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SOME PROBLEMS IN THE CAREER PATTERN STUDY

by
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It has been suggested that one sign of maturity is the ability to postpone gratification. To persons engaged in longitudinal studies, such a concept is quite supportive during the period of waiting for results. Actually, the waiting period is quite active; one may be planning an impending follow-up while still working with data from a previous one.

The Career Pattern Study is a research project of the Horace Mann-Lincoln Institute of School Experimentation at Teachers College. Donald E. Super is director of the project. Influenced by the writings of Buehler, Ginzberg, Havighurst, and Miller and Form, it seemed reasonable to hypothesize that making vocational choices and adjusting occupationally are developmental processes. The purpose of our study is to observe the vocational development and adjustment of a group of subjects over a 20-year time span. Their vocational behavior and their feelings of success and satisfaction are being studied, as well as factors which may be related to such behavior, feelings, and attitudes.

In planning the research, an early step was to select the community and the sample to be studied. We wanted to work in a community of moderate size, so that it could be studied by a rather small staff of research workers, but one that offered the opportunity for a variety of kinds of occupations. It was necessary to select a community located within a reasonable driving distance from New York City, but we did not want one that was economically dependent upon the city. Middletown, New York, was selected. It has a

population of somewhat over 22,000 and is about 65 miles northwest of New York City. The town serves as a shopping center for the surrounding rural area, and has varied small industries. Population growth in Middletown seems to have leveled off to a very gradual rate of increase.

Because the work lives of men tend to differ from those of women, it would have been inadvisable to pool data from both sexes. Therefore, it was decided to restrict the study to males. Boys who were enrolled in the eighth grade of the public junior high school and in the ninth grade of the senior high school in Middletown were selected as subjects. At these grade levels, young people are faced with, or soon will be faced with, the task of making educational choices having possible vocational implications. There were 142 boys in the ninth-grade group and 129 in the eighth-grade group.

During the first year of field work (in 1951-52) the staff lived in Middletown. The subjects were seen for a series of four tape-recorded interviews, varying in focus. Their parents were also interviewed. A variety of tests and questionnaires were given to the boys during the course of the academic year, to assess abilities, aptitudes, vocational interests, work values, and psychological adjustment. Socioeconomic status was rated by an adaptation of the Warner occupational scale from the Index of Status Characteristics. A survey of employment in Middletown was also conducted.

The first follow-up of the subjects was at the twelfth-grade level, or equivalent; interviews were held, and the in-school group was also tested. The next follow-up was three years later (the spring of 1958 for our original ninth-grade group, and this spring for the former eighth-graders). By last spring, the boys, now young men, were scattered geographically. We had come to the conclusion that the 1958 follow-up should be by mailed questionnaire instead of by personal interview.

We wanted to obtain a considerable amount of information from our subjects about their educational and work experiences and their feelings of success and satisfaction. The questionnaire that was constructed for this purpose was 40 pages long, with 154 items, plus four supplementary forms. It was unavoidably long because it had to cover a variety of different kinds of educational and vocational situations, in order to enable the individual subjects to report different possible combinations of activities. Included were items on full-time jobs, part-time jobs, vacation jobs, and past, present, or future training, plus evaluations of success and satisfaction in various activities. Of course, any one person did not have to answer all items. Nevertheless, the questionnaire looked imposing, and might well have discouraged the recipient. We were faced with a familiar research problem: to obtain sufficient detail about our subjects' activities and attitudes so that we would be able to interpret our data meaningfully, yet to avoid overwhelming our subjects by making excessive demands on them. Obviously, no research worker wants to antagonize the individuals whom he is studying (unless that is the object of the study), and the situation is especially delicate in a longitudinal study, in which the same persons are to be contacted more than once.

When the boys were still in high school, they had been released from their classes for interviewing and testing by the Career Pattern Study staff. Now, however, they were out of public school, and filling out the questionnaire was a task that they would have to perform in their leisure time. We were concerned that such a long questionnaire might discourage them, and furthermore we felt that some tangible expression of our appreciation was/ appropriate now, which would not have been appropriate when the majority of the group was still in high school. Therefore, we decided to send some money with the questionnaire as a motivational device. (Previously we had used a similar approach in sending a briefer questionnaire to a control group of subjects.)

Two dollars were enclosed with each questionnaire and an additional three dollars /were sent to each respondent when the completed questionnaire was received. All questionnaires were sent registered mail, return receipt requested. Two and one-half weeks after the questionnaire had been sent out, follow-up post cards were mailed to the non-respondents. Those who still did not respond were sent a follow-up letter and another copy of the questionnaire, after an additional period of two and one-half weeks.

In 1958, our original ninth-grade group consisted of 140 boys (two had died). Within three weeks after mailing the questionnaire, replies had been received from 79 of the group (56%). Replies from other subjects came in a few at a time over a period of months and some are still coming in. So far, 39 additional returns have been received, for a total of 118 of the group (84%). One cannot fairly classify very many of the respondents as late respondents. In some instances, they had moved, and there was a delay in their receiving the questionnaire. Others were away at college or in military service and the questionnaires had to be forwarded to them, sometimes overseas. Other questionnaires were returned by the post office because the individuals had moved and there was no forwarding address. Special follow-up efforts were required in such instances to locate a mailing address, and these efforts were not always successful.

To date, 15 of the former ninth-grade group may be considered non-cooperative in completing the questionnaire, either by direct refusal or by passive resistance. They were compared with 113 of the respondents on several of the variables for which we obtained data at the time of our original contact at the ninth-grade level: intelligence, socioeconomic status, level of vocational aspiration, and adjustment as assessed by an

adaptation of the Rotter Incomplete Sentences Blank. The cooperative group was somewhat more intelligent (Otis IQ of 103.9 as compared to 94.9 for the non-cooperative subjects), of very slightly higher socioeconomic status (4.4 as compared to 4.8), had a higher level of vocational aspiration (2.9 as compared to 4.1) and revealed slightly more conflict in their Incomplete Sentences tests (119.7 as compared to 114.4). All of these differences between the means of the respondents versus the non-respondents are small and probably are not statistically significant. (The significance of the differences was not tested because of the small number in the non-cooperative group.) They are in line with expectation, except perhaps for the slightly more favorable adjustment scores of the non-cooperative subjects, which may reflect a tendency of the latter to deny conflicts, or to have been non-cooperative in taking the test. Such an interpretation of a difference which is probably non-significant anyway is highly speculative and perhaps not very important. What is especially interesting to note is the higher intelligence and level of aspiration in the respondents than in the non-respondents. Projecting this tendency into the future, we may anticipate greater attrition among the somewhat less able and (again being interpretive) perhaps less upward-mobile members of our original sample. The problem of possible bias in the sample with attrition of subjects is one that research workers engaged in longitudinal studies have to live with. I know of no answer to it: one does what one can to retain subjects, and checks for differences between those who continue to supply data and those who do not.

I would like to mention briefly a few findings from our 1958 follow-up before turning to a discussion of another problem we have encountered.

Of the 113 respondents to our questionnaire for whom we have tabulated data, 49 were working full-time and 2 part-time, 23 were in training (all except one of these in college), and 35 were in various branches of the military service. Four were unemployed. Relating some of the ninth-grade data (when the subjects were about 14 years old, on the average) to the post-high-school data (when the respondents were about 21 years old) we found a low and non-significant correlation of .18 between the socioeconomic level of the boys' vocational preferences at the two points in time. A *t* test of the difference in level of their preferences was also not significant.

The relationship between the level of the boys' 1958 vocational preferences and their socioeconomic status as evaluated by parental occupational level in 1951-52 was slightly higher, but the coefficient of correlation (.22) was barely significant at the .05 level. The correlation between intelligence, as measured in 1951, and 1958 vocational preferences was more substantial: .42, significant at the .01 level. It is interesting to note that, despite the slight relationship between levels of vocational preference at the ninth grade and post-high-school periods, the correlations between level of vocational preference in 1951-52 and socioeconomic status and intelligence, respectively (.25 and .39), were similar to the correlations just cited.

A comparison of the levels of vocational preference at the earlier and the more recent period indicates that the level of preference has, on the average, been very slightly lowered. Twenty-nine of the 113 studied had vocational preferences at the same socioeconomic level at both periods; 37 had higher level preferences currently that in 1951-52, and 47 had lower level preferences now than formerly.

The majority of the respondents felt they had been about as successful in their work as their friends had been, and most of them also reported they felt they had made progress toward their goals. The goals, of course, have changed in many instances.

What their eventual occupations will be remains to be seen. The subjects will be recontacted when they are about 25 years old, and perhaps again when they are 30, with a final follow-up when they are about age 35 (20 years after our first contact with them). The findings of research studies such as Davidson and Anderson's suggest that many young people go through a floundering period before settling down vocationally. We want to keep track of our subjects over a sufficiently long period of time so they will have had an opportunity to settle down into some occupation if they are going to do so. Therefore, some of our most interesting data should be the information about the subjects' occupational status and their feelings of success and satisfaction when they are in their mid-thirties, in relation to their early vocational plans and other aspects of their vocational behavior in the eighth or ninth grades, and in relation to other variables on which we gathered data in 1951-52, such as their scores on Strong's Vocational Interest Blank, early work values, TAT's, biographical inventory scores, father identification, and so forth. But to retain a substantial number of our original sample over a 20-year time span will be a major task.

We expect to find changes in the vocational behavior of our subjects during the years of our study. One of our purposes is to observe what does happen in the careers of a group of young people: how much do they move around from job to job, from one field of work to another, from one occupational level to a different one? We will try to gain some understanding of what factors are related to their occupational careers and might serve as predictor variables. However, we know we shall have a problem in inter-

preting our findings, occasioned by the very fact that we have studied our subjects. How much has their participation in the Career Pattern Study influenced their vocational development and the patterning of their careers? While the boys were still in a rather early stage of orienting to educational and occupational choice, they were interviewed concerning such matters. When they were about 14 years-old, they were asked such questions as: "What would you like to be by the time you're thirty?" "How far do you intend to go with your education?" "What would you like to get out of life?" "What sort of person do you think you are?" And similar questions have been asked of them since. Furthermore, tests and questionnaires relevant to vocational planning have been administered. While it is possible that our research procedures have had no effect on the boys, it is also possible that our study may have influenced them to focus on matters of choice and planning more intensively than they may have otherwise. So, by the very process of studying them, we may in some way have affected their vocational development. We think such effects were at a minimum, but we would like to know more about this possibility. In an attempt to make a check, we have gathered some information about the boys who entered Middletown High School the year immediately preceding the one in which the Career Pattern Study was begun. From high school cumulative records and from a short questionnaire mailed these boys the year before our mailing of the longer questionnaire to our original ninth-grade group, we have obtained data about their high school drop-out rate, their academic achievement, IQ, socioeconomic status, and early post-high-school careers. Comparisons will be made between these control subjects and our subjects, to determine whether the two groups differ appreciably in amount of education

obtained, amount of job change, and occupational level achieved. Comparison of the two groups at the ninth-grade level suggested that at that point they were rather similar. If differences between the two groups are found later, they may (though not necessarily) reflect effects of the study on our experimental group.

Another problem which we have only recently encountered in our work is what to do about publishing case studies of our subjects when the overall research is still in process. Obviously, our subjects know they are being studied for research purposes. We have refrained from counseling them or offering them any sort of special psychological service, because our object is to study the processes of vocational development and adjustment as they occur under usual conditions. Our research design is one of occasional cross-sectional studies of the same group at different points in time; the boys are not being studied intensively year after year. Therefore, they are not closely identified with the study, but they are aware it is being conducted.

One question is whether we should obtain specific permission from any subject about whom we might want to publish case study material, even though we would, of course, protect the identity of the subject by disguising the material. We do not feel we can ethically obtain prior permission from the individual or individuals involved because it would then be necessary for the person to see the manuscript, knowing we were designating him. Reading about themselves as we see them, or as they appear in psychometric reports, with no counseling or discussion of the material, might arouse questions or anxieties in the subjects. It might also have some unknown effect on their subsequent careers.

The publication of material disguised so that identity may not be guessed without the individual concerned having reviewed the manuscript might still be possible. However, the question arises, how much disguise of identity is required to be effective, while still preserving the flavor of the actual case? One might be able to conceal the identity of the subject from everyone except himself. If he should read it, might he not recognize himself even through our changes, and would this be harmful to him?

Currently, Dr. Super and I are preparing for publication a report on the first year of the research. The focus of the monograph is on group data, and most of the presentation is statistical and objective in nature. To personalize it a bit, and to illustrate our findings, we planned to include case studies of three subjects: one of high vocational maturity according to our measures, one of average maturity, and one of low maturity. The first case study I prepared was about a boy of average vocational maturity. He also seemed rather average in other respects. I disguised identifying material about the family, the boy's actual vocational preference, and details of his activities. Then I began on the high maturity case, selected on the basis of having the highest score in the group on a composite measure of presumed vocational maturity. He also turned out to be superior in other ways: quite popular with his peers, active in extra-curricular activities, of superior intelligence, a very good student, and physically larger than many of the other boys. How could I disguise all of this, and properly present the case? I tried, but I felt that to a considerable extent I was writing fiction. Then I sent both case studies to the two former staff members who had each interviewed one of these boys,

asking them to guess who the subjects were. Although six years had gone by since they had worked with these boys, the superior boy was identified immediately by his interviewer, and the average boy was partially identified by the other interviewer. At that point I gave up the individual case study approach and have begun to try a different method: a report on composite cases instead of individuals, taking several cases illustrative of high vocational maturity instead of just one, several illustrative of average vocational maturity, and several illustrative of low vocational maturity. I am still working on it and do not yet know how satisfactorily it will turn out. It is quite a difficult task. Currently, I am trying the composite example of high maturity. My approach has been to take the five highest-scoring boys on our vocational maturity measures, and to read over the cases, noting for all five the information needed for the report. Then I have reviewed the information in each area for all five boys, and selected the modal characteristic, or the mean or median, as seems appropriate for the particular variable. However, some disguise of specific detail is still necessary. The composite approach has the advantage of not being any one person yet representing several who are in some ways alike; it also has the disadvantage of not being any one person and representing several who are in some ways different.

In conclusion, should I be asked on the basis of my experience with one such study to evaluate the perils and rewards of longitudinal studies from the point of view of the research worker, I would say these are the perils:

1) loss of subjects over time, introducing possible bias into the findings
2) the possibility of overlooking variables which may be important, or inability adequately to assess variables one thinks are important

3) difficulty in the assessment of complex behavior

4) possible effects on the subjects of being in the study.

The rewards to the research worker add up, I think, to the privilege of observing other people's lives. The reward to society, we hope, is some increase in knowledge. The rewards to the subjects are unknown - perhaps a feeling of having been of service.