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ABSTRACT

To obtain a definition of "listening," open-ended interviews were conducted which began with the question, "What do you do when you listen?" The results were sorted into four contrastive types: indirective vs. directive, unfocused vs. focused, distant vs. intimate, and no-feel vs. feel. From these, four listening personalities were conceptualized and a composite ideal listening personality defined. These conceptualizations can be used in listening classes by grouping students according to their own listening profiles into clusters of like of different type. Through supervised tasks, games, and assignments, students can be guided to a better understanding of their own systems of operations, and these systems can be modified, bringing students closer to the ideal listening type. (JK)

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LISTENING: A DEFINITION AND APPLICATION

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LISTENING: A DEFINITION AND APPLICATION

Have you ever wondered how to really get through to -- a student, son or daughter, spouse? (You fill in the blank) As an educator you've scanned the class and been plagued by the guilt of the knowledge that despite having done your best, some still (though trying) simply could not grasp your point. And further, have you ever heard someone else explain your point to the confused member whereupon comprehension was instantaneous? Therein lies futility and frustration! Especially when the interpreter repeated virtually what you'd said. And you are baffled, standing there shaking your head asking why?

Or have you ever heard yourself say "Now listen to this" or other similar instructional guides right in the middle of a sentence, thought, lecture or conversation? Why, when as communicators our basic assumption has been that the other participant (s) were listening, did you feel the need to enhance it with further instructions? Is this your way of putting value judgements on certain kinds or differing levels of listening? Have you ever asked yourself about these intentions? And have you ever had an answer? Or, reversing the question, when someone asked you to "Pay attention" when you thought you had been listening what did you do?

The intent of this paper is to provide a new vantage, or new "think", for the pursuit of improvement in the study and instruction of effective listeners. First the approach will be to define listening; something largely missing from the current literature. Second we will advance some considerations for application in educational methodology.

One look at education shows an evident absenteeism of instruction in effective listening. A closer look at the academic literature shows a

growing proliferation of ideas and helpful hints. Much has been done recently to approach this shadowy area of communication and learning. However, if you are concerned enough to want something more tangible to fasten to perhaps you'll hear this.

In seeking a definition, interviews were conducted with many people beginning with the question "What do you do when you listen?" Open ended as they were these interviews elicited many ideas and items. They were collected and arranged into a 95 item Q Sort which was then administered to 23 people under four sets of instructions. The respondents were asked to arrange the items according to what they actually do when they listen, what they would like to do, what they thought others actually do, and what they thought others ideally would do. As an additional check they also received the Brown-Carlsen Listening Comprehension Test.

This information from the Q Sorts was then submitted to the Ohio State University's Scatran computer to discern range distribution and factor analysis, according to Kaiser's Varimax and Pearson Product Moment Correlation. The results revealed four effective-ineffective listening types, with the highest correlated factors conceived to be the ideal listening system. The results from the Brown-Carlsen test indicated very little correlation or predictive value compared to the results of the Q Sort in this instance.

The exciting thing about these listening personalities is that in understanding them you can then apply them in better understanding and adaptation in your classroom; and also provide yourself with guidelines for your own improvement in listening by identification of type. The implication here is not for conformity but identification for applied individualization and hence greater effectiveness and versatility.

conceptualized briefly according to social desirability. The four listening personalities or cells (A,C,E,G) with the contrasts (B,D,F,H) providing for each of the four styles are described as follows.

The first cell (A), called Indirective, is methodical, unimaginative, unassuming, laskadasical. He is typified by peripheral, almost unintentional listening. Curious, but unambitious, this personality is content in his own world, preferring things simplified. He is non-aggressive, unenergetic, careless, reluctant and slow to react. The contrast of the first cell, (B), is called Directive (which is discriminating, alive and alert). He is cheerfully optimistic, bright, spritely, energetic, bustling and ambitious. He seeks total emotional cognitive involvement. He is sharp witted, aware, fast and adherent. Tightly fastened (adherent), this cell characterizes the thinker and leader, able to interpret objectively and accurately. Having the answers, this personality gets ahead, is active and knowing, self confident, sure responsible. He is success personified.

The second cell (C), called Unfocused, is unsure, unconfident, not easy going or breezy. He is not so successful as the above contrast of the previous cell. A "Do-Gooder," he is too rigid to be discriminating or free to adapt. Trying too hard, he strives to obey all rules without question or consideration. He is a dreamer in a world of unreality, but unimaginative, unalive and unthinking. The contrast of this cell, (D), is Focused, (which is practical, real and down-to-earth). "With-it", this cell is conscious, mature, pleasant and accepting. He is gentle but focused, popular (not superficial or shallow). He has good judgement, is independent but not indifferent. He is working, progressive and constructive, sensitive and serious with a sense of humor, and understanding good-nature.

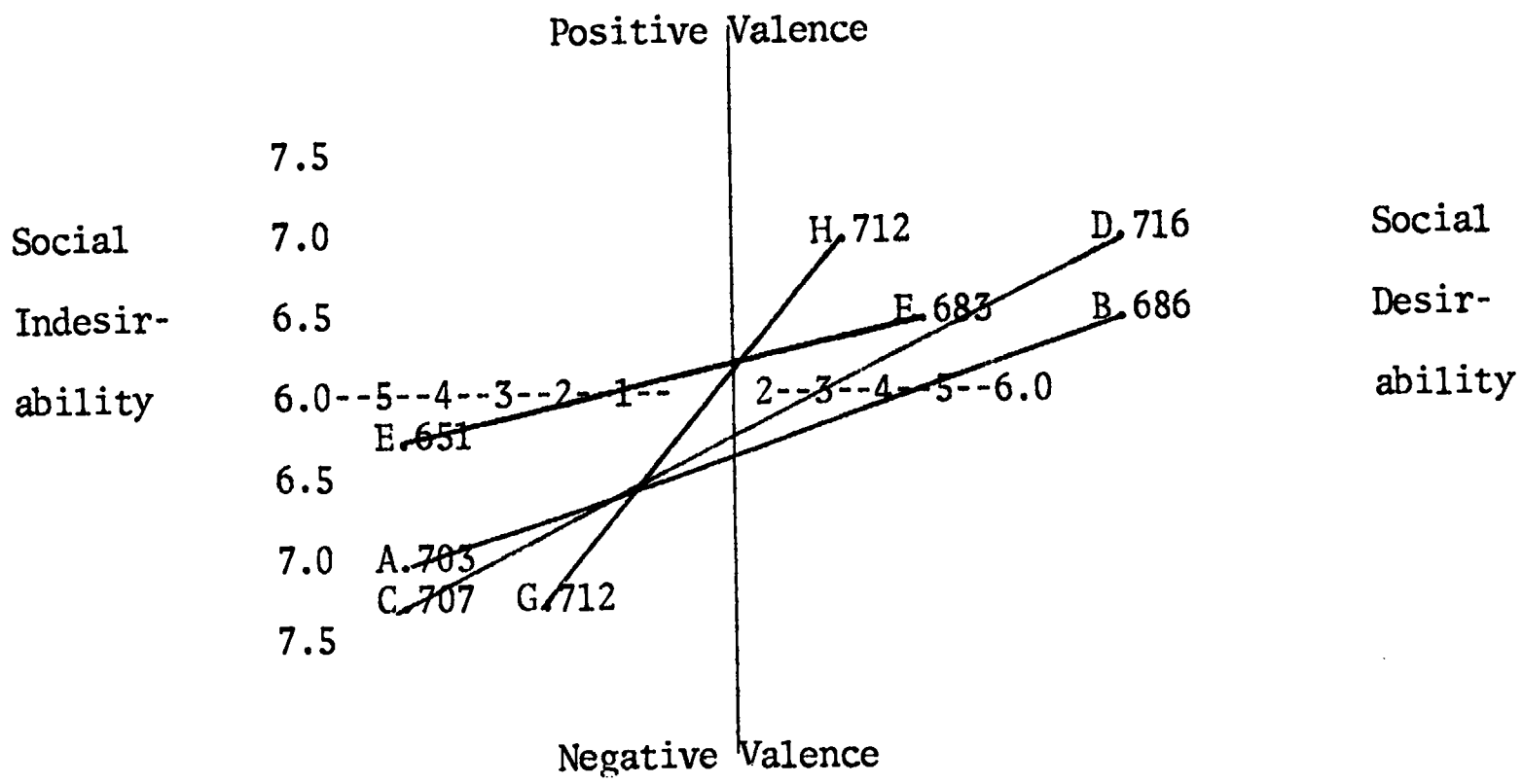
The third cell (E), called Distant (Impersonal, Unreal), is tough minded and sharp. He is an ever present, factual, non-dreaming, thinker with reason and logic. As a knowledgeable individualist, he is stoic, harsh and judgemental. Attempting, but not always with success, he does not try too hard and is not too trustworthy. Hard nosed and not easily fooled, he is sometimes obstinate and thus insensitive. Being somewhat like a non-emotional machine, he is fair, but not very patient with delay or inability. The contrast of this cell, (F) is Intimate (Personal, Real -- which is fatherly, sensitive, kindly and patient). He is gentle, trusting and unselfish, and listens thoughtfully. Totally open and quiet, he is undemanding, courteous and attentive. He contributes deeply conscious feeling. He is well liked and good. He tries, but is not always concretely competitive.

The fourth cell (G), called No Feel, is double the think of the previous cell but not as flattering. He is good, but not outstanding, human or perfect. He gets pressured by time and issues, only half listens and misses the point. He tries and succeeds in doing a better-than-average job. The contrast of this cell, (H) is Feel (which is a rather impersonal stranger, but fair and just and trying). He is fairly sensitive, but somewhat unambitious. Good at adapting, but wanting detached objectivity, he is merely a sponge and does not add of "self" to the situation. Thus he sometimes misses finer points and implications.

These four listener personalities were conceptualized briefly according to social desirability as revealed by their preference patterns.

TABLE 1

PERSONALITY PREFERENCE PATTERNS

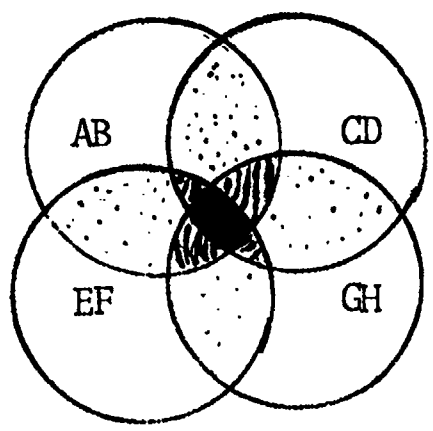


These might also be plotted throughout space in three dimensionality in that they are not to be compared with each other but with preference patterns of individual personalities. Thus they can be said to be in relation to the Kellian constructs of various personality types. Each person can then be placed along the continuum between ends of the four personalities AB, CD, EF, GH.

The respondents viewed as socially negative those characteristics contained within the individual's listening system which by their nature and presence impede the process of that system in its social, communicative functioning. There is a positive-negative attitude involved which differs in social desirability as reported by the respondents.

For the purposes of a working definition in this study, listening was generally conceptualized as the process of using and synthesizing combinations of perceptive sense modalities (interacting) to facilitate communication. Since it is this process of using and synthesizing that is under speculation rather than the physical mechanisms facilitating the process, it is the attitudes and desires, degrees of involvement, abstract and organizational ability, reality, alertness and logicality versus emotional passivity, perceptivity and introspectiveness, standards of toleration and satisfaction that are considered integrally as listening.

A model of these four listening personalities could be conceptualized in the figure below.



The darkened area connecting the four circles is the point of communality to all four types. The areas slashed indicate points highly salient to any three areas simultaneously. The dotted areas are communalities shared by only two areas. The areas of the circles which are not connected represent the characteristics which make each type different.

This model is readily adaptable to the varying "types" of speeches. The areas of exploration which lie within the concept of listening research are also highly vivified by the figure. The "do"s and "don't"s, guidelines

purposes, and goals set forth by R. C. Nichols, Stevens, Brown, Petrie, Duker, Barbara, and others are also applicable.

If we focus on the persons listening, we may also posit that there are differing personalities clustered within the model. AB can start with himself and move to his goal shared commonly by CD, EF, GH in communication. If he reaches his "goal" -- the darkened area on the model -- it can be posited that he moved through a different space from that traveled by any of the other three. It is possible that his system in listening is working as well for him as BC's system did for BC. AB's system may be working more efficiently for him than BC's system would for AB. This may be why AB uses this system. It is also possible that AB has not used the other systems and thus has no evidence that he could not operate just as efficiently or even more so elsewhere. It is also possible that AB would not operate under any of the other systems efficiently even though his system is known not to be the most satisfactory by maximum standards. It may even be possible that there is system X with which AB is totally unacquainted though he would first have to discard his present system AB.

It would seem probable that educators could hope to develop a system of listening instruction through which AB would maximize his efficiency and efforts within the realm of his systems. Prior to this though obviously his system must be isolated and identified in all its uniqueness and components. It is that potentiality to which this study is directed.

The respondents formed a Composite Ideal Listening Personality with the items placed by communalities, shared by all four listener types. The items are listed in entirety as an addendum for your speculation. These can be viewed as habits of listening to achieve and retain, or as goals

toward which to strive in developing a program of listening instruction. If you find areas of overlap within the items they must be viewed as shades of gray in the judgement of the individual listener who must cognitively exercise the extent and direction of acceptableness to which he will affiliate the particular item (s).

A subjective interpretation of the data might describe the ideal listener as follows:

> The ideal listener primarily keeps an open, curious mind. He listens for new ideas everywhere, integrating what he hears with what he already knows. He is also self-perceptive and thus listens to others with his total being or self. Thus he becomes personally involved with what he hears. Being this aware he is not willing to blindly follow the listening crowd. He maintains conscious perspectives in what is going on instead. He looks for ideas, organization and arguments but always listens to the essence of things. Knowing that no two people listen the same way, he stays mentally alert by outlining, objecting, approving, adding illustrations of his own. He is introspective but he had the capacity and desire to critically examine, understand and attempt to transform some of his values, attitudes, and relationships within himself and with others. He focuses his mind on the listening and listens to the speaker's ideas, but he also listens with feeling and intuition.

On any given respondent we must consider the interrelationships and social-behavioral valence, or polarity of the four listening personalities. By focusing on the scores of the Listening Personality Types in the left column below, one can derive descriptions based on the content definitions of those cells which more thoroughly describe the respondent individually.

TABLE 2

PRIMARY GROUPINGS OF LISTENERS

Personality Types	Socially Negative	Socially Positive
A = .703 B = .686	A. Non-Directive	B. Directive
C = .707 D = .716	C. Un-Focused	D. Focused
E = .651 F = .683	E. Distance (impersonal, unreal)	F. Nearness (personal, real)
G = .712 H = .712	G. No Feel	H. Feels

Such a definition for the listener-personality type DGAF (based on rank order from high to low) might include: "objective, readiness, creative eagerness, universal indirection, real and personal." The variations in ordering the score weights indicative of the individual's responses would tend to describe that person's value system or listener approach.

Thus by considering the styles or patterns selected in repeated administrations and by noting differentiation, one could indicate the process of correlates involved in using and synthesizing data by the listener. This incorporates an allowance, or toleration for the dynamics of change in listening and instruction. Provision must be made for such intermediary processes as thinking and feeling to create change or response (change or response being evidence of listening).

With this definition of listening styles, let us consider a projected look into the future for practical incorporation in education. As there is a course called Fundamentals of Speech, there might be a course called the Fundamentals of Listening. It might focus on the Composite Ideal Listening Personality fundamentally. From this one might proceed to concentrate on the selected facets of listening personality correlates unique to his particular style or definition.

For example, the student by entering the program acknowledges a perceived need for improved listening effectiveness. He may identify his own definition of listening style and also his orientation within that definition, specify his goals whether to maximize his potential within that definition or to expand to developing greater effectiveness with one or more other definitions of listening style. Thus from the beginning, the student is essentially given the framework within which to design his particular customized program for improvement. It is speculated that part of the enhancement of effectiveness would be due to the increased motivation from the success of the individual in the creative designation of his needs and potential.

By evaluation with score sheets for types, a pattern of similarities would evolve identifying greatest (1) similarities and (2) individual areas of weakness per person. It might be wise to include the social projections the respondent perceives for others. This would provide further assertion of confidence and integration of the system's internal consistency, both in "actual" and "ideal" situations. Further intensive interviewing is possible by this hand scoring for prescription. This seems to be the simplist and most feasible in accuracy of identification and economy of time for both administrator and student-respondent. At the same time it allows the student

to see for himself what he may need without being deprived of the ultimate goals or objectives. It also provides an introduction to the problem or course. It could provide cluster areas within which to work; and allow the creative teacher some room to navigate.

At this point, after the students have received their personal profile and have been grouped, it would seem possible to begin with a class of any size up to 20 students per instructor. Registration is limited since on this level improvement is the goal by final post test for comparison. The idea is to set up small clusters of like or different types. Supervised tasks, games, assignment type experiences must be given, guiding the student to a better understanding of his system of operation and modification. Lectures, films, etc. might be given to the entire class and also deliberate regrouping to put "experts" in with "learners" on certain points would be advisable. I do not foresee that one instructor could possibly supervise more than four groups of five members on different tasks simultaneously. Thus the idea of team teachers open up. Preaching a point or concept as a way of teaching is less appropriate here than providing opportunity for discovery and practice in a programmed individualized prescriptive course. Since effort is consistent and constant, an attempt should be made to limit activities to shortened periods of perhaps 15 minutes for each task. Supplimentary resource materials should be made available through the use of self instructional soft-ware machinery. Also instructor advisor consultation should be available for further guidance and individual student conferences. Length of the course program would be of necessity variable and on going.

No longer can we assume that the individual must adjust to the course but instead hypothesize that the opposite may be necessary: that the course in listening must adapt to the student. Also coincidental to this evolving conception, one cannot presume to categorize specifically, in advance, all types of people. This would be contradictory to the above premise that the course must be tailored to the individual. However, with the aid of advances in computerization, one might propose a multitude of bits of data programable to identify an individual's present specifications and predict particular areas for improvable effectiveness in listening versatility. With the identification of individual listener personality comes the potential for developing future training programs to develop listenability. Herein we might see a framework for proposing a justified rational "new think" emerging contingent upon the individual's centrality to the issues of listening.

From now on when you walk into the classroom or hear someone say "Huh?" consider his differing vantage on listening and perhaps you will not feel so frustrated when someone else answers! Or perhaps consider the advantages of registering for a course in Improving <u>your</u> Listening Effectiveness!

ADDENDUM

A Composite Ideal Personality

Positive Listening Characteristics

Keeps an open mind.
Is curious.
Listens for new ideas everywhere.
Integrates what he hears with what he already knows.
Listens with his total self.
Perceives self.
Becomes personally involved with what he hears.
Is unwilling to blindly follow the listening crowd.
Is conscious of what is going on.
Listens to the essence of things.
Looks for ideas, organization, and arguments.
Is open minded. Knows no two people listen the same.
Is mentally alert. Outlines, objects, approves, adds illustrations of his own.
Has the capacity and desire to critically examine, understand and attempt to transform some of his values, attitudes and relationships within himself to others.
Listens to the speaker's ideas.
Is introspective.
Focuses his mind on the listening.
Listens with feeling and intuition.
Politely waits his turn to speak.
Realizes that the speaker's intent is now always correctly interpreted.
Notes the effect of that which he hears has upon him and also notes that this knowing how he is being affected affects him.
Wants to know what the speaker is talking about in a down-to-earth sense.
Categorizes facts.
Seeks to utilize all five senses to help himself listen.
Realistically appraises what the speaker does and does not say.
Plans what he is going to say as a rejoinder.
Maintains total awareness in receiving fine details in the total picture.
Seeks to clarify vagueness and ambiguity.
Can empathize easily.
Looks for possible distortions, misinterpretations of information and facts.
Is suspicious of words and distrusts connotations.

Negative Listening Characteristics

Avoids personal involvement in listening, preferring to remain detached.
Strives to be primarily an organ for the passive reception of sound.
Is seldom introspective in listening.
Isolates sounds.
Sometimes allows pressures or conflicts to enter into the listening situations.
Is satisfied without undue demands of further proof or evidence.

Negative Listening Characteristics

Is satisfied with the message others receive.
Listens to details rather than overall essence generally.
Seldom can feel and think and also be turned inward in listening.
Is content to receive the message.
Is good at reading other people's minds.
Avoids transferring his values, attitudes and relationships from himself to others.
Seldom catches what other people do not say.
Will let conflicting affections hinder the intake of the intended message. These are basic to his criteria in judgement.
Finds real personal meaning in sets of words even though they may not convey information.
Is tolerant of abstractions.
Listens only to what the speaker says literally.
Usually hears about the same things heard by most others.
Keeps his personal feelings and reactions to himself.
Prefers to "read into" the unsaid.
Disregards symbols of authority.
Avoids influence of visual cues in listening.
"Gets" the message without worrying about ideas, organization, arguments or other isolated facts and the like.
Insists that generalizations are indefensible.
Is tolerant of abstractions.
Accepts words at their face value with their usual connotations.
Is suspicious of words and distrusts connotations.
Invents his own implications of what is said by the speaker.
Avoids imposing his attitudes and beliefs onto the situation.

BIBLIOGRAPHY

Allport, Gordon W., The Person in Psychology, Boston: Beason Press, 1968.

Arieti, Silvano, The Intrapsychic Self, Feeling, Cognition, and Creativity in Health and Mental Illness, New York: Basic Books, Inc., 1967.

Barbara, Dominick A., The Art of Listening, Springfield, Illinois: Charles C. Thomas, Publisher, 1958.

Barker, Larry L., Listening Behavior, Englewood Cliffs, N.J., Prentice Hall, Inc., 1971.

Berlo, David K., The Process of Communication, New York: Holt, Rinehart and Winston, 1960.

Blake, Reed H., "An Investigation of the Composition of Interpersonal Communication Networks," (Department of Sociology, Brigham Young University), Unpublished paper presented at the International Communication Association, Minneapolis, Minnesota, May 6-9, 1970.

Block, Jack, The Q-Sort Method in Personality Assessment and Psychiatric Research, Springfield, Illinois: Charles C. Thomas, Publishers, 1961.

Brooks, Deems M., "Communication of Values and Interpersonal Growth," (Department of Speech, Florida State University), Unpublished paper presented at the International Communication Association, Minneapolis, Minnesota, May 6-9, 1970.

Cattell, R. B., "On the Disuse and Misuse of P, Q, Qs and O Techniques in Clinical Psychology," Journal of Clinical Psychology, 1951, pp. 203-214.

Coleman, James C., "The Dynamics of Individual and Group Behavior," Part 2, Personality Dynamics and Effective Behavior, Chicago: Scott, Foresman and Company, 1960.

Davitz, Joel R., The Communication of Emotional Meaning, New York: McGraw-Hill Book Company, 1964.

Duker, Sam, Listening: Readings, Vol. I & II, New York: Scarecrow Press, 1966, 71.

_____, Listening Bibliography, Metuchen, New Jersey: The Scarecrow Press, Inc., 1968.

Festinger, Leon, A Theory of Cognitive Dissonance, Stanford, California: Stanford University Press, 1957.

Fruchter, Benjamin, Introduction to Factor Analysis, Princeton, New Jersey: D. Van Nostrand Company, Inc., 1954.

Furness, Edna Lue, "Listening, A Case of Terminological Confusion," Journal of Educational Psychology, Vol. 48, December 1957, pp. 477-482.

Furness, Edna Lue, "Proportion, Purpose, and Process in Listening," Educational Administration and Supervision, Vol. 48, December 1957, pp. 237-242.

Gibson, James J., The Senses Considered as Perceptual Systems, Boston: Houghton Mifflin Company, 1966.

Jessor, Richard, and Feshbach, Seymour, Cognition, Personality and Clinical Psychology, San Francisco: Jossey-Bass Inc., Publishers, 1968.

Jourard, Sidney M., Personal Adjustment, New York: The MacMillan Company, 1967.

_____, The Transparent Self, Princeton, New Jersey: C. Van Nostrand Company, 1967.

Kelly, Charles M., "Listening: Complex of Activities - and a Unitary Skill," Speech Monographs, XXXIV, November 1967, pp. 455-466.

_____, A Theory of Personality, New York: W. W. Norton and Company, Inc., 1963.

Maslow, Abraham H., Toward A Psychology of Being, Princeton, New Jersey: D. Van Nostrand Company, Inc., 1962.

Maltz, Maxwell, Psycho-Cybernetics, New York: Princeton-Hall, Inc., 1960.

McHenry, Dale E., Major USAF, "The Effect of Note Taking Activity on Listening Comprehension in an Immediate Recall Situation," Unpublished paper presented at the International Communication Association, Minneapolis, Minnesota, May 6-9, 1970.

McQuitty, Louis L., "A Measure of Personality Integration in Relation to the Concept of Self," Journal of Personality, Vol. 18, 1950, pp. 461-482.

_____, "A Method for Selecting Patterns to Differentiate Categories of People," Education and Psychology Measurement, Vol. 21, Spring 1961.

Monaghan, Robert R., "Measurement in Speech Education," The Communicative Arts and Sciences of Speech, Edited by Keith Brooks, Columbus, Ohio: Charles E. Merrill Books, Inc., 1967.

_____, and Martin, James G., "Symbolic Interaction: Analysis of Listening," The Journal of Communication, Vol. 18, June 1968, pp. 127-130.

Mooney, Ross L., "Creative Teaching," Edited by E. D. McDaniel, Creativity and College Teaching, Published as Vol. XXXV of the Bulletin of the Bureau of School Service, University of Kentucky, Lexington, 1963, pp. 45-62.

_____, "A Conceptual Model for Integrating Four Approaches to the Identification of Creative Talent," A Report from the Bureau of Educational Research, Ohio State University, Columbus, Ohio, 1957, p. 8.

Mooney, Ross L., "Creation: Contemporary Culture and Renaissance," The Journal of Creative Behavior, Vol. 1, No. 3, July 1967, p. 279.

Morton, Richard K., "Psychosocial Obstacles to Interpersonal Communication," Unpublished paper presented at the International Communication Association, Minneapolis, Minnesota, May 6-9, 1970.

Nichols, Ralph G., "Do We Know How To Listen? Practical Helps in a Modern Age," Speech Teacher, Vol. 10, March 1961, pp. 118-124.

Payne, Stanley L., The Art of Asking Questions, Princeton, New Jersey: Princeton University Press, 1951.

Pflaumer, Elizabeth M., "A Definition of Listening," Unpublished Master's Thesis, The Ohio State University, Columbus, Ohio, 1968.

_____, "Personality Correlates of Effective Listening," Unpublished Doctoral Dissertation, The Ohio State University, Columbus, Ohio, 1970.

Rock, Irvin, The Nature of Perceptual Adaptation, New York: Basic Books, Inc., Publishers, 1966.

Rogers, Carl R., On Becoming a Person, New York: Houghton Mifflin Company, 1961.

Schuelke, L. D., "A Critical Look at the Validation of the Effective Listening Course of Basic Systems Incorporated," Unpublished paper presented at the International Communication Association, Minneapolis, Minnesota, May 6-9, 1970.

Stephenson, William, "The Centrality of Self," The Psychological Record, Vol. 11, No. 1, Granville, Ohio: Denison University Publishers, January 1961, pp. 18-25.

_____, "Independency and Operationism in Q-Sorting," The Psychological Record, Vol. 13, 1963, pp. 269-272.

_____, "The Play Theory of Mass Communication, Chicago: The University of Chicago Press, 1967.

_____, "Some Observations on Q-Methodology," Psychology Bulletin, Vol. 49, 1952, pp. 483-497.

_____, The Study of Behavior: Q-Technique and Its Methodology, Chicago: The University of Chicago Press, 1953.

Tart, Charles T., ed., Altered States of Consciousness, A Book of Readings, New York: John Wiley & Sons, Inc., 1969.

Thompson, G. H., The Factorial Analysis of Human Ability, Boston: Houghton Mifflin Company, 1950.

Wiener, Norbert, The Human Use of Human Beings, Cybernetics and Society, Boston: Houghton Mifflin Company, 1954.