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NO.4933

PREDICTING SUCCESS AND FAILURE IN LIFE INSURANCE SALES:
A COMPARISON OF THREE PSYCHOLOGICAL METHODS

THESIS

Presented to the Graduate Council of the
North Texas State University in Partial
Fulfillment of the Requirements

For the Degree of

MASTER OF SCIENCE

By

George W. Dudley, B.A.

Denton, Texas

December, 1974

Dudley, George W., Predicting Success and Failure in Life Insurance Sales: A Comparison of Three Psychological Methods. Master of Science (General Experimental Psychology), December, 1974, 60 pp., 7 tables, bibliography, 52 titles.

The marketing of personnel assessment services by a variety of individuals and groups has developed into a highly competitive, somewhat unstable, and unusually controversial major American merchandising effort. This study contains a review of the promotional materials and activities of several commercial assessment organizations. Emphasis has been placed upon various "scientific breakthroughs" in the field, including, when possible, the descriptive as well as the predictive utilities that are claimed to result from their use.

Three procedures were studied under actual industrial conditions, using tenure and productivity measures as criteria. None of the procedures was found to be significantly predictive in this instance.

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CHAPTER I

INTRODUCTION

The need for improved personnel selection procedures has been a major contributor to the development of psychological assessment devices and services, and still is. Probably no area within personnel selection in industry has received more attention, over a longer period of time, than has the selection of life insurance agents. Repeatedly high rates of failure and turnover among agents has created an environment of need which has resulted in comprehensive research projects which have produced well documented and meaningful selection systems and a variety of commercial assessment organizations--some of which have chosen to promote their products and services in ways that are not always characterized by a respect for scientific caution or modesty.

Some of these firms have developed elaborate marketing strategies and promotional materials. Advertisements may frequently contain claims of unique methodologies (such as the "scientific breakthrough"), the apparent removal of scientific complexity (such as "ease of application"), and appeals to nebulous sources of authority (such as "the scientific method," or "broad business experience").

The review that follows consists of examples taken from the current promotional practices of some commercial personnel assessment and prediction organizations. These examples are included to provide some insight into the current status of the commercial personnel assessment industry, and into its promotional tactics. No formal attempt has been made, however, to select examples at random, or to necessarily include representative examples, or to review the practices of all commercial assessment firms. Furthermore, it is not the intention of this study to cast doubt upon the validity or the utility of the products and services offered by the organizations included as examples in this review.

Promotional strategies are not necessarily limited to the production of letters, brochures, and booklets. Occasionally, a respected professional magazine or journal may contain articles about selection problems and practices, which may seem at first to be informational, but upon closer examination, appears to be promotional. A few years ago, an article appeared in the Harvard Business Review. The article was written by Mayer and Greenberg, and was entitled "What Makes a Good Salesman?" They begin by stating that

More than 35 years ago, the life insurance industry embarked on an intensive program to solve the problem of costly, wasteful turnover among its agents. Estimates at that time indicated that there was a turnover of better than 50% within the first

year and almost 80% within the first 3 years. After the expenditure of millions of dollars and 35 years of research, the turnover in the insurance industry remains approximately 50% within the first year and 80% within the first 3 years (26).

After identifying themselves with this problem, Mayer and Greenberg propose their solution. "Our basic theory is that a good salesman must have at least two basic qualities: empathy and ego strength." Next, they claim that an assessment procedure that they use measures "central dynamics rather than traits," and that the corollary implication of this is a "positive method of predicting sales success that is beyond what has been done to date." Then, they briefly review what has been done to date, and conclude that the problems with traditional methods of personnel testing are due to: interests being measured, and not ability; the fakability of tests; biases toward group conformity, and not individual creativity; and the traitological approach, which does not reveal the "whole dynamics of the man." They note some improvement, however, in testing procedures, when they say that ". . . of late, personality testing, especially with the increasing use of projective techniques, has gained a certain level of sophistication." It probably should be noted that some psychometricians would dispute this point. Cronbach (5) is critical of certain projective testing practices, and Nunnally states that most projective techniques do a poor job of measuring personality traits, and further says that

"In applied settings, the evidence is clear that projective techniques have, at most, only a low level of validity in predicting criteria" (31).

Smith (35) cites a study by Chance and Meaders. They investigated the phenomena of empathy, and produced behavioral descriptions which would appear to be inconsistent with Mayer and Greenberg's construct of the empathetic and ego-driven successful salesman. No data appeared in Mayer and Greenberg's article in support of their theoretical position, or in support of their assessment and prediction procedures.

The Management Counselors Associates, of Los Angeles, California, market what they call "design perception cards." This procedure is described as "a projective personality test developed for personnel selection in business and industry," and measures several dimensions--one of which is empathy. It is claimed, by Management Counselors Associates, that "Recommendations from DPC (design perception cards) tests results have a very high positive correlation with the recommendations derived from more extensive testing" (7). It is not stated, however, what correlation may be expected between the recommendations derived from administrations of the design perception cards and work-related criteria. The professional staff of Management Counselors Associates is listed as: Charles A. Colenaty, M.A., "President and Director of Consulting and Research;"

John W. McKelligott, Ph.D., "Clinical Psychologist, Director of Testing and Evaluation Services;" and Bill Champion, B.C., "Director of Management Training Services." The promotional material obtained from Management Counselors Associates did not include a fee schedule.

William H. Ennis in a chapter entitled "Misuses of Tests" is critical of validation data that are not criterion-related. He says:

The primary danger of using tests as criteria is that a statistically valid but fundamentally irrelevant employee selection system might be established that favors job applicants with test-taking skills. Employee selection systems of that type cannot be defended on business, professional, or social grounds (8).

Hamilton, Wyatt and McDowell of New Orleans, Louisiana, promote the use of their "Success Index Questionnaire." In a letter addressed to "Mr. Agency Director," Mr. McDowell requests: "Have one of your agents - one you know well - complete it and send it to us. We'll send you the completed Success Index analysis within 24 hours. Then you can determine its accuracy, speed, and potential value to your operation." No reference is made as to the nature of the test, its origin, construction, or validity. However, the cost is \$12.00 per administration, and the claim is made that their "years of combined sales and consulting experience guarantee practical accuracy" (27).

William H. Ennis takes issue with this promotional approach. He testified before the House Post Office and

Civil Service Subcommittee that

value of an employee selection device is not established by statements that "the test works because I (we) have years of success in its use." Such pronouncements, without more evidence, are generally made in the absence of a systematic effort to demonstrate the worth of the particular selection procedure(s) in question (8).

Management Programs, Inc., of Glen Ellyn, Illinois, also market an assessment procedure that they do not support with any data in their promotional literature. Also, they do not inform the potential user of its name, nor do they provide any description of how it works. All that is said is that it is a "physiologically based technique with dramatic results." "The only way to explain our new product," they continue, "is to demonstrate it" (20).

The Mutual Appraisal Process (MAP) was developed by David Merrill, Ph.D., a former contributor to a competitive test, The Aptitude Index Battery (which is made available to "member companies" of the Life Insurance Agency Management Association). The Mutual Appraisal Process is marketed nationally by the Wilson Learning Corporation of Minneapolis, Minnesota. The procedure is constructed upon the principle of "impression formation" and "interpersonal feedback." It is designed to ". . . explore, survey and chart information necessary to predict success or attempt to predict success in a career requiring persuasive skills" (28). The process involves three steps:

obtaining "first impressions," obtaining "self impressions," and obtaining "interpersonal impressions." Measurements are then made of the applicant's expectations for "authority, control, and ego gratification" (or "ACE"), and of his expectations for "systematic, established techniques" (or "SET" ways of doing things).

No validation data were provided with promotional materials, but some was provided upon request. The Life Insurance Agency Management Association has stated that they have ". . . quite a few questions . . . as to the wisdom of his (Dr. Merrill's) complete system for the MAP" (25).

The "Map Package" is priced by the Wilson Learning Corporation at \$575.00, which includes some training, enough material to test six applicants, four pre-recorded audio cassettes, a "Map File Cabinet," one "Counsellor's Certificate," and other supplies. The "Pilot Program," which is enough training and supplies for ten offices, costs \$5,750.00. The processing of each "self-impression" profile is \$20.00, and each "interpersonal identity" profile is \$35.00 (29).

Insta Check, a personnel testing firm located in Jacksonville, Florida, promotes the "highly regarded" Sixteen Personality Factor Questionnaire, which was developed by R. B. Cattell, and made available through the Institute for Personality and Ability Testing, of

Champaign, Illinois. Insta Check provides an automated scoring service which is priced at \$15.00 per administration. They state that "The validity of the results obtained through this test has been well established in clinical, educational and industrial testing situations." To confirm the utility of the test, Insta Check suggests the following procedure:

In order to best evaluate the results of this test, select two employees whose personalities, in your experience, makes them either well qualified or poorly qualified for their jobs. Compare the results of the test as to their personalities, their strengths and weaknesses, and their suitability for the jobs they are now in (18).

In additional support of their services, Insta Check provides a copy of a letter written by Gerald J. Vanderzon, who is a Vice President of C. E. Cook and Company, Investment Bankers, of Grand Rapids, Michigan. This letter is addressed to Mr. Leroy O. Eger, the President of Insta Check, and is dated March 8, 1972. The letter says, "I can say from experience of testing people that the traits of the test have come out true to form. I have also noticed in testing people that we know personally that their results have proved exactly the type of person they are." The letter goes on, "I would say it has been right as much as 99%" (17).

The Guidelines on Employee Selection Procedures state that

Under no circumstances will the general reputation of a test, its author or its publisher, or casual reports of test utility be accepted in lieu of evidence of validity. Specifically ruled out are: assumptions of validity based on test names or descriptive labels; all forms of promotional literature, data bearing on the frequency of a test's usage; testimonial statements of sellers, users, or consultants; and other nonempirical or anecdotal accounts of testing practices or testing outcomes (2).

Selection Research, Inc., (SRI) of Lincoln, Nebraska, is headed by William E. Hall, Ph.D. and Donald O. Clifton, Ph.D. The SRI "process" is founded upon the work of Drs. Clifton and Hall, and consists of a tape recorded, structured, stress-free interview, a self-concept card sort, and an observation report card (which is completed by the interviewer). All of the completed test materials are forwarded to SRI, where "psychologists with doctor's degrees, plus experience in counselling and interviewing" make the analysis, and describe the applicant's potential for success in the position he is applying for as "highly recommended," "recommended," "marginal," and "not recommended" (16). The recommendations are accompanied by a narrative report that describes certain of the applicant's patterns of behavior in language that is consistent with SRI's "tube" model of success-related behavior. Factors found in the behavior of successful life insurance agents are alleged, by SRI, to operate like the vacuum tubes found in television sets. The "tubes" may be present or absent, strong or weak. Some are more

critical to the operation of successful behavior than others. The "tubes" that have been found to exist in the successful life insurance agent include: "courage," "focus," "ego drive," "empathy," and "woo" (the desire to meet and favorably impress new people) (4).

The SRI process was developed to "identify the configuration of thought patterns that are associated with the successful life underwriter." The developmental sequence is detailed in an SRI publication entitled "The SRI Process for Underwriter Selection: A Study of Validity, Reliability, Objectivity and the Distribution of Recommendations" (4).

Evidence on reliability enables SRI to state that "its consistency warrants the use of this instrument for prediction." A correlation coefficient of .96 ($p < .01$) was obtained between the independent evaluations of the two principal investigators when they analyzed 507 applicants. "This high degree of relationship indicates that the instrument can be scored objectively." A correlation of .87 is reported to have been obtained between SRI's predictions and an applicant's later success or failure. "This correlation is sufficiently high for predictive purposes and these results supported the central hypothesis of this research." (The sample size consisted of "eighty-five men out of 396 to whom the process had been administered, and were contracted, and were in the business long enough

for their success to be judged" (4).) The cost is \$50.00 per administration, plus an initial fee for material and other expenses.

The Life Insurance Agency Management Association has indicated some concern over SRI's reported rate of predictive efficiency. They say that they ". . . have looked into Selection Research, Inc., and we (LIAMA) are disturbed at the magnitude of the validity claimed. I know of no selection test even for simple clerical jobs that has validity that even approaches theirs" (24).

Another example of using a business periodical to apparently promote a particular selection method is an article written by Mr. Thomas P. Fullmer, that appeared in "Bests' Review," a magazine that is directed specifically to insurance industry personnel. Mr. Fullmer, who is the manager of the Arizona Agency for the Standard Insurance Company, said that "almost every commercial test available today is a rejection device," and, therefore, he argues, they are inadequate for insurance company selection purposes (9). Mr. Fullmer then suggests greater use of the process he uses, "right after the first interview with a prospective agent so I know, from the beginning, what I'm working with." What Mr. Fullmer uses, and commends to others, are the services of the Delta Professional Handwriting Analysts, Inc. He notes the wide spread use of this approach by several other life insurance companies

such as New York Life, Equitable of Iowa, Northwestern Mutual Life, and the Bankers Life. The article claims that with five lines of handwriting, totaling from 30 to 50 words, plus the writer's age, measurements can be made of behavioral dimensions such as "drive," "thinking," and "fears and defenses." The article does not contain any references, nor is any validation data supplied in support of the claims made.

Vevco, Inc. is another personnel assessment firm that promotes the use of handwriting analysis. It is located in Denver, Colorado. While no psychologists are listed among its staff, its promotional materials appear to be more professionally developed than the literature usually provided by some firms that do have Ph.D. psychologists on their staffs. Vevco's materials contain several references, a glossary of terms, and a bibliography of "American studies taken from psychological abstracts" (which includes one study by H. J. Eysenck, from the British Journal of Psychology) (36).

Vevco, Inc. claims that "Handwriting analysis, as a scientific diagnostic tool for the study of personality, has been developing for several hundred years. It is a respected science and an aid to psychological research outside the United States." They say that they are capable of assessing such characteristics as "sociability,"

"thinking abilities," and "motivating (and less desirable motivating) forces" (39).

While no evidence is provided in support of Vevco's claims or services, testimonial letters are. One letter, signed by H. Fred Vogt, D.D., of the Mile Hi Church of Religious Science, "blesses" the President of Vevco, Inc. for "your wonderful contribution" (38). Another letter, written by Robert A. Bradley, M.D. (whose letterhead identifies the practice of "Obstetrics, gynecology and infertility"), says: "I find analysis of handwriting to be accurate and reliable for determining traits and attributes of both the conscious and subconscious level of awareness" (37).

Prior to using Vevco's services, the prospective user must sign a "Release from Liability and Hold Harmless Agreement." This form protects Vevco, Inc., and any person associated with it, from legal actions of any nature that might result from the use of Vevco's services (40). A schedule of fees quotes "brief evaluations" at \$35.00 each, "business graphs" at \$75.00 each, "in depth evaluations" at \$150.00, and "growth behavior evaluations" at \$200.00.

Predictive Evaluations, Inc., of New York City, is headed by two Ph.D. psychologists: Jerome H. Nagel and H. P. Weingold. According to statements appearing in their promotional material, all applicants for sales positions look good--and that's the problem. Dr. Nagel, in a

promotional letter, says that ". . . any sales prospect you interview is bound to look good . . . Even a poor salesman can pull himself together long enough to make a good initial impression" (30). Therefore, good applicants may really just be bad applicants posing as good ones. If this should be the case, how is the confused personnel recruiter expected to define what it means to be a good prospective salesman, and then to select one? In order to further illustrate the problem, Drs. Nagel and Weingold have included two case exercises: Joe and Phil. "HERE IS A QUICK DEMONSTRATION YOU CAN TAKE AT YOUR OWN DESK. Read each case carefully and hire the right man . . ."

Joe is characterized as

. . . confident, is sociable and likes people . . . he's a good listener and is able to see the other man's point of view . . . he wants to be liked and people tend to like him. He very seldom gets angry and if he does he keeps it to himself. He gets along well with authority figures and is the kind of person that fits right in . . .

Phil is summarized as

. . . friendly and outgoing, but when you get to know him he is arrogant, conceited and not very interested in people . . . but when he begins to talk he can be a most persuasive, charming, convincing individual . . . he gains your confidence and makes you feel like the most important person in the world . . . but don't be fooled, he doesn't really like people . . . to him people are just objects to be twisted, shaped and manipulated (32).

Predictive Evaluations, Inc. warns the reader that if he chose Joe he is wrong, because Joe is an example of the

bad applicant that looks good. They explain that Joe "looks like a winner in every way . . . but he has problems, which may lead him to drink, begin knocking the product line and the company. Joe is bad for business and bad for company morale" (32).

Nagel and Weingold explain their theoretical position further. To them, the successful salesman is a manipulator of other people. He is skillful at behaving like he should, and faking responses to test questions. To counter this phenomena, (which they call "Salesman's Halo"), they have designed a procedure for interpretation and prediction based upon "CORRELATED ANALYSIS" of test results. Additionally, they say that since they never personally meet an applicant, they cannot be "sold" by him; and that ensures maximum objectivity.

It is suggested that Dr. Weingold has some special access to information peculiar to predicting successful salesmen. He "has spent ten years in the field as a hard-hitting successful salesman. Dr. Weingold knows what selling is like. He knows first hand what psychological factors make a salesman effective " (32).

Does their procedure work? They claim that it is a "SALESMAN SELECTION SYSTEM THAT REALLY WORKS." Also, the PEI system gives you facts to work with. "Our ratings clearly define the candidate's effectiveness as a salesman. We skip the meaningless psychological jargon" (32).

Is the procedure valid? For a \$10.00 introductory trial, the potential user is invited to "PUT YOURSELF THROUGH THE PEI SYSTEM - THEN YOU WILL BE IN THE BEST POSITION TO TEST THE QUALITY OF OUR WORK. Be tough on us." A testimonial letter from a drug firm says, ". . . I don't know how you do it, but the PEI system really works!" (32) The fee is \$60.00 per administration.

The Aptitude Index Battery (AIB) is made available, along with other services, to member companies by the Life Insurance Agency Management Association (LIAMA). It is an "empirically developed," paper-and-pencil test, and has received favorable commentary from several sources (15, 5).

The battery consists of several parts, which include a weighted personal history section, and a personality inventory section (which was purchased from Dr. David Merrill and his associates, who now promote the use of the Mutual Appraisal Process through the Wilson Learning Corporation).

All scoring is done in Hartford, Connecticut, by LIAMA. Scores may range from a minimum of a zero to a maximum of 19. Companies that use the AIB adopt a cutting score policy, which permits (according to one LIAMA research report) a certain expected validity. For example, companies using a cut-off score of ten or below may expect an "estimated success rate" of .18, and, those companies using a cut-off score of 18 or below should experience a "success rate" of

.34. (However, a chart found in "Predicting Success with the Aptitude Index Battery, form 1," says that a company using a cut-off score policy of 18 or below can also expect to have to administer the test 3,333 times to produce 100 subjects who "passed" the test (23).)

The AIB has not completely escaped criticism. One author attributes this statement to a LIAMA official:

". . . today LIAMA admits that none of the personality standards have predicted anything for some time" (10).

This same author reports another quote, this one from within the life insurance industry:

The ideal insurance agent, as LIAMA's biography sees him, is a most admirable male--a stanchion of society, and unemployed. Specifically he is an executive who has been out of work a month or less; was with his last employer ten years; has a net worth of \$40,000.00; carries \$40,000.00 or more in life insurance; has at least one college degree; has three or four dependents (not less or more); belongs to four or more organizations; and has held office in at least two of them."

He quotes a general agent for one large eastern insurance firm as saying that he never has seen "such a man and I don't think I'd hire him if I did" (10).

Through the years, LIAMA has provided a great deal of research on topics of special interest to the life insurance industry. They have reviewed the Activity Vector Analysis, Adams--Lepley Personnel Audit, Allport--Vernon Study of Values, Bell Adjustment Inventory, Bernreuter Personality Inventory, Kuder Preference Record, Otis Self-Administering

Test of Mental Ability, the Strong Vocational Interest Blank, and others. They report that the validity studies conducted for each of these procedures produced only "very low relationships with production and survival criteria . . ." (21). In addition, they claim to have reviewed handwriting analysis, the achievement motive approach of McClelland, Rorschach Inkblots, and Mayer and Greenberg's Multiple Personal Inventory. Again, in each case, they found no useful validities. A very recent study, by LIAMA, however, claims improved validities for the AIB (22).

Some commercial assessment firms include the promotion of testing activities as only one part of the total "package" of services that they can make available for industrial clients. One such example is the Communications Institute of America, Inc. (or CIA) of Dallas, Texas. This organization is headed by John L. Shirley, who is also the chairman of Psychometrics, Inc., and the president of Group Dynamics, Inc. [Psychometrics, Inc. is "a college and career counselling" organization, and Group Dynamics, Inc., is "a company which distributes his (Mr. Shirley's) films, records, books, tapes, and handles his courses, seminars and all his speaking engagements." (12)]

John L. Shirley is, according to CIA, Inc. promotional literature, a member of the Association for Measurement and Evaluation in Guidance, and the American Personnel and Guidance Association. However, no references are made

as to the nature and extent of Mr. Shirley's formal training or preparations. It is simply stated that "John Shirley likes to relate to the applied aspects of psychology, philosophy, marketing, management, and personal living" (12).

Mr. Shirley has had a professionally qualified psychologist associated with CIA, Inc. He was primarily responsible for the construction and validation of CIA, Inc. tests. One CIA test is the Manpower Evaluation Booklet (MEB), which is currently being marketed by CIA. This instrument was developed by a Ph.D. psychologist, and is accompanied by comprehensive supportive data. However, this individual is no longer associated with CIA, Inc.

The Manpower Evaluation Booklet is supplemented by periodic "seminars," which proceed under the title: "The Psycho-Dynamics of Management, Marketing and Manpower Motivation," and are personally conducted by Mr. Shirley. Those in attendance may represent a variety of ages, vocations, and educational levels. The MEB is administered to everyone in attendance (a service covered by the registration fee). Dimensions are measured such as "nervous tension," (which is bipolarly represented in stannine scores, and verbally as "calm" or "restless"), and "character strength," (which is "situational morality" as opposed to "traditional morality"). These "dimensions," and some others that are claimed to be measured by CIA, Inc.'s

Manpower Evaluation Booklet, may appear to be curiously similar to certain traits that are measured by R. B. Cattell's 16 Personality Factors test (3).

A proposal that outlined a workshop which Mr. Shirley's Group Dynamics, Inc. would prepare for one insurance company stated: "This course will help your people learn how to determine in one minute 40 to 60 per cent of the personality of any individual they come into contact with." Continuing, the proposal says:

We use an objective tool, (CIA's Manpower Evaluation Booklet), to measure the aptitude and personality dimensions of the participants for their own introspection purposes and to gain a better understanding of the personality structure of others. Therefore, each participant should have a copy of his profile at the meeting. There will be a portion of this meeting when John Shirley will explain each dimension of personality on the profile sheet in depth . . . in relation to their job, self-improvement and in relation to sizing up the conditioning of others for more effective communications and motivation (14).

The workshop supplements test-derived assessment procedures with other supportive subjects. These include "Systems of Management," "Effective Communications," and "Problem Solving." However, a large portion of time is devoted to another assessment procedure, which is based upon John Shirley's version of human physiology and its causal relationship to behavior.

Mr. Shirley begins by constructing a modal of physiologically-bound behavior, progresses through explanations of the Endo, Meso, and Ecto layers, and concludes

with somatic-behavioral descriptions. He emphasizes the importance of somatotype to behavior, and discusses the affects of hereditary, biochemical, and environmental influences on behavior. The "visceratonic endomorph" is characterized by Mr. Shirley as "Belly Bodied and Belly Minded." "The female likes having babies," and the endomorph "can resist anything except temptation." (He also "prefers baths rather than showers") (34).

The Mesomorph has a "good automatic nervous system," and the "cerebronic actomorph" is described as introverted, "prone to the 'threctia' condition . . . the over active sympathetic nervous system." This, Mr. Shirley has written, is due to "40% heredity and 60% over-protection in environment." Students at the workshop are warned that cerebrotonic ectomorphs are also inclined to "more nervous breakdowns, alcoholism, and other psychological problems in this category . . . suicides, etc." Among the behavioral pathologies, that Mr. Shirley claims are associated with cerebrotonic ectomorph, is "more homosexuality and latent homosexuality in men, and frigidity in women." This is plausible, Mr. Shirley explains, because:

Early in life the mother of the young Ectomorph boy realizes that he cannot compete with the mesomorphs athletically. Therefore, she tends to over-protect him and shift him towards the arts, music, etc. Consequently, she strips him of his psychological masculinity . . . which causes him to become more tender-minded and sensitive. Producing the latent homosexual male."

The ectomorph uses intellectualism as his defense, and becomes "lost in the applied area."

Dominance is the "power factor of personality," and is an essentially inherited characteristic. It is "born into the bone matrix through the second layer of the embryo," and, therefore, becomes a "constitutionally fixed" dimension of personality.

Along with certain other somatic characteristics, dominance determines "60% of what vocation a person follows in life." Dominance is easily identified and can be assessed by using three simple steps. First, check the structure of the jaw bone, shoulders, and wrists ("thick wrist structure denotes very high dominance level"). Secondly, look for sustained eye contact; and thirdly, ask questions (high dominant persons give direct answers).

It should be noted that the relationships that have been reported between somatotype and behavior, and upon which Mr. Shirley bases much of his assessment methodology, have been seriously questioned for many years. The criticisms cite reports of statistically impossible results, methodological errors, erroneous arguments of casualty from correlation (concomitance), failures to replicate, and computational errors (33, 19).

It costs \$175.00 per person to attend a Group Dynamics, Inc. workshop. Mr. Shirley's speaking fee, which is recorded in the previously-mentioned proposal, is \$1,200.00.

"Intensive Evaluation by CIA Psychologist on Higher Management Personnel" is \$75.00 for a client-company, and \$125.00 for non-client companies. (It is assumed that these fees are on a per administration basis.) A "Partial List of Participants in Group Dynamics Workshops" include the Baptist Radio and T.V. Commission, Great National Life Insurance Company, White Stores, Inc., Texas Bankers Association, The Illinois Podiatry Association, the Miami Beach Dental Society, and North Texas State University (11).

"Mary Kay Ash, Chairman of Mary Kay Cosmetics, probably said it best as she presented him (John Shirley) with a beautiful trophy . . . John Shirley is a winner" (13).

Dr. Fred Labowitz has a Ph.D. in clinical psychology. He personally has called upon potential industrial clients to solicit their business. He promoted the use of his professional assessment skills for the purpose of employee selection. His procedure consisted of an interview that was sometimes intentionally stressful, and sometimes stress-free. He also made use of a "preliminary screening interview" form (a rating form), and a booklet containing questions for the applicant to answer, as well as incomplete sentences.

Dr. Labowitz would interview each applicant personally, and would provide his client, (who, of course, was not the applicant), with a type-written, double-spaced, one-or two-page long narrative summary of the applicant's potential

for success. His narratives would include comments on such areas as "Impressions," "Family Background," "Career Patterns," and "Personality." The narratives would often contain phrases like ". . . conveys much sincerity and warmth," ". . . some tension being evident," ". . . service needs," "people oriented," and "energy level." He would conclude his evaluation with a rating of: "highly recommended," "recommended," or "not recommended." No other descriptions or explanations were provided by Dr. Labowitz as to the nature of the selection system he uses, and no validation data was produced in support of his services except verbal statements. Also, the extent of Dr. Labowitz's formal training in industrial psychology is unclear. His fee was \$100.00 per administration.

The American Psychological Association has warned that the older problem of inadequately trained practitioners is,

. . . now appearing in a new form. A group of psychologists who are competent in clinical psychology, for example, may set up a firm to do clinical work in the industrial setting. They then succumb to the temptation to undertake assignments in other fields of industrial psychology (selection, rating, market research, etc.) in which their competence does not justify independent practice (1).

There are many other persons, tests, and organizations that probably should have been included in this brief review. It is beyond the scope of this study, however, to attempt an exhaustive account of the promotional activities of the entire commercial assessment industry. It should

be easier, however, to understand why the often ill-informed, and educationally unprepared personnel manager may become confused and bewildered at the entire assessment enterprise. Considering the piles of promotional literature, claims and counter-claims, discoveries, and "breakthroughs," his zealous, incredulous support for a specific, though unvalidated, procedure; or his equally zealous contempt for all psychologists and all tests, begins to make sense.

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CHAPTER II

METHOD

Three of the selection procedures that were discussed in Chapter I were selected to be studied in an industrial setting. The criteria for selecting the procedures were: methodological differences in their approach to employee selection, feasibility of application in an industrial setting, and availability. Although cost per administration was a consideration, it did not have a substantial bearing on which procedures were included in the study. The three procedures that were chosen were: The Selection Research Process (SRI), the Aptitude Index Battery (AIB), and Fred Labowitz, Ph.D. (L).

Subjects

The Ss were 43 out of 156 applicants for the position of career life insurance agent with a Dallas, Texas life insurance company, who were recruited, tested, and contracted during 1970, 1971, and 1972. All applicants were 21 years of age or older (a legal requirement for licensing), and most were inexperienced as life insurance agents. The applicants were recruited in several Texas cities, and in many other cities throughout the United States. No restrictions were imposed regarding race or

sex. Most of the applicants had at least a high school education, and some had attended college or had college degrees. Those applicants who were contracted were provided with supportive financial assistance during the initial period of their employment (which continued for approximately one full year). This assistance was in the form of monthly cash advances, and the amount per month (which was constant) was negotiated with each applicant at the time of contracting. The specific amount was based upon present need and the level of income to which the applicant had become accustomed prior to contracting.

Procedure

Each applicant was administered two selection tests. He was given either the AIB and L, or the AIB and SRI. No experienced applicants took the AIB due to a long-standing company policy. Therefore, some applicants who took one of the other two tests did not have corresponding AIB scores, and the result was unequal sample sizes. All applicants who took the AIB also took the SRI or L, but in no instance was both the SRI and L given to the same applicant.

The testing firms, with the exception of the AIB, were permitted to select which particular branch offices they could work most efficiently with. Their choices determined which combination of tests an applicant was

administered. The AIB had already been in use in all branch offices for many years.

Each newly contracted agent was observed for a period of one full year unless he terminated his employment before that time. Two separate criteria were used to measure performance. They were: tenure and productivity.

Tenure was defined as the number of months that an agent remained actively under contract with the company. To be considered a success in relationship to the tenure criterion, an agent had to remain actively under contract for at least one full year. Tenure accumulated with other companies by experienced agents was disregarded, as was the tenure accumulated by agents who were contracted, then terminated, and then later re-contracted.

Productivity was defined as the ratio of cumulative commission-income generated per month to the total amount of monthly cash advances (also cumulative). Measurements were obtained on commission earned by each agent for each month, for twelve months (unless the agent terminated prior to completing one year of employment). Cumulative end-of-month commissions were annualized to project end-of-year earnings, and this amount was divided into the total of the monthly cash advances made. The resulting proportion, expressed as a percent, was then compared to a table of minimum expected proportions (expressed as percents) for each month of the contract year. Each agent's monthly

production was compared to this guideline and was found to be more than, equal to, or below minimum expected performance for new agents, and thus it was determined whether an agent was a successful producer, (equal to, or above the guideline), or a failure (below the guideline). The minimum standards for production were not demanding during the initial months of employment, but became increasingly more difficult as the year progressed. For example, no production was expected during the new agent's first contract month. However, he would be expected to be producing substantially more by the time he had been under contract for five months.

No follow-up was attempted on applicants who were rejected, or who terminated prior to the completion of the twelve-month tenure criterion. An exit interview was given, however, to all terminators. No operating restrictions were imposed upon the testers that might have impeded the efficiency of their procedures.

The Aptitude Index Battery costs approximately \$1.75 per administration. The Selection Research Process costs \$50.00 per administration, and Dr. Labowitz charged \$100.00 per administration. (These figures do not represent the actual costs per administration which would reflect additional expenses such as "membership dues," supplies, administrative expenses, and set-up fees).

Validation consisted of computing Pearson's Product moment correlation coefficients ("r") between an applicant's test results and his tenure and his productivity.

CHAPTER III

RESULTS

Two Pearson's product moment coefficients of correlation were computed to measure the degree of predictive efficiency for each of the three selection procedures. One was computed using test results and the tenure criterion, and the second was computed to measure the relationship between test results and the production criterion. These data are presented in Table I.

TABLE I
CORRELATIONS BETWEEN PREDICTORS AND CRITERIA

Predictor	N	Tenure	Productivity
SRI	23	-0.21	-0.008
L	20	0.03	.15
AIB	35	0.07	.01

It can be seen, from Table I, that the AIB was found to be the most positively predictive, with an r of $+0.07$, when the tenure criterion was used. L was second most predictive with an r of $+0.03$, and SRI was next with an inverted r of -0.21 . None of these values are sufficiently

high to be taken as deviations from chance expectancies (1).

L had the highest relationship between test results and the production criterion with an r of $+0.15$. The AIB was next with an r of $+0.01$, and SRI followed with an r of -0.008 . Again, however, none of these values were found to be statistically significant at or near the $p = .05$ level.

Due to the rather low sample sizes, and the unexpectedly low correlations obtained, a more detailed data analysis was done.

Thirty-five Ss who were administered the AIB were also contracted. Of this group, 33 passed and only 2 Ss failed. Ten of the Ss who passed the test were successful producers, and 13 of the 33 Ss who passed the test survived one complete contract year. Both of the Ss who failed the test were production failures and terminated prior to completing one full year of service. This data appears in Table II.

TABLE II

AIB

	Production		Tenure	
	Success	Failure	Survivors	Terminators
Pass	10	23	13	20
Fail	0	2	0	2
Total	10	25	13	22

A further composite criteria was also used. This defined success as: surviving one full year, and successfully producing at the end of this time. When this criteria was used, only 5 of the 33 who passed the test could be considered as successful, and therefore "hits." Twenty-eight were misses. Since the 2 Ss who failed the test also failed according to the composite criteria, they too are considered "hits." The total hit rate for the AIB, using the composite criterion, becomes 7 out of 35, or 1 correct prediction for each 5 errors. (This data appears in Table III).

TABLE III

AIB COMPOSITE
(Survived One Complete Contract Year and Still Producing)

	Yes	No	Total
Pass	5	28	33
Fail	0	2	2
Total	5	30	35

Twenty applicants who were administered Dr. Labowitz's selection procedure were contracted. Of these 20 Ss, 5 received a rating of "highly recommended," 8 received a rating of "recommended," and 7 were "not recommended." One of the 5 Ss who were "highly recommended" survived one complete contract year. The other four Ss who received this

rating terminated before completing one year. One S of the 8 who were rated as "recommended" survived for one year, while the remaining 7 did not. Three of the 7 Ss who were "recommended" were successful producers, and 5 were failures. Three of the 7 Ss who were "not recommended" were successful producers and 4 were failures. This data appear in Table IV.

TABLE IV

L

	Production		Tenure	
	Success	Failure	Survivors	Terminators
Highly recommended	1	4	1	4
Recommended	3	5	1	7
Not recommended	3	4	3	4
Total	7	13	5	15

When the composite tenure-productivity criterion was applied, only 1 of the 13 Ss who received a rating of "recommended" or "highly recommended" was successful. None of the 7 Ss predicted to fail under this criterion succeeded. This produced a total "hit" rate of 8 out of 20, or 1 correct prediction for each 2.5 made. (It should be noted, however, that all but one of L's hits were a correct rejection, and not a correct selection. Since he rejected

as "not recommended" more applicants than the AIB; and since the estimated base level for failure is 9.1, it is not appropriate to infer his over-all accuracy at prediction is really 1 correct for every 2.5 attempts. It is unquestionably easier to predict failure under the criteria used than to predict success--and he predicted proportionately more failures than either of the other two procedures. This data appear in Table V.

TABLE V

L COMPOSITE
(Survived One Complete Contract Year and Successfully Producing)

	Yes	No	Total
Highly recommended	0	5	5
Recommended	1	7	8
Not recommended	0	7	7
Total	1	19	20

Twenty-three Ss who were given the SRI process were contracted. Of these, 4 were rated as "highly recommended," 13 were "recommended," 4 were "marginal," and 2 were "not recommended."

Two of the 4 who were "highly recommended" survived for one year, and 2 terminated. Six of the 13 who were rated

as "recommended" survived, and 7 terminated. One of the 4 "marginal" survived, and 3 did not. None of the 2 who were "not recommended" survived for one contract year.

One of the 4 "highly recommended Ss was a successful producer (but he did not survive). Five of the 8 Ss who were "recommended" were successful producers, and 1 of the 4 "Marginals" was a successful producer. None of the 2 "not recommended" Ss was a successful producer. This data appear in Table VI.

TABLE VI

SRI

	Production		Tenure	
	Success	Failure	Survivors	Terminators
Highly recommended	1	3	2	2
Recommended	5	8	6	7
Marginal	1	3	1	3
Not recommended	0	2	0	2
Total	7	16	9	14

None of the 4 "highly recommended" Ss were considered "hits" under the composite criterion. Four of the 13 "recommended" Ss were surviving after one year and successfully producing. No "marginals," and no "not recommendeds" succeeded under the composite criteria. This

produced a "hit" rate for SRI of 10 correct predictions out of 23 attempts, or 1 correct for each 2.3 tries. (Since "marginals" and "not recommendeds" are in fact rejections, SRI too improved their selection accuracy by rejection accuracy.) This data appear in Table VII.

TABLE VII
SRI COMPOSITE
(Survived One Complete Contract Year
and Successfully Producing)

	Yes	No	Total
Highly recommended	0	4	4
Recommended	4	9	13
Marginal	0	4	4
Not recommended	0	2	2
Total	4	19	23

The results obtained from this study indicate weak, inverse, or nearly non-existent statistical relationships between predictions and outcomes. Promotional claims of predictive accuracy, either stated or implied, by these three commercial assessment interests, were not supported by a specific industrial application.

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CHAPTER IV

DISCUSSION

The controversy that characterizes the field of personnel testing involves professionals from many levels, and is sufficiently comprehensive in scope to raise provocative questions about the wisdom of sustaining a formal testing program. Smith (12) optimistically states that tests "can predict," and he supports his position by citing a review that was done by Ghiselli and Barthol. They note 113 studies where test-derived scores were found to be positively related to success in various occupational groups (5). Lipsett et al. (9) also note several studies that indicate some relationship between test scores and work-related criteria, but also note just about as many other studies that have failed to do so. Guion (6) adopts a more pessimistic attitude. He claims that ". . . one cannot survey the literature on the use of personality tests in industry without becoming thoroughly disenchanted."

It is reasonably clear that none of the three selection procedures investigated in this study was found to be usefully predictive. The results for both of the criteria, tenure and productivity, were disappointingly low. However, it is both unfair and unwise to infer that these procedures

would be equally unpredictable for other companies--whether they are inside or outside of the insurance industry.

"Success" and "failure" do not seem to exist in a static, vacuum-like state. They exist, rather, as the result of measurement states, the definitions of which are often arbitrarily developed.

After the behaviors to be measured are defined, they are artificially extracted from work-environments which contain a complex variety of other specified and unspecified constantly interacting influences. Finally, levels of fidelity and accuracy are then expected from these measurements which could be reasonably expected only if the entire field of possible influences had been identified and measured. In short, what results is well-intentioned but highly over-simplified test validation and construction models, where exceptional predictive accuracy realistically may be found to be considerably lower than those implied and claimed by some of the promotional efforts that were reviewed earlier. Blum (2), for example, claims that correlations of the order of +.30 to +.50 "are often the best that can be hoped for."

Differences in work-related environments and the behaviors required for "success" may vary across industries, across companies within the same industries, and possibly, even within single companies. Dunnette (4) states that selection is "inextricably intertwined with personnel

training." The variety of factors that can affect training alone as a possible contributor to an applicant's success or failure can be massive. The quality and quantity of training given an employee can certainly vary widely across industries, across companies within the same industry and even from territory to territory within a single company. Dunnette points out that measurements made under these circumstances can result in more differences among the individuals who are "successes" or who are "failures" than in the differences between the "successes" and the "failures."

Super (14) lists other possible sources of influences originating in the work environment such as the relative purchasing power of different sales territories. He also notes the possible effects of varying levels of aspiration for success and situational occurrences such as an illness in the family. Thorndike (15) agrees. He states that "In almost any personnel situation, factors other than the quality of entering personnel will affect a criterion measure to some extent." Some of these other factors might include a company's operating philosophy and management style, the company's "corporate image" in specific sales areas, levels of competition, quality of products, and advertising. Horst (7) claims that one of the reasons why predictive occurrences have been so low is because testers have traditionally failed "to take into account contingency factors." These factors, to Horst, are those

personal and situational factors which affect performance, but for which the probability of occurrence is not known at the time of prediction. Super (14) states that there are three ways to deal with the problem of accounting for these contingency factors. First, the criterion expectancy can be adjusted in terms of contingencies. Secondly, the contingency factors can be treated as predictors as they become identified. Thirdly, an effort can be made to predict the likelihood of the contingencies occurring.

Out of the environment of work-related behaviors and their influences must come some measures which can serve as an indice of what Super (14) calls "goal attainment." This measure is the criteria. Siegel (11) states that what "success" is, is "a matter of policy." A company's choice of criteria will reflect that company's policy. Various measures of production have served as criteria. They include output per unit of time, quality of production, time lost on job, turnover, promotionability and employee satisfaction. Lawshe (18) describes four broad categories for the measurement of work-related criteria. They are: (1) production data, (2) personnel data, (3) judgments of others, and (4) work samples. Several years ago, Ohman (10) studied the selection of sales personnel and developed a comprehensive list of potential criteria measures. His list, though exhaustive, does not seem to be any more

helpful than Lawshe's four divisions, or any less a "matter of policy" than any other suggestions of possible criteria. Thorndike (15) describes the problem further when he states that the ultimate criteria for success in any occupation is always determined on "rational grounds." He writes

There is no other basis on which this choice can be made. The determination of the ultimate criterion represents an agreement among those who are best qualified to judge as to the objectives of the job, the weight to be attached to each, and the behaviors which represent those objectives.

Because the ultimate criteria is usually unavailable ". . . we are," he continues, "almost always thrown back upon substitute criterion which we judge, either in terms of rational analysis or in terms of empirical evidence, to be related to the ultimate criterion with which we are most fundamentally concerned." This statement eloquently defines the often ambiguous character of criterion. They may be based upon little more than unanimity and, therefore, may or may not be related to the work-related behavior in question. This makes most all testing validation studies--regardless of results--open to question, because the value of the results can be no better than the methodology used to produce those results; and if no formal method exists to define the selection of criterion measures, then how can the results ever be any more than questionable? Dunnette's apparent pessimism may instead be realism.

Perhaps the three selection procedures studied would have produced more favorable results if they had made a more formal attempt to understand what specific measures of successful behavior the company had in mind, and what influences were extant in that company which could modify an applicant's level of potential for success with that company. To put it more succinctly, what was it that the company expected the testors to predict, and under what conditions did it expect the predictions to occur?

The AIB did surprisingly poor. However, it should be noted that the AIB is not the end-product of questionable testing practices. It is a highly respected selection test, and has been for quite a number of years. Its promotional efforts are usually modest, claiming an "r" of about +.33 under an optimum cutting score policy. While the AIB contains much psychometric integrity, it still fails to account for within company contingency factors. The AIB measures certain parameters of prospective agent behavior from certain responses that the applicant provides to questions about personality, economic states, and personal history. But, what do they measure about the many kinds of sales behaviors that a specific company may be considering the applicant for? What products will he sell? How will he be trained? It is not inconceivable that the AIB could have produced more favorable results if more company-specific variables had been accounted for in the

construction of scoring formulas. The AIB has a remarkable history of general predictive efficiency in the life insurance industry. It has been found to be unproductive in this one specific instance. It is reasonable to suppose that if adjustments were made for specific company differences, it would have predicted well in this specific instance also.

The selection approach that is taken by SRI seems, at least superficially, like it should offer certain advantages, and potential improvements over traditional paper-and-pencil testing approach such as that used by the AIB. However, this optimism was not supported by evidence, and the results obtained were clearly less than SRI's promotional efforts would suggest that they should have been. Clifton and Hall's "tube" model (3) seems to lack both the power and fidelity components necessary to seriously improve existing selection methodologies. Again, regardless of sophisticated methodologies, measurements of individual potential apart from measurements of operating work-environment variables seems to be rather futile if one is seriously trying to optimize predictive efficiency.

Dr. Labowitz's relative performance probably represents the greatest source of disappointment. First, he was the only one of the three procedures who actually had an opportunity to personally observe and interact with the applicants. Failure to predict with reasonable accuracy

under these circumstances raises serious questions about the ability of anyone to accurately assess and predict an applicant's behavior. Secondly, Dr. Labowitz's performance was disappointing relative to the fee he charged, which was \$100.00 per administration--plus expenses.

It is impossible to even speculate upon which variables he specified and measured, and which he did not. His methodology was known only to himself, and it can only be assumed that he had a method and systematically applied it even though the predictive accuracies that he achieved do not require this assumption. If he had a methodology it remained unspecified and can probably be best understood as competence by proclamation. By this, it is implied that his ability to perceive and judge individuals accurately is in some way increased because of his training in clinical psychology. It is difficult for the measurement strategist to sort clinical "intuitions" or hunches from undisciplined impulses, and his method, however it was defined (or left undefined), seems to offer little likelihood of improvement over existing selection strategies. It may also be noted that Tyler (13) refers to a study which claims that formal training in clinical psychology actually decreases accuracy in perceiving and judging persons. It is also noted that laymen are often better at this task than are professionals. This may be a disputed point, but one thing is clear; laymen usually don't charge as much.

Two additional issues remain to be discussed. The first one involves the necessity for adequate supervision of industrial testing programs. The second issue is an unpleasant, but apparently unavoidable acknowledgment of malicious intent at worst, and incompetence at best in many commercial testing efforts.

Lipsett et al. (9) state that "under no circumstances should personality testing be undertaken without the supervision of a psychologist." While this is certainly true, it is only partially so. All psychologists are not equally prepared to deal competently with industrial testing programs. These programs often require more than interest or generalized abilities on implications of professionalism such as "clinical psychologist and consultant to industry." The American Psychological Association recognizes the great varieties of preparation and background training within the discipline. It also recognizes that some of its members have failed to realistically perceive the limitations of their competencies relative to their specific areas of training. Under the heading of "the inadequately trained practitioner," the APA (1) has written:

. . . this problem is now appearing in a new form. A group of psychologists who are competent in clinical psychology, for example, may set up a firm to do clinical work in the industrial setting. They then succumb to the temptation to undertake assignments in other fields of industrial psychology (selection, rating, market research, etc.) in which their competence does not justify independent practice."

The responsible parties in industry should be cautioned that not all psychologists are competent in the area of industrial testing, and they should choose those who are to supervise their testing operations accordingly. Guion (6) claims that there has been an increase in the industrial application of tests, and that there has also been an increase in the abuse of such tests. He says that testing programs are selected and installed merely because they are stylish, or have clever-sounding names, or have been skillfully promoted. He argues that little consideration is given to what, if anything, they might be measuring. He warns: "With appalling frequency, however, the incompetent testing program actually results in the selection of applicants who are least satisfactory."

The task of identifying reputable testing organizations is not a simple matter. There are no simple formulas to apply, there have been no scientific breakthroughs in this area, and even extensive experience, though helpful, is no guarantee of success. Sometimes the best tests under the best conditions fail to produce acceptable results, while other procedures of questionable value are claimed to produce extraordinary results. Occasionally, a reputable group may use a faulty research design, while other groups claim to have used some abstract-sounding and hyper-sophisticated, methodology. So, distinctions based upon

results obtained, or methods used are likely to be superficial and possibly misleading.

Thorndike (15) suggests that one of the features that helps to distinguish reputable work in personnel selection "from that of the mass of self-styled 'psychologists,' 'personnel experts,' and other quacks is that the reputable worker in the field is continuously concerned with testing, verifying, and improving the adequacy of his procedures."

Lipsett et al. (9) mention two specific points for consideration, the use of references and advertising. They warn potential test users not to be unduly impressed by references of successful results in other companies. They note that some very good companies may use some very bad tests. This is very likely. The advertising and promotional practices of legitimate psychological assessment organizations are bound by a strict code of ethics. Flamboyancy and sensationalistic claims can indicate superficially or suggest incompetency, but in either case, the real net cost should be considered in relationship to the possible effects resulting from an unethical and ineffective testing program, such as complex legal problems, and financial losses. (The actual cost of a test is not necessarily computed as the sum of the costs per administration. It should also include the probable losses of earnings incurred as a result of the test selecting some poor employees, and rejecting some of those who would have been successful.)

Dunnette (4) writes that

The potential user of tests should be wary indeed of sales pitches proclaiming that a test will solve all sorts of selection problems, that it will tell the user exactly what to do in making personnel decisions, or that it is based upon a great theory of human behavior.

Tests can be effective tools when they have been designed effectively, and are used in the proper circumstances. No test is any better than the methodology that produced it, or more competent than the people who will use it. The well-disciplined, highly-polished legions of salesmen, the unending number of promotional brochures, and the skillfully conducted "seminars" may all distract from this fact--but they don't change it. Thorndike (15) states that "It is often true, unfortunately, that the best salesmanship is applied to the poorest product."

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