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Reactions to vocational interest test feedback as related to style of feedback report and authenticity of information.

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REACTIONS TO VOCATIONAL INTEREST TEST FEEDBACK
AS RELATED TO STYLE OF FEEDBACK
REPORT AND AUTHENTICITY OF
INFORMATION

by

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B.Sc. University of Toronto, 1972

A THESIS

Submitted to the Faculty of Graduate Studies
through the Department of Psychology in partial
fulfillment of the requirements for the Degree
of Master of Arts at the University of Windsor

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1976

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ABSTRACT

The present study explores the reaction of test-takers to feedback from the Strong-Campbell Interest Inventory (SCII) in relation to the authenticity of the feedback information and to the style in which it is written. Ninety-two university students were administered the SCII in group settings and later received four feedback reports concerning their scores on the test's six General Occupational Themes. Authenticity was varied with two of these reports being true, the other two false; style was varied by both true reports being written in one style, and both false reports being written in the alternate style for each subject. Dependent measurements consisted of subjects' accuracy ratings of their four reports on an eight-point Likert scale, and their preference rankings of the same from first to fourth. Ratings and rankings were examined for the effects of style, authenticity, and presentation order. Results showed that neither report style nor presentation order affected subject reaction to the feedback. Subjects did significantly prefer, and rate as more accurate, true reports over false reports.

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CHAPTER I

INTRODUCTION

Testing: Use Or Abuse?

The psychological evaluation of individuals has become an extensive and multi-faceted part of our present-day society. It plays a role in educational, correctional, medical, industrial, and research settings. Goslin (1963) has estimated that between 150,000,000 and 250,000,000 ability tests are administered annually in the United States alone.

Such widespread use of psychological assessment has been questioned in recent years, however, with rising public concern over the impact of these procedures on the lives of individuals. Has psychological testing become too powerful and is it being misused? Does a person have a real option to refuse testing or is the right to privacy being infringed upon? Such questions have been posed by many. (Saper, 1961; Gross, 1962; Hoffman, 1962), and in response, the American Psychological Association in 1970 affirmed the right of an individual to decline assessment by a psychologist.

The Need For Feedback

Another aspect of psychological testing which has led to public criticism is the secrecy surrounding test results. In many of

the settings which employ psychological assessment, virtually no information is given to individuals regarding their test findings (Brim, 1965; Balance et al, 1971; Fischer, 1972). Feedback, or knowledge of results, has been defined as "the stimuli produced by responses, both in terms of feeling the response occur and of observing its effects on the environment" (Burger, 1974, p. 8), and as "evaluative information produced at one stage of a complex on-going process that is automatically utilized to change the process in some way" (Sundberg et al, 1973, p. 75). Within the field of psychological evaluation, feedback refers specifically to the sharing with the client of information gleaned about him during the assessment process. It might inform him, for example, that his responses resulted in his passing a College Entrance Exam, achieving a low percentile on a mechanical interest scale, or being diagnosed as an hysterical personality.

Wiener (1964) states that "effective behaviour must be informed by some type of feedback process, telling it whether it has equalled its goal or fallen short of it." (pp. 58-59). And looking at the subject from another angle, Sundberg et al (1973) point out that:

Obviously the work of the psychologist is all for naught if his findings are not put to use. One link in the information chain that is sometimes left weak or dangling is the reporting of assessment results. The knowledgeable psychologist takes into consideration the needs of the recipient of information and the responsibility he has to assist in image making and decision making. (p. 246)

Few would be likely to disagree with the views here expressed by either Wiener or Sundberg et al. Disagreement does arise, however, with the question of who the recipient of assessment findings is to be. Answers to this question have varied in the past according to the setting in which the psychological tests have been employed.

Test Reporting In Clinical Practice

In clinical settings, the recipients of the psychologists' findings have typically been psychiatrists, social workers, and/or other psychologists, rather than the client himself. Certain historical factors have been regarded as the bases for these differing practices. The development of psychological testing within the framework of the psychiatric setting has been well documented elsewhere (Harrower, 1961; Anastasi, 1962; Sundberg and Tyler, 1962; Balance et al, 1971; Price, 1971; Fischer, 1972). These authors point out that psychologists molded their tests and the procedures surrounding them on the already well-established medical model, the tests thus becoming a means of diagnosing "mental illness". Within the psychiatric environment, patients were generally regarded as objects of examination, and passive recipients of treatment, rather than as participants in these processes. As a result, psychological testing methods took little account of the patient's opinions as to the nature of his difficulties, nor did they attempt to encourage his cooperation in the treatment plan. Feedback had no part to play in a process which construed the patient as neither needing, nor being capable of understanding, the test findings.

A Different Approach In Vocational Guidance

Vocational guidance developed within a framework quite different from that of the medical model, and its assessment practices are accordingly of another type. Clients are here seen as in need of information and consultation, rather than diagnosis and treatment. Salmon (1970) gives a detailed account of these differences in a description of vocational guidance conducted in a psychiatric setting. Due to the felt relevance of this passage, it will be quoted at some length:

There is, however, a difference between vocational guidance and other kinds of psychological assessment which has considerable significance for the communication between psychologist and patient. Whereas requests for diagnostic or personality assessment are made by the psychiatrist, who formulates the need for such assessment without consulting the patient about it, in the case of vocational guidance the request nearly always originates with the patient himself. This difference has several implications. In the first place, the patient is likely to be considerably more interested in the measurement procedures and their results than he is in those of other types of assessment. Secondly, unlike situations of diagnostic assessment - where the patient may be looked on as a 'case', and his remarks as symptoms rather than as conveying directly relevant information - in the case of vocational testing, his subjective views about the problem are vital, and must be taken into account in coming to any conclusions. Finally, since the aim of vocational guidance is essentially to help the patient to gain a greater understanding of himself so that he may make a personally relevant occupational choice, he must be taken into the psychologist's confidence as far as the results of assessment are concerned. The psychologist is thus involved in direct communication with the patient. This feature of vocational assessment is, of course, in marked contrast with normal practice as regards reporting results derived from other types of psychological assessment of psychiatric patients. (pp. 153-154)

What Salmon here describes is the approach to vocational guidance taken within a mental health setting where, traditionally, patients have been denied feedback. What she states then, regarding the practice of communicating test results directly to the test-taker, can be assumed to apply even more strongly outside of the psychiatric environment.

Current Changes

Although vocational guidance and clinical assessment have in the past taken quite different approaches to the testing process, it appears that the differences may now be lessening. Many clinical psychologists have become dissatisfied with the disease-oriented tenets of the psychiatric setting, and accordingly, with the diagnostic assessment procedures they prescribe (Harrower, 1961; Anastasi, 1962; Fischer, 1973). Some have gone so far as to discard testing from their activities altogether (Sundberg and Tyler, 1962). Numerous others, however, have instead sought a modified use of tests which treats the experiencing subject as a valuable source of understanding and responsibility rather than as a mere object of investigation and treatment. These trends in testing practice are compatible with the current transition among many clinicians, toward viewing client difficulties as "problems in living" (Szasz, 1960), instead of "symptoms of mental illness."

The growing conception among clinical psychologists of the client as co-assessor, suggests that their methods of assessment may

in future become increasingly similar to those of the vocational counselors, particularly with regard to the practice of sharing test findings with the client. If this be the case, the clinicians may have something to gain by examining the feedback procedures and related research investigations of their counterparts in the vocational sphere.

Some Issues In Feedback Research

The studies to be cited in the following discussion have been conducted by researchers from diverse areas of psychological assessment. As might be expected, however, this research had its beginnings in the field of vocational guidance, and has a large representation there.

One of the deficiencies of investigations of test reporting efficacy has been that it is usually not clear from the studies what the counseling process entailed and in what manner test findings were employed. Myers (1971), reporting on vocational counseling research, points out such inadequacies and makes some recommendations for improvement:

Investigators engaged in service evaluations could, with a little more effort, focus on the exact nature of the service and describe it better than they typically do....Our current lack of understanding about the procedures and consequences of vocational counseling can in large measure be attributed to the fact that researchers - and, worse yet, reviewers - are so inclined to include all manner of treatments in a single category while trying to answer the unanswerable question: does treatment have any effect? (p. 873)

It is not surprising, in light of the poorly controlled nature of these

studies, that they should come up with inconclusive findings. In a summary of research regarding the general effectiveness of test reporting, Goldman (1971) states that there is "some limited evidence of the values derived by people receiving reports of their test results" (p. 384), and adds that "it is not clear why some studies had so much more favorable results than others...." (p. 384).

Criteria Of Feedback Effectiveness

A number of variables have been employed to assess the effectiveness of test reporting. Included among these dependent measures are: 1) Post-counseling client achievement in a relevant area such as college grades or job performance (Biggs, 1970; McMahon, 1973; Price, 1974); 2) recall of test information (Froelich and Moser, 1954; Holmes, 1964); 3) appropriateness of vocational choice (Wright, 1963; Pilato and Myers, 1975); 4) increased accuracy of self-knowledge (Johnson, 1953; Berdie, 1954; Singer and Stefflre, 1954; Torrance, 1954; Froelich, 1957; Robertson, 1959; Brown, 1965; Barrett, 1967); and finally, 5) client reaction to test feedback in terms of both a) endorsement of the information as self-descriptive (Forer, 1949; Sundberg, 1955; Ulrich, 1963; Balance et al, 1971; Bringmann et al, 1971; Dies, 1972; O'Dell, 1972; Snyder and Shenkel, 1976), and b) feelings toward the material or process (Stone and Simos, 1948; Kamm and Wren, 1950; Folds and Gazda, 1960; Wright, 1963; Holmes, 1964; Campbell, 1965; Forster, 1967, 1969; Gibert and Ewing, 1971; Graff et al, 1972; Price and Johnson, 1973; Coletta, 1974).

For the purpose of this study, consideration will be given primarily to the last two variables listed: increased accuracy of self-knowledge, and client reaction to test feedback.

Increased accuracy of self-knowledge. Myers (1971) explains how changes in an individual's ideas about himself are used to measure test reporting effectiveness:

...[the] usual paradigm for such research is to extract from the student some estimate of his personal characteristics, provide him with information on his test results, and then ask him to estimate his characteristics again. The difference between the pre- and post estimates provides the evidence for the impact of the treatment. (p. 866)

The underlying assumption of this paradigm appears to be that the test material represents a true picture of the individual, and that if he can somehow assimilate it, he will be better off and the feedback process will have been successful. Such an assumption has come to be regarded as a questionable one in recent years, however. Fischer (1972), in arguing against the withholding of test information, states that:

...secrecy from the client limits the professional's own growth. It perpetuates his beliefs in the validity of his privileged perspective. In the absence of the client's challenge to his technical formulations, he is less likely to question, and thus to alter, his interpretations or the operative paradigm ...There is...no need for secrecy from the client. Indeed, in some ways he is the best judge of the reports' accuracy. (p. 365, 366)

If the client is seen as the best judge of a report's accuracy, it seems

illogical to uniformly regard his changing his self-perceptions such that they are in agreement with the report, as an indication of valuable learning and growth on his part, and thus as a measure of feedback effectiveness. Rather, it could conceivably follow that client acceptance of, and agreement with, the assessment findings is a form of validation of the material, and of the way it is presented. This view would be consistent with the growing emphasis, mentioned above, on the experiencing subject as a knowledgeable participant in the assessment and treatment process.

Client reaction to feedback. Not only must it be considered that the individual may have important contributions to make in terms of clarifying the accuracy of assessment findings, but also that, if he is to make constructive use of these, his attitudes and feelings are of great importance. For if the material is presented in such a way as to create confusion, anxiety, or disbelief in the client, the chances of his benefiting from it seem slight. In this regard, Blum and Balinsky (1957) state that "the basic premise in interpreting test results is that it be done with understanding of the client's possible reactions to them" (p. 328). Goldman (1961) further indicates that:

...there is often a tendency to see Reporting as something quite rational and objective, in contrast with those parts of counseling which deal with feelings, needs, and hopes. Reporting scores and their interpretations may indeed be rational and objective processes to the counselor, but they are unlikely to be so for the client....Because our tests seem to us so objective, rational, and factual, we as

counselors need constantly to remind ourselves of the quite different perceptions of our counselees. (p. 364)

In line with this view, then, is the measurement of test reporting effectiveness by client reaction to the feedback, that is, by the degree to which he accepts, and is satisfied by, the feedback information and process.

Although the two criteria of increased accuracy of client self-ratings and client reaction to feedback appear to be somewhat at philosophical odds, they have both been used extensively in the literature and each offers new insights into the area.

Research Findings

Increased accuracy of self-ratings. Studies employing this variable as their dependent measure have had varying results. Johnson's study (1953), using voluntary self-referrals, found significant increases in accuracy of self-ratings of aptitudes, interests, and personality traits, the largest improvements being in self-knowledge of intelligence. Similarly, in studies by both Brown (1965), and Barrett (1967) counseled secondary school students showed more accurate self-estimates than controls. Positive results were also found by Torrance (1954) who reported that after an intensive orientation programme including tests of scholastic aptitude and achievement, students were more realistic in estimations of their abilities than they had been previously.

Mixed findings were reported by Berdie (1954) and Robertson (1959). Berdie's study indicated that college males became more able to accurately estimate their vocational interests after counseling on their Strong Vocational Interest Blank (S.V.I.B.) results, but found no improvement in self-knowledge of characteristics measured by the Minnesota Multiphasic Personality Inventory (M.M.P.I.) or the A.C.E. intelligence test. In Robertson's investigation, 43 to 80 percent of prospective college freshmen receiving counseling changed their self-estimates of ability and interests from pre- to posttest. From the results of a two-year follow-up, however, he concluded that these changes did not have much stability.

Virtually no evidence of increased accuracy of self-ratings after test reporting was found by Singer and Steffire (1954) or Froehlich (1957). In the former study, almost no significant differences were found between discrepancy scores (based on the difference between each subject's self-estimated interests and his scores on the Occupational Interest Inventory) taken before, and three months after, counseling sessions. In the latter study, Froehlich used a group of high school students as subjects and found only very limited changes in self-ratings after individual counseling.

It would appear then, from these inconsistent findings, that no conclusions can presently be drawn as to the effectiveness of test reporting in general, in improving the accuracy of client self-ratings. While such findings pose the very serious question of whether current psychological tests and the counseling based on them are of any use to

the clients involved, for the purpose of this paper I will assume that there is a value to be attained from such procedures. Further specifications as to the reporting methods, subjects, and counselors used in research evaluating feedback effectiveness will hopefully clarify this issue in future.

Client reaction to test feedback. The second dependent measure under consideration, client reaction to test reporting, has had little use in studies of the effectiveness of counseling procedures in general. Rather, it has been employed mostly in research comparing the relative efficacies of various test reporting procedures. One study, however, a twenty-five year follow-up of student counseling at the University of Minnesota (Campbell, 1965), did use this variable in a general investigation of guidance effectiveness. Campbell found that most of the counseled subjects looked back on their experience favourably, although many felt it had not been as thorough and complete as they would have liked. Uncounseled subjects, in response to a question "What could the University have done differently that would have helped you more?", most frequently mentioned some kind of counseling. And in isolating what aspects of the guidance procedure the counseled persons had found most influential, Campbell reports that students remembered more clearly, and rated more highly, the tests they received than the counseling itself or the counselor. If this study is representative of educational and vocational counseling and test procedures, it appears that emotional reactions to, and evaluations

of these are generally positive. Satisfaction with this type of test reporting as a criterion of the success of the process can be expected, then, to be a relative measure. That is, we might expect all such procedures to be satisfying, and differences in reaction to different presentation modes to be one of degree, not of kind. It is not possible to say whether client reaction to all forms of psychological assessment and feedback would be as positive as it appears to be within the area of educational and career guidance. Kamm and Wren (1950) have found a number of factors, however, which may predict whether or not acceptance of test findings will occur in a given setting. Among these are relaxation of both client and counselor; expression of "positive attitudes" by the client; delivery of information which is directly related to the client's immediate problem and not in opposition to his self-concept; and readiness on the part of the client to act regarding a felt need. The authors concluded that "the client with his needs, his wants and desires, his attitudes and feelings is the basic determiner of whether or not acceptance occurs" (p. 40).

It might be expected, therefore, that any type of psychological assessment findings would meet with positive client reaction to the extent that these criteria were met.

Factors Influencing Feedback Effectiveness

Independent variables used in studying test reporting to clients have been as numerous as the dependent measures employed. Goldman (1971)

includes among these, the method of communicating feedback material, the characteristics of clients and counselors, and the amount of time spent in the counseling process. Although all of these are worthy of further discussion, the following summary will concentrate on the first of these factors, the method of communicating assessment findings. Studies examining this aspect of reporting procedures have commonly employed one or both of the two variables discussed above, increased accuracy of client self-ratings, and client reaction to feedback, among their dependent measures. For the purpose of this study, the latter variable will be of primary concern.

Research dealing with the problem of how assessment information should be transmitted in order to make it most acceptable to the client, has itself been divided into numerous subtopics. Among the questions asked have been whether feedback should be 1) oral or written (Stone and Simos, 1948; Holmes, 1964; Coletta, 1974); 2) individually or group-administered (Folds and Gazda, 1960; Wright, 1963; Graff et al, 1972) and 3) counselor-mediated or computer-mediated (Forster, 1967, 1969; Gilbert and Ewing, 1971; Graff et al, 1972; Price and Johnson, 1973).

The Question Of Style

While these variables have, in the past, been studied either separately or in differing combinations, such as oral feedback presented to an individual versus written information given to a group, they have been viewed as basically distinct factors in the feedback process.

It may be, however, that these variables share a common attribute that has not yet been explored in its own right. It seems plausible to the present author that these factors might all be placed along a continuum of style of presentation ranging from personal to impersonal, and that the two poles of each parameter mentioned above would lie at opposite ends of this continuum. Oral feedback might thus be seen by the client as more personal than written, individually-administered as more personal than group-administered, and finally, counselor-mediated as more personal than computer-mediated. If such were the case, it might be that the perceived personal versus impersonal nature of test feedback could account for some of the differences found in reactions to the various presentation-modes mentioned above.

A brief summary of the findings in these research areas will now be presented, in light of the personal versus impersonal dimension which is possibly involved.

Oral vs. written. Written communication of test results, on a purely practical basis, offers definite advantages over the more traditional interview method. Coletta (1974) has pointed out that the former is superior in that it can be reviewed by the client at his leisure, it is economical in terms of time and money, and it can comprise material from many sources thus providing a diversity that is not possible with oral counseling procedures. Campbell indicated in 1965 that there was hardly a shred of evidence that counseling should not be done by mail. It has been felt by others, however, that face-to-

face contact with a professional is the sine qua non of counseling which cannot be eliminated without ill effects. It seems possible that it is the personal nature of the interview situation which has in the past been regarded as essential to the counseling procedure. Along similar lines Coletta (1974) reports that oral feedback can lead to greater client satisfaction than written reporting by providing a warm, non-threatening atmosphere in which negative or dissonant information can be given. Researchers have been stimulated to look into this issue in a systematic fashion.

In a study by Stone and Simos (1948), counselees took a battery of aptitude, interest and personality tests through a public employment office. One half of the subjects were then individually counseled in at least one, one-hour session, the other half received counseling letters summarizing their test results and suggesting specific training and employment possibilities. Both groups placed a high value on the effectiveness of the testing and counseling programme, although the orally counseled group expressed somewhat greater satisfaction with the service.

In a study by Holmes (1964), no significant differences were found between groups receiving oral counseling and those receiving written reports (based on results of intelligence, vocational interest, ability, and personality tests), in their attitude toward test interpretation. The group receiving written material, however, judged the test information as less valuable than the orally counseled group.

Coletta (1974) found that college students preferred oral

personality test feedback but that both personal interviews and written reports were felt to be effective means of communicating test results.

While both methods of conveying assessment findings thus appear to be well received, there is evidence of a preference for the oral mode over the written. By utilizing the suggested continuum of personal versus impersonal reporting style, this finding could be construed as indicating greater acceptance of the personal than the impersonal manner of communication.

Individual vs. group. It may well be that group and individual counseling procedures best serve the client when used in combination. Along these lines Bennet (1955) states:

Years of trial and error methods and some sound experimentation and research have indicated that group and individual procedures in guidance are complementary aspects of a sound guidance program. Neither can fully take the place of the other, but each implements and supplements the other, rendering it more effective. (p. 13)

Whether or not the stage of counseling which involves the actual reporting of assessment results should be performed in an individual or group setting is a somewhat different question, however. In a comment on the feedback study by Wright (1963), Ohlsen points out what he feels to be a serious weakness of test interpretation carried out in groups. By using this method, he feels the counselor breaks confidence with his clients since the very personal content of the information they receive might be learned by others in the group.

In researching the efficacy of group vs. individual test reporting, Folds and Gazda (1960) found students receiving interpretations (based on tests of abilities, interests, adjustment, and values) in individual sessions to be more satisfied than those receiving feedback information in small groups.

In the Wright study (1963) mentioned above, subjects seen in individual test interpretation sessions (regarding their intellectual abilities and vocational and cultural interests) rated the feedback process more highly than did those attending group sessions. Reaction to test reporting was measured by a questionnaire tapping perceived warmth of the counseling relationship, coverage of test information, clarity of test interpretation, and value of test interpretation for educational and vocational planning. Graff et al (1972) found no difference between subject ratings of group, individual, or programmed interpretation based on aptitude and interest test results.

On the basis of these three studies, it appears that test feedback, when presented in an individual session, is met with equal or greater acceptance than when presented to a group. Once again, if the individual-group parameter can be placed along the personal-impersonal continuum, these findings would suggest some preference among test-takers for the more personal communication method.

Counselor-mediated vs. computer-mediated. Computers are fast becoming standard equipment in the psychological assessment of individuals. This development has engendered concern among professionals over the resultant changes in the nature of test reporting procedures and materials. Gedye and Miller (1970) argue against the need for this concern as follows:

The substitution of a supposedly impersonal machine for the usually warm relationship between the tester and the person being tested is likely to worry some psychologists. The experience of the writers, whose joint experience extends to several hundred automated patient-tests, is that fears in this direction are nearly always unfounded and that the effects on the psychologist-patient relationship are either negligible or positive rather than negative. There are indications, particularly from experience with subnormal children, that it might be better to think of an automated system as having, from the patients' point of view, a simple personality, rather than no personality at all. (p. 756)

Although it may be the case, as Gedye and Miller suggest, that computer systems are regarded as being endowed with some type of simple personality, it nevertheless seems reasonable to the present author to view computer-generated interpretations as less personal than counselor-generated feedback. The personal-impersonal continuum will thus be employed as suggested above, in examining the following research.

Forster (1967, 1969) compared a self-explanatory, branching type of programmed test interpretation with the traditional type of interpretation by a counselor, in communicating psychological information to college students. For the most part, subjects in the counselor-mediated group were found to be more relaxed, as measured by

electrodermal skin conductance, than were subjects in the computer-mediated group. It was suggested previously (Kamm and Wren, 1950) that client relaxation is a factor which contributes to acceptance of test findings. It might then be expected that subjects in Forster's studies who received counselor-mediated feedback would be more accepting of the assessment material than those in the computer-mediated group. Unfortunately, Forster does not report any measure of client feeling toward the information received. He does state, however, that in both studies, individuals receiving programmed test interpretations improved more in their accuracy of self-ratings subsequent to feedback than did those receiving counselor-mediated information. Forster suggests that counselors may have modified feedback materials somewhat in an effort to make the content more compatible with the client's self-image. If this was the case then it is difficult to draw any conclusions regarding differential acceptance of assessment information from this study.

Gilbert and Ewing (1971) found that acceptance of programmed counseling in educational and vocational planning was high. Traditional counseling in this area, however, was preferred and regarded as more helpful than was the computer mediated procedure.

As noted above, Graff et al (1972) included programmed self-instruction in their comparison of feedback methods and found no differences between it and either individual or group counseling procedures.

A comparison of counselor-assisted and computer-assisted course selection by Price and Johnson (1973) also found no difference

in students' self-reported reactions to the two guidance methods.

The authors concluded that:

...the fears expressed by some that students will feel dehumanized when asked to interact with a computer rather than a counselor were not supported in this study. Perhaps when a student's goals, interests, and abilities are recognized and contribute to the decision being made, the student feels that he is being treated as a person regardless of whether he is interacting with a computer or a human being. (p. 331)

The inconclusive findings of these studies allow no new inferences to be made regarding the acceptability of personal versus impersonal style of feedback material, based on reaction to counselor-mediated and computer-mediated information.

Summary Of Style-Related Research

Subjects do seem to show some preference for oral feedback communication over written, and for individual test reporting sessions over group sessions. These findings, if conceptualized in light of the personal-impersonal style continuum suggested above, lend some support to the belief that client reaction to personal style feedback is more positive than to impersonal style material. Examination of counselor-mediated versus computer-mediated test reporting showed no evidence of differential acceptance of assessment information and thus provided no suggestion regarding preference for the personal or impersonal delivery mode.

Concern Over The Style Factor

Although the personal versus impersonal aspect of feedback communication has not been previously investigated per se, various researchers and practitioners in the area of psychological assessment seem to have taken this element into serious consideration. Concern over the possibly impersonal, dehumanizing nature of computerized test reporting has been mentioned above (Gedye and Miller, 1970; Price and Johnson, 1973). And in discussing the findings of a study employing computer-generated personality descriptions, O'Dell (1972) indicates that failure to find the expected preference for a group of apparently flattering false statements over less complimentary true statements, may have been attributable to this factor. He states "it is possible that the impersonal nature of the computer printout swamped out any feeling of liking or that the use of the third rather than the second person reduced likability." (p. 273) Graff et al (1972) apparently took this variable into account in their study of test reporting, although they did not vary it. They point out that questions in the programmed self-instructions used in their investigation were not formal, but conversational, in style.

Bixler and Bixler (1946) have argued in favour of the impersonal report style, stating that it "enables the client to relate (the interpretation) to himself, or to reject it, and it frees him to clarify his own motivation." (p. 150) They accordingly recommend presenting feedback statements in the third person, and point out the importance of the way in which test results are communicated as follows:

The frequency with which clients come to counselors quite disturbed about personality test interpretations given by others is...mounting evidence that when such interpretations are given at all, they must be adroitly handled. (p. 151)

Bixler and Bixler express the view that counselors, in this case vocational counselors, should avoid persuasive methods, leaving motivation up to the test data itself, rather than to the counselor. It appears then that their concern regarding personal-style feedback is that it is too persuasive in nature and may cause the client to accept information about himself which is, in fact, untrue or misleading.

Other researchers have looked at the personal versus impersonal nature of feedback, not with regard to the manner in which the information is conveyed, but with regard to the supposed content of that information. Snyder and Larson (1972) showed that acceptance of fake test results as self-descriptive is maximized when the individual is told that they are true of him personally, rather than true of people in general. This would be in accordance with the fears of Bixler and Bixler (1946) regarding the power of such communication.

In light of the concern shown by practitioners and researchers alike, as to the effect on feedback acceptance of the style in which test results are reported to clients, and in light of the current absence of explicit research in this area, it seems that controlled investigation of the style variable is warranted.

The Efficacy of Personal Validation

Another issue involved in feedback research concerns the efficacy of the "personal validation" of assessment findings and interpretations. As mentioned above, some psychologists (Balance et al, 1971; Fischer, 1972) regard the client himself as the best judge of the accuracy of feedback information. If this be the case, then his opinion as to whether such material is in fact descriptive of him, his abilities, interests, etc., should be a viable measure of the validity of the tests and interpretive statements used. This practice of testing the correctness of inferences about a client by requesting his evaluation of them has been termed "personal validation" by Forer (1949). Various studies have been conducted which explore just how capable an individual is likely to be of judging the accuracy of allegedly self-descriptive statements.

Research Findings

Endorsement of stereotyped feedback. In one of the first studies of personal validation, Forer (1949) presented university students with statements which they believed were descriptive of their individual results on a test of personality, interests, ambitions, etc.. All subjects actually received identical reports consisting of thirteen statements which are, for the most part, true of everyone. Examples of such stereotyped statements are "You have a great need for other people to like and admire you" and "You have a tendency to be critical of yourself." These statements can accurately be used to

describe most individuals but, as Forer states, they "lack the quantitative specification and the proper focus which are necessary for differential diagnosis." (p. 118) That is, they say nothing about the individual that enables one to distinguish him from the rest of humanity.

The subjects in Forer's study rated the descriptions they received as highly accurate in revealing basic characteristics of their personalities. Forer concluded from this, that using personal validation as a means of judging the accuracy of feedback material may be a totally fallacious undertaking if that material is of approximate universal validity. He points out that such information tends to be accepted by individuals not only as true about themselves, but as describing what they consider to be unique in themselves.

Ulrich (1963) used the statements employed in Forer's study, in examining acceptance of stereotyped personality descriptions as related to their supposed source. Students were told either that a professional psychologist was giving the personality tests employed and writing the interpretations, or that their peers were performing these functions. No significant difference was found between these two groups in reaction to the feedback. As in Forer's study, however, subjects for the most part accepted the material received as good to excellent in describing their personalities.

Stereotyped vs. authentic feedback. In a study comparing the perceived accuracy of bona fide individual interpretations and of stereo-

typed descriptions, Sundberg (1955) found that students were unable to distinguish between the two. This was the case even when subjects were informed that one of the reports received was not based on their own personality test results.

Desirable vs. undesirable feedback. Sundberg (1955) reported that when all feedback descriptions used in his study were rated by two independent judges, five times as many favourable as unfavourable statements were found in interpretations which had received high accuracy rankings, and twice as many unfavourable as favourable statements were found in those which had received low rankings. Social desirability thus appears to be a factor in the degree to which subjects endorse feedback information as being self-descriptive.

O'Dell (1972) conducted a study in which he compared the perceived accuracy of, and liking for, "Barnum" interpretations, "prosecuting-attorney" descriptions, and authentic computer-generated interpretations based on subjects' results on the Sixteen Personality Factor Questionnaire (16PF). O'Dell states that "the Barnum effect, so named by Meehl (1956), is achieved by constructing statements which are true of almost everyone (i.e., with a high base rate) and which are subtly flattering or at least not negative in tone." (p. 270) The statements used as "Barnum" descriptions in O'Dell's study were taken from Forer (1949) and modified to make them roughly the same length as statements in the study's authentic interpretations. It is interesting that O'Dell points out the "subtly flattering" aspect of the

generalized statements in light of Sundberg's finding of high endorsement of socially desirable descriptions. It may be that high-base-rate statements which were of a less desirable nature would receive lower acceptance ratings than the Barnum statements typically do. O'Dell's "prosecuting-attorney" statements might be of exactly this type. They were constructed so that their meaning was essentially the same as that of the Barnum descriptions, but they were written using as much clinical jargon as possible. Examples of a Barnum statement and the corresponding prosecuting-attorney statement are given as follows: Barnum - "She has a great deal of capacity which she has not utilized, but which she could use if she wanted."; prosecuting-attorney - "The amount of libidinal energy used in maintaining defenses reduces her ability to function at times." (p. 271) It can be assumed that due to their similar content, these statements would have equivalent base rates. The clinical tone of the second version, however, likely carries connotations of pathology which could bring its level of social desirability below that of the first statement. This speculation is based on the finding of Balance et al (1971) that individuals perceive feedback statements based on constructs of psychopathology as significantly more indicative of pathology, and as significantly less desirable, than statements not based on such constructs.

The results of O'Dell's study indicate that the Barnum interpretations were perceived as more accurate than were the authentic descriptions, although there was no significant difference in subject liking of the two report types. Prosecuting-attorney statements were

seen as the least accurate and were the least liked of all three groups. The findings regarding prosecuting-attorney feedbacks appear to lend support to the suggestion made above that high-base-rate statements which are of a less desirable nature than the commonly used Barnum descriptions, would receive lower acceptance ratings than the latter. Indeed they received lower ratings than did authentic test based statements.

O'Dell, in discussing the greater endorsement of Barnum statements than of the authentic 16PF interpretations states that:

...the Barnum effect statements, because of their extremely high base rate, should apply very accurately to everyone. Hence, they should be perceived as more accurate than statements constructed from less than perfectly accurate test scores by an admittedly less than perfect interpretation program. (p. 273)

A recent study by Snyder and Shenkel (1976) incorporates several of the questions mentioned above in its examination of acceptance of high-base-rate personality feedback. With regard to social desirability, Snyder and Shenkel found that subjects rated favourable general statements as more accurately descriptive of themselves than unfavourable general statements. This is consistent with the findings of Sundberg (1955). However, when an independent group of judges rated the same statements as to their truthfulness about people in general, it became apparent that the acceptance rating differences between favourable and unfavourable descriptions merely reflected their actual base rates. In other words, the favourable statements were more universally valid than were the

unfavourable statements, and thus the subjects rightly saw the former as more true of themselves than the latter. This finding suggests that actual base rates of the qualities described in feedback statements should be taken into consideration in any investigation of personal validation. In this vein Snyder and Shenkel recommend that future research devise favourable and unfavourable interpretations equated for degree of truthfulness in order to clarify the effects of the favourability variable on acceptance phenomenon.

Another interesting finding of the Snyder and Shenkel study supported the view that persons are not influenced, in their acceptance ratings of feedback material, solely by the objective verity of the information presented. For while no difference was found between subjects' acceptance ratings of unfavourable feedbacks as descriptive of themselves versus as descriptive of people in general; when the statements were favourable, subjects perceived these as more true of themselves than of most people. This finding appears to be consistent with Forer's (1949) comment that subjects felt his universally valid statements to be uniquely true of themselves, in light of the fact that these statements were actually "subtly flattering" (O'Dell, 1972).

In view of the evidence that subjects perceive neutral or favourable high-base-rate statements as highly accurate, and as more true of themselves than of people in general, O'Dell (1972) warns that:

Even the most careful constructor of interpretation programs might well wind up using nothing but the high-base-rate Barnum statements if they were selected

only through ratings of perceived accuracy given by the person who had taken the test. Thus, although it would be more difficult to accomplish, construction of such statements should be based not solely on the perception of the persons taking the test, but also on outside more objective methods of assessing validity. Even with this method, an external observer making ratings of someone else should be made aware of the potential trap of the Barnum statements. (p. 273)

Despite the great endorsement of favourable high-base-rate statements, and the resulting difficulties with using personal validation in the construction of an interpretation programme, there may nevertheless be a place for personal validation in assessment practice. Provided that care is taken to use statements in client feedback which are not universally valid, but rather have the ability to discriminate amongst different types of individuals, personal validation of feedback reports may well be a viable means of checking the accuracy of individual assessment interpretations.

False vs. authentic feedback. In order for personal validation to be a feasible procedure, under the provisions described above, it must be shown that individuals can differentiate between those "non-Barnum" feedback statements which are true of themselves, and those which are not.

Bringmann et al (1971) examined this question by giving subjects three feedback statements descriptive of findings from the Minnesota Multiphasic Personality Inventory (M.M.P.I.), and three from the Personality Research Form (P.R.F.). Two statements for each test were authentically based on the subjects' own test results, the

other statement for each test being randomly chosen out of all possible statements for that test. None of the descriptions employed were thus of the Barnum, high-base-rate variety. Subjects were informed that some, but not all, of the statements they received would be derived from their own test results. Bringmann et al found that, for both tests used, authentic feedback statements received significantly greater endorsement than did the randomly chosen statements. Under these circumstances, therefore, subjects were able to accurately discriminate between true and false statements about themselves.

Dies (1972) employed raw score data from the P.R.F. to explore what he termed "the fallacy of personal validation" (p. 47). Without the subjects' awareness, half of them received accurate feedback, while the other half received falsified information which was substantially unlike their actual test performance. Results showed that, regardless of the verity of the feedback they received, subjects rated it to be an accurate portrayal of their personality. A difference between groups was found, however, in attitudes toward psychological tests in general. Subjects who had received accurate information rated psychological tests as significantly more useful than did those receiving bogus material.

The discrepancy in the findings of the Bringmann et al and the Dies studies, regarding subject ability to distinguish between true and false feedback information, is a puzzling one. It is

conceivable that the differing procedures used in the two experiments may have contributed to their discrepant results. In the former study, subjects were truthfully informed that not all the information they were about to receive would be authentic, and their differential endorsement of true and random statements reflects this. In the latter study, however, subjects were given either all bona fide, or all bogus material, and received no forewarning about the possibility of the feedback being false. In addition to the difference in instructions, the fact that subjects in the Bringmann et al study received true as well as false statements, the accuracy of which they could then compare, while those in the Dies study got only one type of feedback, may have been a factor in the unequal findings reported in these studies.

Whether or not the explanation given above might account for these inconsistent findings with regard to endorsement of true versus false feedback, it seems that the area is in need of further exploration.

Summary of Personal Validation Research

It seems that favourable or neutral high-base-rate feedback statements elicit strong endorsement from subjects who believe them to be based on their own test results. Individuals appear to view such statements as more true of themselves than of people in general. Unfavourable general statements are regarded by subjects as equally true of themselves as of most people.

When accuracy ratings of authentic statements derived from

subjects' test findings are compared with fake stereotyped descriptions, the former receive equal or lower ratings than favourable high-base-rate statements, and higher ratings than unfavourable high-base-rate descriptions.

When true versus random or false feedback statements, none of which are universally valid, are compared, subjects at times seem able to identify the true statements while at other times not. It is suggested that this difference may be related to the specific procedures involved in the various studies.

CHAPTER II

STATEMENT OF THE PROBLEM

Aims

In response to public criticism of the secrecy surrounding the findings of psychological evaluations, there appears to be a growing trend toward making feedback an integral part of testing procedures in diverse areas of psychological assessment. Accordingly, research is needed which will explore how test results can most effectively be presented to the individuals involved. One concern of psychologists is how to communicate this information in a manner which clients will find acceptable and satisfying. Numerous investigations of this area have been conducted, employing feedback from tests of personality, aptitudes, values, and interests. Unfortunately, the exact nature of the feedback material and its presentation are often left unspecified in these works and when studies investigating the same question achieve conflicting results, it is difficult to determine why this occurred. More highly controlled research is therefore necessary in order that the relevant variables may be isolated.

It is the purpose of this study to provide such a controlled investigation of one factor which may affect a test-taker's response to the feedback he receives: the personal vs. impersonal style with

which the information is delivered. Each subject receives two reports written in a personal manner, and two others written in an impersonal style. Perceived accuracy of, and preference for, the two types of reports are compared to determine the effects of the style manipulation.

The question of whether or not a person can identify statements based on his own test scores is also examined. Each of the four reports given to a subject is descriptive of a high score on one of the test's scales. Only two of these reports, however, authentically reflect the subject's own high scores. The other two are false in that they are descriptive of high scores for the scales on which the subject actually scored low, relative to his other scores.

The present work varies from many of the previous studies in that the two different forms of feedback employed, in this case personal and impersonal, are identical in content and differ only with regard to the variable in question. Since the feedback materials consist of written paragraphs, it is possible to ensure standardization of the information, something which is rarely possible with verbal communication.

It is hoped that by isolating the variable of report style, some light may be shed on the still unresolved questions concerning the effectiveness of various feedback presentation modes.

Based on the previous research in the subject area, four major hypotheses regarding reaction to the feedback were generated:

1. The subjects would perceive feedback reports written in the personal style as more accurate than those in the impersonal style.

2. The subjects would perceive true high score feedback reports as more accurate than false high score reports.
3. The subjects would show a preference for personal style feedback reports over impersonal style reports.
4. The subjects would show a preference for true high score feedback reports over false high score reports.

Significance Of The Problem Area

1. It is significant that the test used in this study is the Strong-Campbell Interest Inventory, a recent adaptation of the Strong Vocational Interest Blank, the most widely researched vocational interest test in North America.
2. It is significant that written feedback is automatically provided by the computerized scoring process for the Strong-Campbell test, and that this feedback has, in the past, used personal style statements in reporting the scores attained on some types of scales, and impersonal style statements in reporting other types. For the scales on which the feedback statements of this study were based, the computerized statements have routinely been written in the impersonal style. For this test and others using standardized feedback material, it would be a simple process to change all statements to either the personal or impersonal style, should one prove to be more acceptable to test-takers in general. And since the change in style does not necessitate any change in the content of the material, this would seem to be an innocuous procedure.

3. Some objections might be raised, however, should it be found that one style of report had such a persuasive effect on the test-taker as to make him endorse information which was in fact inaccurate. This study attempts to determine whether subjects are so influenced by report style or whether, regardless of style, subjects can distinguish between true and false statements.

4. It is significant that most previous studies dealing with the endorsement of false or random feedback statements have employed either solely personal or solely impersonal statements and have not investigated the differential effects of this variation in style. It may be that report style is one factor contributing to the conflicting findings in this body of research.

CHAPTER III

METHOD

Subjects

Ninety-two subjects (Ss), seventy-three female and nineteen male undergraduate students attending the University of Windsor, participated in the study. Their ages ranged from 20 to 47 years with a mean age of 24. All of the Ss were voluntary participants in the study. The subject motivation included the opportunity to take a vocational interest test and receive feedback on their individual results, as well as the chance to gain 10 credit points toward a total course grade out of 300 points.

Two female subjects and one male subject were not present for the group feedback session and thus had to be eliminated from the study. These subjects received their test feedback statements at a later date but were not asked to complete the rating form.

Due to the great majority of females in the sample, it was decided to analyze only the female data at this time. In order to obtain equal numbers of subjects in all treatment groups, after elimination of the two female subjects mentioned above, seven additional subjects were randomly deleted from the study. Data for all eliminated subjects is presented in Appendices H and I. The final sample consisted of sixty-four female subjects, sixteen per

treatment group.

The subject population while not viewed as representative of the general population, is seen as representative of the female undergraduate population at the University of Windsor.

Instruments

The Strong-Campbell Interest Inventory, a revision and extension of the Strong Vocational Interest Blank, was the test used in this study. The Strong-Campbell differs from the S.V.I.B. primarily in the addition of the General Occupational Themes, and in the merging of men's and women's forms into a single instrument. The feedback information used in this study was based on the six General Occupational Themes of the test, which were derived from J.L. Holland's work, Making Vocational Choices: A Theory of Careers. Readers are referred to this book for further information regarding these themes. They are based on Holland's premise that individuals can be described in terms of their relative similarity to one or more of six idealized occupational-interest personality types, (Realistic-R, Investigative-I, Artistic-A, Social-S, Enterprising-E, and Conventional-C), and that each type seeks out a different kind of occupational environment. This rather simplified formulation offers a structure for analyzing the differences between people and the occupations they choose. Campbell sought to include these themes in his revision of the S.V.I.B. since Holland's theory appeared to offer an organizing system for the extensive body of research carried out with the Strong inventories.

For information regarding the reliability and validity of the 1969 revision of the original test, the S.V.I.B., those interested are referred to Katz (1972), Krauskopf (1972), Clendenen (1972), and Kirk (1972). Readers are also directed to the Handbook for the Strong Vocational Interest Blank (Campbell, 1971), particularly with regard to questions of the test's fakeability. Campbell here points out that when students have been instructed to sway their responses on the S.V.I.B. in specified directions, their scores reflect this. In real life situations, however, he concludes that no massive distortion of test results appears to occur even though test-takers might be motivated to fake, for example, in the direction of mechanical interests in applying for an engineering position. In the present study no decisions affecting the subjects were contingent on their test results and motivation to fake would thus appear to be minimal.

Studies of the reliability of the General Occupational Theme Scales of the most recent, Strong-Campbell, revision are cited by Campbell in the S.V.I.B.-S.C.I.I. Manual (1974). The median test-retest correlation for these themes was .86 over a thirty-day period, and .91 over a period ranging from 11 to 22 days. For further information regarding the incorporation of Holland's themes into the Strong-Campbell Interest Inventory, and the validity of these themes, readers are referred to Hansen and Johansson (1972), Campbell and Holland (1972), Blakeney, Matteson, and Holland (1972), Hanson, Lamb, and English (1974), Lee and Hedahl (1973), Matteson, Holland, Blakeney, and Schnitzer (1973) and Cole (1973). Research into the themes them-

selves has a somewhat longer history than that of their adaptation as part of the Strong-Campbell. Those interested are referred to Holland (1962, 1963, 1968), Harvey and Whinfield (1973), Hughes (1972), Andrews (1973), Eggenberger and Herman (1972), and Folsom (1969).

In customary use of the Strong-Campbell Interest Inventory, a computerized summary of the test results is presented to the client on a profile form. The profile indicates the person's standard scores on three sets of scales, one of these being the General Occupational Themes, as well as giving information for their interpretation. For the purposes of this study, twelve high score descriptive feedback reports (Appendix A) were closely derived from the interpretive material given on the profile form: one personal and one impersonal style report being written for each of the six themes. These two versions of each theme were identical in content and differed only with regard to style. Personal style reports were composed of statements employing the second person pronoun, for example, "You tend to enjoy...", "Your interests centre around..." Impersonal style reports used statements written in the third person, for example, "Such people tend to enjoy...", "Their interests centre around..."

An effort was made to ensure that any differences found in preference for, and perceived accuracy of, the two styles of reports would not be attributable to variations in the degree to which subjects as a group found these two types of reports to be socially desirable.

An independent group of female students, also enrolled in an undergraduate Psychology course and deemed comparable to the experimental subjects, volunteered to serve as judges of the social desirability of the feedback reports. Their instructions as to how to proceed are given in Appendix B.

Each experimental subject was given four feedback reports, numbered 1 through 4. After reading these, subjects responded to a rating form (Appendix C) which asked them to evaluate each of the reports individually. Responses took the form of a rating on an eight point Likert-type rating scale of 0 to 7 with the extreme poles marked - 0-Not at all accurate, and 7-Extremely accurate. They were also given the following instructions for each report: "Describe briefly your personal feelings about, and reactions to, Feedback 1)." Finally, subjects were asked to respond to a forced choice ranking of all four statements received, in order of their relative preference for each.

Procedure

Each of the ninety-two subjects was administered the Strong-Campbell Interest Inventory in groups of 41, 31, and 20 subjects each, following the administration procedures outlined in the S.V.I.B.-S.C.I.I. Manual (1974). Approximately four months after test administrations, subjects participated in the second stage of the study, each receiving four feedback reports which they were required to evaluate. This second stage also took place in a group situation, the

groups this time consisting of 50 and 39 subjects each. Every subject was given an envelope containing an instruction form (Appendix D), his four feedback reports, and a rating form. The instructions informed the subject as to the contents of the envelope and requested that he first read all of the feedback reports, in the order presented, and then record his evaluation of each on the enclosed rating form. He was told that, for research purposes, only two of the reports he received (he would not be told which) would actually be based on his own high scores, the other two not being descriptive of his test results.

For half of the subjects the initial two reports were authentically based on the themes in which they attained their highest scores (true reports), and the last two were based on the themes in which they scored their lowest (false reports). The other half read the false statements first and the true last. Each of these halves was further subdivided into two groups: one whose true reports were both written in the person style, and the false reports both written in the impersonal; and the other whose true statements were both written in the impersonal form, with the false both written in the personal. All subjects were randomly assigned to one of the resulting four groups:

- A) Impersonal True (IT¹) followed by Personal False (PF²)
- B) Personal True (PT¹) followed by Impersonal False (IF²)
- C) Personal False (PF¹) followed by Impersonal True (IT²)
- D) Impersonal False (IF¹) followed by Personal True (PT²)

After responding to the rating form, subjects returned these to the Experimenter and were handed a sheet of paper on which the numbers of the feedback reports, 1 2 3 4, were listed and the numbers of the two reports which were true for that subject were circled. The Experimenter subsequently asked the subjects about their reactions to the testing and feedback procedure, and discussed the research project with them. They were then given their Strong-Campbell Interest Inventory Profile sheet and advised as to how to interpret it. They were informed that should they wish to discuss their results in further detail they were invited to contact either the Experimenter or the professor of the psychology course in which they were enrolled.

Statistical Treatment Of The Data

The Fmax test (Winer, 1971) was carried out to test for homogeneity of variance of social desirability ratings for personal and impersonal style reports. A t-test for difference of means (Ferguson, 1959) was carried out on the social desirability data.

The Fmax test was then employed to test for homogeneity of variance of accuracy ratings for the eight types of reports (IT¹, IT², PT¹, PT², IF¹, IF², PF¹, PF²). A 4 x 2 analysis of variance (ANOVA) was conducted on the accuracy ratings to test for any effects of the four different orders (A,B,C,D) or the two presentation positions (first versus second). A Newman-Keuls test (Winer, 1971) was used to measure the interaction effects.

Mean accuracy ratings for reports identical in style and

authenticity, and varying only with regard to their order of presentation (e.g. IT¹ and IT²), were then calculated. The F_{max} test was used to test for homogeneity of variance among the ratings of the four resultant types of reports, the order factor having been collapsed. In order to test hypotheses 1) and 2), a 2 x 2 ANOVA was conducted on the accuracy ratings, investigating the effects of the style and authenticity variables respectively.

Finally, preference ranking data was examined using two Chi-Square tests (Siegel, 1956); one testing for preference as a function of report style (hypothesis 3) and the other testing for preference as a function of report authenticity (hypothesis 4).

Responses to the open question regarding personal feelings toward the feedback were inspected to ensure adequate understanding by the Ss of the experimental procedure. No statistical analyses were conducted using this material.

CHAPTER IV

RESULTS

Means of the standard scores obtained by the female subjects in this study on the SCII's General Occupational Theme scales are presented in Table 1, along with the mean scores obtained by females in the standardization study for these scales. (Campbell, 1974) Inspection of the table shows the similarity of means from both samples and argues for the generalizability of the results of the present study.

As mentioned in Chapter III, an independent group of judges rated the two styles of reports used in this study on a nine-point scale of social desirability. Extreme poles of the scale were marked 1-Extremely Desirable, and 9-Extremely Undesirable. The content of the reports was balanced across the style manipulation, with six judges receiving themes R, I, and A in the personal style, themes S, E, and C in the impersonal; the other six judges receiving themes R, I, and A in the impersonal style, and themes S, E, and C in the personal. Data on social desirability ratings assigned by the judges to each of the three personal style and three impersonal style reports are presented in Appendix E. Ratings for the personal style reports were summed for each judge, as well as for the impersonal style reports, resulting in a single personal style rating and impersonal style rating



TABLE 1

Means for General Occupational Theme Scores
for Females in Standardization Study and in
Present Study

Source	R	I	A	S	E	C
Standardization Study	45.5	48.5	53.2	51.3	48.1	50.1
Present Study	41.8	46.3	53.5	55.6	50.2	46.4

for each judge. An Fmax test (Winer, 1971) was then computed on the means of these style ratings. Table 2 summarizes the results of this test and shows (Observed Fmax < Critical Fmax), thus supporting the assumption of homogeneity of variance and justifying the use of the t test for differences between means (Ferguson, 1959). The relevant means are presented in Table 3 and a summary of the t test in Table 4. Table 4 indicates there is no significant difference in the social desirability ratings given to reports written in the personal and impersonal style ($p > .05$). It is therefore reasonable to assume that any differences found in reaction to the two styles of reports is not attributable to differences in their levels of social desirability.

The accuracy ratings assigned by the subjects to their feedback reports are contained in Appendix F. For each subject, the first two reports received were identical to each other with regard to style (personal or impersonal) and authenticity (true or false), as were the second two reports. For the purpose of investigating differences in accuracy ratings among report types, therefore, mean accuracy ratings were calculated for the first two reports and second two reports of each subject.

The design of this study called for four different orders of presentation. Although no predictions were made, a computational procedure was undertaken to study the possibility of any order effects. The orders in which feedback reports were presented to subjects were: Order A - IT¹ PF²; Order B - PT¹ IF²; Order C - PF¹ IT²; and Order D -

TABLE 2

Fmax Test for Social Desirability Ratings
of Personal and Impersonal Style Reports

SS largest	SS smallest	Observed Fmax	Critical Fmax
136.67	92.92	1.47 N.S.	3.28

N.S. - not significant ($p > .05$)

TABLE 3

Means of Total Social Desirability Ratings for
3 Personal and 3 Impersonal Reports

Type of Report	Mean Ranking	Standard Deviation
Impersonal	13.67	1.47
Personal	12.92	2.91
Average of Means	13.30	

TABLE 4

t Test for Social Desirability Ratings
of Personal and Impersonal Reports

Comparisons	d.f.	t
Personal vs. Impersonal	11	-0.50 N.S.

N.S. - not significant ($p > .05$)

IF¹ PT². See Appendix F for complete data. Table 5 summarizes the results of the Fmax test used to test the assumption of homogeneity of variance among the ratings of the eight different types of reports: IT¹, IT², PT¹, PT², IF¹, IF², PF¹, and PF². Table 5 indicates (Observed Fmax < Critical Fmax), thus supporting the assumption of homogeneity of variance and justifying the use of the analysis of variance (ANOVA) on the raw data. The relevant means are given in Table 6. These data were analyzed using Ferguson's (1959) ANOVA procedure for a 4 x 2 design, a summary of which is presented in Table 7. The two factors analyzed in this procedure are A: position (first two reports vs. second two reports) and B: order (A,B,C, and D). An inspection of the F's shows that neither factor A nor B is significant ($p > .05$), but that the interaction between A and B is quite significant ($p < .001$). Figure 1 shows this result figuratively. In order to establish the nature of this interaction, the Newman-Keuls test (Winer, 1971) was used. Results of this test indicated that there were no significant differences between means except between those of true and false reports ($p < .01$). Within the true and false reports, there were no significant differences due to either position or order ($p > .01$).

Having found no difference in accuracy ratings due to order effects, mean ratings of reports varying only with regard to their order of presentation (e.g. IT¹ and IT²) were calculated. Four types of reports resulted from this procedure: IT, PT, IF, and PF.

Table 8 summarizes the results of the Fmax test used to test

TABLE 5

Fmax Test for Accuracy Ratings of Eight
Types of Feedback Reports
(IT¹, IT², PT¹, PT², IF¹, IF², PF¹, PF²)

SS largest	SS smallest	Observed Fmax	Critical Fmax
32.50	11.98	2.71 N.S.	5.19

N.S. - not significant ($p > .05$)

TABLE 6

Mean Accuracy Ratings as a Function of
 Order (Order A - IT¹ PF², Order B -
 PT¹ IF², Order C - PF¹ IT²,
 Order D - IF¹ PT²) and Position
 (1st Two Reports, 2nd Two Reports)

Position	Order				Average of Means
	A	B	C	D	
Mean of First Two Reports	4.78	4.19	2.59	2.25	3.45
Mean of Second Two Reports	2.25	2.34	4.75	5.09	3.61
Average of Means	3.52	3.27	3.67	3.67	3.53

TABLE 7

Summary Table of 4 x 2 ANOVA Procedure for
Order and Position Effects

Source	SS	df	MS	F
A (Position)	.78	1	.78	0.54 N.S.
B (Order)	3.53	3	1.18	0.81 N.S.
A x B (Interaction)	179.56	3	59.85	41.28 **
Error	173.50	120	1.45	
Total	357.37	127		

** ($p < .001$)

N.S. - not significant ($p > .05$)

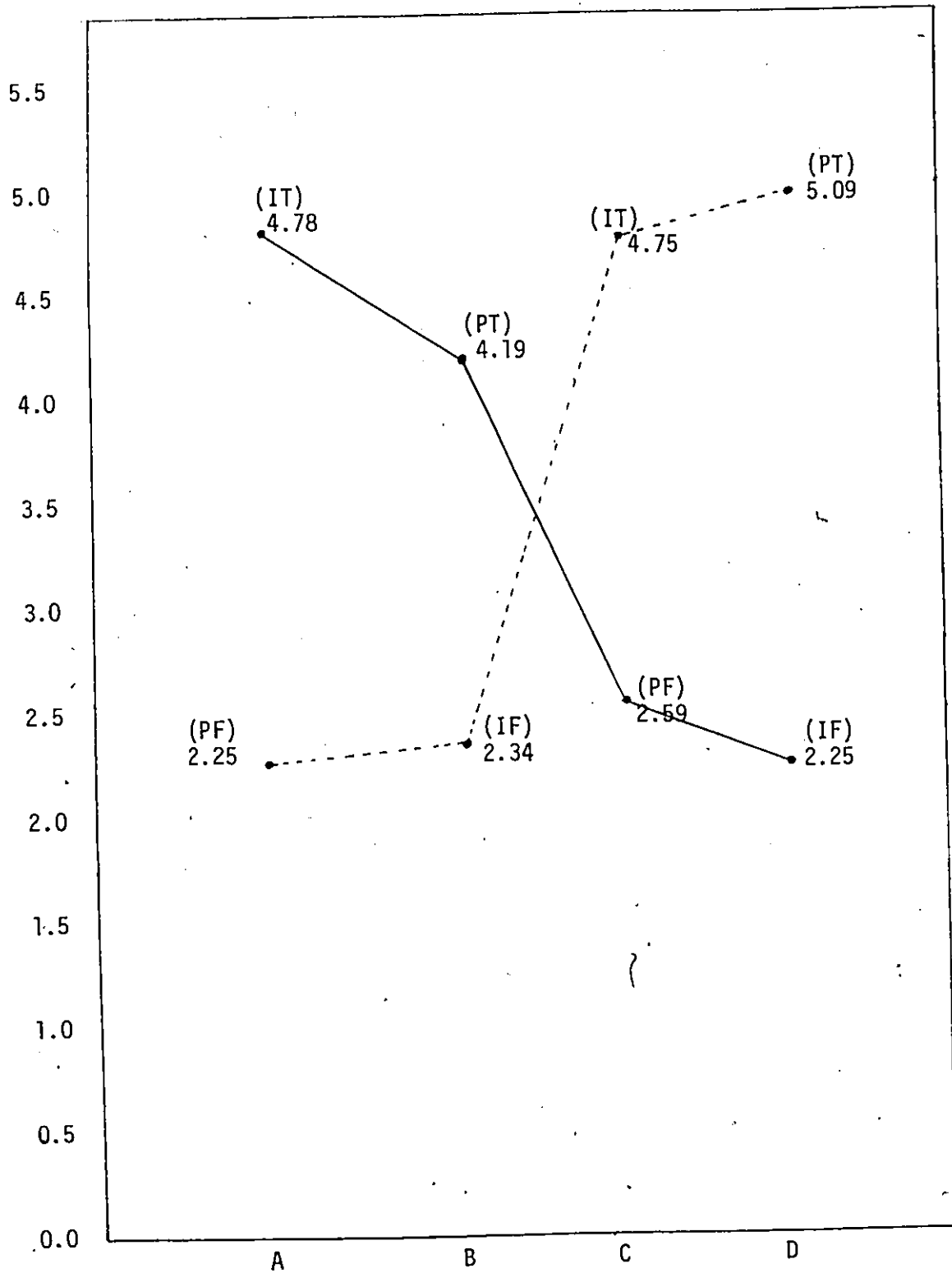


Figure 1. A figure showing mean accuracy ratings as a function of order effects: A, B, C, and D.

————— Mean accuracy ratings of first two reports
 - - - - - Mean accuracy ratings of second two reports

TABLE 8

Fmax Test for Accuracy Ratings of Four
Types of Feedback Reports (Order Collapsed)

SS largest	SS smallest	Observed Fmax	Critical Fmax
60.14	36.98	1.63 N.S.	2.61

N.S. - not significant ($p > .05$)

for homogeneity of variance among the ratings of these four types of reports. The table shows (Observed $F_{max} < \text{Critical } F_{max}$), thus supporting the assumption of homogeneity of variance and justifying the use of ANOVA on the raw data. The relevant means are presented in Table 9. The table shows the mean accuracy ratings of the personal and impersonal reports for both levels of report authenticity.

In order to test hypothesis 1), that Ss would perceive personal reports as more accurate than impersonal reports, and hypothesis 2), that Ss would perceive true high score reports as more accurate than false high score reports, the data was analyzed using Ferguson's (1959) ANOVA procedure for a 2 x 2 design. A summary of the ANOVA is presented in Table 10. Of the two factors analyzed, style and authenticity, only authenticity is found to be significant ($p < .001$). Report style apparently has no effect on the subject's perceived accuracy of the feedback report ($MS=0, p > .05$). Nor is there any interaction effect between the style and authenticity factors. Figure 2 presents these findings figuratively. It is apparent that, true reports, whether written in the personal or the impersonal style, are perceived as significantly more accurate than false reports. Thus hypothesis 1) is not confirmed. There is apparently no difference in the perceived accuracy of the feedback reports resulting from the style in which they are written. Hypothesis 2) does receive support and suggests that subjects found reports based on their high theme scores to be more accurately self-descriptive than those based on their low scores.




TABLE 9

Mean Accuracy Ratings as a Function of Report Authenticity
(True /False) and Style (Personal /Impersonal)

[Order Collapsed]

	True	False	Average of Means
Personal Style	4.64	2.42	3.53
Impersonal Style	4.77	2.30	3.53
Average of Means	4.70	2.36	3.53

TABLE 10

Summary Table of 2 x 2 ANOVA
 Procedure for Style (Personal vs. Impersonal)
 and Authenticity (True vs. False) Effects

[Order Collapsed]

Source	Ss	df	MS	F
A (Style)	0	1	0	0 N.S.
B (Authenticity)	175.78	1	175.78	120.40 **
A x B (Interaction)	0.50	1	0.50	0.34 N.S.
Error	181.09	124	1.46	
Total	357.37	127		

** ($p < .001$)

N.S. - not significant ($p > .05$)

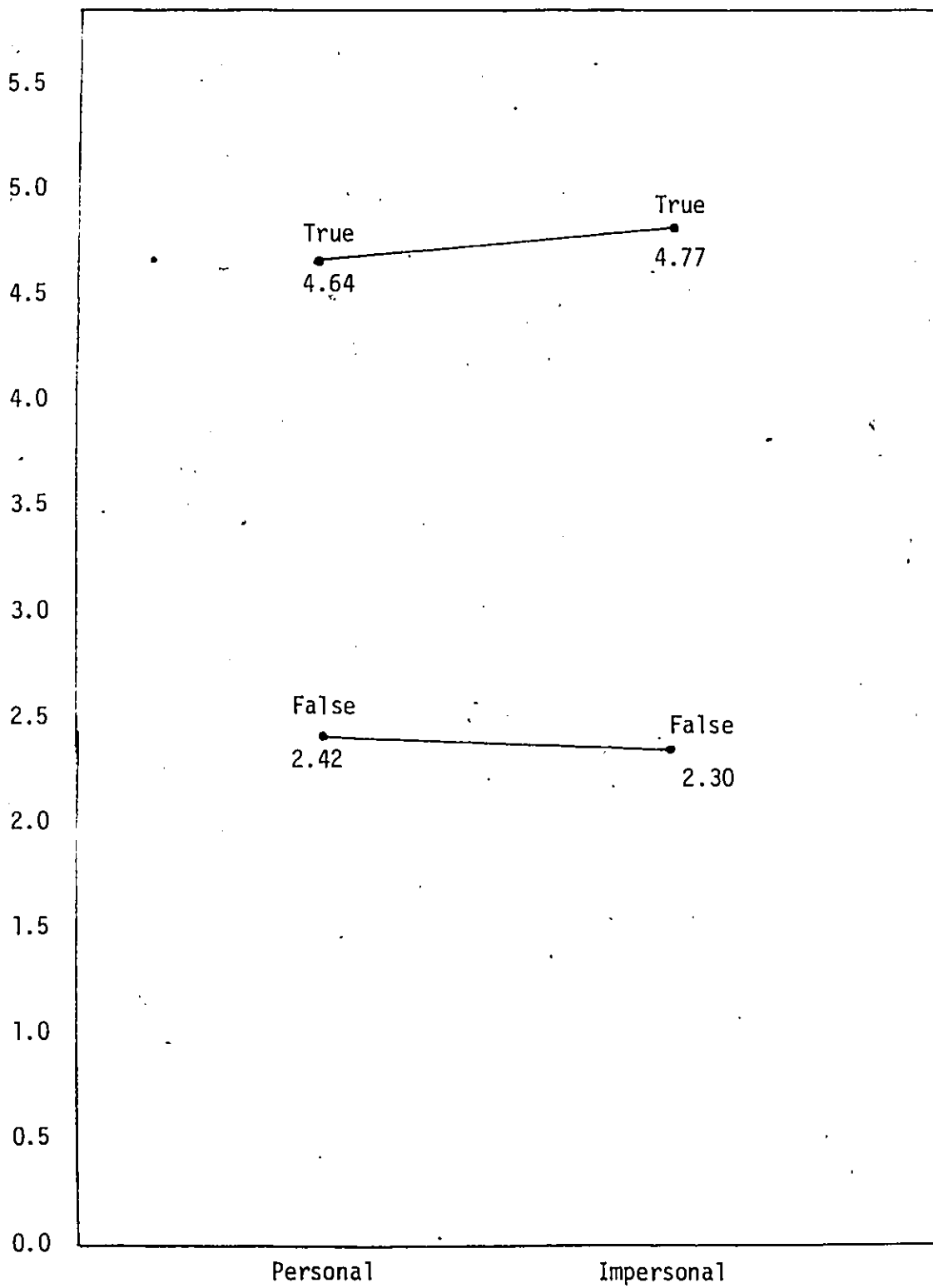


Figure 2. A figure showing mean accuracy ratings as a function of style and authenticity of reports.

In order to test hypotheses 3) and 4), that subjects would show a preference for personal over impersonal reports, and true over false reports respectively, Chi-Square tests (Siegal, 1956) were computed. Each report was ranked by a subject as either first, second, third or fourth in order of preference from high to low. Ranking data is presented in Appendix G. Total rankings for personal and impersonal style reports are given in Table 11. The results of the Chi-Square test on this data, presented in Table 12, indicate no significant difference in preference rankings given to personal and impersonal reports ($p > .05$).

Rankings of preference for true and false reports are presented in Table 13. A Chi-Square test, reported in Table 14, indicates true reports are ranked significantly higher than are false reports ($p < .001$).

Thus hypothesis 3) is not supported, while hypothesis 4) receives strong support. Subjects showed no preference for reports according to their style, but did show a marked preference for true over false feedbacks.

TABLE 11

Total Preference Rankings as a Function
of Report Style

Style	Ranking				Total
	1st	2nd	3rd	4th	
Personal	32	31	33	32	128
Impersonal	32	33	31	32	128
Total	64	64	64	64	256

TABLE 12

Chi-Square Test for Preference Rankings
as a Function of Report Style

Comparisons	d.f.	χ^2
Personal vs. Impersonal	3	0.125

N.S. - not significant ($p > .05$)

TABLE 13

Total Preference Rankings as a Function
of Report Authenticity

Authenticity	Ranking				Total
	1st	2nd	3rd	4th	
True	58	47	17	6	128
False	6	17	47	58	128
Total	64	64	64	64	256

TABLE 14

Chi-Square Test for Preference Rankings
as a Function of Report Authenticity

Comparisons	d.f.	χ^2
True vs. False	3	112.64 **

** ($p < .001$)

CHAPTER V

DISCUSSION

The purpose of this study was to examine the reactions of university students to vocational interest test feedback in relation to the style of the feedback report, and the authenticity of the information presented. The subjects, all female, rated and evaluated four reports, each based on high scores on one of the General Occupational Theme Scales of the S.C.I.I.

Two of these reports were written in a personal, and two in an impersonal form. In a test conducted to ensure that any differential subject reactions to the two report styles would not be attributable to a difference in their level of social desirability, independent judges viewed both styles and rated them to be equal in this respect. Experimental subjects showed no significant differences in their preference for, or perceived accuracy of, feedback reports as a function of the style variable.

Half of the reports received by each subject, either the two personal or the two impersonal, were true descriptions based on that subject's highest scores; the other half were false feedbacks, actually based on her two lowest scores. Subjects showed a strong tendency both to prefer their true reports, and to rate these as more

accurate than the false descriptions.

There was no significant interaction found between the style and authenticity factors.

The findings of this study indicated no significant differences in perceived accuracy of reports due to their order of presentation. The lack of any evidence in this experiment of differences in client reaction to feedback due to report style seems somewhat surprising in light of the concern shown by numerous investigations over the possible effects of this factor (Bixler & Bixler, 1946, Graff et al, 1972, O'Dell, 1972, Snyder and Larson, 1972). It might be, as Johnson and Price (1973) have suggested, that when information specifically relating to individuals is employed in arriving at conclusions about them, they feel they are being treated personally regardless of how these conclusions are presented.

Furthermore, university students may be more accepting of relatively impersonal modes of interaction, than are other segments of society. Since most students are under thirty years of age, for the greater part of their lives they have been exposed to the standardized forms and bureaucratized procedures of modern society. Within the university itself, the importance of the student number as a primary means of identification seems a case in point.

Alternatively, it is possible that the manipulation of style in the present study was insufficient to create the desired personal-impersonal effect. There were, however, some indications that the subjects of this experiment did feel differently toward the personal and

the impersonal style reports, although no suggestion of this was gleaned from responses recorded on the rating forms. In post-experimental discussions, some subjects said that they had felt more compelled to react personally to the feedback when it addressed them in the second person pronoun, than in the third person. Others expressed feelings of frustration because they disagreed with the material presented in their personal reports and agreed with the impersonally-worded descriptions. Subjects whose personal reports were the authentic ones appeared, from these discussions, to be most satisfied with the feedback procedure as a whole. It is suggested that future investigations of the style issue attempt to tap such reactions by asking subjects to respond to the entire feedback procedure, in addition to its component parts.

In the opinion of the present author, the effect of the style manipulation was outweighed in this study by the greater influence of the authenticity variable. The accuracy of the content of the report was a more important factor in determining the subjects' reaction than was the report style. This result may have been heightened by the subjects' foreknowledge that only two of their reports would be authentically based on their own test scores.

It is recommended, therefore, that future research look at the effects of style on acceptance of feedback reports of equal verity; or, if both true and false reports are employed, that subjects not be informed how many of each they will receive.

The finding of equal levels of social desirability for the two

report styles does not appear surprising, in light of their almost identical content. It is possible, however, that subjects would find those reports which were based on their own high scores as more desirable than those based on their low scores. This would be compatible with the comment made by Campbell on the counselor's version of the SCII profile form, that "...what seems to happen is that a person scoring high on a particular theme feels gratified by being thus described and tends to look coolly upon the other, dissimilar types."

Regarding one's own high score reports as more desirable than reports for the other themes, appears reasonable in light of people's motivation in choosing general occupational interest areas. Surely a basic human need is to regard oneself and one's activities in a positive light. A person is thus unlikely to develop interests in those areas which he considers socially undesirable unless he sees himself as quite apart from the rest of society. It might be worthwhile in a future investigation to have subjects rate each of the six General Occupational Themes as to their level of social desirability, and then to compare these ratings with their scores on the various themes.

Previous studies have investigated the ability of individuals to discriminate between true and false, or random, personality feedback statements (Balance et al, 1971; Dies, 1972) and have had conflicting findings. The present study gives strong support to the notion that persons can differentiate true from false feedback reports based on occupational-interest personality types.

The fact that subjects showed a strong preference for true reports over false ones, and consistently perceived the former as more accurate than the latter, can be viewed as a personal validation of the General Occupational Themes of the SCII and of the feedback reports used to describe them. These themes obviously discriminate amongst six general personality-occupational-interest types since subjects not only endorsed their true feedbacks as being accurately self-descriptive, but also viewed their false feedback as inaccurate. There is no question, therefore, of these themes being of the high-base-rate, Barnum variety for which personal validation is a meaningless procedure. Rather, agreement of subjects with their high score descriptions lends strong support to the construct validity of these themes.

As mentioned above, the ability of subjects in this study to identify true and false feedback reports, may have been maximized by their instructions that only two of these would be authentic. While this would not, of course, be applicable to test reporting in a practical setting, it might be that by informing subjects that psychological test results are not always accurate, and by educating them regarding the pitfalls of the Barnum effect, psychologists might engender a more critical attitude among their clients. This would, in turn, enable psychologists both to gain valuable knowledge from their clients and to devise improved testing instruments and procedures.

APPENDIX A
FEEDBACK REPORTS

You attained a high score on the Realistic theme, which suggests that you enjoy outdoor work, particularly that involving large machinery. You probably have good physical skills and coordination and enjoy creating things with your hands. Sometimes you may have difficulty expressing yourself in words or in communicating your feelings to others and you generally prefer to deal with things rather than with complex ideas or with people. Your political and economic opinions tend to be conventional and you are usually cool to radical new ideas. The adjectives rugged, robust, practical, physically strong, and frequently aggressive in outlook may apply to you. You usually do not enjoy jobs requiring you to sell something to others or tell people what to do but would prefer to work by yourself in a skilled trade, a technical job, or in agriculture. Specifically, you are likely to enjoy occupations such as mechanic, construction worker, forester, electrician, farmer, laboratory technician, or various engineering specialties or military jobs.

This person attained a high score on the Realistic theme, which suggests that he or she enjoys outdoor work, particularly that involving large machinery. Such people probably have good physical skills and coordination and enjoy creating things with their hands. Sometimes they may have difficulty expressing themselves in words or in communicating their feelings to others and they generally prefer to deal with things rather than with complex ideas or with people. Their political and economic opinions tend to be conventional and they are usually cool to radical new ideas. The adjectives rugged, robust, practical, physically strong and frequently aggressive in outlook may apply to these people. They usually do not enjoy jobs requiring them to sell something to others or tell people what to do but would prefer to work by themselves in skilled trades, technical jobs, or in agriculture. Specifically, they are likely to enjoy occupations such as mechanic, construction worker, forester, electrician, farmer, laboratory technician, or various engineering specialties or military jobs.

You achieved a high score on the Investigative theme, which suggests that your interests center around science and scientific activities. You tend to be task-oriented and would rather work alone than in a large office with a group of people. You probably enjoy solving abstract problems and like to understand the physical world. You prefer to think a problem through using ideas, words and symbols, rather than to act it out. Usually, ambiguous challenges appeal to you while highly structured situations with many rules do not. You seem to have somewhat unconventional values and attitudes and you tend to be original and creative, especially in scientific areas. Among occupations you are likely to enjoy are design engineer, biologist, social scientist, research laboratory worker, physicist, technical writer and meteorologist.

This person achieved a high score on the Investigative theme, which suggests that his or her interests center around science and scientific activities. Such people tend to be task-oriented and would rather work alone than in a large office with a group of people. They probably enjoy solving abstract problems and like to understand the physical world. They prefer to think a problem through using ideas, words and symbols, rather than to act it out. Usually, ambiguous challenges appeal to them while highly structured situations with many rules do not. They seem to have somewhat unconventional values and attitudes and they tend to be original and creative, especially in scientific areas. Among occupations they are likely to enjoy are design engineer, biologist, social scientist, research laboratory worker, physicist, technical writer and meteorologist.

You achieved a high score on the Artistic theme, which suggests that you enjoy working in artistic settings where there is an opportunity for creative self-expression. You do not appear very interested in highly structured problems or in situations which require you to follow many rules and regulations. Nor do you seem to enjoy tasks that involve great physical strength. You probably would rather be engaged in conveying your feelings and ideas in your own manner, possibly through art, music, drama or writing. Typically you prefer to work alone, and when in a group, you are not very assertive about your opinions and abilities. You are usually an original, creative person, and the adjectives independent, unconventional, and expressive also apply to you. You tend to describe yourself as sensitive, tense, and emotional. Some occupations you are likely to find satisfying are artist, author, cartoonist, composer, singer, dramatic coach, poet, actor or actress, and symphony conductor.

This person achieved a high score on the Artistic theme, which suggests that he or she enjoys working in artistic settings where there is an opportunity for creative self-expression. Such people do not appear very interested in highly structured problems or in situations which require them to follow many rules and regulations. Nor do they seem to enjoy tasks that involve great physical strength. They probably would rather be engaged in conveying their feelings and ideas in their own manner, possible through art, music, drama or writing. Typically they prefer to work alone, and when in a group, they are not very assertive about their opinions and abilities. These are usually original, creative people, and the adjectives independent, unconventional, and expressive also apply to them. They tend to describe themselves as sensitive, tense and emotional. Some occupations they are likely to find satisfying are artist, author, cartoonist, composer, singer, dramatic coach, poet, actor or actress, and symphony conductor.

You attained a high score on the Social theme, which suggests that you feel a strong concern for the welfare of others. You have apparently developed verbal and interpersonal skills which enable you to express yourself easily and get along well with others. You seem to like attention and enjoy being at or near the centre of the group. Generally, numerical problems, highly ordered activities, and situations requiring physical exertion or mechanical work are of little interest to you; you prefer, instead to solve problems through feelings and interaction with people, possibly by arranging or rearranging relationships between others. You are a sociable, responsible, humanistic person and you describe yourself as cheerful, popular, achieving, and a good leader. You are likely to enjoy such occupations as school superintendent, clinical psychologist, high school teacher, marriage counsellor, playground director, speech therapist, or vocational counsellor.

This person attained a high score on the Social theme, which suggests that he or she feels a strong concern for the welfare of others. Such people have apparently developed verbal and interpersonal skills which enable them to express themselves easily and get along well with others. They seem to like attention and enjoy being at or near the centre of the group. Generally, numerical problems, highly ordered activities, and situations requiring physical exertion or mechanical work are of little interest to them; they prefer, instead, to solve problems through feelings and interaction with people, possibly by arranging or rearranging relationships between others. These are sociable, responsible, and humanistic people, and they describe themselves as cheerful, popular, achieving, and good leaders. They are likely to enjoy such occupations as school superintendent, clinical psychologist, high school teacher, marriage counsellor, playground director, speech therapist, or vocational counsellor.

You achieved a high score on the Enterprising theme, which suggests that you are good at thinking up new ways of doing things, and at convincing and leading others. You have a facility with words, which may be put to effective use in selling products or ideas, or in dominating and directing activities. Precise, structured work seems tedious to you, as do tasks involving long periods of intellectual effort. You tend to think of yourself as a leader, and like to organize, synthesize and incorporate the ideas of others into your own. Power, status, and material wealth are generally important to you and you enjoy working in expensive settings. You see yourself as energetic, enthusiastic, adventurous, self-confident, and dominant. You are likely to find satisfaction in such occupations as business executive, buyer, hotel manager, industrial relations consultant, political campaigner, realtor, salesperson, sports promoter, or television producer.

This person achieved a high score on the Enterprising theme, which suggests that he or she is good at thinking up new ways of doing things, and at convincing and leading others. Such people have a facility with words which may be put to effective use in selling products or ideas, or in dominating and directing activities. Precise, structured work seems tedious to them, as do tasks involving long periods of intellectual effort. They tend to think of themselves as leaders, and like to organize, synthesize and incorporate the ideas of others into their own. Power, status, and material wealth are generally important to them and they enjoy working in expensive settings. They see themselves as energetic, enthusiastic, adventurous, self-confident, and dominant. They are likely to find satisfaction in such occupations as business executive, buyer, hotel manager, industrial relations consultant, political campaigner, realtor, salesperson, sports promoter, or television producer.

You attained a high score on the Conventional theme, which suggests that you prefer the highly ordered activities, both verbal and numerical, that characterize office work. You would fit successfully into a large organization but would not likely seek a position of leadership. You generally respond well to authority and are comfortable working in a well-established chain of command. Usually, ambiguous situations do not appeal to you as you prefer to know precisely what is expected of you and you are most effective when working at well-defined tasks. You tend to describe yourself as conventional, stable, self-controlled and dependable, and you generally value material possessions and status. Problems requiring physical skills or intense relationships with others are of little interest to you. Occupations you are likely to enjoy include bank examiner, bookkeeper, financial analyst, bank teller, computer operator, inventory controller, tax expert, statistician, traffic manager, and various accounting jobs.

This person attained a high score on the Conventional theme, which suggests that he or she prefers the highly ordered activities, both verbal and numerical, that characterize office work. Such people would fit successfully into large organizations but would not likely seek positions of leadership. They generally respond well to authority and are comfortable working in a well-established chain of command. Usually, ambiguous situations do not appeal to them as they prefer to know precisely what is expected of them and they are most effective when working at well-defined tasks. They tend to describe themselves as conventional, stable, self-controlled and dependable, and they generally value material possessions and status. Problems requiring physical skills or intense relationships with others are of little interest to them. Occupations such persons are likely to enjoy include bank examiner, bookkeeper, financial analyst, bank teller, computer operator, inventory controller, tax expert, statistician, traffic manager, and various accounting jobs.

APPENDIX B

INSTRUCTION GIVEN TO JUDGES OF
REPORT SOCIAL DESIRABILITY

On the sheets of paper contained in this envelope, you will find brief reports that might be used in describing people. Each of these reports reflects certain occupational interests and general personality characteristics of the person described. Your task will be to judge how desirable each report would be as characteristic of yourself. Remember to judge these reports in terms of how desirable each would be as characteristic of yourself, not on how desirable they would be as characteristic of other people.

In making your judgments, you are to use a nine point rating scale to indicate the degree to which each report would be desirable or undesirable as descriptive of yourself, as shown below:

- 1 - Extremely desirable
- 2 - Very desirable
- 3 - Moderately desirable
- 4 - Slightly desirable
- 5 - Neutral
- 6 - Slightly undesirable
- 7 - Moderately undesirable
- 8 - Very undesirable
- 9 - Extremely undesirable

Please choose the number on the rating scale which reflects your judgment of each report and place this number in the top, righthand corner of the page on which the report is printed. Then, after rating each report, please place the sheets of paper in the envelope and seal it.

Thank you.

APPENDIX C

RATING MATERIAL FOR SUBJECTS RECEIVING
VOCATIONAL TEST FEEDBACK: A BLANK
RATING FORM

- c. Describe briefly your personal feelings about, and reactions to, Feedback 2).

Feedback 3)

- a. Print below the name of the General Occupational Theme described in Feedback 3).

- b. On the scale below, rate Feedback 3) as to how accurately it described your occupational interests and general personality characteristics, circling the appropriate number on the scale.

0	1	2	3	4	5	6	7	
----- ----- ----- ----- ----- ----- -----								
Not at all accurate							Extremely accurate	

- c. Describe briefly your personal feelings about, and reactions to, Feedback 3).

Feedback 4)

- a. Print below the name of the General Occupational Theme described in Feedback 4).

- b. On the scale below, rate Feedback 4) as to how accurately it describes your occupational interests and general personality characteristics, circling the appropriate number on the scale.

0	1	2	3	4	5	6	7	
----- ----- ----- ----- ----- ----- -----								
Not at all accurate							Extremely accurate	

- c. Describe briefly your personal feelings about, and reactions to, Feedback 4).

Please rank the four feedback according to your relative preference of each, with A being the most preferred, D the least preferred. Please refer to the feedbacks by their numbers.

A _____ B _____ C _____ D _____

APPENDIX D

INSTRUCTIONS FOR SUBJECTS RECEIVING
VOCATIONAL TEST FEEDBACK

INSTRUCTIONS

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Thank you very much for your continued participation in this study. Enclosed you will find information regarding your results on the vocational test you took some time ago, the Strong-Campbell Interest Inventory. This information consists of four brief reports of test results (feedback statements), each of which describes a high score on one of the test's General Occupational Themes. These themes refer to an individual's occupational interests and general personality characteristics which attract him or her to certain types of employment. Like most people, you scored higher in some of these areas than in others, and descriptions of those themes in which you scored highest will generally apply to you. For research purposes, however, only two of the enclosed statements refer to your actual high scores; the other two are not descriptive of your own test results. You will be informed later as to which of the reports were based on your test scores.

Please follow these instructions carefully:

1. First read carefully all the statements, marked 1-4, in the order presented.
2. Then use the enclosed rating form which follows statement 4, to record your evaluation of each report.
3. Turn now to the rating form. Have you any questions?
4. Once you have completed both pages of the rating form, please return them to me in the envelope you received; keep the four feedback reports.

As you turn in your rating forms you will receive a key telling you which statements were descriptive of your actual test results. During next week's class you will be given a complete summary of your results on the Strong-Campbell Interest Inventory.

APPENDIX E
DATA ON SOCIAL DESIRABILITY RATINGS OF
FEEDBACK REPORTS OBTAINED
FROM JUDGES IN PRESENT
STUDY

APPENDIX E

Data on Social Desirability Ratings of
 Feedback Reports* Obtained from Judges in
 Present Study

Report No.	Report Style					
	Personal			Impersonal		
	1	2	3	4	5	6
Judges						
1	9	2	2	3	3	9
2	6	1	2	1	6	8
3	3	3	5	2	3	6
4	5	3	2	4	3	9
5	4	8	2	3	2	3
6	6	7	2	1	3	7
7	1	9	8	5	7	1
8	1	5	8	8	7	3
9	3	4	2	8	4	2
10	4	8	4	4	1	3
11	2	3	6	8	3	6
12	1	8	6	8	7	3

* Contents of reports for judges 1-6 were as follows:
 1 - Realistic, 2 - Investigative, 3 - Artistic, 4 - Social,
 5 - Enterprising, and 6 - Conventional.

Contents of reports for judges 7-12 were as follows:
 1 - Social, 2 - Enterprising, 3 - Conventional, 4 - Realistic,
 5 - Investigative, and 6 - Artistic.

APPENDIX F

DATA ON ACCURACY RATINGS OF THE
FEEDBACK REPORTS OBTAINED
IN THIS STUDY FROM Ss

APPENDIX F

Data on Accuracy Ratings of the Feedback
Reports Obtained in this Study from Ss*

Ss	Report Type							
	I	I	P	P	T	T	F	F
1	6	1	3	5	6	1	3	5
2	7	3	0	1	7	3	0	1
3	5	6	5	2	5	6	5	2
4	5	2	1	3	5	2	1	3
5	5	7	0	4	5	7	0	4
6	6	6	4	5	6	6	4	5
7	6	5	3	1	6	5	3	1
8	5	5	0	0	5	5	0	0
9	5	2	0	7	5	2	0	7
10	3	5	1	4	3	5	1	4
11	7	5	4	4	7	5	4	4
12	6	4	5	2	6	4	5	2
13	5	3	0	0	5	3	0	0
14	2	7	2	0	2	7	2	0
15	4	5	2	0	4	5	2	0
16	6	4	3	1	6	4	3	1
17	4	4	5	3	5	3	4	4
18	1	1	1	6	1	6	1	1
19	5	2	6	4	6	4	5	2

Ss	Report Type							
	I	I	P	P	T	T	F	F
20	5	3	4	4	4	4	3	3
21	4	3	6	4	6	4	4	3
22	1	3	6	6	6	6	1	3
23	1	1	3	2	3	2	1	1
24	1	2	5	1	5	1	1	2
25	5	1	3	4	3	4	5	1
26	2	4	4	1	4	1	2	4
27	1	4	7	2	7	2	1	4
28	0	1	5	7	5	7	0	1
29	1	2	7	4	7	4	1	2
30	3	2	3	4	3	4	3	2
31	0	1	4	7	4	7	0	1
32	6	3	5	1	5	1	6	3
33	3	5	6	4	3	5	6	4
34	7	3	1	2	7	3	1	2
35	3	5	5	4	3	5	5	4
36	3	5	1	1	3	5	1	1
37	6	4	2	4	6	4	2	4
38	5	1	5	0	5	1	5	0
39	6	6	0	3	6	6	0	3
40	7	6	4	1	7	6	4	1
41	5	7	0	1	5	7	0	1
42	6	4	5	0	6	4	5	0
43	5	4	2	1	5	4	2	1

Ss	Report Type							
	I	I	P	P	T	T	F	F
44	5	0	2	2	5	0	2	2
45	6	7	1	3	6	7	1	3
46	5	3	2	6	5	3	2	6
47	5	3	3	3	5	3	3	3
48	7	5	6	3	7	5	6	3
49	1	2	4	7	4	7	1	2
50	2	1	6	4	6	4	2	1
51	0	4	5	6	5	6	0	4
52	2	3	6	6	6	6	2	3
53	0	3	7	5	7	5	0	3
54	0	1	7	2	7	2	0	1
55	1	4	3	5	3	5	1	4
56	0	3	6	6	6	6	0	3
57	1	2	5	7	5	7	1	2
58	2	4	4	3	4	3	2	4
59	2	4	6	7	6	7	2	4
60	2	4	5	4	5	4	2	4
61	1	0	6	6	6	6	1	0
62	4	5	3	6	3	6	4	5
63	1	5	7	2	7	2	1	5
64	2	6	4	3	4	3	2	6

* The order of presentation and combination of report style and authenticity is as follows:
 Ss 1 - 16 are Order A - IT¹ PF²; Ss 17 - 32 are Order B - PT¹ IF²;
 Ss 33 - 48 are Order C - PF¹ IT²; and Ss 49 - 64 are Order D -
 IF¹ PT².

APPENDIX G

DATA ON PREFERENCE RANKINGS OF THE
FEEDBACK REPORTS OBTAINED IN
THIS STUDY FROM Ss

APPENDIX G

Data on Preference Rankings of the Feedback
Reports Obtained in this Study From Ss*

Ss	Report Type							
	I	I	P	P	T	T	F	F
1	1	3	2	4	1	3	2	4
2	1	2	3	4	1	2	3	4
3	1	2	3	4	1	2	3	4
4	1	3	2	4	1	3	2	4
5	1	2	3	4	1	2	3	4
6	1	2	3	4	1	2	3	4
7	1	2	3	4	1	2	3	4
8	1	2	3	4	1	2	3	4
9	2	3	1	4	2	3	1	4
10	1	2	3	4	1	2	3	4
11	1	2	3	4	1	2	3	4
12	1	3	2	4	1	3	2	4
13	1	2	3	4	1	2	3	4
14	1	2	3	4	1	2	3	4
15	1	2	3	4	1	2	3	4
16	1	2	3	4	1	2	3	4
17	2	3	1	4	1	4	2	3
18	3	4	1	2	1	2	3	4
19	2	4	1	3	1	3	2	4
20	3	4	1	2	1	2	3	4

Ss	Report Type							
	I	I	P	P	T	T	F	F
21	3	4	1	2	1	2	3	4
22	3	4	1	2	1	2	3	4
23	3	4	1	2	1	2	3	4
24	2	4	1	3	1	3	2	4
25	3	4	1	2	1	2	3	4
26	1	4	2	3	2	3	1	4
27	2	4	1	3	1	3	2	4
28	3	4	1	2	1	2	3	4
29	3	4	1	2	1	2	3	4
30	2	4	1	3	1	3	2	4
31	3	4	1	2	1	2	3	4
32	1	3	2	4	2	4	1	3
33	2	3	1	4	2	3	1	4
34	1	2	3	4	1	2	3	4
35	1	4	2	3	1	4	2	3
36	1	2	3	4	1	2	3	4
37	1	2	3	4	1	2	3	4
38	1	4	2	3	1	4	2	3
39	1	2	3	4	1	2	3	4
40	1	2	3	4	1	2	3	4
41	1	2	3	4	1	2	3	4
42	1	3	2	4	1	3	2	4
43	1	2	3	4	1	2	3	4

Ss	Report Type							
	I	I	P	P	T	T	F	F
44	1	4	2	3	1	4	2	3
45	1	2	3	4	1	2	3	4
46	2	3	1	4	2	3	1	4
47	1	2	3	4	1	2	3	4
48	1	3	2	4	1	3	2	4
49	3	4	1	2	1	2	3	4
50	3	4	1	2	1	2	3	4
51	3	4	1	2	1	2	3	4
52	3	4	1	2	1	2	3	4
53	3	4	1	2	1	2	3	4
54	3	4	1	2	1	2	3	4
55	2	4	1	3	1	3	2	4
56	3	4	1	2	1	2	3	4
57	3	4	1	2	1	2	3	4
58	2	4	1	3	1	3	2	4
59	3	4	1	2	1	2	3	4
60	3	4	1	2	1	2	3	4
61	3	4	1	2	1	2	3	4
62	2	3	1	4	1	4	2	3
63	2	4	1	3	1	3	2	4
64	1	4	2	3	2	3	1	4

*For order of presentation and combination of report style and authenticity, see Appendix E.

APPENDIX H

DATA ON ACCURACY RATINGS OF THE
FEEDBACK REPORTS OBTAINED IN
THIS STUDY FROM ELIMINATED Ss

APPENDIX H

Data on Accuracy Ratings of the Feedback Reports
Obtained in this Study from Eliminated Ss*

Ss	Report Type							
	I	I	P	P	T	T	F	F
Females								
1	2	3	6	6	6	6	2	3
2	6	7	0	2	6	7	0	2
3	1	1	4	5	4	5	1	1
4	1	2	6	6	6	6	1	2
5	5	3	1	3	5	3	1	3
6	3	3	1	1	1	1	3	3
7	1	0	6	4	6	4	1	0
Males								
1	4	2	3	5	4	2	3	5
2	5	7	4	4	5	7	4	4
3	1	1	6	5	6	5	1	1
4	3	3	6	6	6	6	3	3
5	7	7	3	1	7	7	3	1
6	6	4	1	3	6	4	1	3
7	7	3	4	4	7	3	4	4
8	3	3	5	4	5	4	3	3
9	6	2	1	4	6	2	1	4
10	7	6	1	2	7	6	1	2
11	3	3	6	4	6	4	3	3

Ss	Report Type							
	I	I	P	P	T	T	F	F
12	3	1	2	5	2	5	3	1
13	0	3	6	4	6	4	0	3
14	2	6	4	1	2	6	4	1
15	6	1	3	6	6	1	3	6
16	6	1	5	1	6	1	5	1
17	3	1	5	5	5	5	3	1
18	3	1	6	6	6	6	3	1

*No accuracy ratings were obtained from the three Ss who did not attend group feedback sessions.

APPENDIX I

DATA ON PREFERENCE RANKINGS OF THE
FEEDBACK REPORTS OBTAINED IN THIS
STUDY FROM ELIMINATED Ss

APPENDIX I

Data on Preference Rankings of the Feedback Reports Obtained in this Study from Eliminated Ss*

Ss	Report Type							
	I	I	P	P	T	T	F	F
Females								
1	2	4	1	3	1	3	2	4
2	1	2	3	4	1	2	3	4
3	3	4	1	2	1	2	3	4
4	3	4	1	2	1	2	3	4
5	1	3	2	4	1	3	2	4
* 6	-----							
7	3	4	1	2	1	2	3	4
Males								
1	3	4	1	2	3	4	1	2
2	1	3	2	4	1	3	2	4
3	3	4	1	2	1	2	3	4
4	3	4	1	2	1	2	3	4
5	1	2	3	4	1	2	3	4
6	1	2	3	4	1	2	3	4
7	1	4	2	3	1	4	2	3
8	3	4	1	2	1	2	3	4
9	1	3	2	4	1	3	2	4
10	1	2	3	4	1	2	3	4
11	3	4	1	2	1	2	3	4

Ss	Report Type							
	I	I	P	P	T	T	F	F
12	2	4	1	3	1	3	2	4
13	3	4	1	2	1	2	3	4
14	1	3	2	4	1	3	2	4
15	1	4	2	3	1	4	2	3
16	1	3	2	4	1	3	2	4
17	3	4	1	2	1	2	3	4
18	3	4	1	2	1	2	3	4

* No preference rankings were obtained from the three Ss who did not attend the group feedback sessions, nor from the 6th eliminated female S.

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