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ABSTRACT

The Strong Vocational Interest Blank (SVIB) has been used in the selection of Navy ROTC scholarship applicants and a scale was developed to identify potential career effectiveness. Consequently, it was necessary to assess the possibility of faking. An earlier study indicated that when under instructions to do so, individuals can increase their scores by faking. There was, however, no significant tendency to fake among applicants who were retested as freshmen, thus suggesting that either faking does not occur under selection conditions, or that it was present at both administrations. The present study sought to further evaluate these possibilities by comparing SVIBs completed by applicants in routine non-Navy administrations with those they completed under NROTC selection conditions. There was no significant or consistent tendency for applicants to increase their selection scores. The results suggest first, that simulated faking designs do not parallel what actually occurs in selection, rather they indicate only that a scale can be faked; and second, that faking is not a significant problem in the use of the SVIB in NROTC selection. (Author/PR)

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NAVAL PERSONNEL AND TRAINING RESEARCH LABORATORY

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AN ASSESSMENT OF FAKING ON THE STRONG VOCATIONAL INTEREST BLANK UNDER ACTUAL SELECTION CONDITIONS

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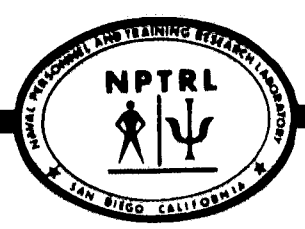
Idell Neumann
William H. Githens



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SUMMARY

A. Problem

Since 1964, the Strong Vocational Interest Blank (SVIB) has been administered to NROTC (Regular) scholarship applicants. Inasmuch as an SVIB scale is used in selection for identifying potential career effectiveness, it was essential to assess this scale's fakability.

B. Background

The responses of several groups of subjects administered the SVIB under a variety of conditions were contrasted. Under instructions to do so, some individuals can increase their scores by faking. However, in an analysis of retention scale scores obtained by NROTC applicants retested as freshmen, no significant tendency to fake emerged. This finding indicated that either faking does not occur under selection conditions or that faking was present in both the selection and freshmen administrations. These alternatives required further evaluation.

C. Approach

Strong Vocational Interest Blanks taken by NROTC applicants as part of a routine non-Navy testing program were obtained and compared with those taken under actual NROTC selection conditions. The results of this analysis were compared with those obtained from the previously conducted simulated faking study.

D. Findings, Conclusions, Recommendations

Previous data indicated that when instructed to fake, most individuals can increase their scores on the selection scale to some extent. However, comparison of applicant and routine administrations indicates that under actual selection conditions there is neither a significant nor consistent tendency for applicants to increase their selection scores. (pages 2-6) These results suggest: (1) that simulated faking designs do not parallel what occurs in selection; instead, they provide only an indication of how much a scale can be faked, and (2) faking is not a serious problem in the use of the SVIB in NROTC selection.

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A. PURPOSE

Since 1964 a considerable amount of research has been devoted to the use of the Strong Vocational Interest Blank (SVIB) as an instrument for early identification of high tenure Navy officers. The primary purpose of these efforts has been to develop measures to use in the selection of Navy ROTC scholarship applicants. As a result of this research, a scale was developed to differentiate between high and low tenure officers commissioned from the NROTC program. This scale provided excellent discrimination between the criterion samples on which the key was constructed, and its validity, though somewhat reduced, remained high on a variety of cross-validation samples. In addition, the scale, when applied to groups who had been tested as high school graduates and retested 8 to 10 years later, provided very satisfactory reliability.

Despite the scale's validity and reliability, information on fakability is essential for such a measure before it may be recommended for use in selection. Several studies of faking (Garry, 1953; Gehman, 1957; Gray, 1959) indicate that when instructed to fake specific SVIB occupational scales, individuals can, on the average, increase their scores by 1 to 5 standard deviations. This information would suggest that the Strong must be used with caution, if at all, in selection. However, in virtually all published studies of faking on the Strong, the subjects have been instructed to fake on certain scales. This approach provides no information on the tendency to fake in actual selection situations. Therefore, it was considered essential to investigate the fakability of the retention scale under such conditions. This report summarizes earlier work on the fakability of the SVIB retention scale and extends the research to faking under actual selection conditions.

B. BACKGROUND

In an initial attempt to ascertain the fakability of the retention measure, a previous investigation (Abrahams, Neumann, & Githens, 1968) utilized data from two groups of individuals on whom SVIB test and retest data were collected. The first group consisted of 122 Officer Candidate School (OCS) trainees who had taken "honest" and "faked" SVIB's under experimental testing conditions. In the "faking" administration subjects were instructed to respond as they thought career Navy Officers would. Results for this group indicated, quite dramatically, that OCS trainees could improve their officer retention scale score considerably when instructed to respond as a career officer would. On the average, scores were increased by three-fourths of a standard deviation. This information, if taken alone, might advise against using the retention scale as a selection instrument. Again, though it must be pointed out that these results are based on instructions to fake--not on actual selection conditions. Consequently, those data indicate only that the retention scale can be faked--not that it will be faked.

The second group used in the previous study was analyzed in an attempt to determine the magnitude of faking under actual selection conditions. This group consisted of 249 NROTC scholarship winners who as part of the selection process had completed the SVIB. Approximately one year later, as freshmen, these students were retested at their NROTC units under experimental testing conditions where, presumably, there would be little motivation to fake. A comparison of their applicant and retest means revealed virtually no differences. The correlation between the scores on the two administrations was .67 and the percentage overlap between the score distributions was 97. These results are in stark contrast to the data based on the instructionally faked SVIB's where the test-retest correlation was .18 and percentage overlap between score distribution was only 70. These data indicate that either faking does not occur under selection conditions or that the perceived need to fake was present in both the selection and freshmen administration.

To evaluate these alternatives further, SVIB testing conditions should be arranged so that NROTC applicants would answer the SVIB under NROTC selection conditions and under conditions having no connection with the Navy. The purpose of the present study is to analyze SVIB's administered in this manner and compare the results with those of the previous study. In the present study, selection SVIB's and SVIB's administered as part of routine high school and college testing programs were gathered for 102 applicants. Results under selection and routine testings are compared with specific emphasis on retention scale scores. The data are also contrasted with those obtained under simulated-faking conditions. These comparisons are primarily intended to determine whether the retention scale is actually faked under operational selection conditions, and secondarily to compare the extent of faking under real-life motivation and instructions to fake.

C. PROCEDURE AND RESULTS

The high school and college records of NROTC scholarship applicants in 1965, 1966, and 1967 were examined to locate those applicants who had taken the SVIB under routine testing conditions. A total of 102 such individuals was located; 46 had completed the SVIB in high school prior to the NROTC administration and 56 had taken it in college following NROTC selection. For the latter group, selection or rejection for the NROTC scholarship--either by the Navy or the applicant himself--occurred between the selection and the routinely administered college SVIB. Since this intervening experience could lead to real changes in interests and thus be confounded with tendencies toward faking, results for the groups are analyzed separately.

Comparison of the selection and the high school testing scores for the first group on the standard occupational scales shows marked similarity. These mean profiles shown in Figure 1 are as similar to one another as are standard test-retest groups reported in the SVIB manual (Campbell, 1966). The rank-order correlation between these mean profiles is .95. Since faking on any one scale typically influences scores on other scales (e.g., Gray, 1959), this comparison would support the conclusion that the applicants did not fake.

PROFILE FOR STRONG VOCATIONAL INTEREST BLANK - FOR MEN

Occupation	Std. Score
Naval Officer Scale	38·35
Physical Therapist	39·35
Dentist	31·35
Osteopath	29·30
Veterinarian	28·31
Physician	34·34
Psychiatrist	25·21
Psychologist	24·22
Biologist	32·30
Architect	28·31
Mathematician	23·24
Physicist	25·26
Chemist	37·36
Engineer	34·34
Production Manager	34·32
Army Officer	36·31
Air Force Officer	42·38
Carpenter	28·30
Forest Service	25·22
Farmer	35·39
Math-Science Teacher	39·39
Printer	32·37
Policeman	29·28
Personnel Director	21·17
Public Administrator	32·25
Rehabilitation Couns.	24·20
YMCA Secretary	26·24
Recreation Admin.	25·21
Social Worker	21·17
Social Science Teacher	21·21
School Superintendent	14·10
Minister	10·6
Librarian	24·23
Artist	27·30
Music Performer	31·34
Music Teacher	21·20
CPA Owner	21·22
Senior CPA	30·30
Accountant	26·25
Office Worker	30·29
Credit Manager	28·27
Chamber of Commerce	31·29
Bus. Educ. Teacher	25·23
Purchasing Agent	32·34
Banker	21·24
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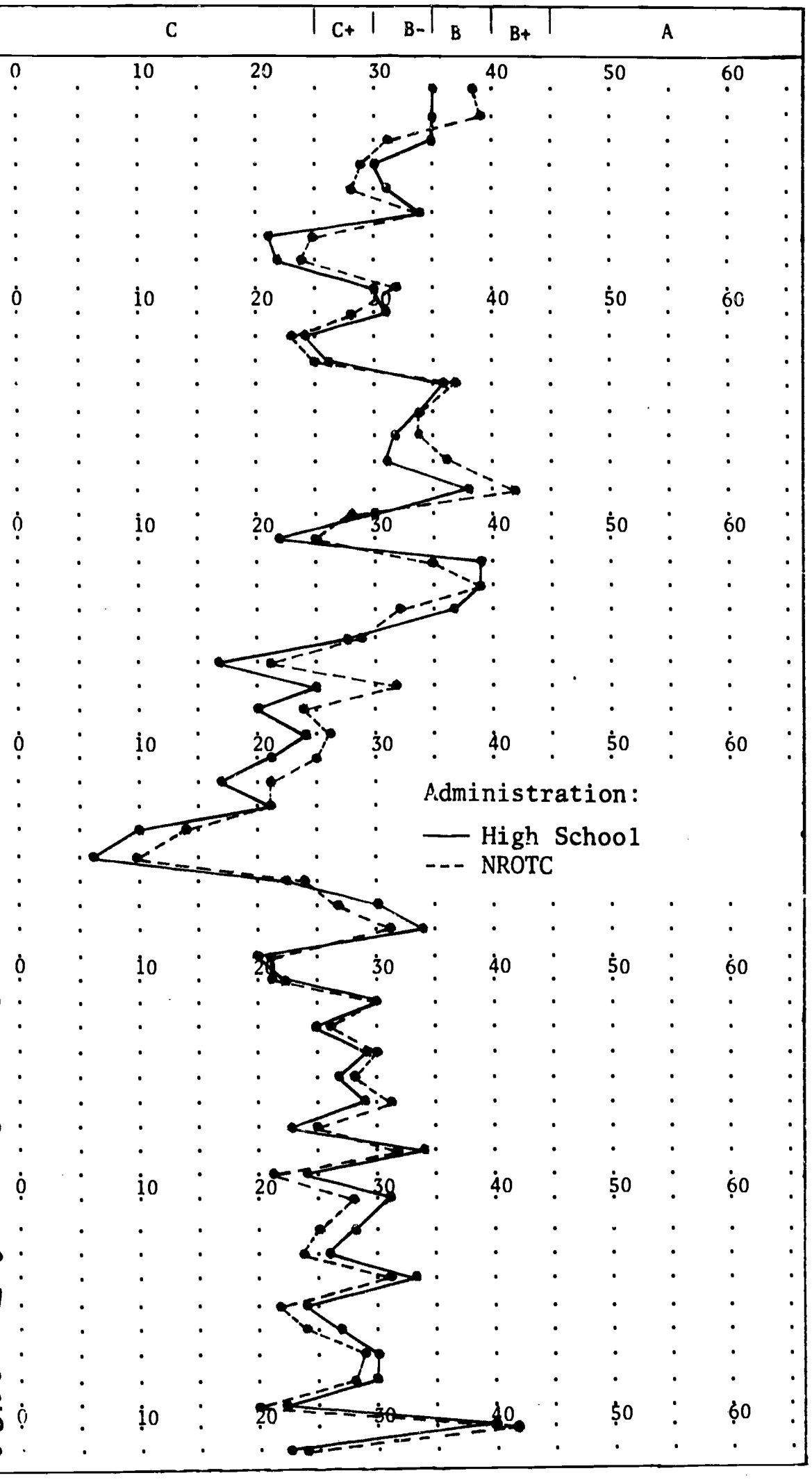

Figure 1. Mean SVIB profiles for NROTC selection and routine high school testing administrations (N=46).

For this same group, Table 1 provides means and standard deviations on the retention scale. These data clearly indicate a lack of faking as measured by the retention scale. The correlation between retention scale scores obtained on the two administrations is .79 and the percentage overlap between score distributions is 97. A test-retest correlation of this magnitude matches that obtained on SVIB occupational scales from standard testing conditions over a similar time period (Johansonn, 1968). Furthermore, the test-retest correlation differs considerably from the .18 obtained when individuals were first tested under usual instructions and then were retested with instructions to fake.

TABLE 1

Comparison of SVIB Retention Scale Scores Obtained Under NROTC Selection and Routine High School Testing Conditions

Administration	N	$\bar{X}$	S.D.	Percentage Overlap	Test-Retest r
NROTC Selection	46	103.54	10.99	97	.79
Routine High School	46	102.67	11.53		

A similar analysis was conducted on those applicants who had taken the SVIB for NROTC application and who later took the SVIB as part of routine college testing. These were considered as a separate sample due to the possibility of a real change in interests as a result of their rejection or selection for the NROTC scholarship. Occupational profiles for both selection and routine testing SVIB administrations were prepared. These data, shown in Figure 2, reveal virtually identical mean profiles. The correlation between these profiles is .98. Table 2 presents the retention scale means and standard deviations obtained under both administrations. While the scores of the routine and selection administrations are not as similar to each other as those in the previous sample, the percentage overlap of 87 and test-retest correlation of .71 still indicate considerable similarity.

Although there is a slight but not significant (p=.33, one-tail) advantage for the selection administration, it does not approach the amount of change--either in terms of correlation or percentage overlap between score distributions--found in the simulated faking group. As suggested earlier, a change between the selection and subsequent routine administration scores may signify a genuine shifting of interests for those applicants who were rejected. In fact, there is some empirical support for this notion. For those on whom selection or rejection status information could be located, the test and retest means were computed. While no tests of significance have been made, the trend seems to support the suggestion that the rejectees reduce their retest scores on the retention scale more than selectees do.

PROFILE FOR STRONG VOCATIONAL INTEREST BLANK - FOR MEN

Occupation	Std. Score
Naval Officer Scale	40·40
Physical Therapist	40·40
Dentist	27·27
Osteopath	27·27
Veterinarian	25·26
Physician	30·29
Psychiatrist	23·23
Psychologist	23·24
Biologist	28·27
Architect	24·25
Mathematician	19·19
Physicist	20·20
Chemist	30·30
Engineer	28·28
Production Manager	32·33
Army Officer	37·38
Air Force Officer	42·42
Carpenter	25·24
Forest Service	23·24
Farmer	32·32
Math-Science Teacher	38·37
Printer	31·32
Policeman	26·27
Personnel Director	25·25
Public Administrator	35·33
Rehabilitation Couns.	27·29
YMCA Secretary	31·32
Recreation Admin.	32·30
Social Worker	25·26
Social Science Teacher	26·26
School Superintendent	17·16
Minister	14·11
Librarian	24·25
Artist	24·25
Music Performer	30·31
Music Teacher	24·23
CPA Owner	23·24
Senior CPA	33·35
Accountant	26·27
Office Worker	31·31
Credit Manager	33·33
Chamber of Commerce	34·35
Bus. Educ. Teacher	29·30
Purchasing Agent	30·29
Banker	22·22
Pharmacist	25·26
Mortician	25·25
Sales Manager	24·26
Real Estate Salesman	31·33
Life Insurance Sales	23·24
Advertising Man	24·26
Attorney	28·29
Author-Journalist	26·28
Pres.-Mfg. Concern	17·19
Computer Programmer	43·43
Interpreter	24·27

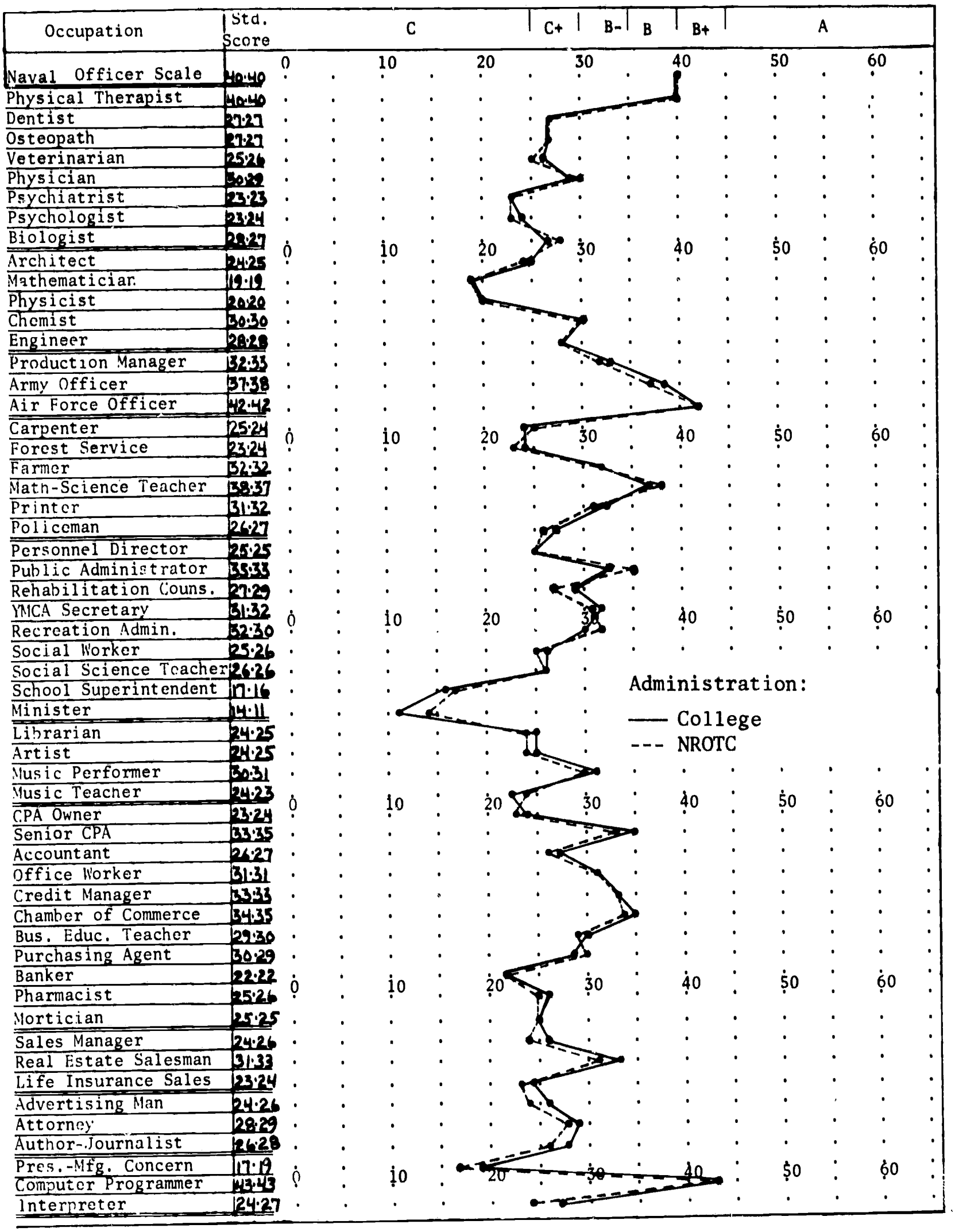

Figure 2. Mean SVIB profiles for NROTC selection and routine college testing administrations (N=56).

TABLE 2

Comparison of SVIB Retention Scale Scores Obtained Under NROTC Selection and Routine College Testing Conditions

Administration	N	$\bar{X}$	S.D.	Percentage Overlap	Test-Retest r
NROTC Selection	56	102.77	11.03	87	.71
Routine College	56	98.91	11.88		

For purposes of comparing changes on SVIB occupational scale scores obtained on the actual selection and routine testing with those obtained in the simulated faking study, mean profiles were prepared for both the "honest" and the "faked" conditions. Inspection of those profiles for score shifts of at least one-half of a standard deviation on the 55 occupational scales revealed 30 such changes. Several easily discernible vocational content themes emerge from these differences. When instructed to fake, occupational scales reflecting business management, leadership, and military content increase and scales reflecting scientific, verbal, and artistic occupations decrease.

Inspection of the differences between the selection and routine testing profiles indicated no shifts of this magnitude for those retested as freshmen, and only three for those routinely tested in high school. The rank-order correlation between the "fake" and "honest" mean profiles is only .78, compared with the selection and routine mean profile correlations of .95 and .98.

CONCLUSIONS AND RECOMMENDATIONS

The data from these studies indicate that, when instructed to do so, most individuals can increase their scores on an SVIB retention scale. However, comparison of selection and routine SVIB administrations indicates that under actual selection conditions there is neither a significant nor consistent tendency for applicants to increase their selection scores. To the extent that these findings are generalizable to other SVIB scales, there would seem to be little parallel between test-taking behavior under faking instructions and under actual selection conditions. It may be concluded, therefore, that simulated faking designs do not provide a particularly appropriate estimate of what occurs in selection, instead they provide only an indication of how much a scale can be faked. Thus, it is recommended that simulated faking studies not be considered to provide conclusive evidence of the extent to which faking is likely to occur in actual selection settings. With respect to NROTC selection, all available evidence indicates that faking does not appear to be a serious problem and the continued use of the SVIB retention scale is recommended.

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