

"NEED FOR SUCCESS" AS A PREDICTOR OF MANAGERIAL PERFORMANCE

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MORE and more, a major role in occupational success is being assigned to personality characteristics. Estimates of these characteristics are being relied upon in the selection of managerial personnel, executives, sales personnel, and many other occupations. In fact, for executive and managerial positions, there is a widely-held view that personality characteristics may well be more important to success than skill or technical know-how. Certainly, given several job applicants with equated skills and experience, those individuals whose personality characteristics are best suited to the particular job promise to be the better performers. To point up this importance of personality to job success, Micherson (1953) surveyed 79 large and small business corporations and reported that, of those executives who failed, over 70% did so because of some flaw in their personality rather than from a lack of ability per se. McGregor (1960) reported that the greatest single factor which apparently influences superior and inferior performance by supervisory people was to be found in the area of personality variables. Gaudet and Carli (1957) report that 80.9% of the executives responding to a questionnaire felt that "personality factors" were the most important cause of executive failure. This importance conceded to personality, and the interest inherent in the subject, has stimulated a wide variety of research on personality tests of various types. Among these have been: (1) tests of the direct-question type; (2)

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tests utilizing "projective" techniques; and (3) tests utilizing forced-choice answer formats. While this work has been successful in defining problems, and has contributed to our overall understanding of personality adjustment, the contribution to the prediction of specific occupational success has been negligible.

Of the many reasons for the failure of traditional-type personality tests in occupational prediction, three deserve special mention: (1) the ease with which test scores can be distorted, by our test-wise applicant populations, to portray the type of personality desired; (2) the lack of reliability displayed by many personality measures; and (3) the failure to design the tests specifically for purposes of occupational prediction (Rundquist, 1950).

The problems which arise in the use of direct-question personality inventories have been widely discussed in the literature. One point, widely expounded, is the fact that the construction of the majority of direct-question personality tests were founded in clinical-diagnostic settings. What appears to be needed is an attempt to produce measures of personality which are specifically intended to predict occupational success. A second point which deserves mention is the particular phases of personality assessed by traditional instruments. For the most part, the units or dimensions purportedly assessed are somewhat tenuously connected with job performance. One possible approach to the improvement of personality tests as predictors of job performance, lies in the assessment of *conative* personality variables, i.e., the measurement of "needs" which are more directly related to on-the-job behavior.

The purpose of this study was to determine the concurrent validity of a *conative* measure which purports to assess "need for success" by measuring perceptual distortion to "loaded" stimuli in an indirect manner.

The Test Instrument

The test instrument is called the *Selective Word Memory Test* (SWMT). It is a short, group paper-and-pencil test requiring 14 minutes testing time and can be administered by relatively unsophisticated testers without a strong psychological or measurement background.

The SWMT is an experimental instrument constructed at the Occupational Research Center, Purdue University (Stevens, 1953). The reliability of this test, using a measure of internal consistency

(Kuder-Richardson Formula 20), was .66, .78, and .91 for three separate samples (Hoisman, 1961). Validity studies for this instrument have produced coefficients ranging from .34 to .78 for twelve managerial samples (Stevens, 1953; Hoisman, 1961; Edel, 1963).

The SWMT involves a recognition task in which stimulus material is presented in the form of certain (loaded) words used in sentences. Words are "loaded" in terms of their connotative position on a success-failure continuum. Some of the words connote success, others connote failure, and others are neutral on the success-failure continuum. Examples of the three kinds of words are:

Success words: Executive, leaders, rewards, success

Neutral words: Line, path, moment, between

Failure words: Immature, weak, poor, failure

All words included as stimuli in the test were judged by a panel of five judges as to their placement on the success-failure continuum. Each judge determined whether a given word connoted "success," connoted "failure," or was neutral. In order to qualify for inclusion in the SWMT, a word had to be unanimously categorized by all five judges.

Examinees are presented 18 sentences generally concerned with themes of success-reward or failure-punishment within the context of the business world. Two examples of the sentences used in the SWMT are:

Our most embarrassing problem is with those weak men who have established a permanent relationship with the Company, but who can never be promoted.

He surrounded himself with brilliant, dominant, aggressive, young men who produced or were sacrificed.

Examinees are given four minutes to read the 18 sentences and then are instructed to turn to the next page. Here the examinee is presented with 180 words arranged in four columns of 45 words each. Of these, 60 appeared once and only once in the sentences. These 60 words are broken down into 20 success, 20 failure, and 20 neutral words. The remaining 120 words which did not appear in the sentences are divided into 40 success, 40 failure, and 40 neutral words.

The examinee has ten minutes to underline those words from the list of 180, which he recognizes as having been in the original

sentences. He is told that approximately one-third of the words did appear in the original text. It is hypothesized that differences in examinee's recognition of these loaded words may reflect qualitative and quantitative differences between successful managers and their less-successful colleagues.

Method

Subjects

A sample of 232 first-level managers from a large, nationwide chain of department stores was administered the SWMT. The managers ranged in age from 24 to 54 years, with a mean age of 39.4 years. The educational level of the subjects ranged from high school graduates to a Master's degree in Business Administration, with the median educational level at 14 years. The sample included 189 male supervisors and 43 female supervisors. Tenure with the company for this sample ranged from 18 months to 34 years.

Procedure

The sample was divided into a "primary" group of 118 managers, and a "hold-out" group of 114 managers for cross-validation purposes. Prior to the administration of the predictor instrument, paired-comparison ratings were made of all individuals by two or more supervisors for each subsample. Raters judged each pair in terms of ". . . which of the two individuals is performing his job better, and is of greater value to the Company?"

Reliabilities of raters ranged from .89 to .96. Ratings were ranked and quantified using the method reported by Lawshe and Kephart (1950). These scores were utilized as the criterion of "managerial success."

Subjects were informed that the SWMT was an experimental instrument that ". . . purported to measure and predict managerial performance." It was felt that the desire to "look good" on the test motivated subjects to perform as well as possible despite reassurances that the scores obtained would not affect their status with the Company and would not be recorded in their personnel files.

The responses of the 118 managers in the primary group on the SWMT were item-analyzed against the rating criterion. This item analysis produced 80 words from the list of 180, which were significantly related to the rating criterion ($p < .05$). The 80 words

were then utilized as an empirical scoring key to score the responses on the SWMT of the 114 managers in the cross-validation group. Table 1 shows the score distributions for the cross-validation group on the SWMT. In addition, scores for all managers in the cross-validation group were available on a battery of mental alertness and personality tests.

The SWMT was scored by assigning one point for each of the 80 "keyed" words underlined. The points were summed and the total divided by the number of all words underlined. This was done to correct for differential numbers of words underlined by subjects. Although the test advises that "approximately one-third" of the words presented on the stimulus page did appear in the sentences, the number of words underlined varied from 34 to 104 words. Computing proportion scores, rather than raw scores, tended to correct for errors of chance. The resulting proportions were coded by multiplying each by 100 to eliminate decimals.

Results

Table 2 shows the correlation of the criterion with SWMT and with ten additional variables. The Pearson product-moment correlation coefficient between the criterion and the SWMT was .43. For this sample size the correlation coefficient is significant at the .001 level of confidence. Pearson product-moment correlations be-

TABLE 1
*Distribution of Scores on the SWMT for 114 Managers
Using an Empirical Scoring Key*

Test Score	Criterion		Frequency
	High	Low	
29 to 31	3		3
26 to 28	5	1	6
23 to 25	6	6	12
20 to 22	19	9	28
17 to 19	8	4	12
14 to 16	13	14	27
11 to 13	3	6	9
8 to 10		9	9
5 to 7		3	3
2 to 4		2	2
-1 to 1		1	1
-4 to -2		2	2

tween the criterion and sub-test scores on the Thurstone Mental Abilities Scale and Thurstone Temperament Scale ranged from $-.04$ to $.21$. Only the measure of "dominance" was significant at the $.05$ level of confidence.

Table 2 shows that the intercorrelations between the SWMT and the sub-tests of the battery ranged from $-.03$ to $.18$. None of these is significant at the $.05$ level of confidence. A multiple correlation was computed using the SWMT and the nine sub-test scores and the resulting Multiple R was $.52$. Table 3 illustrates the Summary Table for the Multiple Regression Analysis. The first variable entered into the multiple was the SWMT, and this instrument accounted for the great majority of the measurable variance.

The institutional importance of these data lies in the improvement in prediction of managerial success for those individuals selected using the SWMT as a prediction instrument. Table 4 presents a chart of theoretical expectancies showing the percent of "superior-rated" managers scoring in each quintile on the performance variable. As the table illustrates, if only those managers scoring in the top 20% were selected for employment, 75% of this group would be expected to be "superior" performers.

Given a favorable selection ratio, predictive efficiency in the selection of managerial candidates appears to be significantly greater than that accomplished with existing predictor tests. In addition, the SWMT promises to improve decision making in promotion and transfer of managerial personnel.

Discussion

Certain inferences appear warranted from the data presented: (1) SWMT does significantly predict the criterion utilized in this study; (2) the low intercorrelations between the SWMT and the sub-tests of the selection battery, ranging from $-.03$ to $.18$, indicate that the SWMT is tapping some variable important to managerial success which is not being assessed by the mental ability and personality tests; (3) for this sample and this criterion, the SWMT seems to account for the largest portion of the measurable variance when optimally weighted in a multiple correlation.

Conclusions and Implications

Despite the promising results obtained, the SWMT is not yet ready for use on the industrial scene. First, it must be remembered

TABLE 2
Correlation Matrix

Y	SWMT "b"	TMA-L	TMA-Q	TMA-T	TTS-A	TTS-V	TTS-I	TTS-D	TTS-E	TTS-S	TTS-R
SWMT "b"	.43										
TMA-L	.19	.12									
TMA-Q	.18	.10	.18								
TMA-T		.64	.94	.18							
TTS-A			.87	.07	.13						
TTS-V				.14	.09	.09	.01	.21	.21		
TTS-I					.02	.07	.10	.15	.03	.05	.13
TTS-D					.25	.25	.09	.17	.05	.04	.03
TTS-E					.21	.21	.05	.18	.01	.05	.14
TTS-S					.26	.26	.08	.19	.03	.00	.04
TTS-R					.23	.23	.45	.47	.14	.27	.09
							.31	.48	.13	.20	.01
									.30	.48	.03
										.59	.05
										.14	.01
											.13

TMA = Thurstone Mental Abilities Scale (Language, Quantitative and Total Scores).
TTS = Thurstone Temperament Scale (seven personality scales).

TABLE 3
Summary Table for Multiple Regression Analysis

Step Number	Variable Entered	Multiple		Increase in R^2	F Value to Enter or Remove
		R	R^2		
1	2 (SWMT)	.4290	.1841	.1841	25.2688
2	9 (TTS-D)	.4523	.2046	.0205	2.8567
3	11 (TTS-S)	.4845	.2348	.0302	4.3413
4	6 (TTS-A)	.4979	.2479	.0131	1.9006
5	8 (TTS-I)	.5114	.2615	.0137	1.9986
6	3 (TMA-L)	.5146	.2648	.0033	0.4786
7	7 (TTS-V)	.5164	.2667	.0019	0.2675
8	4 (TMA-Q)	.5174	.2677	.0011	0.1539
9	10 (TTS-E)	.5177	.2680	.0002	0.0350
10	12 (TTS-R)	.5178	.2681	.0002	0.0211

TABLE 4

Theoretical Expectancies: Expected Proportions of Superior Managers for Each Score Interval of the Selective Word Memory Test Using the Empirically Derived Key

% Range	Score Interval	Expected Proportion of Superior Managers
Top 20	23 to 31	75
2nd 20	20 to 22	60
3rd 20	15 to 19	50
4th 20	8 to 14	40
Low 20	-4 to 7	25

that the validity study reported above is concerned with *concurrent* validity. Because of the dynamic nature of personality, studies which assess the *predictive* validity of this instrument are needed. In addition, studies are required to assess the reliability and faka-bility of the SWMT.

The implications of this study, while not conclusive, are promising. The use of conative measures to assess an individual's "need for success" promises to add to the predictive efficiency of our selection procedures. Certainly, it opens a new approach to the investigation of who *will* succeed in the world of business. To date, our efforts have primarily dealt with who *can* succeed.

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