IMPACTS OF CAMPUS EXPERIENCES AND PARENTAL SOCIALIZATION ON UNDERGRADUATES' CAREER CHOICES

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The purpose of this study is to assess the impacts of selected aspects of the collegiate experience on changes in undergraduates' occupational preferences and personal goals. It focuses on two general aspects of the undergraduate student's participation in a 4-year college or university environment—the social structure, particularly its normative aspect, as defined by the orientations of faculty and students toward the purposes of a college education; and the individual student's perceptions of the institution's capacity for facilitating the attainment of personal goals. The latter aspect of the college experience is reflected in such things as satisfaction with college, the individual's sense of social integration into the campus environment, and assessments of the extent to which experiences within a particular college have contributed to the attainment of desired personal ends (e.g., occupational training and personal growth). A departure from much of the existing research on college impact is that close attention is paid to the concomitant influences of parental socialization that are present throughout the student's college days. Specific aspects of parental socialization processes are considered, notably those reflected in modes of parent-child relationships and family life-style that contribute to adult development. An important aim of the research is to investigate the extent to which college effects on students' occupational orientations and preferences are mediated by parent-child relationships maintained, in many instances, through continued contacts with parents during the student's college years.

The study is intended to contribute to research focusing on collegiate impact on occupational matters and, more generally, on socialization in organizations. On one level, it deals with situational and individual developmental constraints on the choices made by participants in an organizational environment. On another level, it explores a set of socialization processes, concentrating largely on the impact of normative contexts and interpersonal

relations among an organization's members. It investigates the joint impacts of (1) the normative influences exerted by faculty and peers, (2) the perceptions held by students concerning various salient aspects of their collegiate experience, and (3) the persisting impacts of parental socialization during college despite influences brought to bear upon students by participation in the more immediate campus social structure. Figure 1 contains a diagram of the general conceptual scheme developed for the present research.

OCCUPATIONAL ORIENTATIONS AND PREFERENCES

During college, most undergraduates seek information about various kinds of occupations and try to determine not only their own suitability for particular careers but also the reactions of others to certain occupational activities and outcomes. In addition to providing the educational credentials necessary for access to upper white-collar, professional, and managerial occupations, the traditional college education has also provided experiences and resources for the student to develop more generalized orientations toward work and leisure activities.

This framework focuses on change between the freshman and upper division (i.e., junior and senior) years in students' occupational orientations and preferences. To maintain continuity with previous research, particularly the Cornell Values Study (Rosenberg, 1957, p. 14), the study examines students' orientations toward extrinsic rewards (becoming an authority in a special field, and becoming well-off financially) and interpersonal relationships (helping others).

It should be noted that there is an important interdependence between occupational choices and values because, according to Rosenberg (1957), "in addition to people choosing an occupation in order to satisfy a value, they may choose a value because they consider it appropriate for the occupational status they expect to fill in the future" (p. 24). Merton (1968) called this latter process "anticipatory socialization" (pp. 438 to 439). Hence, it is essential that changes during college in the configurations of relationships between occupational preferences and orientations be investigated.

Of course, such attributes of students as sex and race both shape their orientations prior to college and affect the susceptibility of students to the socializing influences of college.

It seems that, increasingly, women in college are preparing for continuous careers following graduation, interrupted only for brief periods (if at all) for child-rearing or other family responsibilities. Nonetheless, value orientations of women still tend to lean more toward interpersonal relationships and less toward extrinsic rewards than those of men, mainly because of the slow movement toward increasing access for women to business and profes-
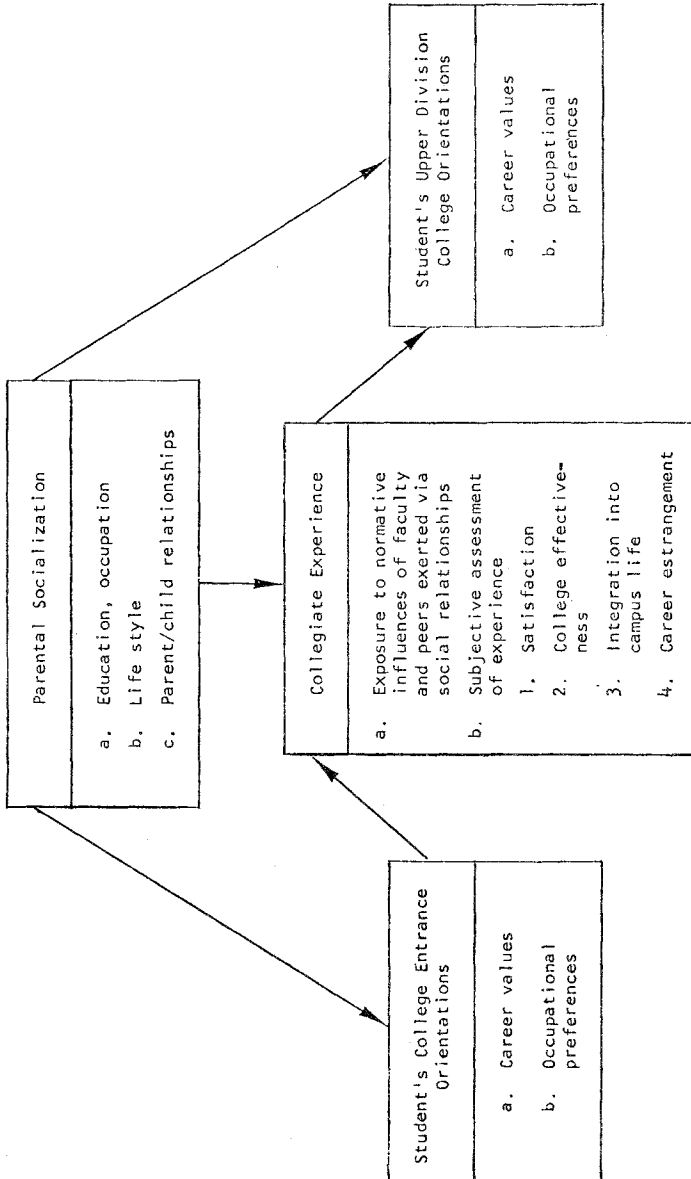
FIG. 1. Conceptual framework for the study of undergraduate occupational socialization.

sional positions. Husbands (1972) described such sex differences among college students very succinctly: "Men tend to rank career and vocational exigencies first among reasons for attending college, while women indicate they are attracted to intellectual pursuits and a liberal education" (p. 263).

Perhaps even more than their white counterparts of both sexes, and despite discrimination and uncertain career progression, college-educated blacks have tended to be highly oriented toward being successful and attaining high-status careers (Crain and Weisman, 1972).

PARENTAL SOCIALIZATION

Explicit in this framework is the recognition that the college campus does not, for most undergraduates, constitute a totally encapsulated environment. Parental influences are important in determining the career preferences and orientations that students bring with them at college entrance. Furthermore, since the effects of parental socialization are also very likely to persist during the course of the student's college years, parental pressures may serve to mediate any impacts of college experiences. Consequently, a major thrust of this study's investigation of undergraduate career development is its assessment of the importance of parent-child relationships in determining the susceptibility of students to the socializing influences of the campus environment. One research question for this part of the study may be phrased as follows: How are various aspects of parental socialization and life-styles (e.g., achievement pressure, support, intellectual and cultural interests) related to the persistance and change of undergraduates' career orientations and preferences? Another is, How do aspects of the collegiate experience and parental socialization interact with one another in influencing the student's career development during college?

In studies of career development, parental influences have been continuously identified as important contributing factors (Borow, 1966). Sociological research consistently shows that occupational attainment is related to such measures of parental social status as occupational prestige and educational attainment (Blau and Duncan, 1967; Alexander and Eckland, 1975). Other studies indicate that occupational values concerning autonomy in work and the undesirability of close supervision in work are associated with a middle social-class position as measured by educational and occupational status, and that these values are transmitted by parents to their offspring (Kohn, 1977). The phenomenon of "occupational inheritance" (i.e., the propensity of children to choose parental occupations) has also been shown consistently in studies of occupational choice among college students (Werts, 1967).

However, a shortcoming of these studies with respect to their assessment of socialization processes is that none deal with aspects of parent-child rela-

tionships that might be related to the transmission of parental influences. Indeed, there is sufficient evidence suggesting strong associations between family social class and parental socialization practices as reflected in parent-child relationships and familial life-style to justify an empirical test of the relative contribution of global aspects of social status versus more specific aspects of parental influence in assessing the career development of college students (Kerckhoff, 1972; Pearlin, 1971). Only Mortimer (1976) has provided evidence suggesting that the nature of parent-child relationships (perceived "closeness") has marked consequences for occupationally related decisions of college students.

The present research goes beyond the foregoing analyses of parental influences by focusing on more specific aspects of processes leading to the transmission of orientations by parents to their offspring, along with the more conventionally used measures of parental status characteristics (e.g., education, income, and occupational prestige). Two dimensions of parental treatment that have been identified as particularly important for adolescent socialization are parental support and parental control, particularly pressures for achievement (Devereux et al., 1962; Thomas et al., 1974). These two dimensions, along with parental life-style characteristics, are of primary concern in the present research.

COLLEGIATE EXPERIENCE: NORMATIVE CONTEXTS

The remaining aspect of the conceptual scheme for the study is the student's collegiate experience. For the moment, consider the organizational environment of college independently of parental socialization. Socialization in college may be thought of as a process that "entails a continuing interaction between the individual and those who seek to influence him (Clausen, 1968, p. 3)." Socialization, in this sense, "does imply that the individual is induced in some measure to conform willingly to the ways of . . . the particular groups to which he belongs (Clausen, 1968, p. 4)." Undergraduate socialization can thus be viewed as a process that results from the student's interaction in normative contexts with other members of the college community. For purposes of the present discussion, normative contexts are considered to be settings where various sorts of generally goal-oriented activities take place among groups of individuals. Norms represent generalized conceptions of what constitutes appropriate behavior when a person is confronted with certain situations or must choose among alternative courses of action.

This portion of the conceptual framework draws heavily from the seminal structural-functional analysis of American universities by Parsons and Platt (1973). Specifically, it focuses on two aspects of their argument as it relates to undergraduate socialization. One has to do with what they term the

"moral authority of institutions" (Parsons and Platt, 1973, p. 167). This refers to the normative order of the college or university as a potent agent of socialization. The second has to do with interpersonal relationships among various members of academic settings. These interpersonal attachments make an important contribution to the members' social integration within the college (Parsons and Platt, 1973, p. 167).

Furthermore, interpersonal relationships contributing to the social integration of students into the academic system are related not only to the attainment of institutional goals, but also to the personal goals of individual students (Tinto, 1975). Social relationships among members of normative contexts contribute to the transmission of normative influences, since, according to Moore (1969), "normative internalization takes place only in situations marked by strong affectivity in relationships, and some part of the affect must be positive" (p. 869).

Put in a somewhat different way, the foregoing suggests two general questions that deal with the socializing effects of an individual's participation as a student in the organizational environment of a college or university. One pertains to social interaction: What are the interpersonal processes through which people are socialized? The other pertains to organizational structure: What are the normative characteristics of the organization that exert socializing influences on members (Wheeler, 1966, p. 54)? At college, the relationship between interpersonal and organizational variables can be explained as follows: Just as students differ in their patterns of interaction with others, colleges differ in their structuring, intentionally or not, of both normative contexts such as classrooms and student residences and of opportunities for social interaction among students and college staff. Hence, in studying college student socialization, it is important to explore the impacts of normative contexts as well as the ways in which interpersonal relationships among members serve to either reinforce or counteract the normative influences exerted within various specific contexts (Lacy, 1978).

By enrolling in a college and attending classes, a student is exposed to various socializing influences, especially those exerted by faculty and peers (Feldman and Newcomb, 1969, pp. 236, 237, 251). A particularly important locus of faculty and student influence is the academic department. In a study of Michigan State University students, Lehmann and Dressel (1962, pp. 221–223) found that seniors rated major field courses and instructors (along with close friends) as having the most significant influences on their attitudes and values during college. More recent studies (Hearn, 1980; Weidman, 1979b) have also shown the significance of the major department as a locus for influences on the career orientations of undergraduates.

Practically all postfreshmen students have some affiliation with an academic department, since it tends to be the unit through which degree require-

ments are formulated and certification of their successful completion is made. Vreeland and Bidwell (1966) described the department as follows: "The department . . . is the principal workplace of the college, has relatively well-defined goals and expectations for students, and commands powerful normative and utilitarian sanctions" (p. 238). These authors argued that the socializing impacts of the department are determined by the expressed goals of the faculty for undergraduate education, which, in turn, determine faculty behavior and expectations for students. They identify three areas of faculty emphasis or goals for undergraduate education: providing a broad, liberal education; providing occupational training; and mixed goals, where both are emphasized.

The academic department can be a powerful source of normative influences on student majors, in large part because of the faculty's ability to differentially reward students for their performance in courses, both through the assignment of grades and the encouragement of social interaction (Parsons and Platt, 1973, p. 179). The evaluation of students' performances in class-related activities as well as other settings may also influence the career plans of undergraduates. It is interesting to note, however, that in determining the kinds of jobs actually held by a large National Opinion Research Center sample of college graduates, "plans are a more important independent influence than grades" (Spaeth and Greeley, 1970, pp. 171-172).

The emphasis on norms and social relationships in the academic department is pursued for several reasons. First, primary social relationships have already been discussed as contributing to the social integration of and, consequently, to the potential normative pressure exerted on members by groups. Second, as Shibutani (1955) asserted, "socialization is a product of a gradual accumulation of experiences with certain people, particularly those with whom we stand in primary relationships" (p. 568). Finally, both students and faculty tend to feel that the most enduring academic impacts of college attendance result from social interaction between faculty and students outside of the formal classroom setting (Wilson et al., 1975; Pascarella, 1980). In sum, the assumption underlying this part of the study is that the central mechanism of socialization transmitting normative influences is primary social relationships with departmental faculty and peers. With respect to influences on students' career orientations within the department, major field peers appear to be less important than major field faculty (Phelan, 1979; Weidman, 1974, 1979b).

It must be remembered that the department is part of a larger organization, the college or university. Students are members of the entire organization, not just of the department. Consequently, there may be some socializing effects of interaction in nondepartmental settings within the college that add an increment to or even cancel out the department's influences. An

important dimension here is the formal extracurricular structure of the college. Presumably, those students who participate actively in extracurricular activities may be more likely than their nonparticipant counterparts to look to peers rather than to faculty as normative referents.

On another level, the general characteristics of the college itself are also important. Student selection is of considerable interest, since departments in highly selective institutions may be more likely to stress a broad liberal education than occupational training. College selectivity has been shown to be positively related to the enhancement of students' scientific orientations (Skager et al., 1966), but negatively related to increasing students' preferences for seeking educationally high level careers (Reitz, 1975). Other studies (Bassis, 1977; Drew and Astin, 1972) found positive effects of selectivity on aspirations and self-evaluations, and Solmon and Wachtel (1975) found institutional quality to be positively associated with postcollege career income.

COLLEGIATE EXPERIENCE: SUBJECTIVE ASSESSMENTS

The other aspect of the student's collegiate experience included in this framework involves his or her subjective assessment of that experience. As one critic of the structural-functional interpretation of socialization has argued (Wrong, 1961), socialization involves both the transmission of norms and the individual processes resulting in the development of unique personal orientations to social contexts. Not surprisingly, there is a considerable literature dealing with the related phenomenon of "person-environment interaction" at college (Stern, 1970; Walsh, 1973; Moos, 1979). The general research question for this part of the study is: How do the individual's perceptions of participation in various segments of the collegiate environment affect the socialization potential of the college? Put in a somewhat different way, it is concerned with assessing whether or not student favorability toward various aspects of the collegiate experience enhances the college's impact on changes in occupational orientations and preferences.

Several dimensions of students' perceptions of their colleges are of concern here. One is student satisfaction with college. Feldman and Newcomb (1969, 94–95) cited four studies of student satisfaction with college in their extensive literature review that suggested some variability in student satisfaction at different points during college, with the lowest levels being reported by sophomores (60% satisfied) and the highest levels being reported by seniors (more than 80% satisfied). Several problems are left unaddressed by these few studies. One problem is that these studies all report simple frequencies or mean responses to items without attempting to show in which areas of undergraduate life students are relatively more or less satisfied.

A second problem is the limitation of the measures of satisfaction used, since most are based on vaguely phrased questions with only very general referents.

Some light is shed on the problem of student satisfaction with college in a study done using students at the University of Minnesota by Berdie et al. (1970). These authors found that "the extent to which a student is satisfied with college depends in part on his own history and personality, in part on the facility with which he obtains his academic objectives, and in part on the experiences, resources, and services which the University makes available to him" (pp. 265–266).

For the purposes of the present study, the inference drawn from the foregoing discussion is that, presumably, the more satisfied a student is with his or her collegiate experience, the more susceptible that student is to the socializing influence of the campus. The present research attempts to specify the ways in which student satisfaction is more or less important in affecting change in students' career choices, and to show how such subjective assessments of college life mediate the impacts of campus normative contexts.

Another important subjective dimension of the student's collegiate experience suggested by the Berdie et al. study is the student's assessment of the extent to which the college has facilitated attainment of specific outcomes that are deemed important by the student (e.g., general education, occupational skills, marriage preparation, help in formulating values). Of particular interest is the student's assessment of the effectiveness of the college as a vehicle for attaining personal goals. While there have been many studies of students' ranking of the importance of goals (Feldman and Newcomb, 1969, 11–17), virtually none have attempted to analyze the relationships among students' perceptions of having attained desired goals and other college outcomes. The present research builds on work in this area (Weidman and Krus, 1979) which suggests that among female education majors at the University of Minnesota, attainment of desired general education goals was positively related to having a favorable image of the College of Education, the organizational home of their major departments. Among men in this study, favorable images of the College of Education were related to their belief that they had obtained occupational skills, independent of whether such skills were highly desirable. These findings again suggest that favorable images of college, and hence the institution's socialization potential, are enhanced by students' subjective assessments of the college's contribution to the attainment of personal goals.

The student's perceived "fit" or subjective assessment of his or her degree of social integration into the life of the institution is another dimension of concern in the present research. Tinto (1975) described social integration into campus life as follows:

[S]ocial integration occurs primarily through informal peer group associations, semi-formal extracurricular activities, and interaction with faculty and administrative personnel within the college. Successful encounters in these areas result in varying degrees of social communication, friendship support, faculty support, and collective affiliation, each of which can be viewed as important social rewards that become part of the person's generalized evaluation of the costs and benefits of college attendance and that modify his educational and institutional commitments. (p. 107)

Social integration, particularly as it relates to primary social relationships with faculty and peers in the transmission of normative influences has already been discussed. With respect to students' assessments of impersonal treatment on campus, the expectation is that the more favorable the student is in his or her perceptions of the campus environment, the greater the socialization potential of the college.

Finally, the study is concerned with those subjective assessments that individuals make concerning their own suitability for careers and their willingness to participate in the formal occupational structure of society. The expectation is that those students who question their ability to develop meaningful careers will also shy away from aspiring to high-status, demanding occupations.

To summarize the general conceptual scheme underlying the foregoing discussion, undergraduate socialization can be conceived as a series of processes whereby the student: (1) enters college as a freshman with certain values, career aspirations, and other personal goals; (2) is exposed to various socializing influences and mechanisms while attending college, particularly (a) normative pressures exerted via social relationships with faculty and peers in the major department and (b) parental support and achievement pressure; (3) assesses the salience of the college environment as the source of both knowledge and orientations perceived to be appropriate for attaining career goals; and (4) changes or maintains those values and aspirations that were held at college entrance on the basis of parental influence, normative pressure in the major, and subjective assessments of the collegiate experience.

STUDY DESIGN

Data for this study came from several national surveys of students and faculty in American colleges and universities that were sponsored collaboratively by the American Council on Education (ACE) and the Carnegie Commission on Higher Education (Trow, 1975).

The Surveys

The faculty survey was conducted in the spring of 1969. The undergrad-

uates were surveyed when they began college as freshmen starting with the cohort that entered college in the fall of 1966, and then again during December of 1969. See Trow (1975, Appendix A) for a complete description of the sampling frames, nonresponse bias, and other technical details of the 1969 surveys. Statistical descriptions of the national norms for the 1969 faculty survey can be found in Bayer (1970); national norms for the 1966 and 1967 freshmen surveys can be found in Astin et al. (1967a, 1967b) and Panos et al. (1968); and a description of the sampling procedures used for selecting the institutions included in the 1966 ACE freshman survey can be found in Astin et al. (1966). A discussion of measurement error and item reliability for the student surveys can be found in Boruch and Creager (1972).

Because these data sets are now more than a decade old, it is reasonable to question the extent to which they are representative of contemporary undergraduate life. Not surprisingly, there is some disagreement on trends in student and faculty orientations. Trow (1977) replicated the 1969 ACE-Carnegies surveys in 1975 and concluded "that American colleges and universities have been marked more by stability in the basic attitudes and values of their students and teachers than they have been by any discontinuous or great change" (p. 6).

With respect to the issue of discontinuity of change in students' values, Trow's conclusion is supported by the 3-decade comparisons reported by Hoge et al. (1981). However, with respect to the issue of magnitude of change in students' values, it appears that there have been some marked changes in entering college freshmen career orientations and choices. Drawing from data reported in the 1969 and 1979 reports from the continuing annual surveys of entering college freshmen conducted by Alexander Astin and his colleagues (the present research used freshman data from the first two surveys in this series, 1966 and 1967), Magarrell (1980) asserted that while all entering freshmen have become more materialistic and career oriented, this is especially true of women. Not only were freshman women much more oriented toward the attainment of financial success and recognition for personal achievement in 1979 than their counterparts in 1969, 1979 freshmen women were much *less* likely to aspire to careers in teaching (37% in 1969; 10% in 1979) and much *more* likely to aspire to careers as physicians, dentists, and lawyers (1% in 1969; 4% in 1979) or in business (4% in 1969; 15% in 1979). Male freshmen, on the other hand, showed virtually no change in aspirations for careers in business (17% in 1969; 18% in 1979).

This suggests that results in the present research for men would probably not be greatly different over the ensuing decade. Results for women, on the other hand, are probably underestimated, since women undergraduates' career aspirations have risen considerably over the last decade. To the extent that the changing trends over the past decade in women's career aspirations are consistent across colleges and majors, the results reported in the present

study are quite likely to reflect the patterns, though perhaps not the specific magnitudes, of results that would be found in analyses of data collected from contemporary undergraduates.

The Study Sample

Institutions with poor student response rates (less than 25%) to the 1969 ACE-Carnegie survey are excluded from the analysis, thereby reducing the institutional sample for the present research to 89. There was a further reduction in the number of institutions ultimately represented in the study brought about by the focus on normative characteristics of academic departments. Since the indicators for norms were the aggregated responses of both departmental faculty and undergraduate majors, only those departments that had sufficient numbers of respondents for reasonably stable estimates of norms could be included. Excluding all departments with fewer than five student respondents left a total of 72 institutions. From all of the departments at these 72 institutions that met the respondent number criterion, 4 were selected for the study: English, mathematics, political science, and history. Not only are these departments representative of the liberal arts curriculum, but there were also sufficient numbers of students in them so that separate analyses could be performed by sex. Clearly, this sample selection procedure resulted in the selection of large departments for study. In terms of socialization, however, this should lead to the underestimation of departmental effects since large departments are presumably less cohesive and socially integrated than small ones.

Since duration of influence has been shown to be an important factor in student socialization (Curtis, 1974), data analysis is based on the cohorts of students who had had maximum exposure to collegiate influences, those who were upper division students at the time of the 1969 survey. Also to maximize potential college influence, students who had attended more than one college were excluded. Thus, the final student sample included only those respondents (1) who had entered college in either 1966 or 1967; (2) who had attended only one college; (3) who had responded to both the freshman and 1969 surveys; (4) whose 1969 major field was English, mathematics, history, or political science; and (5) whose major had at least five upper division student respondents to the 1969 survey. The distribution of the sample by department and sex is shown in Table 1.

There are some problems with the study sample. One has to do with the methodological issue of backward selection to get a sample having repeated measures (Hauser, 1970). From the documentation available on these surveys, it is difficult to determine the exact differences in wave response rates. The overall response rates to the ACE freshman surveys in the late 1960s

TABLE 1. Distribution of Study Sample

Major	Sex		Colleges[a]
	Males	Females	
English	344	627	63
Mathematics	319	242	55
History	496	301	58
Political science	500	224	48

[a]Undergraduates from 72 different 4-year colleges and universities are included in the study: 35 institutions had all four departments represented, 19 had three departments, 9 had two departments, and 9 had only one department.

were not very high (on the order of 20%), so there is real reason to be concerned about the representativeness of the sample selected for the data analysis. That is not to say that the response rates for particular institutions were not considerably higher than the overall response rate; but it is virtually impossible to assess the response rate problem.

Related to the first problem is a second, namely the diffusion of departmental effects that would otherwise result from what Feldman and Weiler (1976) have called the "accentuation effect" of major fields. Since the students included in the present were selected on the basis of their upper division major, there is no way to determine the effects of departments on those who shifted away from one of the four majors chosen for analysis and, hence, no way to control for "accentuation effects" of the major department. It is likely that choosing the departmental sample on the basis of size and upper division major resulted in a somewhat more homogeneous group of majors, in terms of orientations, than is actually the case in the institutions represented.

Two basic considerations justify the use of this particular data base. The first is that these surveys are unique in containing both faculty and longitudinal student data at the departmental level, thereby allowing the analysis to be done on characteristics of specific academic departments rather than groups of related departments (e.g., social sciences, humanities, natural sciences). Second, the ACE surveys of entering college freshmen have been done each fall since 1966 and, hence, represent the longest ongoing effort at obtaining information from entering college freshmen. The information obtained from these surveys is disseminated widely and has been the basis for a substantial amount of influential research on undergraduates. For a comprehensive summary of this research, see Astin (1978). In sum, the shortcomings of these surveys are offset by (1) the data's availability at the departmental level for a relatively large and diverse set of colleges and (2) the

data's appropriateness for addressing the conceptualization of undergraduate socialization developed for the present research.

The Data Analysis

This study is based on secondary analysis of the 1969 ACE-Carnegie National Survey of Higher Education. For a discussion of issues and problems in secondary analysis of survey data, especially using the data for purposes different from those originally intended, see Hyman (1972). The analysis reported herein was designed, in large part, around the available data. The surveys were, however, developed to fill a broad-based set of research needs, many of which paralleled the emphases of the present research.

Based on the conceptual framework shown in Figure 1, the following variables were operationalized for the research. Indicators of parental socialization were parents' educational and occupational status (SES), life-style as reflected in intellectual and cultural pursuits (PARSTYLE), and parent-child relationships as reflected by parental stress on their children to achieve (PARACHOR) and perceived supportive child rearing (PARSUPRT). An additional family background variable, race (NONWHITE), was included as well.

Indicators of students' college entrance orientations were freshman career values with respect to orientations toward helping others (FHELPOTH), becoming an authority in a field (FXPRTFLD), and being well-off financially (FWELLOFF). Freshman occupational preferences were the Duncan (1961) prestige scores of freshman career choices (PFJBCRER).

Collegiate experience variables included four indicators of the major department's normative environment: faculty liberal education norms (FACNORM), student liberal education norms (PEERNORM), primary social relationships with peers in the same major (PEERTIES), and primary social relationships with faculty in the major (FACTIES). Indicators of the student's subjective assessment of the collegiate experience included satisfaction with college (COLSATIS), perceived effectiveness of the college in facilitating the attainment of personal goals (EFFECTIV), career estrangement (ANTICRER), and two measures of integration into campus life—involvement in the formal college extracurriculum (COLINVLV) and perceived impersonality of college (COLIMPER). Cumulative grades (GPA) were also included in this group of variables, as was college selectivity (COLQUAL) and entrance cohort (JUNIOR). Students' upper division college orientations were derived from responses to the same items that had been included in the freshman survey—1969 orientations toward helping others (HELPOTH), becoming an authority in a field (XPRTFLD), and being well-off financially (WELLOFF), as well as prestige of 1969 career choice (JOBCRER).

The items used to construct each of the variables are described in the

Appendix to this paper. For a complete description of the measurement properties of the multiple-item scales, see Weidman (1979a, Appendix A). The correlations among all of these variables by department and sex are also included in Weidman (1979a, Appendix B).

Variables were entered into the multiple regression analyses by groups in the order in which they were presented in the foregoing discussion. The dependent variable was the Duncan (1961) prestige score of the student's 1969 occupational choice. The student sample was partitioned by major and sex for the data analysis. Since the respondent weights developed by the American Council on Education for reporting national college student norms from the surveys that are employed in the present research were calculated on the basis of institutional sampling strata rather than individual student characteristics, all regressions are performed with unweighted data.

As has already been mentioned, since student response rates were generally much lower than faculty response rates, only those departments with at least five student respondents were included in the analysis. The median numbers of respondents on which departmental normative climate measures were based were 15 for faculty and 17 for students. Examination of within-department variance for both faculty and student norm measures showed no notable effects of departmental normative consistency on changes in students' orientations (Weidman, 1974, pp. 50-51).

RESULTS

The results from the regression analyses are reported in Table 2.

English Majors

For female English majors, there were no significant effects of family background (sex and race) on 1969 career prestige. For parental socialization, there was a significant negative effect of parental support. The negative sign for parental support suggests that highly supportive parents do not encourage aspirations for high-status occupations among their female offspring who wind up majoring in English, the only one of the academic departments considered here that has a predominance of female over male students.

For career values at college entrance, there are no significant effects on prestige of 1969 career choice among female English majors. Not surprisingly, the prestige of the freshman career choice had a strong, persisting effect on prestige of the 1969 career choice among these female English majors. The same was also true for college selectivity. For entrance cohort, a significant net negative effect appeared for being a junior as opposed to

TABLE 2. Regression Results: Family and Campus Effects on Career Choices by Major and Sex (Standardized Parameters)

Variables	English Female	Male	Mathematics Female	Male	History Female	Male	Political Science Female	Male
SES[a]							−.119	
NONWHITE		−.102	.122					
PARSUPRT	−.072				−.092			
PARACHOR								
PARSTYLE								
FHELPOTH			−.133					
FXPRTFLD				.084		−.165		
FWELLOFF						−.073		
PFJBCRER	.162	.258	.192	.205	.184	.027	.295	.161
COLQUAL	.182		.189	.196	.191	.089	.166	−.104
JUNIOR	−.064	.088	−.118			.082		
PEERNORM	−.134							
FACNORM								
PEERTIES								
FACTIES				.115	.254	.075		
GPA	.146	.260	.322	.145	.129	.119	.171	.182
COLINVLV	.066			−.107	−.092			
COLIMPER						.096		.109
ANTICRER	−.178	−.151			−.103	−.158	−.131	−.142
COLSATIS	−.088							
EFFECTIV						−.088		
HELPOTH		−.091						
XPRTFLD	.171		.136	.197	.164			
WELLOFF							.130	−.191
R^2	.167	.220	.240	.216	.240	.188	.233	.127

[a]The dependent variable for the analysis is JOBCRER—prestige of 1969 career choice. The independent variables are SES—parental socio-economic status; NONWHITE—racial background other than Caucasian; PARSUPRT—perceived supportive childrearing by parents; PARACHOR—perceived parental stress on child's achievement; PARSTYLE—perception of parents' life style; FHELPOTH—freshman orientation toward helping others in difficulty; FXPRTFLD—freshman orientation toward becoming an atuhority in one's subject field; FWELLOFF—freshman orientation toward becoming very well-off financially; PFJBCRER—prestige of freshman career choice; COLQUAL—selectivity of college; JUNIOR—entered college as freshman in 1967; PEERNORM—liberal education norms of peers in the major department; FACNORM—liberal education norms of faculty in the major department; PEERTIES—social relationships with peers in the major department; FACTIES—social relationships with faculty in the major department; GPA—1969 cumulative grade average; COLINVLV—involvement in formal college extra-curriculum; COLIMPER—perceived impersonality of college; ANTICRER—career estrangement; COLSATIS—satisfaction with college; EFFECTIV—perceived effectiveness of college; HELPOTH—1969 orientation toward helping others in difficulty; XPRTFLD—1969 orientation toward becoming an authority in one's subject field; and WELLOFF—1969 orientation toward becoming very well-off financially. Only those parameters for which $p \leq .05$ are reported.

a senior, suggesting that among female English majors, juniors have lower career aspirations than seniors. Another way to say this is that female English majors build greater confidence in themselves as reflected in higher-prestige career aspirations during the course of their college years.

For departmental normative climate, only peer liberal education norms had a significant effect on female English majors' career choices. That this effect was negative suggests that a strong emphasis on the liberal arts by students majoring in English is accompanied by a deemphasis on seeking high-prestige occupations. Certainly the sorts of careers traditionally available to women in literary fields (notably editing, teaching at the elementary or secondary level, and writing for periodicals of various sorts) do not carry the highest prestige.

College attainments of both the curricular and extracurricular sort showed significant positive net effects on prestige of 1969 career choice among female English majors. For assessments of the collegiate experience, both satisfaction with college and career estrangement were negatively related to 1969 career prestige aspirations. Finally, a strong 1969 orientation toward becoming an expert in a special field showed a strong, positive net effect. This suggests that orientations toward gaining recognition in a career field are reflected in aspirations for a high-prestige career.

A few additional observations help to place the results for female English majors in perspective. First, the overall explained variance (.167) is not very high, which leads to the conclusion that the model developed here is not very effective for explaining the prestige of upper division English majors' chosen careers. The greatest contributor to total explained variance was prestige of freshman career choice (24% of total), followed by personal assessments of the collegiate experience (22%), and 1969 career values (16%). Clearly, for female English majors personal preference as reflected in career choices and values, and personal assessments of their collegiate experiences were more important factors in determining the prestige of their 1969 career aspirations than were either family or institutional variables.

For male English majors, a significant, negative net effect of being nonwhite on prestige of 1969 career preference appeared through each regression. This suggests that white males majoring in English tend to have higher career aspirations than their nonwhite counterparts. Neither any dimensions of parental socialization nor of career values at entrance to college have any significant net effects on 1969 career preferences.

As was true for female English majors, prestige of career preference at college entrance was strongly related to prestige of 1969 career preference. For the college choice variables, only being a junior was related to prestige of 1969 career choice. As compared with female English majors, males in the same major appear to become less rather than more oriented toward high-prestige occupations during college. Males majoring in English showed

no significant effects of departmental normative environment on career choice.

With respect to college attainments, grades were positively related to prestige of career choice, a finding that agrees with general expectations. Also as one might expect, career estrangement was negatively related to high-prestige career aspirations among male English majors. The only career value that reached significance was orientation toward helping others, and its effect was negative among male English majors.

The explained variance for males in English was greater than for their female counterparts (.220 versus .167), but it was still not particularly high. As was true for females in English, prestige of career choice at college entrance contributed the greatest proportion of explained variance (33%) for males in English. The only other substantial contribution to explained variance for males in English was made by college attainments (29%).

Mathematics Majors

For female mathematics majors, there is a substantial positive net effect of being nonwhite on the prestige of 1969 career choices among female mathematics majors. Race is the only family variable that is of significance, since none of the parental socialization indicators showed strong effects.

With respect to career values at college entrance, orientation toward helping others showed a negative effect. Not only did this orientation show a significant effect, but prestige of occupational choice at college entrance was also significant (and positive). For this group of female mathematics majors, both indicators of college choice also were significant. Attendance at a high-quality institution had a positive net effect on prestige of 1969 career choice, while being a junior was negatively related to the dependent variable. None of the four indicators of the departmental normative environment reached significance, nor did personal assessments of the college experience. Wanting to be an expert in one's chosen field was the only 1969 career value that showed a significant net effect on 1969 career choice.

For male mathematics majors, there were no significant net effects of either family background or parental socialization on the prestige of the 1969 career choice for this group of students. The only college entrance occupational value that reached significance in this analysis for male mathematics majors was orientation toward becoming an expert in one's chosen field. The prestige of the career choice indicated at college entrance was also strongly positive in its relationship with prestige of 1969 career choice. An additional positive net effect appeared for college selectivity.

Of the four indicators of departmental normative climate, only social relationships with faculty was significant (and positive). Unlike academic

attainment, extracurricular attainment is negatively related to career pres-
tige aspirations. This finding suggests that there is considerable tension be-
tween curricular performance and extracurricular performance for males in
mathematics. Apparently, in demanding majors little time is left for extra-
curricular activities after assignments are completed.

None of the four indicators of personal assessments of the college environ-
ment reached significance. The 1969 orientation toward becoming an expert
in one's field showed a significant, positive net effect on the prestige of male
mathematics majors' 1969 career choices. Since the same orientation at en-
trance to college also remained significantly positively related to the prestige
of 1969 career choice, this suggests that career achievement values held by
this particular group of students are consistently important influences on
career aspirations throughout the college years.

Looking now at the explained variance, the results for men are not much
worse than those obtained for women in mathematics using this model (.240
versus .216). Different groups of variables were important for men in mathe-
matics than were important for their female counterparts. Prestige of career
choice at college entrance made the greatest contribution to explained vari-
ance (22%), followed closely by college choice (15%), departmental envi-
ronment (15%), and upper division career values (15%). Notice that by
combining the contribution to explained variance of both college choice and
departmental environment, a substantial 30% of the total explained variance
for male mathematics majors is contributed by characteristics of the college.
For mathematics majors, these findings suggest that the most important
determinant of high-prestige career orientations is academic performance
for women and attributes of the college attended for men.

History Majors

For female history majors, no significant effects appear in this table for
family background, but one aspect of parental socialization, support, has a
significant negative net effect on female history majors' 1969 career choices.
This finding parallels the one for female English majors and again suggests
that those parents perceived to be most supportive of their daughters are not
encouraging high-status career aspirations.

None of the college entrance career values were significantly related to
prestige of 1969 career choice. College selectivity was significantly related
to prestige of 1969 career choice for these female history majors. Of the
four indicators of departmental environment, only social relationships with
faculty showed a positive net effect on prestige of 1969 career choice.

As with each of the major fields discussed so far, grades were positively
related to prestige of 1969 career choice. Paralleling the finding for male

mathematics majors, female history majors showed a significant negative net effect of extracurricular involvement on prestige of 1969 career choice. Also paralleling the findings for English majors of both sexes, career estrangement had a negative effect on career choice. Finally, of the 1969 career values, only orientation toward becoming an authority in a field was significant (positive effect).

Looking now at the proportion of explained variance attributable to each block of variables in the model, for female history majors the most important block is departmental environment (33%) and the next most important is college choice (19%), yielding a combined contribution of 52%. These contributions are conveyed primarily by social relationships with departmental faculty and institutional selectivity.

For male history majors, no significant effects of either family background or parental socialization appear in the final equations for this group. The moderate effects of socioeconomic status and parental achievement pressure are mediated by the values of the student at college entrance. This suggests that parental influences are reflected only to a limited extent in long-term career choices and may rather simply lead to the development of certain values. Male history majors showed significant negative net effects on prestige of 1969 career choice for both orientation toward becoming an expert in a field and becoming well-off financially.

For men majoring in history, several institutional characteristics emerged as having significant effects on prestige of senior career choice. College selectivity's effect was positive, as was the effect of being a junior. Men seem to adjust their aspirations downward as they progress through college, while the women we have been studying adjust their career aspirations upward. Interaction with major field faculty was also positively related to 1969 career choice.

The pattern of significant, positive net effects of grades on prestige of 1969 career choice continued for these male history majors. However, for this major group, personal assessments of college took on additional importance. Perceived impersonality of college was positively related to career aspirations. This suggests that possibly those institutions that pride themselves on preprofessional preparation of students, especially in high-prestige fields such as law and medicine, may also be perceived by their students as being impersonal. History has traditionally been a major with broad applicability to career opportunities for men, especially for continuing advanced study in law, public affairs, and business. Career estrangement's negative effect is what would be expected. For perceived college effectiveness in facilitating the attainment of personal goals, the negative effect on male history majors' 1969 career choices is surprising. This suggests that those students who felt that they had gotten desired career training and liberal

education from college were not seeking the highest-status careers. On the other hand, 1969 orientations toward becoming well-off financially were positively related to prestige of 1969 career choice.

Prestige of career choice at entrance to college contributed the largest fraction to the total explained variance (31%) in prestige of 1969 career choice among male history majors. Next in importance was personal assessments of college (17%).

Political Science Majors

Female political science majors are the only group for whom there is a significant effect of family socioeconomic status on the prestige of 1969 career choices. While logic would suggest that this effect should be positive, that it is negative is consistent with the work of Alexander and Eckland (1975), who suggested that this finding is simply a reflection of ceiling effects, that is, a very limited distribution of occupational aspirations clustered toward the high end of the status ladder. Spaeth (1978) has also drawn a similar conclusion and gone further to argue that the problem of ceiling effects is made even worse when the Duncan (1961) prestige scores are used. No significant effects appear for parental socialization or for career values at entrance to college for female political science majors.

There is a significant, positive net effect of prestige of college entrance career choice on subsequent 1969 career choice among these students, a finding which parallels previous findings for all sex and major groups. Also, there is a significant, positive net effect of college selectivity that again parallels the findings for females in each of the four majors. Departmental environment is unrelated to these women's upper division career choices.

Grades again have a positive effect on prestige of 1969 career choices. Only career estrangement, of the personal assessments of college, has a significant, negative net effect, a finding that is also congruent with previously discussed findings. The only 1969 career value that was significant, but negative, was wanting to be well-off financially. Examining the proportion of explained variance accounted for by each block of variables shows that prestige of college entrance career choice contributes most (31%), followed by 1969 career values (17%) and college choice (15%).

The directionality of the signs for this group is somewhat anomalous, particularly for socioeconomic status and 1969 orientation toward becoming well-off financially. Aside from possible ceiling effects of the measures, political science may be a major that draws women who are less career-oriented than in some other fields. Predominantly male, political science may be seen as a major where goals other than preparing for a high-status career are pursued by female majors.

For male political science majors, there are no significant effects on career aspirations of family background, family socialization, or career values held at entrance to college. There is the consistently positive net effect of career choice at entrance to college. For this group, however, college selectivity has a negative effect on prestige of 1969 career choice, a finding in accord with Reitz (1975).

Departmental normative environment has no significant effects on prestige of male political science majors' 1969 career choices. Grades again show positive effects. As was the case for male history majors, perceived impersonality of college is positively related to career aspirations. The negative net effect for career estrangement is consistent with the findings for the other majors. There are no effects of 1969 career values.

With respect to the relative contribution of each block of variables to the total explained variance in the model, the most important contributors are prestige of college entrance career choice (35%), followed by college attainment (25%) and personal assessments of the college experience (21%). Overall, however, this model explains less variance (.127) for male political science majors than for any of the other major groups studied.

DISCUSSION

Contrary to some of the research on parental socialization of college students, especially Winch and Gordon (1974), the present study showed very limited persisting influences of parental socialization on changes in the career orientations and aspirations of college students. Looking at the correlations between parental life-style and career orientations at college entrance does affirm the findings of strong parental influences on career orientations of adolescents in the work of Bengston (1975). The findings from the present research suggest that parents become less and less important influences on the career orientations of their offspring as they move away from the overall supervision of the family and into college.

It should be noted, however, that the absence of parental influences in the present research may be an artifact of the available measures which were based on respondents' reports of parental behavior. Recent studies by Davies and Kandel (1981) and Looker and Pineo (1983) suggest that adolescents may systematically underestimate the importance of parental influences on aspirations. These authors demonstrate the importance of obtaining information *directly* from parents rather than relying on reports by adolescents of their parents' influence.

As anticipated, the single most important predictor of the prestige of these undergraduates' 1969 career choices was the prestige of the career to which they aspired at college entrance. It is interesting to note that career

preference at college entrance tends to be correlated with parental socio-economic status and life-style, but these correlations are modest. Hence, the impacts of parental influences upon college students probably do not reflect direct transmission of orientations. In fact, the findings for this study support the conclusion drawn by Bengston (1975) that the family is "an important mediating link in selecting or orienting the child to the multiple reference groups to which he or she can turn for value development in a pluralistic society" (p. 369).

If Bengston's observation about the role of the family in what he calls "social location" is accurate, there is reason to expect that characteristics of the college attended, especially qualitative and normative aspects, could exert potent socializing influences on undergraduates. For females in each of the four majors, college quality did, in fact, have a positive effect on prestige of senior career choice. A similar pattern appeared for men majoring in mathematics and history, but college quality had a negative effect on the career choices of political science majors. Junior cohort effects were opposite in sign for males (positive) and females (negative), suggesting that the longer the student is exposed to college the more career aspirations decrease for males and increase for females.

The effects of the normative climates of academic departments were not particularly striking in terms of the significance of specific indicators. The only significant effect of departmental norms was the negative one for student liberal education norms on prestige of female English majors' 1969 career choices. Social relationships with departmental faculty, on the other hand, were positively related to prestige of senior career choice for males in mathematics and history, and females in history. This relative absence of effects for particular indicators of departmental climate also was confirmed by Hearn (1978). However, as was also the case with Hearn (1978, p. 191), for one group of women (history majors) more of the total explained variance in prestige of 1969 career choice could be explained by the departmental environment (33%) than by any other block of variables. Furthermore, for female history majors, when the contribution of college choice was added, the total institutional contribution to the explained variance in 1969 career prestige was 52%!

The present study did unearth some rather striking effects of colleges on career aspirations, especially for female history majors (52% of total explained variance) and male mathematics majors (30% of total explained variance). These findings are at odds with studies by Alwin (1976) and Bachman et al. (1978) who found very small net effects of colleges on career attainment. Neither one of these studies employed other than school-level variables in their assessments of college effects. In the present research, the college effects were attributable primarily to college selectivity and social

relationships with departmental faculty. With respect to the impacts of college selectivity, the strong positive effect for females affirms the findings of Bassis (1977) and Drew and Astin (1972). For males, however, selectivity has a significant net effect only for mathematics (positive) and political science (negative) majors. This negative effect adds fuel to the fire of the controversy over the effects of college quality on aspirations, since it is in accord with the findings of Reitz (1975), but in opposition to the findings of Bassis (1977) and Drew and Astin (1972). What seems clear in this regard, however, is that institutional effects on career aspirations do vary by the undergraduate's academic major and sex. In addition, it might also be inferred from these findings about the effects of institutional quality that the assertions about the important status-conferring capacity of the institutional "charter" (Meyer, 1972) are indirectly affirmed, though the "charter" is conceived as being more a function of societally perceived institutional mission than of student selectivity.

The findings that social relationships with departmental faculty have important influences on career matters of undergraduates agree with other research, notably Wilson et al. (1975) and Hearn (1978). However, the relative absence of normative impacts of academic departments is somewhat disappointing in view of findings to the contrary for undergraduates' career values (Weidman, 1974, 1979b). Because doing the analyses by department reduces considerably the variation in norms for students in a given major, it stands to reason that any effects because of this restricted variation of normative climate measures in the same departments (but across institutions) would be minimal. There is, of course, a trade-off here. The present research focused primarily on differences by sex in impacts of major departments. Certainly, it would be desirable for future research to probe more systematically than the data at hand allow for the dimensions of disciplinary differences in the structure of undergraduate studies or other programmatic aspects than might reflect more accurately the normative variation across academic departments.

It is striking that the orientations of female undergraduates toward becoming an expert in a field have a consistently positive net effect on their career aspirations. This suggests that those women who build confidence in themselves during college, especially through academic rather than extracurricular attainments and who develop orientations toward career success also tend to aspire to high-status careers. It is interesting to note in this regard, that the negative effect of junior cohort on career aspirations of women in two of these majors suggests that females tend to adjust their aspirations upward during college, while certain of their male counterparts tend to adjust career aspirations downward during college.

Contrary to findings (Weidman, 1974) for departmental impacts on career

values which suggested that women are influenced more than men by social relationships with departmental faculty, the present study shows virtually no sex differences on this dimension in its impact on career aspirations. Institutional characteristics appear to have even a bit more important influence for women (especially history majors) than for men in the four departments included in the present research. These findings underscore the importance of college and major choice in the career development process.

Also of interest is the finding that while the effects of social relationships with departmental faculty on women's career aspirations tend to be positive, the effects of peer norms for women in English are negative. Apparently, those women who emphasize relationships with peers and extracurricular attainment tend to aspire to lower-prestige occupations than their counterparts who emphasize relationships with departmental faculty and curricular attainments. These effects on women's career aspirations must, however, be interpreted cautiously, since women tend to be less likely than men to be able ultimately to fulfill their aspirations. According to Spaeth (1977), "compared with men, women showed greater instability in occupational expectations, reaped lesser returns in occupational status from investments in advanced education, and were less likely to realize their occupational expectations" (p. 206).

One other observation is in order here. The model developed in the present research for examining parental and college impacts on undergraduates' career choices contributed only modestly to the explained variance of career aspirations (ranging from .127 for male political science majors to .240 for male English majors and female history majors). However, this is in line with other studies of college effects on occupational attainment, in particular Alwin (1974, 1976), whose models contribute explained variances of roughly .2 to .3.

In sum, the present research demonstrates the importance of looking at various subunits in colleges and assessing the effects of those subunits on students of both sexes separately. It should be remembered, however, that the present study is restricted to undergraduates majoring in only four liberal arts departments. In order to gain a more complete understanding of the undergraduate career socialization process, additional research is needed that would include majors in some of the currently more popular fields (especially business and related fields) and more contemporary cohorts of college students. While the findings presented here certainly do not answer all the questions that might be asked about impacts of the academic major on career aspirations of undergraduates, they do carry the research on this topic a step further.

Research is always limited by the selection of variables, the methodology employed, and the nature of the evidence used to test the relationships

posited among those variables. An important shortcoming of this study was the small case base for the computation of departmental norms for undergraduates majors. Sociometric data on a broader range of both normative and interactional variables would be desirable for a more rigorous test of the conceptual position put forward in this study, especially since that would enable the direct, rather than inferred, linking of specific norm senders with socialization outcomes. In addition, it would allow the direct specification of an important determinant of socializing impacts, the content of and sentiment exchanged in social interaction with departmental faculty and peers (Hearn, 1978, 1980; Hearn and Olzak, 1981; Lacy, 1978). Furthermore, it is important that efforts to study parental socialization be based, at least in part, on information obtained directly from parents as well as from their offspring.

It must also be remembered that this study of undergraduate career development dealt only with occupational status aspirations. There are other, nonvertical dimensions of occupations such as employment setting (e.g., public agency, corporation, independent practice, and small business) or type of activities (e.g., working with people, ideas, data, or things) that are also important dimensions of occupational attainment (Mortimer and Lorence, 1979). Certainly, for the present research it could be argued that the negative net effect of parental support on the career prestige aspirations of female English and history majors simply reflects parental emphases on such nonvertical dimensions of occupations as personal fulfillment and the selection of careers that are most appropriate for the personal interests and abilities of these women, regardless of the career's status.

The foregoing suggests that future research should be designed to incorporate estimates of parental and campus influences on both vertical and nonvertical dimensions of careers, especially since it appears that normative contexts at college seem to affect undergraduates' values much more than their career status aspirations. Other studies might build on this one by focusing on single institutions where detailed sociometric data could be obtained to supplement the data from survey instruments and by paying closer attention to nonvertical dimensions of careers. Synthesizing results from several such small studies could help to expand and clarify the interpretations of undergraduate career development set forth in the present study.

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APPENDIX: DESCRIPTION OF VARIABLES USED IN THE STUDY

The following is a brief description of each indicator used in the data analysis. The questionnaires from which the items were obtained are reprinted in Trow (1975).

Family socioeconomic status (SES) was a scale based on four items: Duncan (1961) prestige score of father's occupation; father's education; mother's education; and family income.

Race (NONWHITE) was a dummy variable with a score of 0 assigned for those students who indicated "White/Caucasian" as their race. All other responses were given a score of 1.

Supportive child rearing by parents (PARSUPRT) was a scale based on four items: "They made me feel I could talk with them about everything"; "They comforted and helped me when I had troubles"; "When they wanted me to do something, they explained why"; and "If I had some kind of problem, I could count on them to help."

Parental stress on child's achievement (PARACHOR) was also a scale constructed in the same way as PARSUPRT for the following three items: "They kept after me to do better than other children"; "They kept pushing me to do my best in everything"; and "They kept after me to do well in school."

Parental life-style (PARSTYLE) was a scale of five items: "Interested in intellectual pursuits"; "Interested in cultural pursuits"; "Religious"; "Interested in politics"; and "Financially comfortable."

Occupational values were single-item indicators that appeared on both the freshman and 1969 questionnaires: "Helping others in difficulty" (FHELPOTH, HELPOTH); "Becoming an authority on a special subject in my subject field" (FXPRTFLD, XPRTFLD) and "Being very well-off financially" (FWELLOFF, WELLOFF).

Occupational choices were the Duncan (1961) prestige scores of the freshman occupational choice (PFJBCRER) and the 1969 occupational choice (JOBCRER).

College selectivity (COLQUAL) was the ACE selectivity index based on "National Merit Scholar Selectivity" from Astin (1965).

College entrance cohort (JUNIOR) was a dummy variable with a score of 1 assigned to all respondents who entered college in the fall of 1967, and a zero assigned to all respondents who entered college in the fall of 1966.

The indicators used for both departmental faculty and student liberal education norms (PEERNORM, FACNORM) were based on a single item appearing in both the faculty and undergraduate surveys conducted in 1969; "Undergraduate education in America would be improved if there were less emphasis on specialized training and more on broad liberal education." Each respondent was assigned the mean score for his or her major department on both of these variables.

Primary social relationships with college peers in the same major as the respondent (PEERTIES) was a scale based on three items: "Of your close friends, what proportion are students at your college?"; Of your close friends at your college only, what proportion are living in the same building as you?"; and "Of your close friends at your college only, what proportion are in your major field?"

Primary social relationships with faculty in the major field (FACTIES) was a scale based on four items: "Is there any professor in your major field at college with whom you: *Ever* talk about personal matters; *Often* discuss other topics of intellectual in-

terest; *Often* discuss topics in his field; and *Sometimes* engage in social conversation?"

GPA was the self-reported cumulative grade average of each respondent.

Involvement in the formal college extracurriculum (COLINVLV) was a scale based on responses to four items: "How often, on an average, do you: Participate in student government; Attend a meeting of some college organization"; and "Which of the following experiences applies to you since entering college: Worked in a college political campaign; and Voted in a student election?"

Perceived impersonality of college (COLIMPER) was a scale based on three items: "Answer each of the following as you think it applies to you: I felt 'lost' when I first came to the campus; Most students are treated like 'numbers in a book'; and Athletics are overemphasized."

Career estrangement (ANTICRER) was a scale derived from three items: "I cannot imagine being happy in any of the careers available to me"; and "Do you think you will: Never have a career at all; and Graduate without a specific career in mind?"

Satisfaction with college (COLSATIS) was a scale of the following items: "How satisfied are you with the following at your college: The college's academic reputation; The intellectual environment; Faculty/student relations; The quality of classroom instruction; The variety of courses I can take; Friendships with other students; and The administration."

Perceived effectiveness of the college in facilitating the attainment of personal goals (EFFECTIV) was based on responses to four items asking how important a particular goal was and then how much of each the respondent had received from their college. The two items were: "A detailed grasp of a special field"; and "A well-rounded general education."