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ABSTRACT

The psychological meaning and predictive value of a person's vocational aspirations were examined by applying Holland's typology to the vocational aspirations of high school juniors (N=1,005), college juniors (N=692), employed adults (N=140), and a second sample of college students studied over a 1 year interval (N=624). The aspirational data were obtained from the Daydreams section of the Self-Directed Search (Holland, 1972). Categorical and correctional analyses show that a person's retrospective vocational aspirations have coherence and yield efficient predictions. In addition, the degree of coherence or similarity among a person's vocational aspirations provides a potentially useful index of a person's decision-making ability. Vocational aspirations were also found to be more predictive of future vocational status than were interest inventories, suggesting that these aspirations can serve as a validity check on the Self-Directed Search itself. (Author/PC)

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APPLYING A TYPOLOGY TO VOCATIONAL ASPIRATIONS

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Introductory Statement

The Center for Social Organization of Schools has two primary objectives: to develop a scientific knowledge of how schools affect their students, and to use this knowledge to develop better school practices and organization.

The Center works through three programs to achieve its objectives. The Schools and Maturity program is studying the effects of school, family, and peer group experiences on the development of attitudes consistent with psychosocial maturity. The objectives are to formulate, assess, and research important educational goals other than traditional academic achievement. The School Organization program is currently concerned with authority-control structures, task structures, reward systems, and peer group processes in schools. The Careers program (formerly Careers and Curricula) bases its work upon a theory of career development. It has developed a self-administered vocational guidance device and a self-directed career program to promote vocational development and to foster satisfying curricular decisions for high school, college, and adult populations.

This report, prepared by the Careers program, applies Holland's typology to people's vocational aspirations in order to examine their psychological meaning and predictive value.

APPLYING A TYPOLOGY TO VOCATIONAL ASPIRATIONS

The psychological meaning and predictive value of a person's vocational aspirations have usually been deprecated or ignored--researchers and textbook writers usually express doubt about their reliability or predictive value (Crites, 1969; Super & Crites, 1962; Darley, 1941; Williamson, 1964). Many practitioners, perhaps most, appear to regard a recital of a person's vocational aspirations as only "interesting" as they move to pick up their test booklets. In contrast, the evidence indicates that a person's current vocational aspiration has at least as much predictive validity as an interest inventory (Dolliver, 1969; Holland, 1962; Holland & Lutz, 1968; Whitney, 1969). And most recently, Gottfredson & Holland (1974) reported that a college student's current aspiration forecasts his vocational aspiration one year later somewhat more efficiently than the Self-Directed Search (SDS) itself or its six occupational scales--the six interest scales of the Vocational Preference Inventory (VPI).

This report examines the psychological meaning and predictive validity of a person's current vocational aspiration and his history of aspirations. More specifically, answers to the following questions are attempted: (a) Do a person's current and retrospective vocational aspirations possess psychological coherence or are they unrelated to one another? (b) Does the degree of coherence among a person's vocational aspirations have any psychological meaning? (c) Can a person's vocational aspirations be coded and summarized to yield an efficient index of future vocational aspiration?

If the answers to these questions are at least moderately positive, several practical techniques for supplementing vocational assessments become possible. In addition, positive results will imply that a person's

history of vocational aspirations are lawful in the same way that work histories appear to be lawful (Holland, 1973), providing more evidence that a person's lifelong vocational development can be interpreted within the context of a single typology.

Method

Records of current and retrospective vocational aspirations were obtained for volunteers in high school, college, and adult samples who took the SDS along with other vocational assessment materials. All vocational aspirations and choices were coded according to Holland's (1972) occupational classification so that all analyses could be interpreted in terms of that theoretical structure.

Analyses involved comparing one vocational aspiration with others for earlier times, with the SDS code, or with subsequently expressed vocational choice. In each instance, the same classification scheme, theoretical constructs, and hexagonal model were used to define or categorize vocational aspirations (Holland, 1973). Other analyses involved computing correlations between aspiration agreement and other information about the respondents.

Samples

The data were collected in two earlier studies. In the first study, Nafziger, Holland and Gottfredson (1973) performed a longitudinal study using a college sample (first assessed with the SDS as freshmen) to study student satisfaction in college. Data used in this investigation were obtained from a group of 1,183 students undergoing freshman and transfer-student orientation in a suburban public liberal arts college. These students took the SDS in the summer of 1972. Questionnaires were sent to students who could be located in the spring of 1973. After

sending two reminders, a total of 746 questionnaires including 624 with an expression of vocational choice were obtained. This group is hereafter called the satisfaction study sample.

In the second study, Holland, Gottfredson and Nafziger (1973) attempted to establish the concurrent validity of some vocational diagnostic signs proposed earlier (Holland, 1973). Diverse samples of high school juniors (N = 1,005), college juniors (N = 692), and employed adults (N = 140) were administered the SDS and were concurrently assessed in other ways as well. No claim of representativeness is made for these samples. They were obtained from diverse sources (9 states) in an attempt to secure a wide distribution of personality types. This group is hereafter called the diagnostic study sample. The original reports give more specific information about these samples.

Measures

In both earlier studies the chief source of data was the SDS. This device measures a person's resemblance to six theoretical models or types by tapping vocational interests and their correlates. A description of the SDS is given by Holland (1972). The types assessed are named Realistic, Investigative, Artistic, Social, Enterprising, and Conventional and are given their fullest description in Holland (1973). The occupational daydreams portion of this simulation asks the respondent to report the occupations he has considered and to list the most recent one first. Space is provided for a list of eight occupations. This was the source of the respondent's current aspiration and his retrospective aspiration history.

The degree of similarity, or the degree of coherence among aspirations, was assessed according to their proximity on the hexagonal model. For example, two Realistic aspirations are the most coherent and are

scored 4; a Realistic and an Investigative aspiration are somewhat coherent and are scored 3; a Realistic and an Artistic are next, scored 2; and a Realistic and a Social aspiration are least coherent, scored 1.

In the longitudinal satisfaction study students expressed their occupational choices by selecting one of a coded list of 98 alternatives in the follow-up questionnaire sent approximately one year after their SDS assessment. A total of 91 persons indicated that their field was not listed and 155 persons indicated that they were undecided; these persons were excluded from the analyses.

Holland (1972) reports reliabilities of the scores on components of the SDS, but the reliabilities of classifications were required for this study. These reliabilities are not known, but the reliabilities of the first-letter SDS summary code and the aspirations have been estimated using kappa (Cohen, 1960). Kappa is a coefficient of greater-than-chance agreement given the two marginal frequencies for a set of nominal groupings. Kappa is interpreted as the proportion of above chance possibilities for agreement to occur actually occurring. Its maximum possible value is 1.00.

Retest data were available to assess the reliability of the first-letter SDS Summary Codes for a sample of high school students tested two to three months after an initial testing. The value of kappa for 122 high school men was .62 and for 83 women was .42.

The reliability of the first letter of the first aspiration was estimated using data from the diagnostic study sample. These persons were asked the aspiration question in the SDS. Earlier the same day they had responded to the following item: "List all the jobs or occupations you could do and would like, if you had enough money to get the necessary training, and if you could get that job when you finished your

training or education." Between these two measures, kappa was .67 for 296 men and .71 for 321 women. These values are all rough estimates; the high school women's sample was especially small.

In the diagnostic study all three subsamples (high school, college and adults) were administered the SDS and a questionnaire containing a collection of special scales and items. In addition, students in two high schools were administered the Career Maturity Inventory (Crites, 1973). These assessments made the following scales, scores, and indices available for use in the present study.

1. Consistency of a person's SDS profile was defined according to the hexagonal model (Holland, 1973). Persons whose two highest Summary Scores were adjacent, alternate, or opposite on the hexagon received consistency scores of 3, 2, and 1, respectively.

2. Differentiation of a person's SDS profile was defined as the absolute difference between the highest and lowest Summary Scores. Differentiation of the Occupations profile of the SDS followed the same rule.

3. Using the SDS a person's interpersonal competency was estimated in three ways: (a) totaling a person's self-ratings in the Self-Estimate section of the SDS, (b) using his Social Competency Score, and (c) using his Enterprising Competency Score.

4. Complexity of outlook was defined as a person's SDS Artistic Summary Score.

5. Commonness of a person's two highest Summary Scores was scaled using a national sample of college students (4,074 men and 4,283 women). Commonness of each two-letter permutation was defined as the observed frequency of that combination per thousand persons of the same sex in

in the national sample.

6. Profile similarity was defined as the average rank order correlation among the five profiles (Activities, Competencies, Occupations and the two sets of self-ratings) in a person's SDS. The five profiles should be more highly correlated for people who are more rather than less integrated. More concretely, a high average intercorrelation means that a person's preferred interests, self-ratings, and competencies are consistent with one another. In addition, profile similarity scores will be positively correlated with a person's SDS differentiation score. This outcome must occur because a high SDS differentiation score requires that a person's individual profiles be similar.

7. Knowing About Jobs. This occupational information test is from the Career Maturity Inventory (Crites, 1973). It has reported internal consistency coefficients which average about .85 and has marked content validity.

8. The Interpersonal Competency Scale (Holland & Baird, 1968b). This 20-item true-false scale has moderate internal consistency and retest reliability and substantial construct validity. For a one-year interval, retest correlations equal .63 and .67 for men and women in three different colleges.

9. The Preconscious Activity scale (Holland & Baird, 1968a). This 38-item true-false scale has moderate internal consistency and retest reliability. Its construct validity is well-established. Its highest correlations are with Barron's (1953) Complexity-Simplicity Scale (.53 and .53 for 689 men and 340 women in a national sample of high school students).

10. Anomy Scale (McClosky & Schaar, 1965). This 9-item scale scored agree or disagree was used with a true-false format. McClosky and Schaar obtained reliability and substantial construct validity using two large samples and many criteria (MMPI, CPI, social status, attitude scales, etc.).

11. Short and long forms of the Vocational Attitude test from the CMI (Crites, 1973). The short form contains 17 items having the highest average zero-order correlations with the total scale across all grade levels (Crites, 1969). The long form has moderate internal consistency and construct validity.

12. Knowing Yourself. This self-knowledge test is concerned with one's vocational potential. This competency scale from the CMI (Crites, 1973) has moderate internal consistency. Construct validity is weak but promising.

13. Identity scale. The present scale was initiated by using the identity factor (4 items) from the Psychosocial Maturity Inventory (Greenberger, et al., 1971) and by creating 11 other items to assess identity in terms of Holland's theory. For example, identity is conceived as a clear knowledge of one's competencies, preferred activities, interests, and vocational goals. This scale has satisfactory internal consistency and its correlations with other scales and indices used supports its construct validity.

14. Quasi-performance indices. These indices are assumed to be related to the ability to make good vocational decisions. They include the following four measures:

a. A questionnaire item asks a student if he has made at least a tentative vocational choice:

I have made a tentative occupational choice or I am currently employed full-time True or false?

b. Another item asks about satisfaction with choices:

How satisfied are you with your present job or your choice of an occupation? (Check one of the following.)

____1. Well satisfied with choice
____2. Satisfied, but have a few doubts
____3. Not sure
____4. Dissatisfied, but intend to remain
____5. Very dissatisfied and intend to change
____6. Undecided about my future career

c. An agreement index (Zener & Schnuelle, 1972; Holland, 1972) was used to estimate the agreement between a person's current vocational aspiration and the group of vocations implied by his SDS assessment. This agreement index provides a 7-step scale based on the inverse probability of agreement between two three-letter codes. This index is especially valuable because it spells out objectively the degree of agreement in terms of the same theory used to develop the classification and SDS.

d. Translation Task. The following item was used to secure an estimate of a person's translation ability:

"List all the jobs or occupations you could do and would like, if you had enough money to get the necessary training, and if you could get that job when you finished your training or education.

"I could do and would like the following kinds of jobs:" (space provided for a list of ten)

The translation task was scored by using the Zener & Schnuelle technique; each occupation listed was scored for its agreement with the person's SDS summary code, and these were averaged over the number of occupations actually listed by each person.

The reliabilities of the scales and indices were estimated by retest if possible. If the retest data were not available, the Hoyt and KR 21 internal consistency measures were used in that order. In general, the evidence about these scales and signs reveals that they are moderately reliable, but ranged from the .30s to the .80s. Estimates for a few scales and indices were not available. These data are presented elsewhere (see Table 2, Holland, Gottfredson & Nafziger, 1973).

Results

Unlike the method section, the results can be presented in a succinct fashion. The first analysis, shown in Table 1, indicates that a person's current vocational aspiration is significantly related to each of his or her earlier aspirations. Note that as an aspiration becomes more remote in time from the current vocational aspiration, the

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Insert Table 1 About Here

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percent of agreement between the current and earlier aspirations steadily decreases for both sexes in all samples. Table 1 was obtained by creating six-by-six tables for the distribution of current aspirations versus the distribution of next most recent aspiration, and so on for all eight aspirations using data from the diagnostic study samples. The trends in Table 1 provide strong evidence that a person's vocational aspirations are interrelated.

The degrees of consistency or agreement between first letters of a person's current and earlier aspirations, scored from 1 to 4 according to the hexagonal model, were obtained and averaged. This average was correlated with a large number of variables to learn if the average

agreement among aspirations has any clear psychological meaning. Table 2 shows the correlations between the degree of agreement among vocational aspirations and other variables from the high school diagnostic study sample. Table 3 shows these correlations for the college diagnostic

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Insert Tables 2 and 3 About Here

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study sample. These tables include only those variables having one or more significant correlations with the criterion--average agreement among the vocational aspirations. The following variables had no significant correlations with the criterion: age, VPI scales (Realistic, Artistic, Enterprising), satisfaction with choice, father's and mother's education, all Career Maturity Inventory scales, Identity, Interpersonal Competency, Anomy, SDS scales (Realistic, Artistic), Sum of Self-Estimates, VPI differentiation.

On the positive side, the correlations in Tables 2 and 3 indicate that people with consistent vocational aspirations also tend to have current vocational aspirations that agree with their high-point SDS codes and to have high translation scores. This is true for both sexes and for both high school and college samples. In plain English, people whose vocational aspirations belong to the same occupational category are also likely to have reinforcing SDS Summary Codes and to be good decision-makers.

Other trends fail to replicate across all samples. Of these the strongest trend is that persons with well-differentiated SDS profiles are also likely to have a similar set of vocational aspirations. In theoretical terms, well-defined people according to the SDS tend to have vocational aspirations that cluster in a single or related set of

occupational categories. They know what they like and can do.

The final task was to estimate the predictive validity of a person's vocational aspirations singly and in combination with the SDS. The results of analyses of three kinds of predictions are shown in Table 4. The first group of analyses shows how the predictive validity of the Current Aspiration Code is moderated by different characteristics of the remaining aspirations and their agreement with the SDS Summary

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Insert Table 4 About Here

Code. For example, the first letter of the current aspiration is more efficient if the current aspiration agrees rather than disagrees with the SDS Summary Code.

The second group of analyses in Table 4 shows that the first letter of the Aspiration Summary Code is a more efficient predictor if the person's vocational aspirations have high average agreement. For men, correct predictions go from 37.0% to 50.7%, and for women correct predictions increase from 56.0% to 65.9%. Unexpectedly, persons whose Aspiration Summary Codes were consistent (that is, the first two letters were hexagonally adjacent) were not more predictable than those with inconsistent Aspiration Summary Codes.

The third group of analyses shows how the predictive validity of the first-letter SDS Summary Code is moderated by different characteristics of the Vocational Aspiration Codes. For example, the first letter of the SDS Summary Code correctly predicts the category of a student's vocational choice one year later 39.6% of the time for men. If students are classified as more or less differentiated when their vocational

aspirations are scored and summarized according to the same formula used to summarize the SDS itself, the proportion of correct predictions is unaffected--39.7 vs. 39.4%. In this group of analyses it is clear that more efficient predictions are obtained when the first letter of the SDS Summary Code agrees with the first letter of the Aspiration Summary Code or the first letter of the most recent aspiration code. In the latter case the percent of correct predictions jumps to 63.6 and 85.0 for men and women respectively.

Ironically, if the first letter of the SDS Summary Code and the current vocational aspiration do not agree, then the current vocational aspiration is still a better predictor than is the SDS.

Discussion

The main findings reinforce the results of many closely related studies of vocational aspirations (Bartlett, 1970; Holland & Lutz, 1968; Dyer, 1932; Dolliver, 1969; Elton & Rose, 1970; Richards, 1970; Whitney, 1969; Holland, 1963; McLaughlin & Tiedeman, 1974). In each of these investigations, the category of a person's aspiration was a relatively efficient predictor of the category of a later vocational aspiration or choice. In nearly every instance, vocational aspirations were at least as efficient as interest inventory scales and were often substantially more efficient. For example, the category of a college student's vocational aspiration predicted the category of the student's sophomore aspiration about twice as efficiently as the scales of the VPI (Holland & Lutz, 1968). Elton and Rose (1970) have demonstrated the efficiency of initial vocational choices for a four-year interval. The percent of correct predictions per category (six) ranged from 49 to 87%. Although these studies of vocational aspiration were rarely

performed on representative samples (Richards, 1970), the numerous replications, without failure, using diverse samples (high school, college, and adult groups) and over a range of time intervals (1 to 11 years) now provides strong evidence that a person's vocational aspiration when properly categorized is a powerful predictor of subsequent aspirations. Thus, researchers and practitioners can no longer ignore a person's aspiration as superficial and unreliable information.

This conclusion is strengthened by the new but closely related analyses in the present study in which we treated a person's vocational aspirations with as much care and interest as others have treated tests and inventories. In short, the typology was thoroughly applied to a person's vocational aspirations to exploit whatever information they contained. The chief outcomes of these analyses are fourfold: (a) A person's vocational aspirations appear related to one another, or have psychological integrity--they fall disproportionately in the same or related categories according to the hexagonal model. (b) The more closely related a person's vocational aspirations, the more predictive they are of subsequent vocational aspirations. (c) The more closely related a person's vocational aspirations, the more likely he (she) is to be a good vocational decision-maker as defined by our decision-making task. (d) Vocational aspirations can be scored and used in combination with the SDS Summary Code to exceed the usual base rate predictions for subsamples of women as well as men. The base rate classification made by assigning persons to the category most frequently chosen by members of their sex yielded 26.6% and 72.4% correct predictions one year later for college students in the satisfaction study sample. The corresponding predictions made by using the SDS Summary Codes are only 39.6% and 42.0% correct for men and women. When the first letter of a person's

vocational aspiration is the same as the first letter of the SDS Summary Code, however, the predictions are 63.6% and 85.0% correct for men and women respectively.

Taken together, the main findings imply that a person's vocational aspirations have considerable psychological meaning; they imply decision-making ability, psychological integration, and predictability.

The psychological integrity discovered for vocational aspirations closely resembles the integrity of the average person's work history. In both cases the application of the typology to the data show that vocational aspirations and successive jobs appear related rather than unrelated (Holland, Sørensen, Clark, Nafziger & Blum, 1973; Nafziger, Holland, Helms & McPartland, 1972; Parsons, 1971). The degrees of relatedness for vocational aspirations versus work histories, and for men versus women, imply several hypotheses which merit closer examination. For men, retrospective vocational aspirations appear less related than work histories (cf. Holland et al., 1973; Nafziger et al., 1972; and Parsons, 1971 with the present data). These differences may be the outcome of increasing realities, restrictions that come with increasing age, continuing learning or socialization, and clearer conceptualization of suitable jobs. For women, the greater predictive power of their work histories relative to men's may reflect a greater restriction of opportunity or a restricted range of personal vocational development. Our data does not say which of these possibilities is more likely. Only experimental study can unravel this issue, and no amount of correlational study can do more than add to the complication and debate.

Some theoretical constructs (Holland, 1973) are strengthened by the positive findings. It is clear that the concepts of differentiation, the

hexagonal model, and the classification provide efficient means of showing relations among vocational aspirations and the SDS scales and in moderating the predictions made from the data. The concept of consistency is a negative exception among these positive interpretations. Equally important, the theory provides a means of integrating both aspiration-history and work-history data so that it is now possible to study almost a whole life in the context of the theory with more assurance. In addition, a portion of the diagnostic scheme proposed earlier (Holland, 1973) and tested recently (Holland, Gottfredson & Nafziger, 1973) is supplemented, because good decision makers tend to have similar vocational aspirations as well as well-differentiated SDS profiles.

The results also lend some indirect support to Super's (1972) paradigm: vocational choices involve an implementation of one's self-concept. The retrospective and current aspirations as well as the other components of the SDS can be considered to tap various aspects of the person's self-concept. Consequently, if the pictures in the head are clear and tend to agree, then the person is more predictable.

The practical applications of the present and related studies are clear and unequivocal. There is no clear need for further replication. In vocational counseling and selection, interviewers can obtain vocational aspirations and score such responses immediately or along with other material after the interview. Comparison of the vocational aspiration codes with inventoried interests will allow interviewers to obtain better predictions than has heretofore been possible, at least for a subgroup of persons. When aspirations and inventory coincide, predictions can be made with more confidence. If they diverge, then the vocational aspiration is still a better predictor. (See Table 4

in this paper and Table 7 in the Holland and Lutz study.)

In the case of "undecided" students, a retrospective history of vocational aspirations is less threatening and easier to accomplish than a long interview to clarify several current aspirations and to examine why the person has no dominant aspiration. A person's retrospective aspirations in combination with his or her inventoried interests can be used to develop some alternatives worth exploring.

In addition, the correlations between aspirational agreement and performance on the translation task suggest the possibility that retrospective aspiration histories may be useful in identifying those persons most and least in need of vocational assistance. Implementation of this notion requires further validation of the aspiration agreement measure and the translation task with relevant samples of adults.

The results support the inclusion of current and retrospective aspirations in the SDS and their use advocated earlier (Holland, 1972). Vocational aspirations are more predictive of future vocational status than are interest inventories, and vocational aspirations can serve as a validity check on the SDS itself. Other inventories can incorporate this advantage by either including an aspiration section or by advocating that counselors review a person's vocational aspirations.

References

Barron, F., Complexity-simplicity as a personality dimension. Journal of Abnormal and Social Psychology, 1953, 48, 163-172.

Bartlett, W. E. Vocational choice stability matrix: Development, applications, and implications. Indiana Personnel and Guidance Journal, 1970, Spring, 71-77.

Cohen, J. A coefficient of agreement for nominal scales. Educational and Psychological Measurement, 1960, 20, 37-46.

Crites, J. O. Vocational psychology. New York: McGraw-Hill, 1969.

Crites, J. O. Theory and research handbook for the Career Maturity Inventory. CTB/McGraw-Hill: Monterey, Calif., 1973.

Darley, J. G. Clinical aspects and interpretation of the Strong Vocational Interest Blank. New York: Psychological Corporation, 1941.

Dolliver, R. H. Strong Vocational Interest Blank versus expressed vocational interests: a review. Psychological Bulletin, 1969, 72, 95-107.

Dyer, J. R. Sources and permanence of vocational interests of college men--101 cases over five year period. Journal of Applied Psychology, 1932, 16, 233-240.

Elton, C. F., & Rose, H. A. Male occupational constancy and change: Its prediction according to Holland's theory. Journal of Counseling Psychology, 1970, 17, Part 2, No. 6.

Gottfredson, G. D. & Holland, J. L. Vocational choices of men and women: A comparison of predictors from the SDS. Research Report No. 175. Baltimore: Center for Social Organization of Schools, Johns Hopkins University, 1974.

Holland, J. L. Some explorations of a theory of vocational choice: I. One- and two-year longitudinal studies. Psychological Monographs, 1962, 76, (26, Whole No. 545).

Holland, J. L. Explorations of a theory of vocational choice and achievement: II. A four-year prediction study. Psychological Reports, 1963, 12, 537-594.

Holland, J. L. Professional manual for the Self-Directed Search. Palo Alto, Calif.: Consulting Psychologists Press, 1972.

Holland, J. L. Making vocational choices: A theory of careers. Englewood Cliffs, New Jersey: Prentice-Hall, 1973.

Holland, J. L. & Baird, L. L. The Preconscious Activity Scale: the development and validation of an originality measure. Journal of Creative Behavior, 1968, 2, 217-225. (a)

Holland, J. L. & Baird, L. L. An interpersonal competency scale. Educational and Psychological Measurement, 1968, 28, 503-510. (b)

Holland, J. L., Gottfredson, G. D., & Nafziger, D. H. A diagnostic scheme for specifying vocational assistance. Research Report No. 164. Baltimore: Center for the Social Organization of Schools, Johns Hopkins University, 1973.

Holland, J. L. & Lutz, S. W. The predictive value of a student's choice of vocation. Personnel and Guidance Journal, 1968, 46, 428-434.

Holland, J. L. Sørensen, A. B., Clark, J. P., Nafziger, D. H. & Blum, Z. D. Applying an occupational classification to a representative sample of work histories. Journal of Applied Psychology, 1973, 58, 34-41.

McClosky, H. & Schaar, J. H. Psychological dimensions of anomy. American Sociological Review, 1965, 30, 14-40.

McLaughlin, D. H. & Tiedeman, D. V. Eleven-year career stability and change as reflected in twelfth grade project TALENT data through The Flanagan, Holland and Roe occupational classification systems. Journal of Vocational Behavior, 1974, in press.

Nafziger, D. H., Holland, J. L. & Gottfredson, G. D. Student-college congruency as a predictor of satisfaction. Research Report No. 163. Baltimore: Center for the Social Organization of Schools, Johns Hopkins University, 1973. Journal of Counseling Psychology, 1973, in press.

Nafziger, D. H., Holland, J. L., Helms, S. T. & McPartland, J. M. Applying an occupational classification to the work histories of young men and women. Journal of Vocational Behavior, 1974, in press.

Parsons, G. E. An application of Holland's vocational theory to an empirical study of occupational mobility of men age 45 to 59. Unpublished doctoral dissertation, Ohio State University, 1971.

Richards, J. M., Jr. Who studies what major in college. Paper presented at American Psychological Association convention, Miami, September, 1970.

Super, D. E. The future of vocational development theory. In J. M. Whiteley and Resnikoff, A. (Eds.) Perspectives in vocational development. Washington, D. C.: American Personnel and Guidance Association, 1972.

Super, D. E. & Crites, J. O. Appraising vocational fitness (rev. ed.) New York: Harper and Row, 1962.

Whitney, D. R. Predicting from expressed vocational choice: a review. Personnel and Guidance Journal, 1969, 48, 279-286.

Williamson, E. G. Vocational counseling. New York: McGraw-Hill, 1964.

Zener, T. Baldwin & Schnuelle, L. An evaluation of the Self-Directed Search: A Guide to Educational and Vocational Planning. Research Report No. 124. Baltimore: Center for the Social Organization of Schools, Johns Hopkins University, 1972.

Table 1

Retrospective Vocational Aspirations and Current Aspirations in Same Major Category

Retrospective Aspirations	High School				College				Adults[1]			
	Men		Women		Men		Women		Men		Women	
	%	N	%	N	%	N	%	N	%	N	%	N
Second (most recent not current)	55**	325	47**	542	45**	319	51**	336	66	35	46	81
Third	45**	302	33**	521	34**	311	50**	331	34	35	35	80
Fourth	37**	241	33**	457	29**	250	38**	283	29	34	36	70
Fifth	37**	178	32**	402	31**	215	36*	261	33	30	18	61
Sixth	36**	133	29*	334	29**	172	28	221	15	27	26	50
Seventh	31	93	24**	277	25*	141	34	185	12	24	20	39
Eighth	31	77	24	241	26	111	32	160	14	22	31	32

Note:--N's are not constant because some persons left some lines blank in recording their aspirations.

* x^2, 25 df, $p < .05$

** x^2, 25 df, $p < .01$

[1] N's are too small for a reliable 6 x 6 x^2 test.

Table 2

Correlations between Average Agreement of Aspiration History and Other Characteristics

Characteristic	Average Hexagonal Agreement between Current Aspiration and Earlier Aspirations: 1-2	1-3	1-4	1-5	1-6	1-7	1-8
	High School Boys (N = 408)						
C-Score (Occupations)	-06	-05	-05	-05	-05	-05	-05
Made Choice?	18**	15**	16**	17**	17**	17**	17**
Enterprising (SDS)	-08	-11	-16**	-17**	-17**	-16**	-16**
Conventional (SDS)	-10	-15**	-11	-11	-10	-10	-10
Differentiation (SDS)	15**	10	08	06	06	06	06
Agreement Personality Type/ Current Aspiration	24**	41**	44**	45**	46**	46**	46**
Agreement Personality Type/ Future Possibility	13	15**	17**	16**	16**	16**	16**
Average Translation	27**	23**	22**	22**	22**	22**	22**
Profile Similarity	10	10	09	07	07	07	06
	High Schools Girls (N = 597)						
C-Score (Occupations)	-12**	-05	-06	-06	-06	-05	-05
Made Choice?	-02	02	02	04	03	03	03
Enterprising (SDS)	-02	-04	-03	-03	-04	-04	-04
Conventional (SDS)	-11	-12**	-12**	-13**	-12**	-13**	-14**
Differentiation (SDS)	10	14**	14**	14**	14**	13**	13**
Agreement Personality Type/ Current Aspiration	18**	38**	43**	44**	45**	46**	48**
Agreement Personality Type/ Future Possibility	08	06	08	09	10	10	10
Average Translation	16**	10	11	13**	14**	15**	15**
Profile Similarity	12**	15**	14**	15**	15**	16**	15**

Note:-"1-2" equals the agreement between the code of the first and second aspirations; "1-3" equals the average agreement between the first and second, first and third aspirations, etc. The N's increase from "1-2" to "1-8" because people give variable numbers of aspirations.

Table 3

Correlations between Average Agreement of Aspiration History and Other Characteristics

Characteristic	Average Hexagonal Agreement between Current Aspiration and Earlier Aspirations 1-2	1-3	1-4	1-5	1-6	1-7	1-8
	College Men (N = 342)						
I-Score (Occupations)	07	11	08	05	06	05	06
S-Score (Occupations)	07	-02	00	-01	-02	-03	-04
Preconscious Activity	03	02	00	-03	-02	-03	-03
Investigative (SDS)	01	06	03	00	01	01	02
Social (SDS)	00	-06	-04	-04	-04	-04	-05
Consistency (SDS)	16**	04	06	06	05	05	05
Differentiation (SDS)	07	-02	00	-01	-01	-01	-02
Commonness (SDS)	06	06	06	05	05	05	05
Agreement Personality Type/ Current Aspiration	17**	28**	31**	33**	33**	34**	34**
Agreement Personality Type/ Future Possibilities	08	09	14	15**	16**	16**	15**
Consistency (Occupation)	17**	09	06	04	03	03	03
Average Translation	19**	14	20**	19**	22**	22**	22**
Profile Similarity	09	02	02	01	01	01	00
	College Women (N = 350)						
Investigative (Occupations)	-15**	-06	-07	-06	-05	-05	-05
Social (Occupations)	20**	20**	16**	15**	15**	14	16**
Preconscious Activity	04	16**	14	14	14	15**	18**
Investigative (SDS)	-26**	-17**	-12	-11	-10	-10	-10
Social (SDS)	27**	21**	20**	21**	20**	20**	20**
Consistency (SDS)	12	05	03	04	03	04	06
Differentiation (SDS)	16**	21**	20**	20**	20**	19**	16**
Commonness (SDS)	23**	21**	20**	21**	21**	21**	24**
Agreement Personality Type/ Current Aspiration	17**	25**	25**	28**	28**	28**	28**
Agreement Personality Type/ Future Possibilities	14	11	11	13	13	13	13
Consistency (Occupation)	08	11	08	06	08	08	06
Average Translation	22**	19**	20**	23**	23**	24**	25**
Profile Similarity	05	12	15**	15**	15**	14	11

* $p < .05$

** $p < .01$

Table 4

Using Retrospective Aspiration Histories to Predict

Occupational Choice One Year Later

Predictor	Men % Correct	Men N	Women % Correct	Women N
First letter of First Aspiration Code	52.1	163	69.9	396
if Aspiration Summary Profile is differentiated	52.8	70	71.2	229
if Aspiration Summary Profile is undifferentiated	51.6	93	68.3	167
if Aspirations have high average agreement	54.9	71	71.5	249
if Aspirations have low average agreement	50.0	92	67.3	147
if First letter of the SDS Summary Code is the same	63.6*	66	85.0**	246
if First letter of the SDS Summary Code is different	44.3	97	45.3	150
First letter of Aspiration Summary Code	37.0	192	56.0	432
if Aspiration Summary Profile is differentiated	45.1**	71	60.0	230
if Aspiration Summary Profile is undifferentiated	32.2	121	51.5	202
if Aspirations have high average agreement	50.7**	71	65.9**	249
if Aspirations have low average agreement	28.9	121	42.6	183
if Aspiration Summary Code is consistent	34.3	137	54.0	296
if Aspiration Summary Code is inconsistent	43.6	55	60.3	136
First letter SDS Summary Code	39.6	192	66.4	432
if Aspiration Summary Profile is differentiated	39.7	71	66.8	230
if Aspiration Summary Profile is undifferentiated	39.4	121	66.1	202
if Aspirations have high average agreement	43.7	71	67.1	249
if Aspirations have low average agreement	37.2	121	65.6	183
if first letter of Aspiration summary is the same	47.6*	82	72.8**	268
if first letter of Aspiration summary is different	33.6	110	56.1	164
if first letter of the first aspiration is the same	63.6**	66	85.0**	246
if first letter of the first aspiration is different	27.0	126	41.9	186

* significant moderation, x^2, 1 df, $p < .05$

** significant moderation, x^2, 1 df, $p < .01$