

The Assessment Interview: Metalinguistic Strategies in Management Assessment Practices

© 1994. American Psychological Association (This article may not exactly replicate the final version published in the APA journal, Consulting Psychology Journal: Practice and Research. It is not the copy of record. See: <http://www.apa.org/journals/cpb/>)

Joseph Yeager and John Brenner

Abstract: Observing that the field of executive assessment has not significantly evolved during the past two generations, the authors draw the following conclusions. Old fashioned, obsolete, psychological tests continue to provide generalized labels without giving meaningful answers about what is being measured. The almost universal employment of interviews in conjunction with these tests has permitted assessors to apply intuitive metalinguistic strategies to the assessments. It is this intuitive analysis of linguistic behavior which gives executive assessment its validity as a predictor of future success. The authors suggest that conscious, intentional linguistic approaches to assessment will enhance its effectiveness and advance the integration of the fields of psychology and behavioral linguistics.

An Inquiry

A recent study of management assessment practices by Ryan and Sackett (1990) came to this conclusion: "Individual assessment has been a little researched topic, in part due to the great variation in practice which makes generalization of findings difficult."

This conclusion should come as no surprise to consultants involved in the assessment and behavior and the prediction of performance potential. In fact, as psychologists with extensive experience in executive assessment, the authors devised an informal survey consisting of an interview and a questionnaire for practicing corporate psychologists engaged in routine executive assessment practices in Fortune 500 companies. Based on the understanding that the world of business provided a results-oriented approach to assessment, our intent was to survey new assessment approaches and to gain updated insights into assessment practices from corporate psychologists.

After sixty-eight interviews were conducted the authors discontinued the inquiry. The initial hope of uncovering new instruments or approaches that have direct bearing on improvements in executive assessment gave way to the realization that the field of assessment has not evolved much compared to a generation or two ago in terms of the traditional psychometric measurement tools and their related rationales. The psychologists all utilized a variety of paper and pencil assessment inventories as well as other devices such as in-baskets and interviews, but the reigning approach could only be characterized as eclectic.

There was, however, one intriguing constant among all the psychologists interviewed, and that was the interview. Despite the low marks consistently given to the interview in the professional literature over the years (Meehl, 1954, chief among them), in the "real world" of corporate psychology the interview was the one test all agreed to be indispensable in the assessment process. Closer examination of this discovery has led the authors to the following conclusions: 1) Corporate assessment psychology—and by extension all of assessment psychology—has developmental needs; 2) The interview is universally used because of the assessors' intuitive metalinguistic strategies; 3) Conscious, intentional linguistic approaches to assessment will enhance assessment effectiveness and further the field.

Where in the Field?

Garden variety psychological tests, as assessment devices, have a long history and cover a great deal of ground, including where they fit into an assessment rationale for business. Perhaps tests are not used as enthusiastically as 30 years ago, but they are still a major part of current practices. Table 1 and Table 2 provide an

overview of the large number and wide variety of psychologists surveyed. Psychological tests used by most assessors included well-known tests such as the MMPI, the California Personality Inventory, the 16PF and locally developed in-baskets. By and large, everyone has his or her own way of doing things, and, consequently, opinions varied about the ingredients of an effective assessment program.

The first question that must be asked is why such a lack of consensus prevails in assessment practices. Eclectic approaches in any field are generally synonymous with the absence of a fully developed and workable technology suited to the problems at hand. Eclecticism in this regard is also synonymous with “theory” and current assessment testing and measurement practices are a mixed bag of theories, methods, and assumptions varying from one practitioner to the next.

Although scientific method is implied in the work of practitioners on a case by case basis, our inquiry in fact reflected the absence of a coherent strategic or technological framework among management assessment practitioners.

tests currently being used by the
This lack of a fully developed technology limits the impact of the practitioners. In addition, and perhaps significantly, the prevailing approach is practiced within the confines of psychometric and measurement traditions that currently set the stage for assessment. Such reliance on the correlational technology has been exploited to its limits for assessment. Business pursuits demand the identification of causal relationships among phenomena, and as will be treated later in greater detail, the limitation of correlational practices is that they separate the linguistic components of stimulus and response.

What in any case appears evident is that fragmentation characterizes the field of executive and management assessment. Bohm and Peat (1987) offer suggestions for why this situation persists;

A more general subliminal cause of fragmentation in science involves what might be called “the tacit infrastructure of scientific ideas.” Some of our most valuable skills exist in the form of such a tacit infrastructure knowledge.

Table 1

Percentage of survey respondents utilizing types of tests in management assessment

Setting	Personality	Intelligence	Values	Temperament	Interest	In-Basket	Sales	Management
Outplacement Firms	50.00%	20.00%	0.00%	10.00%	10.00%	0.00%	5.00%	5.00%
Independent Practitioner Industrial Psychologists	47.00%	15.00%	0.00%	5.00%	21.00%	5.00%	2.00%	5.00%
Testing Labs	50.00%	12.50%	12.50%	2.00%	12.50%	0.00%	0.00%	12.50%
Totals	50.00%	15.50%	1.00%	6.00%	15.50%	3.00%	3.00%	6.00%

Note: N=68

A child, for example, spends long hours with a bicycle before suddenly learning to ride. Yet, once the new skill is acquired, it never seems to be forgotten. It takes a subliminal and mainly unconscious form, since no one actually “thinks” about how to ride a bike... Most scientists, for example, carry out their research by using experimental techniques or applying established theories that were first picked up in graduate school... But science, like everything else is in a constant process of evolution and change... The results of this change is that the underlying tacit infrastructure of concepts and ideas may gradually become inappropriate or even irrelevant. But because scientists are accustomed to using their tacit skills and knowledge in subliminal and unconscious ways, there is a tendency of the mind to try to go on working in old ways within new concepts. The result is a mixture of confusion and fragmentation.
(p.20-22)

The mixed bag of tests and the implicit reliance on the correlational model found in our inquiry at the very least invite closer examination of the methods and theoretical foundations of the field. This need for a fundamental look is further strengthened by the fact that corporate psychologists routinely assess people with a significant degree of success—given their continued employment as a testament to competence. In other words, a subliminal strategy among assessors appears to be responsible for their continued success, and it makes circumstantial sense that this strategy would be related to the only common denominator among utilized tests—the interview.

Assessor Intuition

The relationship between traditional psychometric measurement rationales favoring normative and statistical approaches and the assessors’ universal reliance on the interview can be explained as nothing less than the difference between statistical and experimental method. In short, sophistication in correlational psychometrics and statistics is not the same as having in hand the mechanisms of behavior needed for a truly scientific approach to

assessment. Statistical technique is not necessarily synonymous with behavioral technology, and assessors are limited by a pervasive over-reliance on statistical rather than experimental methods. This inherent methodological

Table 2
Paper and pencil tests used for management assessments

- Adult Career Concerns Inventory
- Allport Lindsey Temperament
- Analytical Judgment
- Battery of Mental Abilities
- Budner Scale
- California Psychological Inventory
- Diagnosis Test for Management Development
- Edwards Personal Preference Scale
- Employee Aptitude Survey
- FIRO-B
- Gilford Zimmer Aptitude Tests
- Gilford Zimmer Temperament Survey
- Hogan Tests of Personality
- Holland Self Direction Search
- How Others See Me
- How to Supervise
- Leadership Opinion Questionnaire
- Meyers Briggs Type Indicator
- Nelson Picture
- Pappy Preference and Perception Inventory
- Raven Matrices
- Rorschach
- Rotter Incomplete Sentence
- Sales Comprehension Test
- Sixteen (16) PF
- Strong Vocational Interest Blank
- Thurstone Temperament Schedule
- Watson Glaser Critical Thinking

(Two unnamed In-Basket Exercises)
Tests in use by survey respondents

shortcoming is masked by customary psychometric perspectives and commonly accepted techniques for working with assessment data.

The key to understanding the present state of affairs in assessment is the fact that psychology lacks an effective behavioral classification system. This handicap is one certain indicator of the field's developmental needs, for without a system to classify things there is no way to predict in a causal manner the interactions of all the important forces on the person undergoing assessment. Yet this situation is precisely what leads assessors to highly value the interview. It compensates for the intrinsic problems contained in the assessment battery. The normative, statistical/actuarial measurement approach is intuitively placed in a secondary role by the assessors while the ipsative, clinical experimental approach unknowingly comes to the foreground. In other words, it happens that linguistic testing (the interview) becomes the basis for rendering meaning from all of the other tests.

Since the interview has routinely received poor marks for validity, one can legitimately wonder why this is so. For instance, Paul Meehl (1954) compared clinical judgments versus actuarial prediction in his landmark work and gave the nod to the actuarial approach for its effectiveness. But his assumptions about the issues at stake did not include the hidden forces of linguistic factors as the source of practitioner preference for the clinical approach. Instead, he focused on the secondary phenomena of clinical interview content rather than the language substructure. In spite of his influence, practitioners have continued to rely on the interview as the primary tool regardless of its low technical esteem.

Clearly, there is very little in common among the elements of data represented by, say, the MMPI, a Weschler IQ, a Rorschach, a background check, a resume and an interview. How could such extremely diverse inventories be blended into a report that would make sense? Synthesizing this diversity is like assembling a jigsaw puzzle out of mismatching brands, sizes and types of parts. Assessment psychologists have nevertheless intuitively found a common denominator: the only common ground for such analysis is the internal consistency of the practitioner's own intuitive linguistic logic.

That the assessor is the ultimate test in an assessment battery is hardly earth-shattering news in some quarters, but how and why this works is

worthy of due consideration. Essentially, it is our contention that unconscious linguistic meta-strategy used by the practitioners, informs the maneuvers of professional thinking required to integrate the findings of the tests. In other words, the psychologists are dependent on the linguistic architecture of everyday language as the basis for synthesizing their data and being effective. They have sorted and refined it as they have gained experience in adapting "academic" tools to the demanding world of business, but at the root lays the practitioner's own intuitive linguistic logic.

Such unconscious linguistic metastrategies are in fact a commonplace. At a deep intuitive level, most people know when things are linguistically logical. Native speakers of any given language usually understand whether what someone says makes sense or not. English speakers, for example, would intuitively agree that "Joe out the door fairly he went" is not well spoken. There are built-in rules of knowing whether a spoken or written statement is either well-formed or ill-formed.

Contrasting the limits of the traditional measurement rationale and the psychologists' intuitive ways of working shows the value of measuring people by their linguistic behaviors. After all, as a species we do more communicating to one another linguistically than anything else. In addition, true measurement or assessment must be dynamic, and behavior is the only choice for measuring performance.

Language as Behavior

Through their reliance on real-time interviews, assessment practitioners obtain dynamic measurement not available to them with correlational and parametric statistical approaches. That dynamic behavior can be measured from language rests on the fact that linguistic assessment strategies retain the vital dynamic linkage of stimulus and response (question and answer, cause and effect) as well as the context in which those strategies occur (Bandler and Grinder, 1975). Simply put, language is behavior, and the structure of a person's language logic can be measured dynamically for executive problem solving strategies.

As it turns out, such language-logic strategies are typically much more complex than the tests being used by practitioners (Dilts, et. al. 1980; Dilts and Yeager, 1990). It would seem, in fact, that the psychologists involved in our inquiry realize that only the interview and interviewer currently have the requisite variety to capture the degree of complexity evident in linguistic strategies. So while there are many items of disparate character in an assessment battery, they are managed together by virtue of their ability to be viewed and expressed in language logic by the assessor. In other words, those in the assessment world seem to be implicitly following the advice of Miller (1962), who stated that “one of the best ways to study the human mind is by studying the verbal systems that it uses” (p.762).

The link between language and behavior has never been questioned in psychological measurement, but in the interests of efficiency most assessments tests are cast in some form of multiple choice format. Group average, norms and other aggregate observations then fragment and distort the observations being made by further separating the answers from the questions. Yet, eliciting the before and after behavior of the person and utilizing the underlying mechanism of change is critical because it connects the elements of the performance in question.

As an illustration, consider the typical testing practices which derive from the standard question and answer format. To ask a series of questions in a multiple choice Likert Scale format is limiting in the extreme. That is, when the answers are scored a derived number or an index of some sort supposedly characterizes the behavior being surveyed. In fact, the answers have been separated from the responses. And if factor analysis has been applied, as it has been with the majority of instruments, there is further compounding and separation of the questions and answers. This is a terrible loss of the cause-effect linkages and the mechanisms in the assessee’s logic. In contrast, methods of content analysis deliver a great deal more information of relevance and power as shown by McClelland (1953), Weiner (1972), Miller (1990) and others.

In essence, when most paper and pencil tests are administered, something goes wrong immediately. The person answers the questions according to some sort of scale. It might be

Yes/No or a scale of 1 to 5 perhaps 1-10. Then, typically, the answers are scored accordingly to a scoring key. The summarized answers are then given a name to place them in perspective within the scheme of some theoretical rationale. Yet a score of “5” for an individual being tested for communication skills, for example, reveals not a single thing about what parts of communication the person does well or poorly, and there is no connection between what the person thinks and how the person behaves. Without the behavioral mechanism it is exceedingly difficult to target the real problem. And it is exactly at this point of obtaining the misleading assessment findings that experience assessors override the labels and substitute their own intuitions to identify the real issues.

The old-fashioned paper and pencil way merely gives a generalized label without a meaningful answer about what is really going on. Such generalization itself represents flawed linguistic logic as described in Bandler and Grinder (1975). The conventional approach also provides no way to use the answer to manage the situation. On the other hand, with a single question such as, “Do you like to be in charge of other people?” assessors can explore the meaning of that answer and relate it to the specifics of the context and tasks at issue. Of course, to have any validity, there must be a very effective scoring system for the content analysis of the verbal responses. Bandler and Grinder (1975) and Yeager (1991) have provided exactly such scoring systems for assessment purposes.

With questions like the one given above, the purpose of contrasting the connection between question and answer against a task is clear. Moreover, the measures are consistent since content analysis is used similarly to real life conversations. This is an important consideration in view of the fact that from a linguistic perspective, people manage behavior on a day to day level with far greater acumen that is generally understood even by psychologists. The value of language as a viable avenue of pursuit for general psychology has been stated by Miller (1990).

One of the psychologist’s great methodological difficulties is how they can make the events they wish to study publicly

observable, countable, measurable. It is significant to note that the device most often used for conversation from private to public is language. Thus speech is a crucial problem for psychology. None of their other activities gives the same sort of insight into another person as does their language. Since people spend so much of their waking hours generating and responding to words, no general theory of psychology will be adequate if it does not take account of language (p.7).

As mentioned, in an unconscious way the assessors encountered in our inquiry have actually taken language into account as suggested by Miller. The assessors use the language of the interview and the in-basket types of tests to keep the stimulus and response, the questions and the answers connected. In fact, the assessors are using content analysis techniques during the interview in the same vein as David McClelland's work on motivation. With data that keeps the assessee's thinking, logic and language patterns intact, the assessor draws substantially valid conclusions about the person's motivation (McClelland, 1953). From the heavy reliance on interviewing and the business demand for concrete results, it is apparent that the intuitive priority assigned to the interview is justified for these practitioners as a vehicle for identifying issues of substance.

Intuitive Linguistics

McClelland (1953) formalized a linguistic method to measure the strength and type of a motive by counting the type and frequency of words used by the person. Managers and executives have relied on an intuitive rule of thumb version of McClelland's methods for generations. Some are just better at it than others. It has been noted, for example, that an English major is often better attuned to linguistic assessment than is a psychologically trained expert (Sommer, 1987). The English major has been taught an exquisite sensitivity to actual language use in oral and written communications. In contrast, the psychology major has been trained in theory and abstract psychometrics that can be far removed from the actual behavior of the executive suite.

So when considering a conversation or interview as an appropriate measure of a person's

behavior, the skill of the interviewer becomes the important factor. Assessors and managers trust the interview because dialogue is an effective assessment device. Persuasive dialogues are a case in point. Anyone who has ever suffered buyer's remorse after an ill-advised purchase can appreciate the conversational skill levels attained by true sales professionals. Such an advanced level of verbal skill is often expected in management ranks; thus, facility with language is a logical focus of assessment attention.

Content analysis, unconsciously organized to suit the views of the individual practitioner, is the main vehicle used for identifying important performance characteristics when employing linguistics as the blueprint of performance mechanisms. The intimate link between language competence and success has been defined by Benjamin Whorf (1956), and the connection to measurement can be found in many sources (Merluzzi, et. al. 1981). Assessors build a story out of words to understand the person being studied in terms of their words and communicate their finding via still more words using the common denominator of that communication, i.e., linguistic architecture.

Linguistics, in our view, is the hidden source of whatever degree of qualitative success occurs in the field of business assessment because conversation (the interview) allows a linguistic experiment to occur. As encountered in daily conversational contact with people, experiments with cases of N=1 work quite well. Suppose, for example, you are at a cocktail party and are introduced to someone. This person begins to talk at length about himself or his career and does not bother to gain rapport or your interest. His favorite words are "I, me, my and mine." Your patience runs out when the person exceeds your threshold of first person pronouns and possessive adjectives. You will likely decide that this person is self-centered and start to do a sideways shuffle to the bar to escape.

All of us have on benchmark in our mind that keeps track of the number of times the "other person" used pronoun and adjectives such as I, me, my and mine. When someone goes beyond that certain threshold (depending on one's patience), we decide how inconsiderate or self-centered he or she is. We accomplish this

test simply by intuitively counting words—no theory, no constructs to confuse things. And the measure is at the sophisticated and solid level of ratio scales with an absolute zero as opposed to nominal, ordinal, or interval scales, which are troublesome psychometric devices (Yeager, 1989).

In fact conversational linguistic tests of language well-formedness and the measurement of interventions on a before and after basis are routine in linguistic encounters. Decisions are made daily much as in our cocktail party scenario based on a mechanism that operates out of awareness but is there nonetheless. A well trained observer of linguistic phenomena will have the ability to analyze an executive's linguistic moves, but even those not trained in linguistic analysis intuitively understand the basics of such measurement.

In clarifying the far reaching implications of linguistic measurements for assessment, it must be understood that much of this behavioral linguistic approach utilizes the findings initiated by the seminal work of Harvard's David McClelland (1953). When he worked on the identification of three important motives—power, affiliation and achievement—assessment gained an insightful new view of performance. While there are many motives that drive people, McClelland definitively demonstrated that a person's motives are characterized by the person's typical choices on how he or she interprets a given situation and communicates that understanding in words. Those words can then be effectively analyzed for assessment, prediction and behavior change applications.

In fact, the little cocktail party example has implications that go far beyond a simple exercise in salient word counting. When a successful executive takes a measure of someone to select for his or her team, he or she is using a process of the type illustrated in the party example. The difference of course is that the tests are much more sophisticated and based on an intuitive linguistic knowledge that evaluates the person's use of language (both verbal and nonverbal). But rather than out-of-context pen and paper test statistics to make the assessment, the observer is using real-world language based on a personal real-time analysis of the communication patterns and characteristics of the assessee.

In short, the practicing psychologists in the business world are well ahead of the lagging technology in terms of their intuition. Language is the vehicle commonly used to engage the world in pursuit of goals, and as such it reflects a person's mode of organizing resources to pursue goals. Implicit in the strategies used by assessors was a linguistic base, borne out by their reliance on the dynamic measurement offered by the interview. This application of linguistics as a common denominator to the assessment effort should in one sense come as no surprise. As Whorf put it:

“We dissect nature along the lines laid down by our native languages. The categories and types that we isolate from the world of phenomena (are due largely) to an agreement that holds throughout our speech community and is codified in the patterns of our language. The agreement is, of course, an implicit and unstated, *but its terms are absolutely obligatory.*” (Whorf, 1956, p. 213-214).

Linguistic Assessment Approaches

Consider this definition from a sixth grade English textbook: “A sentence is a group of words expressing a complete thought.” Accordingly, the sentence is a primary unit of linguistic analysis and, by extension, of executive performance. It seems cogent then to assess the logic of language usage if what is sought is some measure of thinking processes and inventiveness. And even such a simple definition of a sentence as given in a grade school primer implies there are rules we use when we think in language. In turn, what we think determines what we do. This is also of prime importance to assessment because if language is rule based it necessarily engenders repeating behavior—and repetition means behavior can be predicted.

The potential value of linguistics to assessment cannot be overstated. As stressed by Bock (1990), there simply needs to be a repertoire of models of the appropriate combinations of language variables. There are a number of efforts in this direction and a modest mention of a few examples are those of Teglassi (1993), Gersie and King (1990), Schank (1990), and White and Epston (1990), all of whom work

with narrative analysis as the basis of assessment and change efforts.

Perhaps the most profound issue for psychological assessment as a whole is the fact that traditional assessment is based in theory or constructs. Linguistic approaches, on the other hand, are based on observation and behavioral modeling of the language that expresses the thoughts of the assessee. Language usage in communication defines the rules of the individual and allows prediction to occur in very effective terms. This is similar to what happens when we get to know individuals intimately; we learn to predict their behavior on the basis of patterns that have been communicated during everyday shared experience. Such predictions also can be done using less time and requiring less intimacy when one has well developed linguistic tools.

Summary

The hidden linguistic meta-strategy used by assessment psychologists in the business world points to several related conclusions. First of all, assessment psychology has developmental needs not being met by traditional assessment processes. Secondly, the interview, and its underlying intuitive measurement, appears to compensate for the counterproductive fragmentation of assessee behavior caused by typical assessment practices in the field. This conclusion is supported by measurement expert Lee Cronbach, quoted by Most (1993) as saying: “As soon as I had data to inspect, I kept finding that the methods of measuring and summarizing introduced artifacts—relationships that had nothing to do with the persons measured and everything to do with the choices the inquirer had made. Furthermore, these choices often buried important relationships” (p. 30).

The most promising conclusion the authors have drawn is the conscious, intentional linguistic approaches to assessment will enhance assessment effectiveness and advance the inevitable and worthy integration of psychology and behavioral linguistics. Assessors have demonstrated an abiding respect for the whole person that surpasses the limitations of their assessment tools. Their well-honed intuitions are largely linguistic in nature, as shown by the fact that the common denominator to their varied assessment styles and

strategies is language, the medium of communication.

References

- Bandler, R. & Grinder, J. (1975). *The structure of magic*, (Volumes I & II). Palo Alto, CA: Science and Behavior Books.
- Bohm, D. & Peat, F.D. (1987). *Science, order and creativity*. New York: Bantam Doubleday.
- Bock, K. (1990). Structure in language. *American Psychologist*, 45, 1221-1236
- Cronbach, L. J. (1989). Lee J. Cronbach, In G. Lindzey (Ed). *History of psychology in autobiography*, (Vol. 8). Stanford CA: Stanford University Press.
- Dilts, R., Bandler, R., Grinder, J. & DeLozier, J. (1980). *Neuro-linguistic programming: The study of the structure of subjective experience*, (Vol. I). Cupertino, CA: Meta Publications
- Dilts, R. & Yeager, J. (1990). *Overcoming resistance to persuasion with neuro-linguistic programming*. Ben Lomond, CA: Dynamic Learning Publications.
- Gersie, A., & King, N. (1990). *Storymaking in education and therapy*. London: Jessica Kingsley Publishers.
- McClelland, David (1953). *The achievement motive*. New York: Appleton-Century-Crofts.
- Meehl, P. (1954). *Clinical verses statistical prediction*. Minneapolis: University of Minnesota Press.
- Merluzzi, T. V. & Glass, C. R. & Genest, M. (Eds.) (1981). *Cognitive assessment*. New York: New York University Press.
- Miller, G. A. (1962). *Some psychological studies of grammar*. *American Psychologist*, 17, 748-762
- Miller, G. A. (1990). The place of language in a scientific psychology. *Psychological Science*, (Vol.1, No.1.), 7-14
- Most, R. (1993). Lee J. Cronbach : Asking the right question. *The industrial Organizational Psychologist*. May 1993, 28-33
- Ryan, A. & Sackett, P. (1990). *Individual psychological assessment for personnel decisions: The effects of graduate training and professional affiliation*. Doctoral dissertation. Bowling Green State

- University and University of Minnesota.
- Schank, Roger C. (1990). *Tell me a story: A new look at real and artificial memory*. New York: Macmillan Publishing Company
- Sommer, L. (1987). Annual Practitioner Training in Behavior Change Technology. Newtown, PA: CommTech Group, Inc.
- Teglasi, H. (1993). Clinical use of storytelling. Needham Heights, MA: Allyn and Bacon.
- Weiner, B. (1972). *Theories of motivation: From mechanism to cognition*. Chicago: Rand McNally.
- White, M. & Epston, D. (1990). *Narrative means to therapeutic ends*. New York: W.W. Norton & co.
- Whorf, B. (1956). *Language thought and reality* Cambridge, MA: MIT Press
- Yeager, J. (Winter/Spring 1991-1992). Using linguistic methods to improve executives' goals strategies. *Consulting Psychology Bulletin*, (V. 43, No.1).
- Yeager, J. and Sommer, L. (1989). The rise of behavioral linguistics in assessment and prediction. Presented to the annual meeting of the Academy of Behavioral Technology. Santa Cruz, CA