . . . no young man has ever been more fortunate in his teachers and friends than I. Gestalt psychology was taught me by Max Wertheimer and Kurt Koffka . . . I found in Kurt Goldstein my bridge between the holistic and the dynamic. His great book, The Organism, influenced my thinking very profoundly . . . I learned psychoanalysis from David M. Levy, from Abram Kardiner and later from Erich Fromm and Karen Horney. I was analyzed by Emil Oberhols, the best learning experience of all . . . my conclusions through the Freudian literature by the young analysts, Bels Mittleman and Jesse Ziskov, made it much more meaningful for me. Study with Alfred Adler made me keenly aware of the shortcomings of various Freudian doctrines . . . the Adlerian insights [I felt] were not sufficiently appreciated by American psychologists, psychoanalysts and clinicians. I studied anthropology primarily with Ruth Benedict but . . . learned much from friendly conversations with Margaret Mead, Gregory Bateson, Ralph Linton, Alexander Lesser, Lucien and Jane Banks [and] a field trip to the Northern Blackfoot Indians . . . I was most fortunate in being befriended by Gardner and Lois Murphy . . . my close friend Rod Mentes was a confirmed behaviorist. Amicable and endless arguments with him helped me again and again to tighten up my thinking and to be properly tentative about my conclusions . . . E.L. Thorndike, though disapproving of everything I was trying to do, made me his research assistant . . . he encouraged me to disagree with him. He taught me much about kindness and nobility that he never put down in writing . . . and my wife[ 's] essentially aesthetic approach to life has taught me much that is very clearly reflected at many points in this book.

'During 1947-49, I had the great privilege to participate in an informal seminar with Drs. E. Frenkel-Brunswik, D. Krech, D. MacKinnon, D. Mandelbaum, R.N. Sanford and E. Tolman. Some of [my] theories were first presented to this group: . . . [and I am] indebted to the writings of Gordon Allport, Henry Murray, Andras Angyal, Carl Rogers . . . ' . . . The naiver conceptions of science which now guide the work of many psychologists tend to serve an excluding critical purpose rather than a creative and constructive purpose . . . my work has proceeded from a theory of science which is very different from the one most commonly held . . .

' . . . this book presents only a portion of [my] systematic psychology . . . it presents too rosy and optimistic a picture . . . Particularly conspicuous is the omission of a chapter on the limitations imposed upon individual basic-needs-gratification by the fact that other individuals also have legitimate needs . . . also the problems of discipline, inculturation, harmful permissiveness, and the strengthening effects of delay and of frustration, conflict and deprivation.'
DISCUSSION OF HOWARD BOONE JACOBSON'S PAPER
'EXTENSIONAL METHODS IN TRAINING FOR JOURNALISM'
by Robert K. Straus, New York

Howard Jacobson's paper 'Extensional Methods in Training for Journalism' was of particular interest to this reader of the Bulletin who has wrestled for some years with the practical implications of the questions which he raises, without being able to answer them, even to his own satisfaction. Jacobson's approach, as revealed in this paper, is helpful but still, of course, takes up only the theoretical aspect of the problem, as he himself recognized in a conversation with this reviewer. Perhaps, other readers of the Bulletin will be sufficiently interested to come forward and continue the discussion which Jacobson's paper has initiated.

Jacobson's discussion focuses on the controversy which has been going on among working newspapermen for some years as to the merits and defects of 'objective' reporting as practiced in the majority of U.S. newspapers during most of this century, and whether or not and to what extent it should be supplemented by an added responsibility for explanation and interpretation to relate the significance behind the news.

Jacobson gives his evaluation of the inadequacies of the 'objective' reporting tradition as 'pre-scientific' and aristotelian and refers to the Amos perception tests and other evidence in support of this evaluation.

He goes on to say that 'the hazards that have to be faced in accepting interpretive reporting as the modus operandi seem just as bad. Paraphrasing his comments, the reporter who writes 'objectively' is not 'conscious of abstracting', nor is his reader aware of how the reporter's nervous system (and abstracting habits) have influenced the resulting story.

The reporter who 'interprets' bounces 'back and forth from the "descriptive facts" level to "inference" levels, and back to the first verbal level, confusing the order of abstracting, and seldom ever bothers to take an "inference" back down to verbal, extensional levels. Interpretive reporting suffers as a victim of its own irresponsibility.'

'Rather than objectivity or interpretation, this writer (says Jacobson) would develop a method for approaching the "observable facts" based upon predictability.'

Jacobson believes that extensional methods will provide the desired predictability. He says:

What I have labeled extensional (investigative) reporting parallels the distinct and coordinated nature of language-fact relationships as formulated by Korzybski, and defines this larger operational system. The type of training we want to get at presupposes a potentially continuous type of practice where news, whether it is gathered at the 'observable facts' level by the eye witness reporter or not, is described, interpreted, etc., only after periodic operational checks of the 'descriptive facts' somebody else's words, 'inferences', and general knowledge against the non-verbal, experienced data. In this way, the reporter becomes obligated to picture the news for his readers as a continuing process and as an event-as-a-whole, which should increase predictability.

Jacobson proceeds to describe a tool he has invented, which is a journalistic adaptation of the structural differential and which he calls 'the verbalization scale.' He describes how this scale can be used, with appropriate criteria, to differentiate between at least two verbal levels in any given newspaper story; the 'descriptive facts' level and one level of 'inferences' (including in this one 'inference' level, first order, second order inferences, etc.)

With this scale he arrives at a Verbalization Level Ratio (VLR) for any given newspaper story, which he illustrates by applying it to the way in which various newspapers and journalists handled the prisoner-of-war compromise plan presented to the United Nations General Assembly by India in December 1952.

Each individual story is scored to determine the percentage of 'inferences' to 'descriptive facts'.

Says Jacobson: 'The VLR measure helped the writer to understand the relationship of "inferences" to "descriptive facts" within various types of stories about an event-as-a-whole.'
The proportions suggest that if the VLR is low in "inferences" or objective, then as the scale reveals, the story is too limited, too positive, and does not permit the necessary freedom to be self-corrective. If the VLR is high in "inferences" or interpretive, it indicates that the story eluded the extensional check with the non-verbal levels, and is probably over-simplified, personal, and self-reflexive. A low in 'inferences' will result in a low in meaning while a high in 'inferences' will result in a high in meaning 'but not necessarily a high in predictability.' (Italics supplied by this reviewer.)

The VLR serves as an alarm to warn reporter and editor of the dangers of 'false to factness' in any specific story and 'emphasizes the need for extensionalization beyond the scope of traditional objective and interpretive practices if maximum predictability is to be realized.'

But the VLR 'tells only part of the picture regarding extensional methods which can be utilized for training in journalism.' Other methods suggested include: 'conditional who, what, when, where, why and how questions...which do not seek the last word for any story'; use of editorial devices to avoid the pitfalls of elementalism, identification, and allness, etc.

In short, Jacobson believes that non-A methodology, if overtly introduced into the operation of a daily newspaper, would help to resolve the existing controversy among working newspapermen as to the respective merits of the 'objective' and 'interpretive' schools of reporting and thereby increase the predictability of newspaper stories.

The average newspaper reader who reads the Jacobson paper might wonder what all the 'fuss' is about. But any student of Korzybski's formulations should have no difficulty in recognizing the legitimacy and importance of the methodological controversy, dealing as it does with appropriate techniques for mapping at the verbal level yesterday's object level events. But it is probable that even a Korzybski student has been conditioned over the years to take his newspaper as he finds it, without worrying about whether the stories which he reads in it have or have not 'predictability'. He may wonder why there is any necessity for the daily paper to take on the job of 'interpreting' the facts, with or without 'predictability'. After all, the daily paper is only one of many media available to the citizen today. He has his radio, his TV, his Kiplinger letter, his Time, his Reader's Digest, his books, and when these are not enough, his friends to talk to and correspond with. If he is really troubled about how to interpret a particular event he can canvass all of these sources to get an answer. Why should the editor and reporter of his daily paper have to add their efforts to those of these other media, some of which make 'interpretation' their principal concern?

Such scepticism is understandable but unjustified. The daily paper, while only one of many media available to us, is still our most widely accepted medium of communication and brings more information to us about the world-in-process than any other single medium, even though it is well established that we give it less time each day than we do our television set. Also, much of our information about what is available to us through these other media reaches us through our daily paper. And in bringing us information it inevitably to some extent already interprets this information in a rather 'hidden' way, even when it is leaning over backwards to be 'objective'. One example of such 'hidden' interpretation is the 'play' a particular story gets. 'Play' is newspaper jargon for the size and language of the headlines, the position in the paper and the length of the story, all of which interpret the importance of the story (in the editor's judgment) as compared with other stories that day. When the average person hears a news story on the radio he will have less notion of the weight to give it than when he reads it in the next day's paper. For the 'play' given it will reveal the judgment of the editor as to its importance, which evaluation will then be communicated to the reader, and who may accept it quite unconsciously. And we have all been conditioned, perhaps much too much so, to respect the authority of the printed page per se over the spoken word per se (i.e. not taking into account the authority of the individual speaking).

The daily newspaper has also from time immemorial interpreted the news for its readers on its editorial page. In the days of the great personal editors, the Greeleys, the Wattersons, etc., the entire paper reflected the editor's personal interpretation of the day's news and this practice continued in a few papers down to recent times. Many papers today subscribe to the syndicated columns of journalists whose sole function is to interpret various facets of the news. Is it then illogical to suggest that the daily paper extend this service to its news columns but substitute a disciplined non- aristotelian technique or interpretation for the more individualistic technique of the great personal editors? (Who we have been conditioned to consider as 'great' because they were able to impose their individual semantic reactions to the news on their own readers and through being quoted in other papers on the country at large.)

If we go along with Jacobson, and agree that the newspaper of the future must build interpretation 'with maximum predictability' into its news reports, it might be in order to ask
whether this will be necessary right across the board or whether such a technique can be limited to a certain percentage of each day's stories? It is this reviewer's opinion that certain types of stories can continue to be handled 'objectively' - i.e. just the 'facts' without 'inferences'! News of births and marriages, for example. Just where the line should be drawn will vary from newspaper to newspaper, according to the semantic reactions of the editor, the reporter, the community and the part of the country in which the paper is located, and the traditional policy of the paper, which means that it will have trained its readers to expect certain things of it. A tabloid in New York would handle a Woodward case quite differently from a tabloid in another city, where it was not a local story, and the New York Times would (and did) handle it differently from the New York Daily News.

We cannot take the space to discuss the range of possible judgments as to where the line should be drawn between the stories which are deemed to require: 'interpretive' treatment and those which do not. It is a matter for further investigation and consideration. But with respect to those stories that are finally deemed (by an individual editor) to require interpretive treatment (by his standards) we will arbitrarily assume that the newspapers in the future will be more and more ready to recognize a responsibility to give their readers 'interpretive treatment (by his standards) we will arbitrarily assume that the newspapers in the future will be more and more ready to recognize a responsibility to give their readers 'interpretive' reporting with 'maximum predictability' if they can develop a technique for doing so.

This brings us up squarely against the problem of developing a practical technique for incorporating 'maximum predictability' into such newspaper stories as an editor may decide are 'important' enough to warrant the treatment. Elmer Davis, writing in the Atlantic Monthly, in August 1952, in an article with the title of 'News and the Whole Truth' had this to say:

What to do? More and more, from inside as well as outside the (newspaper) trade, there is a demand for interpretive reporting, which puts into the one-dimensional story the other dimensions which will make it approximate the truth. But this entails serious dangers. I have seen some undeniably well-intentioned endeavors to put in these other dimensions, but the dimensions were derived, not from the evidence, but from the opinions or prejudices of the publisher, as they so often used to be. One Chicago Tribune is enough. And even if a man's conscience is as rigorous, his mind as relentlessly objective, as the weights and measures in the Bureau of Standards, he may still fall short of doing as accurate a job as he means to do because he doesn't know all the angles or hasn't time to get around to them under the pressure of covering what is in front of him and writing a story about it.

This is the danger that Jacobson recognizes when he measures a story with his VLR. As the number of 'inferences' go up in proportion to the number of 'descriptive facts' there will be more meaning but not necessarily greater predictability. As Davis says, the Chicago Tribune under Col. McCormick's direction was one of the last strongholds of personal journalism and provided interpretations of the news in its news stories quite often, but they were highly subjective and personal interpretations, in accord with the Colonel's general outlook.

So much depends upon who is doing the interpreting. Newbold Noyes of the Washington Star, speaking at St. Louis on May 1, 1953, said:

I suspect this is one reason - indeed the biggest reason of all - why the old-timers made such a fetish of objectivity. They probably recognized, no less than we do, that it would be nice to give readers the meaning and feel of events as well as the facts of them. But they probably knew, as we are bound to learn, that to do this effectively requires a lot more intelligence, character, education, and wisdom than the newspaper profession so far as been able to muster.

Both Davis and Noyes are pointing out a few of the practical difficulties of allowing the reporter to do his own interpreting. But this reviewer believes that newspapers cannot escape facing up to the problem, as difficult as it may be to resolve in practice. Some newspapers are already beginning to do so but without benefit of any training of either editors or reporters in extensional techniques.

In a world as complicated as the world in which we live in 1956, information per se is not enough. It must be organized and arranged in structures, with both the reader and the organizer aware of the process of organization. The organizers (in the case of a newspaper, both editor and reporter) ideally would be selected on the basis of possessing initially or being capable of achieving an extensional non-arian orientation. Insights resulting from such an orientation would produce maximum predictability for the reader and thereby help to orient him in the kaleidoscopic space-time world in which we live. As Jacob Bronowski says in What Is Science? (Simon & Schuster, N.Y., 1955, James R. Newman, Ed., cf. page 427):
All living things act to anticipate the future; this is what chiefly distinguishes them from lifeless things. But not all methods of foresight are the same. Man has evolved a foresight based on the interpretation of events. He seeks to anticipate the future, not merely by responding to the present, but by understanding it. This is his characteristic method, the method of foresight based on insight; and he uses it systematically in science.

The tradition of 'objective' reporting that still dominates our daily newspapers tends to disorder rather than to orient many newspaper readers. 'Facts' coming from every direction, heralded by blaring headlines, confuse and distress the reader more deeply than he is aware of. He turns from the news story to his favorite columnist to find out what the facts 'mean'. He must, perforce, find some interpretation which 'makes sense' in order to settle the disturbance 'inside his skin', to create 'cosmos out of chaos' as the Chinese say. The interpretation which he latches on to may not turn out to be the 'correct' one - 'the truth' - as we label it. But any interpretation is better than none, if the reader can be trained to be conscious of abstraction and if he remembers to date a particular interpretation. To quote a famous sentence of Justice Holmes: 'The best test of the truth is the power of the thought to get itself accepted in the competition of the market....'

Why is it that some people have a greater capacity for insight and, therefore, interpretation than others? Would it be correct, from a general semantics point of view to say that such people have 'healthier' abstracting habits than other people? In other words, having become extensionally oriented, they are in a better position to exercise 'foresight based on insight'.

Since a daily paper constitutes the reader's most frequently consulted 'map' of the territory or environment in which he lives, it has at least an opportunity, if not a responsibility, to encourage 'healthier' abstracting by their readers. To do so, it must first produce a newspaper which seeks to extensionalize for 'maximum predictability' (foresight based upon insight) its most 'important' news stories. This task should not be left exclusively to the syndicated columnists and the editorial writers, as it is now for the most part.

To what extent the readers of an extensionally oriented newspaper should be taken into the confidence of the paper and told what is taking place, I do not know. To what extent, the staff editors and reporters who are to do the job should be selected on the basis of having already achieved a prior degree of extensional orientation (as some people have when compared with others) or to what extent they must be trained on the job towards such an orientation, I do not know.

President Eisenhower's heart attack could perhaps be cited as an interesting example of 'forced' extensionalization of a subject by newspapers. This was a story of overriding importance to every reader. To focus attention, there was the affection with which most people regarded him and the element of self-identification (will it happen to me?). All sorts of futures depended on the question of predictability. What does it mean for the future of war and peace; of business activity; of the Republican and Democratic parties, etc.? Thanks to the decision of the White House, a great deal of information (not all) was communicated to the public from the first day of his attack. His doctors and finally the President himself held press conferences and appeared on television to inform the public as to the criteria by which his condition could be evaluated and his recovery determined. Without laboring the point, it seems clear that the result of this welter of information and interpretation has been to take much of the 'scare' value out of 'heart attack' (verbal level) and to extensionalize the differing degrees and types of heart attack and the extent to which such an illness restricts one's life during the convalescent period and thereafter. The limits of foresight based upon insight have been delineated in detail. The net result is that today, as compared with a year ago, the average newspaper reader is probably quite well extensionalized on 'heart attacks'. He has presumably been told what 'science 1956' knows about them and, furthermore, he has been told that there are limits to this knowledge, as for example, that no one has ever had a coronary who occupied the position of President, so that there is no similar experience on which to base a prediction.

Not many subjects are important enough to enough people to warrant the type of treatment which the President's illness has been given. But it is perhaps a good example of what the daily press can do in using its news reports to orient its readers, when it puts its collective shoulder to the wheel and when it is in a position to pass some of the responsibility for interpretation to a group of experts who represent 'science 1956', in this case Dr. White and his colleagues. Of course, one thing which, perhaps, might have been pointed out (at least in the opinion of this reviewer, who is a confirmed Democrat) is that Dr. White and colleagues might conceivably have been influenced in their interpretations of the 'facts' by the pressures which have been playing around them as they did their
interpreting. The map-makers in this case (as in most cases) had many people leaning over their shoulders who had a big stake in the sort of map they made.

Another and even more specific illustration of the direction in which one leading newspaper is moving was the 'Report on the South: the Integration Issue,' a special eight-page survey, published in The New York Times on March 17, 1956. 'Ten staff correspondents of The New York Times traveled thousands of miles and talked to hundreds of persons in seventeen states and the District of Columbia to get the integration story' says the Times. They started the survey two months before it appeared in print.

This survey included a lengthy introduction; a state by state report, broken down into three categories according to whether the particular state was going along with integration, delaying, or resisting; a table of State laws; a glossary of terms. 'The main objectives of the Times survey were to examine the shifts of opinion in the South, to explore their diversity and evaluate them.'

Here is a particular example of what can be done when a responsible newspaper, with ample resources, decides to organize a team to take their time in covering a complex, many-faceted story, in order to give its readers an insight into a problem of over-riding concern to the country at large. Specific inferences are listed in twelve paragraphs, at the end of the introduction. These inferences lead to at least five concrete predictions. Whether these interpretations would stand up under the rigorous scrutiny of Jacobson's VLR, it is not for me to say. I have not attempted to deal with either the story of the Eisenhower illness or this survey of the integration problem to a line by line check of the inference level statements against the descriptive level statements. My own evaluation is that both these recent examples of journalistic practice constitute encouraging attempts to deal extensionally with the process-level world and to make maps which do more to orient the reader than newspapers have tried to do in the past.

In conclusion, Jacobson's paper suggests a sound theoretical foundation for the handling of the news, which resolves the either-or dilemma of 'objective' vs. 'interpretive' schools of thought in the work-a-day newspaper world. Some newspapers are moving slowly in this direction, guided perhaps more by rule of thumb recognition of needs, than by theoretical formulations. The practical difficulties are considerable, especially for the smaller newspaper, with limited editorial budgets, but not insuperable. If the wire services (Associated, United Press) do their part even the small paper may be able to participate in this trend, which I feel certain will continue. General Semantics techniques could be helpful if employed to train editors and reporters, and perhaps, eventually, even the readers, to be more aware of the problems of abstracting involved in the preparation of a daily newspaper and in reading what has been prepared so as to achieve the insights which lead to foresight.

Robert K. Straus has not previously contributed to the Bulletin but his name has long appeared in our list of Trustees and he is now President of the Board, 1954-. He was born in New York 1905, attended St. George's Episcopal School, and was 'predestined' for Harvard, his father, Jesse Isidor, being a graduate and member of the board of overseers (roughly equivalent to trustees). He continued his studies in history and government at Cambridge University and the Zimmerman School in Switzerland and returned to Harvard for the MBA (1931) at the Graduate School of Business Administration.

He was assistant executive director, New York State Emergency Relief 1931-32; deputy administrator N.R.A., Washington, 1933-35; deputy director, Resettlement Administration 1935-36; and a member of the New York City Council 1938-42. He served as a Major in the Army 1942-46, mostly in England during the War, and then in Military Government, Germany.

Who's Who lists his occupation as 'publisher'; he was treasurer and publisher of Omnibook magazine 1938-52, and is now secretary-treasurer of Telenews Productions Corporation which, among others, produces for USIA television news. He is also connected with a number of highly technical magazines and American Heritage, the book-magazine edited by Bruce Catton. As evidenced in his discussion of Jacobson's paper, one of his chief and continuing interests is responsible news gathering and dissemination, and eventually we expect to see him in the publisher's seat of a major newspaper.

Mr. Straus's interest in general semantics goes back to 1935 when he first read Science and Sanity. He attended Korzybski's New York Seminar in 1946, and Bois' Advanced Seminar February 1954.
Discussion...cont’d.

BOIS ON BURROW: A CORRECTION

By Mrs. William E. Galt

To the Editor: I have read with interest in the General Semantics Bulletin, Nos. 16 & 17, J.S. Bois’ review of Science and Man’s Behavior, Dr. Trigant Burrow's book which was edited by my late husband. The thoughtfulness and thoroughness of Dr. Bois’ study are most obvious, even though one may differ with some of his ideas.

In view of his careful analysis of the book, I was surprised at the paragraph on page 90 which read:

There is also frequent superficial word relations that are worked into would-be logical sequences: 'affect' and 'affectation', 'I like him because he is like me'; 'vote' (votum) and 'wish'; and finally one that I cannot stomach at all: 'atone' broken into 'at one'.

Dr. Bois perhaps did not mean to suggest that Dr. Burrow indulged in personal interpretations when he called attention to the etymology of these words, yet the statement seems to hold this implication. These derivations and others cited in the book are of course found in the works of accepted authorities. Skeats’s Dictionary of Word Origins, for instance, shows that atone is 'made up of the two words at and one' while of the word like, it says, 'the literal sense is to be like or suitable for.' The current meaning of a word undoubtedly evolves from its original sense, and this relationship does not seem to be a superficial one.

In case other readers understood Dr. Bois' criticism in the same way as I did, I wanted to send this word to indicate what appears to me a misinterpretation.

ALFREDA S. GALT (Mrs. William E.)
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STEPHEN HARRISON’S MATRIX ANALYSIS OF ‘REALITY’ AND VON UEXKÜLL’S ‘ISLAND WORLDS’ (Umwelten)

Criticised by K. B. McCutcheon

To the Editor: Stephen Harrison’s method (GSB 16-17, p. 68) may be legitimate and useful for its objective of identifying the independent referents of a given word, but I question the significance of his example, application to the word ‘real’.

Before continuing, I point out that I have no antagonism for his method, which may or may not be valuable as far as I can see. I wish only to point out certain limitations, and if the following remarks seem sharp it is only for the sake of clarity and brevity.

I think that most of the argument in philosophy about reality concerns objective reality, while Harrison has only found referents for subjective reality (my own terms). His ten criteria for reality were subjective and were applied in a subjective way by one subject. For instance, the subject rated the item ‘star’ much lower than the item ‘table’ in the qualities ‘palpable’, ‘otherwise sensible’, and ‘immediate’, but if he were transported to the immediate vicinity of a star, all tables being left behind, I think he would reverse these ratings. Thus the ratings represent the subject’s viewpoint. I might have graded the ‘qualities’ of the items just the same as the subject, but I still regard a star and a table as equally real. My referent for ‘reality’ is what I have called ‘objective reality’. So Harrison has failed in his sub-objective, stated just before his analysis, ‘The merit of the procedure presented in this paper is that it may be able to bring about a reconciliation in a manner which will be found compellingly correct by all parties.’ Harrison’s failure to find a referent for objective reality* is I think due to his by-passing Korzybski’s approach, which distinguished between perceived objects represented to us by our nervous systems and the ‘events’ or ‘scientific objects’ from which they are abstracted.

Harrison’s chief objective was to illustrate his method. In this objective I suppose he has succeeded, at least for those that understand factor analysis. By choosing a singularly unfortunate example, he has also illustrated how general semanticians can pretend to solve a problem while not trying to solve it.

Having assumed that philosophical problems of reality are not ‘metaphysical problems’, he writes, ‘This procedure does not, of course, solve any metaphysical problems; what it does, however, is to focus attention upon that part of the problem which is real.’ (p. 72) At this point his referent for ‘real’ corresponds with my referent for ‘phony’.

*It might be argued that his second criterion covers this. But he himself writes, ‘Atoms, electrons, and Space-Time appear to qualify very well as (Real) Objects.’ It can be seen from the table that ‘air’, ‘flame’ and ‘bacterium’ qualify poorly. I would say the ‘unspeakable events’ corresponding to all six are equally real.
Perhaps his method will be used to promote understanding, but it has the limitation that it is merely descriptive, and we should not expect in general to eliminate chaos by merely describing it.

I found the article "Island Worlds" or What is the Meaning of "Umwelt"? (GSB 16-17, p. 63) amusing, particularly in conjunction with your ambiguous introduction: '... It had been my intention to relate its publication here to "consciousness of abstracting" and other korzybskian formulations ... Attempted doing of it soon showed me the futility. For korzybskians, the piece must speak for itself - or not at all.'

The article urges unconsciousness of abstracting on non-verbal levels; 'its publication here' can only be taken by me as a humorous incongruity. It has an amusing shallowness which reminds me of Korzybski's remark, 'The charm of the child lies, to a great extent, in his narcissism, his self-sufficiency, and inaccessibility.' (Science and Sanity, p. 524)

I am curious how other followers of general semantics - particularly the leading ones - take this article, and I hope you publish some other comments in the next issue. Here are mine.

The piece advocates regression to narcissistic orientation: 'The geocentric orientation was followed by the heliocentric which lasted until recently. But already Kant had shaken the independence of space when he demonstrated that space is a form of human perception. From there it was but one step to rehabilitate space as an integral part of the island-like world of the individual being.' Von Uexkuell admits 'There is an undisputable advantage in the conception of a common space which is the same for everybody. ... Without it we could not start drawing a map because it would be impossible to unite all individual viewpoints.' However, for Von Uexkuell this is just narcissistic expediency; he is not concerned with explanations: 'It is only expediency in thinking to assume the existence of just one objective world.'

The entire article has been written with no direct reference to the event level - the scientific objects - from which we abstract the 'objects' (ref. Science and Sanity, pp. 392, 329, 402 and the Structural Differential) except for 'the conception of a common space'. Von Uexkuell ignores the event level too thoroughly to deny its existence explicitly, but he tempts the reader to take his heavily obvious statements about the (subjective) object level as such a denial:

Although equipped with every conceivable sense-attribute the objects remain essentially products of human subjectiveness, they cannot exist all by themselves and without subjectiveness. Only after being clad in the wrappings the island can bestow, will the objects appear as something of substance.

We are not in the position to find out what the objects were without the wrappings.

Implications of this article remind me of some of the most fantastic science fiction I have read, but I find this type of science fiction singularly devoid of any but pathological ideas.

K. B. McCUTCNON
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ANY COMMENTS?

Some Remarks: We wonder if Mr. McCutchon would revise some of his evaluation of von Uexkuell and the 'Umwelt' piece if it were possible for him to experience the Adelbert Ames Demonstrations in Perception (formerly at Hanover, now at Princeton Perception Research Center and the Visual Research Center of Ohio State). He might arrange to view the film made of Ames' demonstrations by the U.S. Navy Bureau of Medicine. At least he could read some of the literature (Princeton Psychology Department puts out a long bibliography). We assume he is aware from the context of the translation and notes that von Uexkuell, writing in 1936, was not acquainted with Korzybski's work.

Further, we would quote the following re McCutchon's discussions:

'. . . the two terms 'meaning' and 'significance' somehow overlap, with a resulting confusion and difficulty of analysis. We use the term 'general semantics' in preference to the old 'semantics' to indicate a fundamental difference between the two. The older difficulties originated because specialists in the 'meaning' of words disregarded an unavoidable factor; namely, that any linguistic or mathematical theory must begin with undefined terms which cannot be defined any further by words. In principle these undefined terms are labels for direct experiences and observations which involving sub-cortical processes on the silent (un-speakable) level. Obviously no amount of verbal definition can convey to the individual first order pain, which he has to evaluate on the silent, organismal level inside the skin.

The introduction of the terms 'unspeakable', or 'silent' level eliminates
another serious source of confusion. We are accustomed to use the terms 'objective' and 'subjective'. Thus, the direct experience of, say a pinch, usually is called 'subjective', and, say an apple, is called 'objective'. The facts in the meantime are that both the apple and the pinch may be considered 'subjective' or 'objective' as we please, both being products of the nervous system. By accepting this unified terminology; namely, 'un-speakable', or 'silent' level, we automatically eliminate endless, useless verbal bickerings.

- Alfred Korzybski, 1940

[The above is quoted from 'General Semantics, Psychiatry, Psychotherapy and Prevention,' a paper given at the annual meeting of the American Psychiatric Association, May 1940, published in both American Journal of Psychiatry, September 1941, and Papers from the Second Congress on General Semantics (IGS, 1943), pp. 99-96.]

Re Harrison's matrix analysis, it is interesting to note points of similarity with the Bois-Bachelard 'Epistemological Profile and Semantic Psychoanalysis' in the present Bulletin. Personally, I am heavily biased against involving myself in the mad muddle of multiorbidity surrounding the term 'real'. I find I can be clearer about what I am talking about if I avoid using 'real', 'reality', 'really', etc., and talk in ways consistent with the G S map-territory analogy, the un-speakable levels, consciousness of abstracting (of which consciousness, or awareness, of the mechanisms is a usually neglected very useful correlate).

M. KENDIG

MORE ABOUT The Family of Man

In the book section of G S Bulletin Nos. 16 & 17 we published 'The Family of Man as viewed by Edward L. Gates.' In his comments on the photographic exhibition (a majority of the prints are reproduced in the book of the same title), Gates included Mr. Fred Ringel's 'Minority Report' from the May 1955 issue of Popular Photography, 'A Rebuttal' of Mr. Ringel's report by Mrs. Nell Dorr, famous for her charming photographs of children, appeared in the July Popular Photography just as we were going to press. Mrs. Dorr graciously gave us permission to use her letter but unfortunately this arrived too late. We are pleased to include it among these discussions of the last issue.

A REBUTTAL

It takes the opinion of a strong minority to balance the opinion of a less articulate majority, and both are necessary to evaluate the whole. Keeping this in mind, I reread Fred Ringel's letter on the Family of Man in your May issue, and wish to comment on it here in an honest effort to be unprejudiced.

First. Isn't it true that the scientists, politicians, businessmen, churches, and even schools have in the last decade tended to stress the differences within the family of man? Until now, here in New York "diversity of thought and background, semantic concepts and religious goals have made the United Nations into a Tower of Babel." Isn't it about time that, purely as an experiment, it is a healthy thing for photographers to stress the family likenesses - even if it is just the eyes, the nose, and the mouth?

Second. Should the object of the exhibit be to acquaint the public with "the progress of photography and who the great artists are that have mastered the technique of the camera"? In other words, a Who's Who in Photography? Or can we assume that we are also human beings and wish to contribute with our cameras to the over-all welfare of mankind?

Third. Before we censure Mr. Steichen for personal flag-waving, let us remember that although he is one of the great lens-men of all time, his own photography is hardly featured in the exhibit.

Fourth. Mr. Ringel asks, "In what respects does man feel alike?" I would say: we love, we hate, and we fear. We all are born, we suffer, and we die, and within that compass we all must walk. Doesn't the Family of Man stress these points? Doesn't it bring the world a little closer?

I can only try to understand an honest difference of opinion, but in all truth I cannot see how Mr. Ringel could make the statement, "The very concept of the Family of Man is rather trite. What is worse, it is based on ignorance if not a lie." I must ask Mr. Ringel to say which one it is out of those 500 pictures which he feels is based on ignorance or a lie.

FURTHER COMMENTS by Edward L. Gates

The 'Family of Man' showed humankind as being similarly motivated when similarly oriented photographically. My queries are concerned with the validity of so showing 'humanity' as a whole. After GSB 16 & 17 went to press, the Institute received a copy of the new edition of Charles Darwin's Expression of the Emotions in Man and Animals. As an addition to this book are shown (Plate III) four photographs of 'The Expression of Fear in Bali'. The caption explains: 'The Balinese readily go to sleep during the day and in particular they go to sleep
when they are frightened. This behavior is summarized in the common Balinese phrase, "takoet oeles" (literally, "afraid-sleep"). Figures (1) through (4) show two thieves falling asleep during their trial. (Quoted from G. Bateson, and M. Mead, Balinese Character, New York Academy of Sciences, 1942, in Charles Darwin, Expression of the Emotions in Man and Animals. New York: Philosophical Library, 1955.)

The photographs show two men falling asleep. By 'Family of Man' standards, I assume, the pictures would have been included in a group showing people sleeping. The interpretation would be different, certainly, if there were a category of photographs representing fear and the Balinese were shown there. Re-examining The Family of Man book, I find a number of groupings in which the similarities are perhaps purely photographic, not human. What, I wonder, would be the effect of regrouping?

SEMANTICS OF PHOTOGRAPHY

In 'The Semantics of Photography,' page 32, Popular Photography for February 1956, Mr. Bruce Downs, the editor, discussed and quoted from Gates' Bulletin piece. A number of our Members wrote to tell us about this and one even sent an English translation from the Spanish edition of the magazine. Popular Photography is said to have the largest circulation in the photography field (some 500 thousand). Mr. Downs writes, 'We are a magazine for photographers and we are always surprised (and pleased) when non-photographers show interest in something we print. For example Mr. E.L. Gates, an editor of the General Semantics Bulletin, noted the controversy about The Family of Man exhibit which ran in our letter column...'

We're surprised and pleased also to have something in our Bulletin noted in a 'mass circulation medium.' (Gates, by the way, is something of a photographer; perhaps that disqualifies us as non-photographers.) Commenting on Gates' final sentence — 'It would be interesting if students of general semantics who are interested in photography could produce some prints which represent 'The Family of Man' in terms which recognize man's cultural diversity, yet underscore man as a time-binding class of life.' — Mr. Downs writes, 'It would be interesting, indeed, and photography might find itself a valuable contributor to the arsenal of semantics — or, in layman's terms, "understanding".'

The insight of science is not different from that of the arts. Science will create values... when it looks into man; when it explores what makes him man and not an animal, and what makes his societies human and not animal packs.

J. Bronowski
The Common Sense of Science

The British Journal for the Philosophy of Science

November 1955

ARTICLES:
Hypothesis about the Origin and Disappearance of Matter, R.O. KAPP.
Value-Judgments in Social Sciences, M. ROSHWALD.
Degrees of Explanation, F.A. HAYEK.
Maxwell on the Method of Physical Analogy, JOSEPH TURNER.

NOTES AND COMMENTS:
A Discussion of Professor Kapp's Views, H. BOND.
A Reply to Professor Bondi, R.O. KAPP.
Remarks on Professor Bondi's Views on 'The Age of the Universe,' Rt. Hon. the EARL OF HALSURY.
Comment on Lord Halsbury's Remarks, H. BOND.
A Logical Basis for Genetics?, J.B.S. HALDANE.
Some Comments on 'The Age of the Universe,' C.K. GRANT.
Achilles and Dimensions, G. BURNISTON BROWN.

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ARTICLES:
The Definition of Psychosomatic Disorder, NIGEL WALKER.
The Logic of Quanta, ALFRED LANDE.
Ethological Models and the Concept of 'Drive', R.A. HINDE.

NOTES AND COMMENTS:
An Empirical Confirmation of the Representative Theory of Perception, J.R. SMITHIES.
On Dr. Burniston Brown's Note: A Correction, HERBERT DINGLE.

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Freud's Theory, R.S. PETERS.
Psycho-Analytic Technology, J.O. WISDOM.
Experimentation within the Psycho-Analytic Session, HENRY EKTEL.
A Critical Evaluation of Certain Basic Psycho-Analytic Conceptions, W. RONALD D. FAIRBAIRN.
Freud and Homeostasis, NIGEL WALKER.
On Explanations in Psychology and in Physics, ERNEST H. HUTTEN.
The World of the Unconscious and the World of Commonsense, R.E. MONEY-KYRLE.

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ARTICLES:
Towards a Science of Social Relations (1), G.A. EBBES.
On Extrapolation, with special reference to the Age of the Universe.
Do Computers Think? (1), MARIO HINDE.

NOTES AND COMMENTS:
A Reply to Professor Haldane, J.H. WOODGER.
The Time of Physics and Psychology, R.A.C. DOBBS.

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Parkside Works, Edinburgh 9
In a book of this type the author's background is important if one is to evaluate in any way his material. The dust jacket gives us the following:

Weston LaBarre is Associate Professor of Anthropology at Duke University. With degrees from Princeton and Yale, besides teaching at several universities, he has been a research intern at the Menninger Clinic, a Guggenheim Fellow, and has done field work in several continents. During the war he worked for WRA and was a naval officer in ONI and in OSS, serving in China, India, Ceylon, and the West Indies. His numerous publications include studies in several areas of the social sciences.

With these data we might expect the book to follow an analytically oriented approach to a synthesis of the sciences of man, and the author reasonably well achieves this attempt.

His early material beginning with problems of living organisms differentiating them from machines is useful reading in an area where many a current focus emphasizes the superiority of the machine. The biological discussion of development is intriguing and filled with bits of interesting information. The author traverses the animal kingdom, beginning with the amoeba on through the primates, ending naturally enough with Homo sapiens. His discussion of evolution suggests a fascinating notion that, since man's intelligence is 'several eons ahead of his body,' man in a way is thereby probably fixed in an evolutionary pattern, since he has already developed machines to achieve results which might otherwise come through physical evolvement. 'His mind is too fast to permit or need such genetic evolving.' These chapters are, I think, some of the best in the book.

As the author progresses, he has tables of life development of primates and continues with studies of apes, comparing them with Homo sapiens. Step by step the author builds up to man's structure and eventually gets around to man's actual development. Hand and the brain are stressed as major advantages, and the author points out that the emancipated hand has emancipated man from any other organic evolution whatsoever. With man, genetic evolution and organic experiments have come to an end. Without involving the animal body and its slow, blind genetic mechanisms, man's hands make the tools and the machines which render his own further physical evolution unnecessary; they replace the slow, cumbersome, expensive, uncertain, and painful mechanism of organic evolution with the swift, conscious, biologically free, and painless making of machines.

Next the author lays stress on the brain although the brain-hand contact mechanism obviously demonstrates the background of his thinking.

Oddly enough LaBarre does not stress the importance of time-binding in his pattern. Man with his brain and his hand existed for countless thousands of years before he learned to preserve information, thereby preventing one generation from merely repeating the achievements and errors of its forbears. Certainly Korzybski's contribution here, which is now broadly accepted in philosophy, seems to have been overlooked.

Familial organization next comes in for consideration, and the human mammalian pattern of permanent breast function is held one of the causes of human domestication. The author seems to feel that the 'togetherness of individuals,' depending on successful functioning of human physiology is at the base of familial - hence, cultural development. 'Sexuality and sociability' are even more ideally woven together in humans than in anthropoidal apes and we have in this book a discussion of how 'Father Comes Home to Stay' - 'And Makes It Legal.' These last two chapter titles are typical of the excellent writing pattern of the author whose fluency keeps one interested in spite of the large assortment of difficult data he sometimes presents.

Having achieved the final domestication of man in marriage, the author in a chapter titled 'People Are Different' attacks the theory of racial superiority and inferiority whilst discussing quite reasonably the actual physical differences of humans around the world. He feels that man is not only a new species, but rather a new kind of animal and denies totally racial
numbers 18 & 19, 1955-56

differences, except as cultural achievements. In an intriguing set of paragraphs, he shows how all races have what might be considered advanced physical evolutionary achievements, but simultaneously also presents apparent backward evolutionary findings. 'Actually the races have specialized variably in the paedomorphy of different traits,' and LaBarre believes that these are 'phenomena of domestication in an animal with increased dependency of infants upon adults and of specialized adults upon one another.'

The author next turns to speech, and here his approach is primarily oriented toward Sapir and Whorf. These chapters will be familiar to students of general semantics, but yield much value through the authors somewhat different approach.

In his concluding chapters LaBarre summarizes his material, and although this is one of his most complex sections, he eventually arrives at the notion that it is man's society-cultural pattern that differentiates him from all other mammals. He feels that man's symbolic systems make for communication and that breakdown represents sickness. These chapters are nowhere nearly as well developed as the first part of the book, since the author seems to be treading deep water and jams together many unrelated bits of information in his attempt to prove his theory. Wide and to a degree unrelated areas are covered in these chapters, moving from mental illness to superstition, and at times the book becomes mighty difficult to read. The author finally ends in a sort of crescendo with a chapter discussing problems of intercultural or inter-society controversies, and while he does not solve any problems, concludes by rightly stressing at any rate that we are animals having knowledge of good and evil and that the eventual choice of our activities is ours.

The book also includes an excellent set of references and an index.

Any evaluative commentary on this book must be spotty since it traverses such tremendous areas. My personal opinion is that the first part is much the best and well worth the purchase price. The omission of Korzybski's contributions represents a serious gap and had the author considered some of the communicative technics of general semantics, together with the theory that any cultural change which in any way impedes man's natural time-binding capacity is atavistic, he would have saved himself much philosophic speculation in his concluding chapters. In spite of these defects - from one point of view - the book, representing as it does a fresh approach to an ancient problem, should be widely read and in its pages will be found many novel notions and bits of information which may not be totally acceptable but which will certainly stimulate cortical action in any reader.

COMMENTS BY MARTIN MALONEY, The School of Speech, Northwestern University

THREE KEYS TO LANGUAGE by Robert M. Estrich and Hans Sperber.

I have been amazed and gratified, in recent years, at the interesting and useful insights into the communicative process which result when scholars in various disciplines give their serious attention to its analysis. Three Keys to Language strikes me as being one of the most interesting efforts of this sort that I have seen to date.

What Estrich and Sperber have done is to draw on the resources of anthropology, linguistics and literary criticism for their analysis of human communications. The authors describe themselves, justly, as linguists; but the term needs further qualification. Their linguistics is chiefly historical linguistics and philology, of the sort usually discovered in English departments and modern language departments of universities. The techniques of literary criticism fit nicely with this sort of approach; so do the insights of anthropologists, provided that they are used at second hand.

The result of the analysis is a most illuminating discussion of certain peculiarities of 'language and thought' which are common in everyday usage. There is, for example, as fine a discussion as I have seen of word-taboos in literate and non-literate societies, an excellent analysis of humor as verbal strategy, and some most interesting remarks on personal style.

It seems rather a pity to complain of a book that I like very much; still, I have two small objections to register:

1) It took me much too long to discover what the 'three keys to language' are, and the knowledge hardly seemed worth the trouble. The 'three keys', it appears, are the three 'as-
pects' or 'functions' of language - psychological, social, historical.

2) The authors, as do altogether too many of their colleagues, eagerly set up and knock down the old straw man of 'an ideal language in which each word should have a single unmistakable meaning and each idea should be expressed by just one significant word, not as is often true in natural language by a number of nearly equivalent synonyms. The mere fact that from Locke to Korzybski attempts have had to be repeated again and again seems to show that a really foolproof language is beyond human possibilities.' (p. 136) Now I can take Locke or leave him alone, but I am a little tired of the notion that workers in general semantics spend their time developing linguistic perpetual motion machines. As Mark Twain said of Fenimore Cooper's critics, it hardly seems right that these gentlemen should evaluate a man's work so easily without having read it.


This book is another by-product - and, I believe, an exceedingly valuable one - of the increasing interest in communications research. The author, a member of the teaching staff of the Massachusetts Institute of Technology, says that he was impelled to write the book when, in 1946, he tried unsuccessfully to find a text for an undergraduate course in the psychology of communication. Any teacher who has tried to choose a text for a 'communication' course of this general type will sympathize. Language and Communication is, so far as I know, the first text in this exceedingly important area; nevertheless, despite its pioneering air, it is exceedingly well done.

Although Professor Miller points out in his preface that communications studies of value are produced by philologists, anthropologists, sociologists, engineers, etc., in practice he sticks pretty closely to studies with a psychological bent. He admits also to a behavioristic bias, which I suppose accounts for the fact that his book is almost chemically pure in its reporting of the factual findings of researches, with only slight traces of speculation and hypothesizing apparent.

The general arrangement of Language and Communication is inductive; the text begins with chapters on phonetics and perception and ends with a chapter on speech in society - 'the social approach.' This arrangement, as the author admits, makes the book considerably duller to read, but is probably the most logical order of presentation.

Professor Miller has apparently done what he set out to do in this text with a great deal of competence. His book is, indeed, indispensable to any serious student of communications. Readers who are new to the communications field should, however, be warned that Language and Communication reports only a fraction of the research and speculation in this area; the student who wishes to press on further must travel from anthropology through general semantics and on at least to sociology and perhaps even to zoology to get what he wants. Although the bulk of this material cannot be learned from Miller, any student will find his book of inestimable value during at least a part of the journey.

To describe Miller's attitude toward general semantics is a little difficult. The expression which seems to cover his situation is this: he knows of it. Miller lists Science and Sanity in his bibliography, together with three publications by Wendell Johnson. He refers on two or three occasions in the text to Johnson's research, but evidently on the assumption that this work can be subsumed under some such heading as 'psychology of language.' His solitary reference to Korzybski (p. 111) is a rather odd one. In discussing types of definitions, Miller states that an extensional definition of a term involves listing or pointing to all events (how about all characteristics of all events?) designated by the term. He then points out that this is frequently pretty difficult, and hence we had better not worry too much, as Korzybski does, about the problem of 'anchoring our language in reality.'

I am glad to report that Miller is a far better student of his other sources for Language and Communication than he has apparently been of Science and Sanity. I should like also to underline my conviction that, however little Miller has been able to learn from general semanticists, general semanticists can profit a great deal by a study of the material he has summarized in his book.
SEMANTICS AND THE PHILOSOPHY OF LANGUAGE: A COLLECTION OF READINGS

The student of general semantics who opens this book will, unless he is already familiar with the papers it contains, be initially impressed with the necessity for distinguishing 'semantics' from 'general semantics'. The writings of such men as Goodman, Quine, Hempel and Marhenke will surely seem to him unfamiliar, complex and perhaps exceedingly intensional (to use that term in a somewhat derogatory sense). And indeed, those 'general semanticists' who insist on the distinction presumably do so because they wish their own concerns and techniques divorced from these elaborate analyses of language structure, per se, the endless assault of words on words.

Even a casual reading of the papers in the Linsky collection will, however, do much to modify this view. 'General semanticists' owe far more than they sometimes recognize to the philosophers of semantics. Their heavy stress on 'extensionality', though exceedingly valuable in many respects, has tended to keep them from paying very much attention to the structural analysis of language. The result is that they are unaware that many of their most common formulations on language structure have been borrowed from such philosophers as Russell (whose chapter on 'Descriptions' from his Introduction to Mathematical Philosophy is reprinted here). And certainly, since 'semantics' like 'general semantics' has flowered exceedingly in late years, many other 'concepts' have been developed which are worthy of the closest study.

Dr. Linsky has attempted, in Semantics and the Philosophy of Language, to reprint, chiefly from philosophical journals, some of the major papers on semantics and linguistic philosophy, a good number of which, he remarks, have become classics. I am by no means qualified to say whether he has omitted any papers which should have been included, but I can say that the papers which he has selected are most distinguished. A collection which includes such work as Carnap's 'Empiricism, Semantics and Ontology' and Willard V. Quine's 'Notes on Evidence and Necessity,' and a dozen other studies of like quality, could scarcely be thought inadequate.

This book will repay admirably the time one spends in studying it.

CULTURE IN CRISIS: A STUDY OF THE HOPI INDIANS by Laura Thompson.

PERSONALITY AND GOVERNMENT: FINDINGS AND RECOMMENDATIONS OF THE INDIAN ADMINISTRATION RESEARCH by Laura Thompson.

In 1933, as one of the less-publicized New Deal reforms, the federal government undertook to reorganize its administration of Indian affairs - an administration which had, up to that date, been sometimes corrupt, occasionally efficient, and most of the time - from the point of view of an anthropologist - incredibly naive. In 1941, on suggestion of the Secretary of the Interior and other officials, the Indian Personality and Administration Research, sponsored jointly by the Office of Indian Affairs and the University of Chicago's Committee on Human Development, was set up. Its purpose was to study, from many points of view and over a long period of time, American Indians as individuals and as members of tribal societies, and as wards of government.

This program, over a period of years, has proved enormously fruitful. Miss Thompson's Culture in Crisis and Personality and Government are two of the major reports to result from it. Culture in Crisis is an intensive study of the Hopi Indians which begins with 'the ecologic dimension of the Hopi crisis' and ends (a chapter taken from the writings of Benjamin Lee Whorf) with an analysis of the relationships traceable among the Hopi language, Hopi patterns of thought, and Hopi behavior. Personality and Government is a much more general summary of the findings of the Indian research, with sections on the Navajo, the Sioux, the Papago, and the Hopi.

These studies are, in my opinion, superb and impressive achievements. I am tempted to say that they are unique; but on second thought, I hope that they are not. I hope that more, many more studies of human problems are available or in progress which will prove to be modelled on these. Specifically, the features of this research which seem to me most valuable are these:

1) The Indian research studies are cross-disciplinary. More than fifty scientists, representing disciplines ranging from psychology to
linguistics to public administration, collaborated in their production. Surprisingly enough, too, this great range of specializations has been fitted into a unified conceptual framework which permits Miss Thompson, as well as others who have reported these studies, to take maximum advantage of many special techniques and sets of data, while maintaining a consistent and single attack on her problem. Such studies, as they increase in number, should do much to modify the extreme elementalist which has afflicted the social sciences until recent years.

2) These studies were conceived and are phrased as action-research. This means, for one thing, that government officials and civil servants, as well as 'academic' scholars, have made important contributions to them. For another, it means that the traditional and (in my opinion) unhealthy dichotomy between 'pure' and 'applied' research has here suffered severe damage. I do not deny that there is much valuable research existing in the social sciences which did not derive from a 'practical' motive. Nevertheless, the antithesis between the 'practical' and the 'pure' has always seemed to me a false one, a point which these studies demonstrate admirably.

3) These studies - particularly Culture in Crisis - make a highly sophisticated use of the study of language as an 'index of culture'. Cultural anthropologists have for some time supported this in theory; but I think that few studies of man-in-a-culture to date have so successfully used it in practice as the Thompson study of the Hopis. Workers in general semantics will, of course, be especially gratified to note how heavily Miss Thompson leans on the work of such scholars as Whorf and Dorothy D. Lee, and how closely she follows Korzybski's formulations in her discussion. For my part, I have not seen another study which so effectively integrates the theory of general semantics into its pattern.
which educators have not so far adequately recognized.

Students of general semantics may feel that Carroll is not wholly fair (or at least, that he is inaccurate) in his negative criticisms. After all, the ‘aura of cultism and missionary zeal’ was perhaps necessary in the early years of general semantics as a sort of fertilizer; few new intellectual systems attract much attention or serve much purpose if they are received without enthusiasm and spread without zeal. And twenty years, or twenty-five, or forty, are none too few to develop a set of brilliant formulations into a scientific discipline producing useful research. But when all this has been said, it still seems advisable for students of Korzybski to attend to Carroll’s criticisms; it is a long step from an intellectual enthusiasm to a science, and we need all the help we can get in making it. And by the same token, his positive comments, in this commentor’s opinion at least, point to the most obviously and immediately useful areas of general semantics in which advancement can be made.

COMMENTS BY CHRISTOPHER B. SHELDON, Summer Institute of Linguistics *


Early in 1954 Dr. Pike published Part I of his book, which I shall refer to as Language, in a preliminary edition. This book should evoke a good deal of interest among all those interested in non-aristotelian studies, for in it Pike formulates a unified theory for the description of human behavior. Certainly there is a great need for such a theory, and so far attempts to formulate a workable theory have not been too successful.

First a bit of background about Dr. Pike. He is the Professor of Linguistics in English and Anthropology at the University of Michigan. In connection with the University he has published three important texts in the field of descriptive linguistics on phonetics, phonemics, and tone languages. At the same time he is the Director of the Summer Institute of Linguistics. The Summer Institute gives intensive training in descriptive linguistics primarily to missionaries who are going out to all parts of the world to reduce unwritten languages to writing. The principal training center of the Summer Institute is at the University of Oklahoma, but there are also Institutes at the University of North Dakota, and in Canada, England, and Australia.

The Summer Institute of Linguistics has trained approximately 3,000 students to reduce languages to writing, and its own members are at present working in more than 115 different languages. Thus the teaching staff consists of men and women who have had considerable field experience. Dr. Pike heads the Institute. He did most of his field work in Mexico, where in a period of ten years he reduced the Mixtec language to writing and translated the New Testament into the language.

It is one thing to prepare a student to do an adequate job of linguistic description, but it is an entirely different matter to prepare one to be able to so grasp a language and a culture that he is able to translate portions of the New Testament into the language of primitive peoples and teach them to read and understand it. Thus Dr. Pike has developed his theory with the knowledge that it must be usable by the worker in the field and practical.

Dr. Pike introduces the need for a unified theory of the structure of human behavior with a simple illustration. He describes the song-game played to the verse:

Under the spreading chestnut tree
With my baby on my knee;
Oh how happy I would be
Under the spreading chestnut tree.

In the song the first verse is sung. Then in each succeeding repetition of the verse gestures are substituted for the words. For instance, spreading is indicated by the hands being extended outward, chest—by hitting the chest, -nut by hitting the head, tree by another gesture of the hands, etc. So finally in the last version only a few connectives and articles are left between gestures performed in unison to the original timing of the song.

Now how would a descriptive linguist analyze the song if all he heard was the last verse? He would be at a complete loss. And the anthropologist describing non-linguistic behavior would be able to describe all the gestures, but he would not be able to find their meaning without taking into account the words in the first verse. And a musician would be able to describe the first verse, but what would he do with the last?

*See editor’s note, page 103
Thus Dr. Pike says '... the structural analysis of the event as a single unit may be difficult or impossible under a fractionated approach to the analysis of behavior.' (1) And he suggests that '... there is needed a theory which will not be discontinuous, and which will not cause a severe jar as one passes from non-verbal to verbal activity: there is needed a unified theory, a unified set of terms, and a unified methodology which can start from any kind of complex human activity, with various sub-types of activity included, and analyze it without sharp theoretical or methodological discontinuities.' (1-2) In the following four chapters he presents his theory, and in the final two chapters he applies the theory to descriptive linguistics. In formulating his theory he uses some linguistic terms or coin new and very useful terms from linguistics, but it is important to note that once the theory is understood, if it is valid the same conclusions should be reached if one starts with any other of the disciplines which deal with human behavior.

In the second chapter Pike describes two basic approaches to the study of a culture, the ETIC (coined from phonetic) and the EMIC (coined from phonemic) approaches. These concepts are very useful and worthy of some attention. The etic approach is primarily concerned in making generalized statements about the data, classifying the comparable data from many different cultures into one system and comparing any new data with the created system.

But the emic approach is valid for only one culture at a time, or rather one culturally defined class of people. Its goal is to 'discover and to describe the pattern of that particular language or culture in reference to the way in which the various elements of that culture are related to each other in the functioning of that particular pattern ... .' (8) In other words the emic approach is structural and attempts to describe every event in reference to the culture as a whole and to the other events within the culture.

The etic approach is classificatory and non-structural. Pike describes it as 'alien' to culture while the emic approach is 'domestic' or 'internal'. The etic approach is the 'objective' laboratory approach in which the scientist observes a culture without participation in it, and any data he discovers he systematizes in reference to other cultures he has studied.

An emic evaluation cannot theoretically be made until 'everything' about the culture has been observed so that it can be explained in reference to the whole culture and all of its parts.

But in practice segments of a culture can be emically analyzed if their relation to the whole is understood and if a margin of error is allowed for. Thus the emic approach deals with particular events as parts of a larger whole. The etic approach, however, may abstract events from their context or local system for the purpose of classification, comparison, study in isolation, etc. The etic approach often deals only with the physical characteristics of the events without reference to purpose, meaning, use, or distribution of the characteristics, while the emic analysis must always refer to the physical, distributional, and purposeful characteristics of the event.

The etic approach has the appearance of absolutes. 'Similar' events from various cultures are observed and built into a system to describe all cultures. But the emic approach is relative; each cultural event is studied in relation to its own cultural environment.

These two methods of approach must not be set over and against one another; they are both useful and necessary to the scientist. An observer entering a new cultural situation first draws upon his knowledge of other peoples to interpret what he sees; he makes an etic evaluation. This first prestructural evaluation must be revised again and again until it is transformed into an emic (i.e. structural) appraisal of the culture, an appraisal which will even take account of the attitudes and actions of the observer himself, for he becomes a part of the emic situation. Since the final emic report is made from the standpoint of the internal structure of the culture, different observers trained in emic analysis should be able to arrive at substantially the same conclusions, while it is usual that different observers making etic reports of a culture will come to rather widely separated conclusions because of the personal bias of each observer.

The emic approach is essential in the field of human understanding. Every person has an emic structure, and it is difficult to communicate to that person without understanding his emic structure. Thus Pike says, 'For a common emic structure a common experience is therefore prerequisite, both verbal and non-verbal, in a unified whole. Since this never occurs for any two people, there are always problems of understanding.' (18) These problems are greatly increased when dealing with peoples of other cultures. For instance, Eugene Nida describes the experience of a missionary in the Philippines who was insulted when the first guests to his house dusted off the seats of the chairs before sitting down to dinner and then wiped off the

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1. All references to pages in Pike's *Language* will be in parentheses immediately following quotations.
silverware and plates with napkins. What an insult to his wife! But he was making an etic evaluation. He interpreted the event of one culture in the light of his own culture. Further investigation would prove that the actions of the Philippine guests were the polite and 'cultured' thing to do. Their actions cannot be understood except in relation to their own culture, i.e., emically. Pike writes, 'People of one nation (or class of society, etc.) may sometimes appear to another to be "illogical" or "stupid" or "incomprehensible" simply because the observer is over a long period of time taking an alien standpoint from which to view their activity, instead of seeking to learn their emic patterns of overt and covert behavior.' (17)

It can be predicted that a person will not have much difficulty in passing from his own culture to another that is structured emically much the same and vice versa. For instance, an American has little difficulty in adjusting to life in Canada, but if he should visit an Indian tribe of Amazonia, he would be in difficulty because the emic structures of the United States and the Amazon tribe would be so different.

Furthermore, the various objects found within a culture depend upon the emic structure of the culture for their classification. A shirt is an article of clothing in this country, but given to a native who has never seen one, it might be used for something entirely different within the emic structure of his own culture.

Much emphasis has been put on the emic approach by Pike because it is essential to any adequate unified theory of the structure of human behavior.

In chapters three, four, and five, Pike completes the outline of the basic premises of his theory. The final two chapters of the book apply the theory to linguistics, and they would only be of interest to the descriptive linguist, and so I shall not discuss them in this commentary. And it should be remembered that the theory will not be explained in all its details by Pike until Part II is published.

In chapters three to five Pike describes at length three units of human activity: a church service, a football game at the University of Michigan, and breakfast in his own home over a period of several weeks or more. These units of behavior are called behavioremes, another coined word. I shall define the behavioreme and trust that the rest of the review will make it clear: 'A BEHAVIOREME (for an emic behavior cycle) is an emic segment or component of purposive human activity, hierarchically and trimodally structured, having closure signalled by overt objective cultural clues within the verbal or non-verbal behavior of the domestic participants or domestic observers, and occurring through its free or conditioned, simple or complex variants within a behavioral system (or composite of systems) and a physical matrix which are also emically hierarchically and trimodally structured.' (57-58)

Let us look at a church service. The whole service can be considered a unit of continual human activity, and yet there is no doubt but that there are smaller units of activity within the whole, such as hymns, prayer, scripture reading, etc. And the hymns have smaller units, stanzas; and within the stanzas are sentences, within the sentences, words, etc. How are these segments of activity to be separated from one another for the purpose of description? Pike characterizes every unit of human behavior as a wave of movement. The nucleus, or point at which a unit of activity reaches its culmination, is easy to identify. It is the top of a wave of motion. But the borders of the wave are 'fuzzy'. It is difficult to determine exactly where one wave ends and another begins. However, these borders are identified, although fuzzily, when there is a change of activity. 'It is this process of changing actions and actors which gives to a behavior sequence a character of pulsations of activity. The nucleus of a new type of activity acts as the peak of a WAVE OF MOTION - and segments within segments are pulses within pulses which are added together to form complex waves of activity (analogous to the manner in which ripples can be superimposed upon a larger water wave).' (30)

For instance, the church service begins for some when they enter the church, others will continue to talk and do not consider the service to be under way until the organ prelude has started, still others continue to talk until the first hymn is announced. But when the whole congregation is standing and singing the first hymn, all the members realize the service has started; they are participating in an activity or wave of motion which is definitely distinct from the previous activity of 'going to church' or 'getting ready for church'. Closure of a unit of activity or behavioreme is thus defined in reference to the participants of the activity. The participants themselves recognize when they have finished certain units of activity such as 'going to church' or 'singing a hymn' or 'listening to the sermon', etc., although they may not recognize the exact moment they have passed from one behavioreme to another. Many will object to this indeterminacy of segment borders because it does not lend itself to a 'neat' description, but I believe that treating

2. Nida, Eugene A., Customs and Cultures, Harper & Bros., N.Y., p. 1. This book is very valuable in giving many illustrations of the problems encountered when missionaries are confronted with cultures differently structured from their own.
activity as waves of motions is closer to the structure of the world than treating activity as if it were made up of clearly defined segments.

The church service, the hymn, the prayer, and the sermon can each be considered a 'whole', or behavioreme. So Pike states that '... one must conclude that there is in behavior, a HIERARCHICAL STRUCTURE (which we referred to as wheels within wheels) in which smaller emic wholes may be viewed as parts of larger emic wholes, which in turn are parts of still larger ones. ...' (32), etc. A participant in the service can lower the focus of his attention to one sentence or phrase within a hymn, or he can raise the focus of his attention to a consideration of the effect of all the church services of the past six months on his life. Any unit of behavior is in the context of a hierarchy; it is interrelated with larger units and may contain within it smaller units.

Therefore Pike elaborates on the behavioreme by enumerating three other types: the included behavioremes which 'are smaller than the behavioreme containing them, but which are analyzed as behavioremes on the basis of the same kind of criteria.' (63) But if this is so, how far should you continue to divide up units of activity? For the purpose of description it is necessary to be able to know when your analysis is complete. Somewhere there should be a lower limit because if there is none, the analyst would have to continue to the molecular or atomic level. Therefore Pike defines a minimum behavioreme in terms of the presence of purpose and closure reflecting that purpose. This is not exact but lends itself to a suitable method of description which will not descend below a manageable level. Furthermore, it is sometimes useful to contrast a behavioreme to a larger unit within a hierarchy, and so Pike calls any behavioreme larger than a minimum one a hyperbehavioreme. There has been no need to set up theoretical limits for a maximum behavioreme.

The behavioreme of 'eating breakfast every morning' is considered the 'same' behavioreme for the purpose of description because it has certain characteristics which are similar each day such as the hour when it is eaten, the type of food eaten, etc.; and at the same time the activity contrasts with other meals such as lunch and supper. But each day there will be variants in the way breakfast is eaten; exactly what is eaten, the conversation which taken place, etc.

How is the behavioreme itself to be analyzed? This is the most important question for anyone attempting to describe human behavior; and now we come to the core of Pike's theory. He writes, 'We are ready to see that on any level of focus each such emic unit, each chunk, even one for which the borders seem relatively clear cut, is divided structurally into three specific kinds of complex overlapping components which I shall call MODES.' (35) These are the feature mode, the manifestation mode, and the distribution mode. This does not mean that an emic unit can be divided up into three separate and distinct entities. Rather 'each of these modes covers the same physical data, however, with a simultaneous structuring in these respective ways. Each of the modes, in turn, can be discovered only in reference to a system which embraces all three, such that the units of each enter into a network of units characterized by and discoverable by their relationship to the entire system of modes and units of modes of which they are a part.' (36)

The distribution mode is characterized by the spot-class correlation of the behavioreme. Thus the church service fills a spot within a larger behavior unit which might be called the 'weekly religious activities.' At the same time the service has within itself smaller units of activity; for example, the pre-sermon hymn. In connection with the hymn there are four important characteristics of the distribution mode: 1. It can and does fill the pre-sermon spot. 2. It is a member of a class of activities (other hymns) which can fill this spot. 3. This hymn, along with the class of which it is a member, may occur in other hymn spots of the service. This Pike calls the spot-class potential, an important component of the distribution mode. On the basis of the potential, predictions can be made as to future occurrences of the hymn in this or other spots. 4. The hymn also has internal structuring with spots internal to it. Each stanza of the hymn is a spot, and within each stanza are sentences, phrases, words, etc., each of which can be described tri-modally. 'The DISTRIBUTION MODE of that hymn-singing activity is a composite of all these distributional characteristics: its potential for occurrence in various spots and classes in this service or elsewhere in other kinds of religious meetings, its actual occurrence in this particular spot and class on this particular day, and its internal spots and classes on lower internal focus levels.' (36-37)

The manifestation mode deals with the manner in which the behavioreme is manifested physically. The same hymn sung twice in succession by the congregation would have an infinite number of small etic differences: the words would not be pronounced exactly the same, the rhythm would be a little different, each singer would vary the production of the hymn a bit, etc. The singing of the pre-sermon hymn is not limited to one occurrence but is a composite of all such occurrences. The singing of it at a particular point is one manifestation of that emic unit, and each time the hymn is sung results in another manifestation of the same emic unit.
At any level of focus differences in manifestation occur, and a complete description of the manifestation mode theoretically would include a statement of all actual and potential variants in the unit at its top focus layer and internal lower-focus layers as well. (37) But since this is practically impossible to achieve in the average description, subperceptual events are treated in special studies, and 'the descriptive task is made manageable ... by limiting one's attention, for certain purposes, to high-focus levels of activity where the perceptible variants are fewer; and by accepting sample occurrences of an emic unit as representative of the total variants of its manifestation mode.' (37)

The feature mode is the expression of contrastive and identificational features of an emic unit including the features of meaning and purpose. At the same time that the church service is going on, there is another junior church service for the young people of the congregation. This service has many of the elements of the adult one: prayer, hymns, sermon or talk, etc.; and thus there are identificational features of the morning worship unit, for certain aspects of the unit can be identified with the aspects of another unit. But at the same time there are differences. The junior church is conducted in such a way as to hold the interest of the young people. Therefore the hymns are livelier, the prayers shorter, the sermon more of a challenge to youth. Thus at the same time there are contrastive features (distinctive features) in which aspects of the worship service contrast with aspects of another unit.

Meaning and purpose are present in every emic unit, but at times it is very difficult to analyze a unit in such a way as to find them. They cannot be found by any kind of instrument, and often the participants of the activity cannot explain the purpose. The man in the pew may not know why the pastor chose a certain hymn to be sung. Therefore the analyst needs to supplement the explanation given to him by his informants. He can do this by studying the spots in which the activity occurs and then noting the response elicited by the activity. The meaning or purpose component is found by studying the behavior in its context to find out where it occurs, what comes before, and what happens afterwards. Thus the singing of a missionary hymn just before a sermon presenting the missionary needs of some area would prepare the congregation for the sermon, and the overall response of the congregation to the hymn and sermon might be to support a worker in the needy area mentioned. The purpose of the hymn and sermon are reflected in the response of the congregation.

Finally Pike gives us a formula which should be used in the description of any behavioreme (emic unit of activity):

\[
U = \frac{F}{M} \quad U: \text{emic unit of activity} \\
F: \text{feature mode} \\
M: \text{manifestation mode} \\
D: \text{distribution mode}
\]

At times it is impossible to separate the modal components of a unit clearly. And it must be remembered that F, M, and D are not tripartite divisions of the unit. It is not the feature mode plus the manifestation mode plus the distribution mode, but the manifestation of each mode is the manifestation of the whole. Each mode covers the whole unit, and each mode can also be analyzed trimodally, and thus the analysis can be carried down to any level of focus.

Thus Pike has given us a theory and method for describing any kind of human behavior. He shows that any such description in its final analysis should be an emic one, i.e. it should be 'internal' and structural. He has given us a method for breaking the waves of human activity into units (behavioremes) for the purpose of study, and he has given us a method for studying each of these behavioremes.

Pike is not a student of general semantics, but I think the reader will recognize that his approach is thoroughly non-aristotelian. His theory is new and not even fully presented to the public yet, and it must be verified by actual field work before its usability is proved. But it is certainly worthy of close scrutiny by those who are interested in unifying into one general theory the disciplines related to the description and understanding of human behavior.

*Editor's Note: Mr. Sheldon's interest in general semantics and his interest in 'communication between peoples of different cultural and linguistic backgrounds, and the type of work done by B.L. Whorf,' have been mutually reinforcing since a luncheon conversation we had here in early 1950. His background includes growing up in Connecticut on the Sound and on an island in Maine - he's an expert sailor - with intervals in Latin and Central America where his father has been involved with oil developments. He graduated from Exeter and finished air force pilot training shortly after the end of the War. When he and Yale didn't see eye to eye, he studied Spanish and Music at Seattle Pacific College, majored in linguistics and archaeology at the University of San Marcos, Lima, Peru (BA 1951); in philosophy and literature at the University of Madrid (PhD 1956); and in Biblical Theology at Princeton Theological Seminary where he received a BD degree in June 1955. Last winter he attended our seminar at Lime Rock, 27 December 1954 - 2 January 1955. Presently he is following the two year training program of the Institute of Linguistics, Norman, Oklahoma, where he spent last summer and lectured once a week on general semantics. He is now living with the few surviving members of the Habasupai Indian Tribe in Arizona and doing a linguistic description of their language which has never been written down. For a note on Mr. Sheldon's thesis at San Marcos, entitled 'Linguistic Structure and Our Aristotelian Concepts in the Light of General Semantics' (in Spanish) see GSB Nos. 6 & 7, 1951, pp. 84-95. -M.K.
COMMENTS BY PENELLOPE PEARL POLLACZEK, Psychologist, Mount Vernon (N. Y.) Schools


Dr. Moses is Assistant Clinical Professor in charge of Speech and Voice Section, Division of Otolaryngology, Stanford University School of Medicine, San Francisco, California. His book was of considerable interest to me as a student of general semantics because of the new notions it suggested as to operation on both the verbal and non-verbal levels. Dr. Moses' main thesis is that personality can be analyzed on the basis of various dimensions of voice. These dimensions are listed and discussed in detail. There are cases to demonstrate what Dr. Moses means. Unfortunately, no actual statistical evidence is offered to support the claims. In his opening chapter, Dr. Moses draws a parallel between his technique of voice analysis and that of Rorschach analysis. He offers an interpretation of material collected in voice analysis and an interpretation from a Rorschach protocol, both based on the same individual. The two interpretations parallel each other in a striking manner. An examination of both analyses would, however, be extremely disappointing to students of general semantics since they both consist of freely used higher order abstractions.

Apart from the author's claims for vocal analysis as a kind of projective technique (and it may of course ultimately prove to be of considerable value along these lines) the book is filled with intriguing nuggets of information and suggestions about what sorts of things to look for in listening to voices and what the author thinks, from his experience and from earlier studies, they mean.

The author makes the comment, incidentally, that some of his current researches are being carried on in conjunction with Gregory Bateson (Communication: The Social Matrix of Psychiatry, Ruesch and Bateson, GSB Nos. 14 & 15, pp. 86-87). Dr. Moses is careful to point out that the problem of the listener and his own particular abstractions emerging from his particular 'set' is admittedly a tough one in voice analysis.

The book includes a fascinating chapter on Vocal Ontogenesis but again there is no presentation of basic research, and in his mention of some of the names in this field that of Piaget is strangely omitted.

Probably the most interesting chapters of the book for G S students are Three and Four where the author takes up various dimensions of the voice. The following listing is the author's:

<table>
<thead>
<tr>
<th>Acoustic Dimensions</th>
<th>Other Dimensions</th>
<th>Other Significant Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>(The 'Five R's')</td>
<td>Melody</td>
<td>Pathos</td>
</tr>
<tr>
<td>Respiration</td>
<td>Intensity</td>
<td>Manerism</td>
</tr>
<tr>
<td>Range</td>
<td>Speed</td>
<td>Melism</td>
</tr>
<tr>
<td>Registers</td>
<td>Accents</td>
<td>Exactness</td>
</tr>
<tr>
<td>Resonance</td>
<td>Emphasis</td>
<td>Pauses between words</td>
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<tr>
<td>Rhythm</td>
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</tbody>
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The above aspects are elaborated upon and illustrated in considerable detail. Attention is drawn to the relationship between these dimensions, various personality traits, and cultural stereotypes.

For me, one of the most interesting dimensions described by Moses is that of melody. He claims (p. 59), 'The intent, but not the content, is communicated by nothing but the melody.' Interestingly enough there is no mention of metalinguistics in this chapter although the observations strike me as paralleling closely the work in that field. Of special interest is Moses' discussion of the use of stereotyped vocal patterns by individuals with certain positions such as teacher, minister, etc. A provocative discussion of the use of major and minor keys and their supposed significance is also to be found here.

Moses also discusses the change in vocal fashions from generation to generation. Another interesting topic is that of the development of forced, unnatural speech on the part of the neurotic. For example, Moses says (p. 83) 'Often the careful observer has the impression that the patient is expressing through body language: "I would rather be hoarse than communicate."'
In his chapter on 'Areas of Interpretation in the Neurotic' Moses discusses speech in relationship to the following:

1. Climacteric voice
2. The drive for autonomy
3. The drive for achievement
4. The lack of social adjustment
5. The complainer
6. The quarrelsome

In the next chapter and in the final chapter Moses considers vocal features of: Neurosis, Compulsion-Obsession, Vocal Cord Neurosis and Schizophrenia.

Throughout this book there are any number of challenging formulations which strike me as amenable to neat statistical treatment.

After reading this book I noticed that I became quite self-conscious and introspective about my own vocal dimensions. For example, I noticed a certain nasality associated with defensiveness. I also noticed that high pitch seemed to invite high pitch in those about me. As might be expected, this was also true in the case of the dimension of 'intensity'. I began to notice that when I changed these dimensions consciously there was a lag in doing likewise on the part of the partner in communication. I also noticed that in my own case hearing myself use an unusually high pitch tended to perpetuate its use in myself, a self-reflexive kind of thing. It struck me that these various vocal dimensions may be observed and used by individuals as signals of psychological mal-functioning.

COMMENTS BY JAMES P. PETTEGROVE, New Jersey State Teachers College, Montclair


Here is the most useful book I have yet seen for the teacher of linguistic communication on the secondary level. Mr. Thomas combines a plain and systematic presentation of fundamental semantic concepts with a wealth of suggestive hints for classroom use. His book is a rare blending of the theory and terminology of General Semantics with practical, real-life applications.

The point of departure of Language Power for Youth is a broad humanistic conception of education. The English curriculum, according to the author, is basic in the preparation of young people for effective living. Language study will help the individual understand others, to cooperate with groups of people, to live more happily. 'Upon these powers rests his effectiveness as a citizen of democracy.'

But life in a democracy demands more than the traditional linguistic skills: classical literature, grammar, punctuation, composition. The active citizen must grasp the finest shades of idea and feeling in others; he must try to understand and be able to express these nuances in himself. Hence, Mr. Thomas reasons convincingly, the functional approach to English is the 'meaning approach'. All the traditional subject matter and skills of the English course are treated from this viewpoint. It makes sense. Also, the actual results are encouraging, whereas the results of grammar study have a very low correlation with ability to write effectively.

The unique feature of this book lies in its orientation to the classroom problem. 'The teacher lecturing in the classroom may not be communicating to his students the facts and ideas about which he is talking,' Mr. Thomas states. On the lookout for this hazard, imaginative teachers are always seeking methods and techniques for conveying facts, ideas, attitudes to members of their classes. In order to assist teachers of linguistic communications Mr. Thomas has collated the classroom procedures of forty-one secondary-school instructors representing localities from Massachusetts to California, and from Illinois to Louisiana.

The method of Language Power for Youth consists of a direct statement of a theoretical aspect of linguistic study followed by a selection of alternate procedures which have been found successful in different schools. Those of us who have taught Hayakawa's Language in Thought and Action, and his earlier Language in Action, cannot fail to read with interest Mr. Thomas's presentation of the results of numerous uses of this text throughout the country.

Problems, such as that of the age level for introducing semantic theory and the amount of terminology to be taught in an introductory course, are illuminated by instances of trial and error discussed by Mr. Thomas. Pitfalls of some teachers of semantics, and of some texts, are also treated. As the author points out, one of the tendencies in our schools when teaching...
students to recognize propaganda and emotional (affective) uses of language has been to make them alert merely to the negative and dangerous uses. This has evoked cynicism along with defensive attitudes towards all appeals to the emotions and all attempts at persuasion. But Paradise Lost employs affective language just as much as the unscrupulous politician may, the author says. He warns too against a frequent teaching error, that of reducing language study to a short list of slogans: 'The word is not the thing,' 'Find the referent.' One of the objects of modern study of linguistic communication is to avoid such stereotypes.

The style of this book is well suited to its message. High abstractions are introduced without pedantry, and concrete illustrations are presented without being translated into semantic 'jargon'. The excellent bibliography with critical evaluations of basic works in semantic theory, of textbooks on communications, and of recent periodical literature will be deeply appreciated by every sincere student in this field.

**COMMENTS BY HOWARD BOONE JACOBSON, University of Bridgeport, Connecticut**


What goes on - and certainly what sometimes goes wrong - when a person talks to another person, whether the party being talked to or doing the talking be wife, neighbor, Russian diplomat or self, is the big question answered by 'Your Most Enchanted Listener.'

Actually what does go on has been in the realm of anybody's guess, although eyed suspiciously by a growing band of scholars for quite awhile. But not so with the bulk of the popular literature, which still affirms blatantly that in order to communicate effectively one must be a vocal genius, or, in other words, use a lot of tools besides words, meaning eyes and hands oral asides, diction, inflection, dialect, rhythm patterns, and various other kinds of vocal paraphernalia in any face-to-face situation. The author of this book sums up this situation neatly: 'We still accept, celebrate, and honor a tremendous amount of sheer verbal assertion, particularly when it is presented by appropriately draped authorities to the accompaniment of music, banners and symbolic gestures to which our responses of deference have been thoroughly conditioned.'

Man, the creator and user of symbols, has yet to learn that there is no necessary relationship between the truth or the value of words and the manner in which they are expressed. Human symbolization and communication goes haywire periodically because of the hypnotic effect of these surface noises, particularly from the voice beautiful, the highly fluent, and the silver-tongued paranoid - all of which Wendell Johnson, speech pathologist and general semantician, finds distressing and dangerous.

One answer to this unrelentingly fateful activity of people talking to each other and in the bargain to themselves, maintains Dr. Johnson hopefully, is a widespread appreciation of what is involved in a reflective use of language and in an awareness of what goes on inside the listener when he responds to and with symbols. What anyone says to himself is important. When the speaker tells himself that Mr. Smith is peculiar, he is not talking about Mr. Smith in any descriptive sense. He is symbolizing his own inner state, the content of his perception (experiences, etc.), revived by his nervous system reacting to the stimulus of Smith. And if humans are to eliminate this kind of verbal behavior and to be 'scientific' about their language habits, then they cannot afford to forget or disregard this fact that 'it is our own bodily processes inside our own skins that we transform into the words we breathe into the windy code of speech.'

What are these processes that go on inside the human nervous system whenever one speaks or writes, reads or listens? Johnson describes them operationally in a schematic diagram of Mr. A talking to Mr. B. The reader can trace for himself structurally just what happens between any event in the outside world and the verbalization of that event. Probably the most surprising thing that one discovers following Johnson's line of thought of what is singularly human in this process is that Mr. A and Mr. B can be the same person: a man talking to himself! What also appears to take place is that when there is a real life Mr. B listening to Mr. A there is also the same Mr. A reacting to himself as his own listener.

This is contrary to the English language which talks about the speaker and the listener as if they were two different people. The author points out that there seems to be no word for the process of a speaker-listening-to-and-reacting-to-himself other than 'a man talking to himself,' which does not have the best connotations generally. The shortage of symbols to label this process correctly has contributed to the over-simplification here and has retarded the investigation and understanding of this 'internal feedback.' Johnson warns: 'For every
speaker is his own most affected eavesdropper, and that is why the art of talking to ourselves is one that we may not neglect save at the ever present risk of growing self-distortion.

Furthermore, a very heavy share of the problems of individuals and of nations, of groups of all sorts, and of cultures broadly considered, also involves a lack of awareness generally about the relationship between other pre-verbal phenomena, particularly abstracting and projecting, about which even the most extensively schooled have been taught very little, and verbal activities such as speech sounds, reading, vocabulary, formal and factual statements, subject-predicate sentence patterns, classifying, etc. Returning from the structural regions of typical and atypical speech behavior and pattern, Johnson tries to compress his ideas and information into a matrix from which one can only hope might spring 'world view' about human symbolization and the causes of communication failure.

While suggesting how machinelike language has become, Johnson himself becomes the unknowing victim of a language phenomenon whose origin he attributes to S.I. Hayakawa, 'psittacism,' which is defined as 'a statement that is made in a parrotlike fashion, a parroting or repeating of something one has read or been told.' Actually, the term seems to have been first used by Henri Pieron in his book, *Thought and the Brain,* published in 1927. Korzybski included the exact quotation in his *Science and Sanity* six years later and some years before Hayakawa appears to have resurrected the word. The term, 'tossed into our common pool of talk,' has made some ripples; and rightly so, even the general semantician is not immune from the merry-go-round of language pattern.

Johnson emphasizes aspects of the symbolizing process in scientific method and behavior which he feels can be useful in any attempt to eliminate the kind of language behavior in the ordinary face-to-face situation which affects the listener in ways that are false-to-fact, confusing, degrading, and demoralizing. He finds in the answerable question, for instance, a mechanism which most forcefully liberates scientific behavior from the vagaries of ordinary human behavior seeking to 'unravel webs that have never been spun' because it can be answered only by observable facts.

The book also integrates some of the major formulations of recent communications theory and general semantics. It discusses such important everyday language-fact relationships as how to understand the difference talking makes and the difference it doesn't make, how to ask answerable questions, how to tell a fact from an inference from a value judgment, how not to confuse words with things, how to recognize gobbledygook, how to be a dependable observer, and honest reporter and a good listener, how to appraise a speaker, how to make words resemble the 'world of not-words,' much of which is familiar territory to the reader already oriented in Johnson's *People in Quandaries*.

However, there are differences. The author's previous book was written from the narrowly specialized point of view of a general semanticist and a student of speech only. This book could be considered a series of interrelated essays on sane, cooperative and creative living, or ways to prevent and eliminate the kinds of speech behavior that keep people from becoming as kindly and creative as they could be, and to encourage the ways of speaking that liberate and strengthen and ennoble the speaker and the listener as well.

Johnson expresses his deep concern for man's verbal fate in a style that is both sensitive and eloquent, especially when he voices the hope that things may get better as man understands his own ingenuity for transforming the world around him into symbols: '... to be aware of the magic of communication that transforms men into humanity is to part all but blindingly the curtains of our self-estrangements.'

He seems to have a special fondness for turning a neat aphoristic phrase, many of which he isolates and repeats to set the thought pace as each new chapter begins. Some typical examples: 'It is possible and it is common to see what one believes only because one believes it.' 'Only those who are wise to the words are the wise to whom the words are sufficient.'

This book is definitely for the less critical reader. Perhaps the more sophisticated reader will best prefer Johnson in the role of the elder statesman, prophetically lashing out at verbal delusion everywhere and everywhere professing his belief in the potentialities of man.

**Book Briefs...**

Recent books by G S students: *The Golden Archer, 'A Satirical Novel (on U.S. manners) 1975,* by Gregory Mason, erstwhile anthropologist and New York University Professor of Journalism (published by Twayne in January '56) has, by now, been enthusiastically received by such opposites as Paul Blanchard (American Freedom and Catholic Power) and Catholic author Isabel Currier who comments 'unquestionably creative thinking and a (Continued on page 114)
THE ANALOGUE APPROACH TO THE INTEGRATION OF KNOWLEDGE: AN ABSTRACT

By Elwood Murray, Director, School of Speech, and James E. Perdue, Dean, College of Arts and Sciences, University of Denver

Editor's Note: This abstract of a paper for the Colorado-Wyoming Academy section on Psychology, School of Mines, 27 April 1956, constitutes a very brief preview of a plan for the relational integration of knowledge on which the authors have been working for several years, and which we believe will interest many of our Members, whether or not they are professionally classified as 'educators'. --M.K.

A plan is outlined for an interdisciplinary laboratory for some forty instructors representing the physical, biological, the social sciences, and the humanities to permit the relating 'horizontally' of their knowledges. This attempt to work out methods for a long-range revision of the general education curriculum would be based on the building of a series of analogue units and the methods for administering them. The aim is to help instructors and their students think across verbal boundary lines, to release greater creativity, critical thinking, and better adjustments and human relations.

In this laboratory the instructors would be both training themselves and preparing materials for their students which would lead toward a better relational orientation to the fact-territories of 'general education' and the control of behaviors in respect to symbols incidental to these learnings. In meeting first in groups homogeneous in their subject matters the instructors would indicate the most basic fact-structures in their respective areas of 'knowledge'. These structures would be selected in terms of order, function, relations, and formative processes as described by L.L. Whyte and Alfred Korzybski; and assigned a priority.

Then, in heterogeneous and interdisciplinary groups the instructors would build analogue units of some six parallel 'layers' each. These would take their departure from the most basic structures in nuclear and astrophysics. Behaviors related to social sciences, humanities, and fine arts would be viewed as analogies to the basic physical structures. Structures from literature, history, and the arts would be selected to correspond with the physical structures. Methods would be worked out to gear the diverse interests of freshmen into the potentials of the analogue units. These units would be constructed to permit the desired development in students as indicated by available measuring instruments. 'Conceptual integration' would be kept secondary to the relational-extensional-fact orientation desired.

If the analogies are to have a validity, discipline in consciousness of abstracting and communicating is required. Hence, incidental to the building and teaching of these units the nature of symbolizing and communicating must be presented. Both in the laboratory for the instructors and the classes in which these units would be experienced a familiarity with these complicated processes is necessary in order to deal with misunderstandings and confusions, and to bring better adjustments and evaluations in everyday living as well as make the student more competent in the specialized ('vertical') studies which should follow or accompany this training.

THE INDUCTION APPROACH TO COMMUNICATION AND LEARNING: AN ABSTRACT

By Elwood Murray, Director, School of Speech, and Major Charles Burns, Professor of Air Sciences, ROTC, University of Denver

Editor's Note: This paper will be delivered before the Rocky Mountain Psychological Association Meeting at Jackson Hole, Wyoming, June 1956. The abstract serves, we believe, to elucidate and extend one dimension of the interdisciplinary laboratory described above. --M.K.

Polarization, magnetism, and other aspects of electronics are viewed as parallel and analogous to what goes in human relationships and personality. Induction relates and holds together not only human personality but also groups, enterprises, and cultures. The concept of induction seems harmonious with the various definitions of communication and helps explain them.

Induction is most commonly observed when a secondary coil is brought into proper position with a primary coil, but without physical connection. Transformers, generators, motors, and wire-tapping depend upon induction for their functioning. All of these involve polarization and magnetism. A current introduced into one coil induces a current in the other coil which is similar in structure but yet with certain
differences. There is an invariance under transformation wherever induction occurs.

There are analogous invariances under transformation wherever there is adequate communication. In the various orders of abstracting within the individual and in interaction with both the physical and the social environments induction with polarization and magnetism are common manifestations. The principle applies at all stages in the reception and processing of information through the human nervous system and in the interactions of person-to-person, person-to-group, and group-to-group. Communication seems to be better among persons who attract each other; it breaks down as personalities repel. Well-adjusted and mature personalities have been described as warm and capable of two-way communication, in contrast with less well-adjusted and immature personalities.

Induction permits new explanations of semantic reactions and meanings. More complex and differentiated circuits have their analogues in more complex and differentiated communication behaviors. 'Images', 'ideas', 'concepts' react upon each other according to the order in which they are introduced. Learning and memory are built as the circuits become differentiated and kept in use.

Apropos of the above abstracts, we quote from Dr. Murray's recent letter: 'I have never seen a more effective learning process and enthusiasm than what occurred last night in my evening laboratory where three groups evolved three "analogue units" in "general education". These were based on "light", "polarity", and "entropy". The sweep of relationships which were brought out at a concrete, specific level was amazing and inspiring according to "feedbacks" which have been coming in. I doubt whether the class members will forget what they "learned" by these methods.' --Editor

ELWOOD MURRAY, professor and director of the School of Speech, has been at the University of Denver since 1931, and closely associated with the teaching development of general semantics since 1940. He is a member of our Board of Trustees and a Fellow of the Institute. He attended Korzybski's Intensive Seminars at the IGS in 1939 and 1940; organized the brief seminars which Korzybski gave at the University in the summers of 1944 and 1949, and was co-organizer with M. Kendig of the Second and Third Congresses on General Semantics held under the joint auspices of the University and the Institute in 1941 and 1949.

Dr. Murray was born in Illinois, graduated from Hastings College, Nebraska, 1922, and received his MA (1924) and PhD (1931) in speech and psychology of speech from the State University of Iowa. Before going to Denver, he taught in the Abraham Lincoln High School, Council Bluffs, Iowa, and Purdue University. He is a member of many societies in the fields of speech and psychology, and contributes frequently to professional journals.

Among his books are The Speech Personality (Lippincott, 1940, revised edition with a chapter on general semantics, 1944) and Integrative Speech (Dryden, 1953) done in collaboration with Guthrie Janssen and three colleagues then at Denver. Quite apart from its value as a speech text, the latter is a very sound exposition of general semantics and especially notable as a 'blending' of general semantics with psycho-drama, socio-drama, role playing and other techniques from Moreno's work and Lewin's group dynamics. It seems that teachers and study group leaders have neglected this book's potentially rich contribution to the general semantics learning process ($4.65 by mail from the Institute).

In 1951 Dr. Murray was chief activator in the founding of the 'National Society for the Study of Communication' which publishes The Journal of Communication. He is also chiefly responsible for initiation of a general semantics interest group in the Speech Association of America. This new interest group was approved and organized at the Los Angeles meeting of the Association in December 1955, the formal title being General Semantics and Related Methodologies.

The following page is reproduced from the monthly University of Denver REPORT. It indicates one of the many areas of research in which Dr. Murray is interested. We believe that empirical studies of semantic reactions done with the Polygraph will become one of the more fruitful sorts of research in general semantics. So far as we know, Wilbur E. Moore of Central Michigan College is the only other worker in general semantics who has done research along these lines. For a number of years he was using a Maico Psychometer in testing, among others, the conditionality of students' reactions to words before and after their training in general semantics. These researches have not been published. The use of the psycho-galvanometer in researching the effects of G S training was first suggested in 1935 by M. Kendig in a thesis done at Teachers College, Columbia University. The psychometer and psycho-galvanometer (Science and Sanity, pp. 119, 196, 335, 508) are roughly equivalent machines. The more elaborate polygraph records blood pressure, breathing, etc., as well as 'electrical activity'. (A Keeler Polygraph costs about $1200.)
DU SCHOOL OF SPEECH USING LIE DETECTOR FOR RESEARCH

Many of the secrets of speech disorders, stage fright and good personnel relationships are being unlocked through unique research with a polygraph (lie detector) being conducted by the famed University of Denver School of Speech.

Unusual application of the crime-detecting device for furthering human welfare was made possible through its donation to DU by the Blue Hill Foundation of New York on recommendation of one of its directors, Robert U. Redpath.

Where does a lie detector fit into the overall operation of a school of speech at DU or at any college or university?

Six Months of Study

Perhaps the inventor of the machine would also wonder about his machine's use at the DU school. However over the past six months Dr. Elwood Murray, director, and Don Sanders, a graduate assistant and a candidate for a Ph.D in language disorders, have put the machine to work ferreting out causes, reactions and internal disorders in the field of communications. And as far as can be determined DU is the only school in the nation to make such use of the lie detector.

The two, working as a team, have found that the highly sensitive polygraph will measure the physiological reactions and resistances of an individual to different types of speech situations such as light and emotional conversation, light as well as emotional reading, and silent self-talk such as heavy concentration as in mental arithmetic.

Thinking Difficulties Registered

If a subject is under study using the lie detector and he is thinking deeply the machine will register that the subject's blood pressure, electrical activity and breathing are highly affected. Thus difficulties in thinking in relation to communication are detected.

In case of high-pitched voice or other voice disorders, the instrument gives a measure of the deviation in depth and duration of inspiration and expiration. This information is most valuable to the clinician or voice instructor in determining whether the difficulty is emotional or in the structure of the vocal organs.

Hidden Factors Found

Inability to formulate precise statements (to say what one means), in situations especially important to the individual is a most common disorder in speech. There is a tendency not to explain fully enough, or the opposite of being impulsive and saying too much. As soon as a person says too much he arouses boredom if not opposition. These internal difficulties are reflected directly by the delicate indicators of the machine. These hidden factors are brought to light thus aiding teacher and speaker to work more effectively with their problems.

New fields in speech therapy, diagnosis and treatment of speech disorders may be opened in the near future by use of the lie detector, Dr. Murray said, thus widening the horizons of this pioneer research at the DU School of Speech.
A SOCIETY FOR THE ADVANCEMENT OF GENERAL SYSTEMS THEORY

Editor's Note: We have for some years been following the writings of Ludwig von Bertalanffy on general system theory. The Institute became a member of this Society shortly after its founding. At our request, Dr. von Bertalanffy prepared the following for the Bulletin. It is partly abstracted from Science, Vol. 123, No. 3190, p. 283. In our next issue we shall publish 'Semantics and General System Theory,' based on a lecture he presented before the Montreal General Semantics Society, October 1953. --M.K.

A Society for the Advancement of General Systems Theory was organized under Section L of the American Association for the Advancement of Science in Berkeley, 27 December 1954. The founding committee consists of Ludwig von Bertalanffy (biology), K.E. Boulding (economics), Ralph W. Gerard (physiology), and Anatol Rapoport (mathematics). The Statement of Purpose of the Society reads:

The main purpose of the proposed Society for the Advancement of General Systems Theory will be to encourage the development of theoretical systems which are applicable to more than one of the traditional departments of knowledge. All sciences develop theoretical systems of concepts, relationships, and models. Many of these systems are isomorphic, but their similarity is undetected because of differences in terminology and of other barriers to communication among specialists. Furthermore, systems which have been well worked out in one field may be helpful in another.

The principal aims of General Systems Theory are, therefore:

1. To investigate the isomorphy of concepts, laws, and models in various fields, and to help in useful transfers from one field to another;
2. To encourage the development of adequate theoretical models in areas which lack them;
3. To eliminate the duplication of theoretical efforts in different fields;
4. To promote the unity of science through improving the communication between specialists.

An organizing meeting was held at the convention of the American Association for the Advancement of Science in Berkeley, 27 December 1954. The modern development of the biological, behavioral, and social sciences necessitates an expansion of our conceptual schemes. There exist theoretical models, principles, and laws of generalized 'systems' which are applicable in different fields. A main problem of modern science, further, is a general theory of organization. Concepts like those of wholeness, directiveness, teleology, and the like, although alien to classical physics, cannot be avoided when dealing with biological, behavioral, and social phenomena. There are various trends in modern science dealing with the problems mentioned, such as General System Theory in the narrower sense, the theory of information, of games, of decision making, etc. The proposed Society has as its main goal the further development of such theory, and correlation of the various approaches.

Donations from the K. Bostrom Foundation facilitated the organizational work.

The membership fee is five dollars, and inquiries or checks should be directed to Dr. L. von Bertalanffy, Mt. Sinai Hospital, 8720 Beverly Blvd., Los Angeles 48, California.

At the last meeting of the Society, held at the Atlanta convention of the AAAS, a symposium, 'Entropy,' was devoted to the generalization of the entropy concept in Irreversible Thermodynamics and in Information Theory. According to the dictum of physics, the universe gradually 'runs down', progressing toward states of increasing disorder and leveling down of differences. In contrast, the living world progresses, in individual development and in evolution, towards states of increasing order and heterogeneity. Ludwig von Bertalanffy outlined the advances made in the thermodynamics of irreversible processes, open systems, and steady states, which shed light on this apparent paradox as well as many other problems in physics and biology. By posing new problems to 'Maxie', the Maxwell demon, Anatol Rapoport discussed the questions of how far informational entropy presents a measure of organization and whether a conversion between thermodynamic and informational entropy is legitimate. W. Ross Ashby [Design for a Brain] studied the experimenter and the system investigated as parts of a super-system, from which unexpected features of the systems studied in science arise. Raoul S. Naroll showed that the principle of allometric growth applies to specialization in primitive tribes as well as to the process of urbanization in modern history, so that it may offer a quantitative measure for social developments.

The temporary committee of the Society will continue its function until the election of officers. The first Yearbook of the Society will appear soon. The next meeting of the Society will be held at the 1956 convention of the AAAS in New York.
The following is excerpted from a report by the New York Society for General Semantics.

Under the joint supervision of its President, Dr. Robert P. Holston, and its Executive Director, Jane Heyburn, the following programs and activities have been instituted during the past year:

1. Public Relations - The Society has cooperated with the Audio-Visual Center of Indiana University in a nation-wide promotion of a series of films on G S by the late Irving J. Lee for the Ford Foundation's Fund for Adult Education.

2. A Management Services Division has been organized to provide consultation and training based on G S to business firms - and to consultants who want to use G S in their professional work.

3. An Adult Education Division is coordinating the growing training function of the Society. During the past six months alone, the following courses have been sponsored by the Society: General Semantics for Executives, 8 sessions, at Columbia University, by Dr. Holston. Introduction to General Semantics, 6 sessions, at Ryack, N.Y., by Harry Maynard. Applied General Semantics, 8 sessions, at Columbia University, by guest speakers, with coordination by Dr. Holston. The Fundamentals of General Semantics, featuring the "Lee Films," 4 sessions, at the Academy of Sciences - by Dr. Holston. How to Improve Your Thinking Ability, an Introduction to General Semantics, 4 sessions, at Cooper Union, by Mr. Maynard.

4. Informal Training - Society members are introduced to the discipline at informal Orientation Meetings. They may continue in small discussion groups which meet at members' homes on a regular basis.

5. Leadership Training - The growing demand for guest speakers, discussion group leaders and teachers has made it necessary for the Society to plan a Leadership Training Program for next fall.

6. A Monthly Lecture Program, under the chairmanship of Sam Scharff, has continued to present speakers on a wide variety of subjects related to G S. During the past year, the following addresses have been made to the Society: Dr. J.R. Pierce...."Meaning, Randomness and Art." Mr. Reuben Nathan...."Problems of Intercultural Communication." Dr. Penelope Pollaczek...."G S and Interpersonal Relations in the School, the Home, and in Everyday Situations." Dr. Eugene Raskin...."Communication through Architecture." Dr. Norman Locke...."G S and Mental Health." Dr. Ralph Hefflerline...."Pro-proactive Feedback - The Use and Misuse of Internal Bodily Information." Dr. Leo Pap...."Code and Message, Some Structural Aspects of Language." Mr. R. Gerald Morris...."Human and Mechanical Processes of Abstracting." Dr. William Vogt...."Sex and Semantics." Dr. Ruth Lofgren...."How to Discover Ourselves - the Significance of Non-verbal Learning." Professor Gregory Mason...."North of Tomorrow - an Extrapolation of Current Trends in Thinking." Dr. Mario Pei...."The Relationship between Language and Thought - some comments on Meta-linguistics." A Special "Author Meets Public" Lecture Series Featured: A.C. Spectorsky - author of The Exurbanites, speaking on the "Exurbanite Dilemma." Wendell Johnson - author of People In Quandaries and Your Most Enchanted Listener, speaking on the latter subject.

Stuart Chase - author of Tyranny of Words and Power of Words, speaking on "G S in a Changing World."

The Society also cooperated with the Institute in presenting the Alfred Korzybski Memorial Lecture by Dr. Clyde Kluckhohn - "General Semantics in the Perspective of Non-Literate Cultures."

A Speakers Bureau, under the direction of Felton Koch, has been established to coordinate the growing numbers of requests for talks concerning General Semantics. During the past year, the following speakers have appeared under the auspices of the Society: Jo Rosenfeld participated in a panel discussion on "What is a Liberal?" for the Trenton Hadassah Organization. Dr. Sam Stein addressed a Dental Society on "How General Semantics can be used in the Doctor-Patient Relationship." Dr. Penelope Pollaczek addressed The Child Education Foundation on "Communication Between Children and Adults." Harry Maynard addressed a meeting of design students sponsored by the Art Directors Association on "Fundamentals of General Semantics." Robert Holston spoke to the Hunter College Parents Association on "Applications of General Semantics to Child Rearing." Robert Strauss spoke to a luncheon meeting of the Newspaper Editors and Publishers Association on "Semantics and General Semantics." Robert Holston addressed the Purchasing Agents Association on "Communication Problems." Seymour Nathan talked before the Montreal G S Society on "Society Organization."

Other Activities: Trips to the Princeton Perception Laboratory have been arranged for members by Mrs. Gerald Luntz. Applications of G S to Psychiatric Education and Practice are being explored by Advisory Council member, Dr. Carl Fulton Sulzberger. Book Sales and Membership Activities are coordinated by Society Secretary, Allen Flagg, and Eleanor Gould. Receptions for guest speakers, and refreshments at meetings, are organized by Mrs. Chase Mellen, Mrs. Harry Maynard and Mrs. John Beck. Public Relations planning is being carried forward by Charles Dace Kellogg and Monroe Koestler, with production under the supervision of Richard Bernstein and Lee Schers. A library of transcribed speeches is being assembled by Edwin S. Hubbard. The monthly newsletter, "The Verbal Level," continues under the editorship of Barabara Sapinsley.

These activities have been possible only because of the devoted effort and support of a great many people not mentioned here.
Shortly after Dr. Holston became President, a three-year plan of action was initiated with the following two major goals: 1. To continue to work toward a greater degree of cooperation and integration in the G S world - not as an end in itself but as a basis for 2. Improving the public relations and, particularly, the organizational effectiveness of the G S movement. Two key steps in this three-year plan were: 1. The New York Society assumed autonomous status, with its Board of Directors pledging support and cooperation to both the Institute of General Semantics and the International Society. 2. A full-time Executive Director, Miss Jane Hayburn, was employed in 1955 to coordinate the growing number of activities of the Society which are described above. The address of the New York Society for General Semantics: N.Y. Academy of Sciences Building, 2 East 63rd Street, New York 21, New York.

TRANSLATIONS OF SCIENCE AND SANITY

Spanish Translation of Selections from Science and Sanity: A thesis in progress. William Bryan Key, Jr., assistant professor of speech and journalism in the William Allen White School of Journalism at the University of Kansas has partially completed a translation of Selections from Science and Sanity into Spanish as his doctoral dissertation in communication at the University of Denver. According to Dr. Elwood Murray, 'the study of the problems of translation in the light of the structure of the two languages composes his dissertation.' Dr. Paleske, head of modern languages at Denver, is also reviewing the translation with the help of some of the Spanish scholars who have studied at the Institute. It is hoped that the translation will be published within the next few years.

Dutch Translation of Science and Sanity. Mr. Jan F. van Dantzig of Bloemendaal, Holland, writes us that he finished the first rough draft of his translation of the entire (860 pages) third edition of S & S in June 1955, and is now working on the fourth revision in cooperation with several Dutch-English friends and some scientific consultants. A publisher has become interested in bringing out the translation. However, Mr. van Dantzig writes, 'the publishing of the book in Dutch was not at all the motive for the translation but only the fact that we, my wife and I, admire and love Science and Sanity so much that we wanted and want to acquire the technique of general semantics (consciousness of abstracting) as well as possible at our age (55 and 56 years). So the translation was by no means an aim in itself but for our purposes a necessary preliminary which has already taken all my free time during nearly four years.' He goes on to say that after reading the book again and again he decided to make a written translation not only to save time but because it necessitates far more 'losing oneself in the original' than mere reading, and leads to better understanding, etc. Studying and answering Mr. van Dantzig's 17 pages of notes and queries is in itself fascinating, though lengthy, task for our free time, and a good learning experience to boot.

GENERAL SEMANTICS AT NORTHWESTERN AND IN THE CHICAGO AREA

According to current information received: Most of the courses in general semantics formerly taught by Irving Lee in the Northwestern School of Speech are being carried on by professors Martin J. Maloney and D.C. Barnlund. Sanford I. Berman, who was doing his doctoral work under Lee's supervision, is carrying on the courses for police supervisors at Northwestern's Traffic Institute. Last year, Berman organized the General Semantics Club of Northwestern.

Laura Louise Lee (Mrs. Irving J.) is supervising practice teachers in the department of speech correction and audiology, School of Speech of Northwestern University.

At University College, the downtown division of Adult Education of the University of Chicago, in the Spring quarter of 1956, under the heading 'Communication': Berman is teaching two classes, a beginning course in general semantics called, 'Language, Meaning and Maturity,' and 'Principles of General Semantics' a continuation of the former; Lee's Language Habits in Human Affairs is text for the first, and Johnson's People in Quandaries for the second. Maloney is teaching an introduction to general semantics called 'Language in Thought and Action.' Dr. Bess Sondel is conducting lectures and discussions on contemporary 'communication theory', featuring, among others, the work of Korzybski. University College and the Chicago Society for G S are offering a series of six lectures this Spring called 'New Pathways in Semantics.' The subjects and speakers are: 'Semantics and the New Behavioral Sciences' by Anatol Rapoport, now at Mental Health Research Institute, University of Michigan. 'The Communication Situation: The Language of Gesture' by Ray L. Birdwhistemell, University of Louisville. 'Tone of Voice and Its Meanings' by Henry Lee Smith, Jr., Foreign Service Institute, Department of State. 'Semantics and the Philosophy of Science' by Robert M. Palm, University of Chicago. 'Semantics and Psychotherapy' by Charles B. Congdon, MD, psychiatrist of Chicago.

Berman is also teaching public speaking at Illinois Institute of Technology and for the Chicago Police Officers, using Lee's materials. He highly recommends the Lee 'movies', six brief television sequences now distributed by the University of Indiana Audio-Visual Service.
KORZYSKI ANNIVERSARY (1956) COMMITTEE. A
pro tem planning committee for the twenty-fifth
anniversary of Science and Sanity was formed in
the Spring of 1955, consisting of Irving Lee,
Russell Meyers, MD, Charlotte Read, Robert Red-
path, M. Kendig and Robert Straus, the latter
acting as coordinator. A series of informal
get-togethers with other people interested or
working in general semantics were tentatively
planned to survey developments in the discipline
and allied fields, etc., and get consensus on an
anniversary program. The notion was to keep the
groups small in size but unlimited as to topics
so that many interests and points of view could
be considered. Irving Lee suggested we take as
our model for these meetings the 'Spring Con-
ference' (on education) which is annually held
in Chicago. In brief, this is a program of or-
derly 'bull-seasonts'; nobody makes speeches or
reads papers; the participants suggest the
agenda and discussion subjects. A few people
from each part of the country and representing
different interests were asked to meet with us
at Princeton Inn, 25, 26, 27 November. The
meeting opened with 40 people around the confer-
ence table; some of them from as far away as Cal-
ifornia, Texas, Colorado, Iowa. Most participants
had attended seminars, but few had previously
met each other. The discussions were wide-
ranging and at many levels. They were tape
recorded, but the diversity of subjects and
viewpoints was such that nobody tried to write a
covering report. We reached few conclusions.
Many of us felt that in spite of our general se-
manitics we need a lot of practice in how to talk
and listen constructively in permissive situa-
tions like this, and that any further such get-
togethers had better be limited to 15.

Current planning of the Anniversary Commit-
tee in New York has been focused on a General
Semantics Conference or Congress (which term to
be used is undecided) to be held in the Summer of
1957. The aim is to have the sponsorship of the
Conference truly representative of the many gen-
eral semantics groups and societies and organiza-
tions with similar interests. Russell Smith of
New York University, president of the Interna-
tional Society for General Semantics, is repre-
senting the Society, and he and Dr. Meyers, who
is a member of their Board and a trustee of the
Institute, are assembling the committees. The
time will probably be late in August. Previous
General Semantics Conferences and Conferences
have been held at University of Denver (1941 and
1949), University of Chicago (1951) and Washing-
ton University, St. Louis, Mo. (1954). Many
favor an Eastern meeting place for 1957. If the
full Committee approves, one of the residence
colleges at Yale University will be used. All
persons interested in reporting on their work in
general semantics should send summaries (1000 to
2500 words) or completed papers (two copies) at
their earliest convenience. The Anniversary
Committee, Room 2500, 595 Madison Avenue, New York
22, will receive and forward the papers to the
Program Committee for consideration.

BOOK BRIEFS - Continued from page 107

very funny satire,' as well as by many who find
it 'full of G S applications.' Says G.B. Vet-
ter, psychology professor and secretary of NYU
Chapter, American Association of University
Professors, 'I have never read anything like it
...whodunit, satire, racy romance, social criti-
cism and analysis of religion in one...sweet
old ladies will not read it. Your approving
audience is limited to (a) high I.Q.s, (b) athe-
ists and heretics, (c) libertarians, (d) readers
with a taste for social satire, (e) people with
insight into motive behind various witch-hunts.'
($3.50 at bookstores.) The Itch of Opinion,
dedicated to Alfred Korzybski, a selection of
columns written by Leo A. Lerner, social-minded
editor of 17 Neighborhood Newspapers. Introduc-
tion by Carl Sandburg. ($3.75, Chicago North-
side Newspapers, 7519 North Ashland Avenue.)

Parents on the Run by Marguerite and Willard
Beecher, see also page 67.

'The only possible aim of science is to
discover structure...[and] the recent advances
of science show, beyond doubt, that the day will
come when all science will be formulated in
terms of structure...' (S & S, 1933). Re above
epitome of Korzybski's approach we recommend two
recent books for insights and elaborations.
They may annoy G S students by repeating (in
different words) Korzybski's thesis and com-
pletely ignoring his pioneering emphasis on
structure. Neither author so much as mentions
his name. Theories of Perception and The Con-
cept of Structure by Floyd H. Allport (John
of the Science of Tomorrow [sic] by Lancelot
Redpath is urging his good friends, particularly
those with G S background, to put The Common
Sense of Science by Cambridge University mathema-
tician, J. Bronowski, on their "must" reading
lists -- for style as well as content (Harvard
University Press, 154 pp. $2.00).'

We received a postcard reading, 'Robert U.
Redpath is urging his good friends, particularly
those with G S background, to put The Common
Sense of Science by Cambridge University mathema-
tician, J. Bronowski, on their "must" reading
lists -- for style as well as content (Harvard
University Press, 154 pp. $2.00).' We agree,
but please note, Bronowski's 'Common Sense' is
not the common sense which modern science teaches
us to distrust. BRONOWSKI on any writing - we'd
say - automatically recommends it, whether it be
on mathematics, physics, operational research,
literature or radio drama (e.g. 'The Face of
Violence'). For confirmation, please read his
essay, 'Science as Foresight' in What Is Sci-
tence? (edited by J.R. Newman, Simon & Schuster,
1955). As Newman says, 'in less than 15,000
words, Bronowski manages to impart a clear un-
derstanding of...computers and logical machines,
the theory of games and information theory, cy-
bernetics, the logic of experiment, the nature
of human thinking and the light cast upon it by
study of automata' - and 'in our opinion the
best tie-in of these current developments with
S & S.'
From the Institute

Since 1952 the Bulletin has opened with one of the Korzybski Memorial Lectures which have been given in New York in April for the past five years. In 1955 R. Buckminster Fuller spoke on his development of synergetic and energetic geometries in relation to Korzybski's central formulation of structure. His text was scheduled for this issue. After a considerable wait, we go to press reluctantly without it. Mr. Fuller looks upon the material presented in this Lecture as an important milestone in his own work. We look forward to publishing his text whenever he gets the manuscript and drawings ready in the way he wants them to appear. In 1956 Clyde Kluckhohn, professor of anthropology, Harvard, spoke on General Semantics and 'Primitive' Languages, and his paper will appear in the next Bulletin.

Business Organization Memberships, a new classification, was started for 1955-56. This was suggested by friends who feel that corporations which benefit from the training of personnel in general semantics should participate in supporting the Institute's program of teaching and publication. Tax-wise, these Memberships can be charged off as a contribution or a business expense. Privileges include tuition for any one of our seminars and ten copies of each issue of the Bulletin.

The List of Members of the Institute for 1955-56 will appear in the next Bulletin. As of June first, seven hundred ten Members contributed eleven thousand dollars.

The Collected Papers of Alfred Korzybski, with an introduction and historical and methodological commentaries on the papers by M. Kendig, will be published by Harper probably late in 1957. The book will contain also the only transcription of one of his seminars which Korzybski corrected. Originally published by Olivet College in 1957, it has been "out of print" since then. M. Kendig is taking a leave of absence during the winter to do the research and writing. This publication seems increasingly needed. Judging by the manuscripts sent to the Institute for criticism, the book will help to clear up many problems of interpretation which we find are common among people who have studied only Science and Sanity and Manhood of Humanity. These problems of interpretation become apparent when writers undertake an exposition of the methodology in relation to their particular field and in terms of the applications they find useful in their work. Subtle issues of structural implications are often involved and some 'simple corrections' take many hours of writing to explain in the context of the person's work. It is hoped that the commentaries, as well as the collection of the papers in one volume (some are available as reprints), will be helpful to present and future students of the discipline. The book will run to about 500 pages.

Courses: Elton Carter conducted a Special Intensive Seminar for the Institute at Bard College in July 1955. The lectures and demonstrations during the first five days covered the principal formulations in Science and Sanity, following Dr. Carter's syllabus of his general semantics course for graduate students at Pennsylvania State University. Then two days were devoted to group practice in problem-centered discussions moderated by Dr. Carter. Participants were enthusiastic. The group was limited to 15 and included physicians, university and high school teachers, business executives, a designer and a scientist from South Africa.

Our 12th Summer Seminar-Workshop was held the last two weeks in August, also at Bard. These courses have been described many times in the Bulletin and Members receive detailed announcements. Though the pattern is well-established, the Course differs considerably from year to year, which surprises some of the 'old students' who come for refresher training. Last year's new features were the lecture-demonstrations with Russell Meyers, MD, of University of Iowa, on current-day principles of neuro-physiology and psychology as related to evaluative behavior and communication, and with Professor Marjorie Swanson of Bowman Gray Medical School on colloidal structures and general semantics. Both will be with us for the 1956 Course, 17 August to 2 September, and this year Dr. Sam Bois will lecture on developments in theory and practice, especially in the field of executive development. Charlotte Selver, who introduced a new type of bodily awareness training at the last Winter Seminar, 27 December - 2 January, will conduct daily small group training. Dr. O.R. Bontrager continues to give the basic lectures and demonstrations covering Korzybski's non-aristotelian system at both the Summer and Winter Seminars. Listening Training, given by Charlotte Read continues to gain in importance. We hope Dr. Bois will have time to give another of his intensive seminars for us during 1956-57.

OFFICERS AND TRUSTEES 1956: President-Treasurer, Robert K. Straus, New York...Vice-President, J. S. Bois, Montreal...Secretary, Charlotte Schuchardt Read, New York...Director, M. Kendig, Lakeville...Douglas G. Campbell, MD, University of California...William Exton, Jr., New York...Marion Harper, Jr., New York...W. Benton Harrison, New York...Raymond W. McNealy, MD, Northwestern University Medical School...Russell Meyers, MD, College of Medicine, State University of Iowa...Elwood Murray, University of Denver...Robert U. Redpath, Jr., New York...Harold Regenstein, New York