STUDENT EVALUATIONS OF CALIFORNIA STATE SERVICE

by

Thomas H. Willoughby
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Approved:

James R. Bell, Chair
E. L. Klingelhofer

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CHAPTER I

THE PROBLEM

Public employment at all levels -- federal, state, and local -- is generally held in lower repute than private employment. Psychologists, political scientists, public administrators, and economists frequently express this conviction in their professional journals. They admit that public employment in general has risen greatly in prestige during the past thirty-five years but maintain that it is still regarded as a relatively inferior livelihood by a majority of citizens.

Statement of the problem. This research examines 1375 upper division students in the California state colleges to determine (1) the general level of prestige of employment in California state service as seen by that group, (2) the prevalence of favorable or unfavorable opinion about the state of California as an employer in certain selected areas, and (3) any relationships which may exist between these items and the factors of sex, age, marital status, college major, geographic location, vocational preference, employment preference, father's occupation, father's employer, mother's occupation, mother's employer, and previous work experience.
Importance of the research. At the present time there is no organized factual information available about the attitudes of college students toward employment in California state service. Officials at the California State Personnel Board have manifested an unconfirmed fear that many college students regard the state as an inferior employer and that, therefore, state service fails to attract "its share" of qualified college graduates.¹ The present research attempts to test this intuitive assumption. It provides factual data about the existing opinions of college students toward state employment and about relationships between opinion and the above mentioned factors.

The immediate applications of the research are obvious. The existence of hostile or adverse opinions erroneously held will necessitate a re-evaluation of state recruitment policy to combat the error. If such opinion is grounded in fact, a review of pertinent personnel policies and public relations practices will be in order.

Ideally, however, this study will be only a first step in student attitude research. The present research only tests

¹ This opinion reoccurred in several interviews conducted in the spring of 1958, with Alden L. Brock, Head, Recruitment Division, California State Personnel Board and R. P. Everett, Chief, Standards and Surveys Division, California State Personnel Board.
the unanimity with which college students espouse certain selected attitudes and attempts to correlate these results with selected environmental and circumstantial factors. The data will immediately suggest more basic and more crucial questions. Why are the observed attitudes held? Are the observed correlations causative? This preliminary study cannot supply answers to questions of the latter type. It can and does establish a foundation for further research which would do so. In this role it has its greatest potential significance. Practically speaking, however, its greatest impact will be in its value to the California State Personnel Board. The aim of this study is not only to provide a basis for immediate reassessment of recruitment and public relations procedures but to contribute to a more meaningful general evaluation of internal personnel processes and programs presently existing in state service.
CHAPTER II

REVIEW OF PREVIOUS RESEARCH

Major attitude research in this area of public employment has been quite sparse. The studies of Leonard D. White, Sidney Mailick, George P. Bush and Charles M. Hersh comprise the only thorough previous research.

I. THE STUDIES OF WHITE AND MAILICK

The first significant research in the area of public employment prestige was conducted by Leonard D. White, who, in 1929, undertook to measure the prestige of public employment in municipal Chicago.² He assumed that general attitudes toward public employment could be deduced by comparing individual preferences between public and private positions of substantially equivalent character. Accordingly, his main testing vehicle consisted of a list of twenty paired occupations. Respondents were requested to indicate their preference out of each pair.³ A "heterogeneous" group of


³ The alternate positions were equivalent as to salaries and duties, the intent being to focus attention on the single variable of the public or private character of the position. Ibid., pp. 4 ff.
4,680 Chicago residents was sampled and some limited follow-up measures were employed to check the validity of the initial results. The results indicated that municipal employment in Chicago was preferred less frequently when compared with private employment. More important, however, several interesting correlations were discovered in the course of the analysis. Women had a higher opinion of public employment than men. Favorable opinion toward public employment varied inversely with age and with position in socio-economic groups. Public employment was favored only by the young and by those in lower social and economic classes. Such positive opinion declined sharply and became overtly and progressively unfavorable with only slight advances in age or socio-economic status.

In 1930-31 White used substantially the same methods in a nation-wide follow-up survey to determine if the relationships he had found in his Chicago experiments were generally true. Here the sample consisted of 7,168 persons in eleven cities chosen to obtain the "broadest geographical representation." Once again the general prestige level of public employment was below that of private employment and the sex, age, and socio-economic differentials were observed to operate.

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The major criticism of White's research comes in the light of today's sophisticated sampling methods. His samples in both experiments were not drawn to represent a specific population and there is evidence that there was an imbalance of some age and sex groups. His analysis failed to employ statistical tests of any kind; he merely examined differences between groups and rather arbitrarily decided whether they were large enough to be termed significant. Crude as his research appears by today's standards the general relationships indicated above seemed undeniably present.

That these same relationships are likely to exist today can be concluded from the research of Sidney Mailick, who in 1947-48, used White's techniques on groups of college students at the University of Chicago and the University of Cincinnati to determine whether the relationships discovered by White still existed. The results agreed in large measure with White's original studies. Prestige of public employment was generally lower than that of private employment. The sex factor operated as before and an inverse relationship existed between opinion of public employment and the socio-economic level of students' families. Because of the limited age span represented in the sample, Mailick drew no conclusions about the age differential.

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In short, Mailick did little more than demonstrate the reliability of White's techniques. Criticisms of White's original studies, therefore, are fully applicable to Mailick's study. In addition Mailick is guilty of a sin of omission. Although twenty years of testing experience had produced various statistical devices for determining whether differences observed between groups were significant, he failed to employ any such device and formed his conclusions by inspection. In spite of such shortcomings it seems safe to recognize that the general factors White observed operating in the national population are equally present in the college community.

II. THE STUDIES OF BUSH AND HERSH

Where both White and Mailick were concerned with the general prestige of public employment, Bush and Hersh limited their outlook to federal employment and to specific opinions about federal employment. Although the latter investigations represent two distinct items of research, they are related in the sense that the results of the Bush survey are basic to that of Hersh.

The Bush investigation served as a pilot study which laid foundations for the more extensive Hersh research. Its purpose was to determine the reasons why graduating college seniors applied or failed to apply for federal employment. Bush confined his research to engineering students in southern and eastern colleges. He employed extensively open-end questions in an attempt to pinpoint the attitudes students held most strongly. His findings indicated a series of attitudes typical of those of engineering students toward federal service.

Hersh undertook to discover whether these attitudes were true of the college senior in general. He constructed a questionnaire of thirty-eight attitude statements comparing federal and private employment. Five eastern colleges participated in the research and a sample of 660 was taken. Record was made of the factors of sex, employment of father, previous employment experience, academic major and academic grade average to discover any correlation which might exist between these factors and attitudes. Data were analyzed for significance with a statistical t-test.

From his analysis Hersh concluded that college seniors generally favored private employment over federal employment. He discovered correlations between all previously mentioned factors and attitudes except the factor of academic grade
average. There was a positive correlation between previous work experience and attitude. Individuals with experience in private employment were more favorably disposed to private employment while those with experience in federal employment were more favorably disposed toward federal employment. Parental occupations were related to student attitudes. Those whose parents were employed in business or industry were favorably disposed toward private employment; those whose parents had been employed in the public service were more favorably disposed to federal employment. Women had significantly higher opinions of federal employment than men. Federal employment was positively favored only in the general areas of job security and employee benefits. 7

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7 Hersh, op. cit., pp. 68 ff.
CHAPTER III

RESEARCH TECHNIQUES

Are the attitudes of eastern college students toward federal employment characteristic of those of California state college students toward state service? Some similarity is to be expected but there is no particular reason why all the relationships should hold for California. California is conceded to have a relatively high level of state service. It is possible that this factor has favorably influenced the opinions of college students toward the state.

Although the previous studies were not conducted within California or even on the level of state government, they do provide a basis for testing the opinions of California students. The studies of White and Mallick indicate general relationships which one might expect to find operating in California. The Bush-Hersh studies, by indicating the most strongly held opinions about federal government, furnish a point of departure for construction of a questionnaire applicable to the state of California.

I. THE QUESTIONNAIRE

The questionnaire consists of fifteen attitude statements with which respondents are asked to register their
agreement or disagreement on a five-place ranking scale.\textsuperscript{8}

In general the majority of statements were adopted from those listed by Hersh as the attitudes held with most intensity toward federal employment. All were modified to some extent to make them applicable to the state of California. As such they do not represent transcripts of Hersh's statements but rather restatements of the attitudes he found held most intensely.\textsuperscript{9}

The statements themselves are designed to measure student attitudes in several general areas. Questions A and L inquire about what students believe to be the general preference of their peers for private or for state employment. Questions B and C refer to attitudes toward professional development; question D refers to the area of job security. Questions E through I refer to specific working conditions including the efficiency of top management, the competence of first-line supervisors, work incentives and the amounts of work demanded and produced. Items J and M allude to salary differences between state and private employment. Item K elicits opinions about promotions and item N about the general area of employee benefits.

\textsuperscript{8}For a copy of the questionnaire see Appendix 1.

\textsuperscript{9}Ideal procedure would have been to conduct an open-end pilot study of the Bush type and then to test whether attitudes expressed in the pilot study were typical of the entire college population. Limitations of time, staff and funds forced the use of the "ready-made" attitudes expressed in the Hersh report.
In the spring of 1958 two different forms of the questionnaire were given to selected classes on the Sacramento State College campus. The purpose was to detect any differences in response which might be due to alternate ways of phrasing attitude statements. Some slight revision was made as a result of this pilot study. The final format and construction of the test were reviewed both by professors at Sacramento State College competent in the field of test construction and by experienced examiners at the California State Personnel Board. The final form of the test was as valid as the results of the pilot study and the inspection of competent individuals could make it.

II. SAMPLING PROCEDURE

Seven California state colleges participated in the survey. The state colleges were selected primarily because of their uniform organizational structure. This uniformity provided better control over sampling procedures by insuring that samples would be taken from similar areas on each campus.

10 The colleges participating were Sacramento State College, Fresno State College, San Jose State College, San Diego State College, Los Angeles State College, Long Beach State College and Chico State College.

11 The state colleges are organized by divisions, e.g. Division of Social Science, Division of Business Administration, etc. Comparable divisions in the various colleges each offer substantially the same programs.
The social science division in each college was selected as the nucleus for administering the questionnaire. Classes tested were either those required for graduation or general courses which would attract a wide distribution of academic majors. Two classes in each of the areas of economics, political science, history, psychology and sociology were tested. Wherever possible, identical courses were chosen in each college; where such selection was impossible, an attempt was made to substitute a course closely approximating the original in scope and content. In general the following scheme was followed: Economics courses tested consisted of one course in economic theory and one in economic history; political science, one course in political theory and one in American national government or state and local government; history, one course in European history and one in American history; psychology, a course in abnormal psychology and a course in industrial psychology; sociology, a course in social theory and a course in the sociology of the family.12

A total sample of 1375 students participated. Because of the impossibility of separating seniors from the rest of the classes, the test was extended to cover upper division students. Although administration could not be personally

12 For a complete list of the classes tested see Appendix 2.
supervised, the instructions were clearly and simply stated on every questionnaire; each instructor received a personal copy of the instructions and was charged to go over the instructions with his class before they began answering the questionnaire. Students who might have taken the test in another class were cautioned not to do so again. There is no reason to believe that the replies were not made in good faith and did not represent the honest opinion of the respondents.

III. ANALYTICAL PROCEDURES

Necessity of a non-parametric test. In analyzing the data the crucial question was whether observed differences in opinion were the results of chance variations or whether they represented significant differences in the groups being compared. The procedures of statistical inference enabled such a determination to be made.

In the development of modern statistical methods, the first techniques of inference which appeared were those which made a good many assumptions about the nature of the population from which the scores were drawn. Since population values are "parameter", these statistical techniques are called "parametric". Such techniques produce conclusions which contain qualifiers, e.g., "If the assumptions regarding the shape of the population are valid, then we may conclude that..."
More recently [has occurred] the development of a large number of techniques of inference which do not make numerous or stringent assumptions about parameters. These ... "non-parametric" techniques result in conclusions which require fewer qualifications, e.g., "regardless of the shape of the population, we may conclude ... "

Because this analysis is unable to make extensive assumptions about the nature of the population being sampled, non-parametric techniques of analysis are clearly in order.

The Kolmogorov-Smirnov test. The Kolmogorov-Smirnov test was employed wherever it was necessary to compare two groups. The test is extremely sensitive to differences in location or shape of population distribution function and operates in the following manner. If two samples are drawn from populations having identical distributions their cumulative percentage curves would be expected to resemble each other. If the difference between the cumulative percentages of the samples at any point is too great to be reasonably attributed to chance, it can be logically inferred that the populations being compared differ significantly.

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14 For a detailed account of the Kolmogorov-Smirnov test used to test inference from two samples see Ibid., pp. 127-136 and Merle W. Tate and Richard C. Clelland, Nonparametric and Shortcut Statistics in the Social, Biological, and Medical Sciences (Danville, Illinois: Interstate Printers and Publishers, Inc., 1957), pp. 93-95.
The Chi Square test. Wherever three or more groups were to be compared among themselves a Chi Square test was employed. Briefly, this test is designed to determine whether the frequencies observed in various classes in a sample differ sufficiently from theoretical normal frequencies to warrant the conclusion that significant differences exist between the classes.15

The coefficient of risk chosen as adequate for this analysis was 5 per cent. Thus conclusions of significance have a 95 per cent probability of being accurate. Wherever significant differences were discovered, conclusions about the groups involved were formed by inspection.

IV. EVALUATION OF METHOD

The methods of statistical inference here employed are quite suitable to the subject matter and are appropriate to the data. If any criticism is forthcoming, it must be of the sampling techniques and not of the method of analysis. The crucial question is whether the sample represents a good cross section of the college community. Every attempt was made to insure such a cross section and the present analysis is predicated upon a positive assumption of its representativeness.

15 For a detailed account of the Chi Square test see Tate and Clelland, op. cit., pp. 59ff., and Siegel, op. cit., pp. 42ff.
CHAPTER IV

RESULTS

I. ANALYSIS BY SEX

The sample contained 989 men and 386 women. Analysis of the data by sex unearthed significant differences of opinion between men and women in four areas.

General preference for state employment. Seventy-six per cent of the men agreed that college graduates with greatest ability were more likely to enter private employment than state service. In addition 79.4 per cent agreed that college graduates as a group were more inclined to seek work in private employment than for the state. In contrast 67.8 per cent of the women agreed that the most able college graduates would likely enter private employment, and 67.3 per cent agreed that college graduates as a whole would be more inclined to seek work in private rather than state employment.

Note that the differences expressed in this area do not seem to be differences in direction of opinion but rather differences only in the extent to which the same opinion is prevalent in each group. Men, however, were significantly less favorable to state service than women.

16 Unless otherwise indicated the terms "agreed" or "disagreed" as used in the following analysis shall signify the cumulative percentages of the "strongly agree" and "agree" categories.


Wages and salaries. In the area of wages and salaries, general opinion was that the state paid its employees less at all levels. This opinion was especially prevalent in regard to salaries of top executives. Ninety-two and two-tenths per cent of the men and 81.6 per cent of the women believed that executives in business or industry receive more pay than those in state service. Seventy-six and seven-tenths per cent of the men and 59.8 per cent of the women believed that this salary differential was true of state jobs in general. Note that here again, although the differences between men and women students are statistically significant, they do not appear to be fundamental differences in opinion -- only differences in the prevalence of the same opinion. Most important, men were once again significantly less favorable to state service than women.

Professional development. There is a significant difference between the sexes in their opinion of state employment as a recommendation for future employment in business or industry. Eighty-one and three-tenths per cent of the women felt that such experience would not be a poor recommendation for work in private employment; only 70.7 per cent of the men agreed with them. Note that the difference is once again one of prevalence of the same opinion but that women appear more favorably disposed toward the state than men.
No significant difference of opinion existed between the sexes in their view of career opportunities. Approximately 55 per cent of each group agreed that private employment offered more opportunities for career service than state employment; only 23 per cent maintained that it did not.

**Working conditions.** Five items in the test measured attitude on specific working conditions. On three of these items a significant difference was discovered between men and women. In the area of management efficiency 66.6 per cent of the men agreed that top management in private employment was more efficient than in the state service; only 54.9 per cent of the women held the same opinion. An even sharper distinction occurred in relation to the question of where the individual employee would work harder. Fifty-nine and eight-tenths per cent of the men agreed that an individual would work harder in private employment; only 39.6 per cent of the women held the same belief. Although 39.6 per cent of the women does not represent an absolute majority, it is more than either the group who disagreed or the group which had no opinion. As such it can be classed as indicative of the previously noted trend for feminine opinion to be in the same direction as masculine but somewhat less unfavorable to the state.
The trend does not hold for beliefs about the volume of production demanded of the individual worker. Sixty-four and seven-tenths per cent of the men maintained that first-line supervisors in private employment demanded a higher volume of production from those working under them than did their counterparts in state agencies. Only 11.7 per cent of the women felt the same way; 53.9 per cent of them disagreed with this attitude. In this instance the difference of opinion does not seem to be one of degree but one of kind. Women do not believe that immediate supervisors demand higher volumes of production in private employment than they do in state employment.

Two statements about working conditions failed to elicit any significantly different responses. Approximately 57 per cent of both sexes disagreed with the statement that first-line supervisors were more likely to be competent in state employment than those in private employment. Sixty-nine and one-tenth per cent of them did not believe that the state provided greater work incentives to its employees than did private employment.

Analysis in the following three areas revealed no significant differences in the opinions of men and women.

Job security. Both men and women agreed that state workers had greater job security than persons in similar
positions in private employment. Specifically, 50.3 per cent of the men and 48.5 per cent of the women agreed that college graduates were more secure working for the state than working for private business or industry.

Promotions. The attitude statement in this area was designed to test the respondents' beliefs of the part played by "influence" in obtaining promotions. About 53 per cent disagreed that promotions in state service were likely to be affected by "whom you know."

Employee benefits. Both sexes agreed that the state offered more liberal employee benefits than private employment. Sixty-eight and eight-tenths per cent of the men and 61.7 per cent of the women agreed that the state had more liberal vacation, sick leave, retirement and other fringe benefits.

Summary. Analysis of the data by sex shows substantial agreement with those attitudes Hersh found typical of students toward the federal government. Students believe that college graduates in general will seek employment in private business and that the more able graduate is likely to enter private employment in preference to state service. Wages and salaries in private business are believed to be better than those in

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For Hersh's general conclusions, Supra, pp. 8-9.
state service. Although employment by the state is not regarded as a hindrance to a career in private employment, the latter is seen as offering better career opportunities than the state. To the college student top management in private industry appears more efficient than its state counterpart; first-line supervisors appear more competent; the individual employee appears to work harder and to have greater work incentives. Only in the areas of job security, promotion and employee benefits is the state looked upon with outright favor.

Significant differences between men and women occurred only in their beliefs about the general employment preference of college students, professional development in state service, working conditions, and wage and salary practices. Although differences were significant, they appeared to be differences only in the extent to which the same opinion prevailed in a group and not basic differences in opinion. The only exception to this generalization occurred in the belief about the volume of production demanded of the individual worker by his immediate supervisor. Men believed that a greater volume was demanded of the worker in private employment; women disagreed outright with this attitude. All differences illustrated that men were less favorably disposed toward state service than women.

All data were analyzed by marital status of the respondents. In no instance did the opinions of single men differ significantly from those of married men. Comparison of married women and single women likewise failed to disclose any significant variations in response. Thus, all that has been said in the above analysis is true regardless of the marital status of the respondents. Further analysis by sex of the responses from each college failed to disclose any significant geographic differences in opinion.
II. ANALYSIS BY AGE

For purposes of analysis by age the sample was broken into five groups. Two hundred thirty-eight respondents fell into the 18-20 year old age group; 660 into the 21-25 year group; 281 into the 26-30 year group; 125 into the 31-40 group; and 91 into the group over forty years of age. Significant differences were found among these groups in four general areas.

Job security. All age groups agreed that job security was greater for college graduates in state service than for those in private enterprise. The significance appeared to be in the degree to which this opinion prevailed in each group. In this instance opinion varied proportionately with age. While only 63 per cent of the 18-20 year olds held this to be true, 69 per cent of the 21-30 year olds, 75 per cent of the 31-40 group and 72 per cent of those over forty registered agreement.

Promotions. In this area also all groups substantially agreed that promotions in state service did not depend upon an individual's "influence." Here again the differences, although significant, appeared to be only differences in the extent to which one opinion was held. Sixty per cent of both the 18-20 group and the over-forty group agreed to the equity of the
state's promotion policies while only 52.6 per cent of the
groups in the 21-40 age bracket shared the same opinion.
There does not seem to be any apparent reason why the over
forty group should combine with the young in expressing the
more favorable attitude toward the state.

**Professional development.** A significant difference oc-
curred in only one item in the area of professional develop­
ment. All groups agreed that employment for the state would
not be a poor recommendation for future work in private em­
ployment. The intensity with which this opinion was held,
however, varied in relation to the respondents' ages. Eighty­
seven per cent of the 18-20 year group, 77 per cent of the 21­
25 group, 68 per cent of the 25-30 group, 59 per cent of the
31-40 group and 56 per cent of the group over forty thought
that experience with the state would be a good employment
reference. All groups agreed without difference, however,
that private employment presented greater career opportuni­
ties than state service.

**Working conditions.** Significant differences appeared
among the age groups in their attitudes toward top management,
competence of first-line supervisors, and volume of work de­
manded from individuals. Fifty-seven per cent of the 18-20
year group believed top management more efficient in private
employment than in state service; 65 per cent of the 21-40
group and 72 per cent of those over forty held the same opinion. The tendency of younger students to exhibit a more favorable attitude toward the state was again demonstrated in the expression of opinion on the competence of first-line supervisors. Although the attitudes of all groups over 21 years were not distinguishably different (approximately 60 per cent of these groups believe that first-line supervisors are more likely to be competent in private enterprise), only 52 per cent of the 18-20 group held this opinion.

Almost the same pattern of differences occurred in the responses to questions about the actual volume of work demanded by first-line supervisors. Fifty-three per cent of the 18-20 group believed that a higher volume of production was demanded in private employment; 61 per cent of the 21-25 group, 65 per cent of the 26-30 group, and 69 per cent of those over forty agreed. Except for the 31-40 group, the results indicated an inverse relationship between favorable opinion and age. Only 53 per cent of the latter group, however, agreed that private employment demanded a higher volume of production.

On two items in the area of working conditions no significant differences occurred among the age groups. A majority of respondents agreed that state agencies do not provide greater work incentives for their employees than does private
enterprise. In terms of actual work all believed that an individual would work harder in private employment. In the areas of general employment preference, wages and salaries, and employee benefits no significant differences were discovered in the opinions of the various age groups.

**General employment preference.** All age groups agreed that college graduates in general were inclined to seek private employment rather than state. In particular, they agreed that graduates with the greatest ability would be more likely to enter private employment than state service.

**Wages and salaries.** All age groups agreed strongly that salaries for top-level positions were higher in private business. Agreement about salaries for lesser jobs was not quite so unanimous but still in excess of 70 per cent that better salaries were paid by private employment.

**Benefits.** Sick leave, retirement, vacation and other benefits were considered better in state service than in private businesses.

**Summary.** The pattern of responses on several questions varied significantly with the age of the respondents. State service was regarded favorably only in the areas of job security, promotions and work benefits. All age groups agreed
that although experience in state service would not prejudice their employment records in the eyes of private employers, there were more career opportunities open to them in private employment than in state service. All believed that top management was more efficient and immediate supervision more competent in private businesses, that private employment provided more work incentives and put the employee in an environment where he actually worked harder. Wages and salaries were believed better at all levels in business or industry than in state service.

Where significant differences did occur the youngest, i.e., the 18-20 year group, were invariably more favorably disposed toward state service than older age groups. There was some tendency for attitudes unfavorable to the state to be inversely related to age. The only exceptions to this tendency occurred in the responses of the over-forty group about the equity of the state's promotional system and those of the 31-40 group about the volume of production demanded of an employee by his supervisor. In each instance the response pattern of these groups was identical to that of the 18-20 year olds.
To analyze the data by college major some system of classification was necessary in order to arrange the sundry academic majors into meaningful and manageable categories. Hence the various academic majors were grouped into eight major areas. The sample was distributed as follows: education and psychology majors, 218 respondents; health, recreation and physical education majors, 34 respondents; engineering majors, 13 respondents; social science majors, 625 respondents; science and mathematics majors, 51 respondents; business majors, 271 respondents; humanities and fine arts majors, 106 respondents; miscellaneous majors, 57 respondents.19

A relatively small number of students fell into each of the areas of engineering, health, recreation and physical education, and science and mathematics. Although the techniques of non-parametric analysis assure a valid comparison of the response patterns in these areas with those of other areas, one

19 These categories were adopted from the official list of academic majors and the departments under which they are classified in the California state college system. This list is published in mimeographed form by the California State Department of Education. For a complete list of the majors included in each category see Appendix 3.

The category of miscellaneous majors includes such majors as forestry, wild life, home economics, industrial arts, nursing and occupational therapy. In no instance did this group exhibit any tendencies significantly different from social science majors. Accordingly they will not be further referred to in this analysis. Whatever is said of social science majors will be equally applicable to them.
question must be raised. Because of their relatively small size the possibility exists that these samples may be biased and this possibility must be taken into account in assessing the results.

Analysis of the data indicated that no significant differences existed among the opinions of different college majors on the questions dealing with job security, promotions, and employee benefits. State service drew favorable responses in each of these areas. Sixty-eight and two-tenths per cent of the respondents felt that the state offered more job security for college graduates than did private employment. Fifty-two and two-tenths per cent believed that promotions in state service were not likely to depend on the amount of "influence" an employee might be able to exercise. Sixty-six and eight-tenths per cent agreed that the state offered its employees a more liberal benefit program than did private business.

In four areas, however, significant differences of opinion were discovered among the groups.

Wages and salaries. There was substantial and strong agreement that the salaries of top-level executives were likely to be higher in private employment. Engineering, social science, science, business, and humanities majors registered 91 per cent agreement with this sentiment. Education majors apparently
held this attitude with somewhat less intensity, 85 per cent of the sample agreeing with the expressed attitude. Health and physical education majors, in turn, registered only 75 per cent agreement.

There was substantial agreement about salaries at lower levels. Here too there were more clear cut divisions between the different groups. Engineering (91 per cent) and science (84 per cent) majors were strongest in their belief that salaries at lower levels were greater in private employment. Seventy-eight per cent of social science and business majors and 70 per cent of education and humanities majors agreed. Only 60 per cent of health and physical education majors agreed.

**General preference.** All groups agreed that the more able college graduates would be more likely to enter private business than state service. In addition there was substantial agreement that college graduates generally would be more apt to seek employment in business rather than for the state. On this latter point, however, there were significant differences in the extent to which the opinion was prevalent. Engineering majors (92 per cent) and business majors (87 per cent) clearly believed most strongly that private industry is the college graduate's first choice for a job. The opinions of the remaining groups are slightly less strong but
are so clustered together that they admit of no clear cut distinction. They fall into the following hierarchy: education majors (77 per cent), social science majors (75 per cent), science majors (73 per cent), humanities majors (70 per cent) and physical education majors (67 per cent). Because the expressions of agreement follow each other in such close order it is impossible to determine any one point at which differences become significant. It does seem probable, however, that a significant difference in attitude does exist between the groups represented at the extremes of the continuum, viz., the education majors and the health and physical education majors. Note that health and physical education majors are once again the least unfavorable to state service.

Professional development. All groups agreed that experience gained in state service was not a poor recommendation for future work in business or industry. There was also firm overall agreement that career opportunities were better in private employment. The intensity with which this latter opinion was held varied significantly. Three general groupings appeared. Engineering majors (69 per cent), humanities majors (68 per cent), and business majors (65 per cent) registered the highest degree of agreement. Education majors formed an intermediate group (61 per cent) and science majors (54 per cent), social science majors (51 per cent) and health
and physical education majors (51 per cent) registered least agreement. Whether education majors form a separate group or belong in the group with engineering, humanities, and business majors may well be disputed. It is apparent, however, that if they are to be considered together with any group it must be the humanities, engineering and business group. Health and physical education majors are once again least unfavorable to state service.

Working conditions. Seventy per cent of the sample agreed without significant difference that private businesses provide greater work incentives to their employees than does state service. In all other areas significant differences did occur among the groups in their opinions of other working conditions.

In general, there was agreement that in practice the individual employee works harder in private employment than he would if he were in state service. Analysis disclosed three levels of intensity with which this opinion was held. Engineering (77 per cent) and business (70 per cent) students held it most strongly. Science (55 per cent), social science (52 per cent), humanities (52 per cent) and education (48 per cent) students held the opinion firmly but with somewhat less conviction. Finally, only 36 per cent of health and physical education students agreed with the statement. By contrast 41
per cent of this latter group did not believe that an employee works harder in industry than he does in state service. Note that the difference in this instance is not the usual one of degree. Here it is an opinion basically opposed to that prevalent in the other groups.

With regard to the volume of production demanded by immediate supervisors, engineering students approached unanimous agreement (92 per cent) that first-line supervisors in private employment demand a higher volume of production from their employees than do their counterparts in state service. There was strong agreement among the business students (71 per cent) to the same effect. Social science (58 per cent), education (56 per cent), humanities (55 per cent), science (53 per cent) and health and physical education (51 per cent) students held the same opinion but to a lesser degree. Note that business and engineering majors expressed attitudes least favorable to the state while health and physical education majors were once again least unfavorably oriented toward the state.

Top management was generally thought more likely to be efficient in private employment. Once again three distinct levels of opinion emerged from analysis. Engineering (79 per cent) and business (74 per cent) majors were strongest in their belief. Social science (64 per cent) and science (62 per cent) students were somewhat less firm together with
humanities (58 per cent) and education (57 per cent) majors. Health and physical education majors (48 per cent) demonstrated the least agreement with this statement and thus demonstrated the least unfavorable attitude toward the state.

Immediate supervisors were thought more likely to be competent in private employment than in state employment. Although this opinion seemed to be held fairly firmly, it was held with less unanimity and conviction than that regarding the efficiency of top management. Business majors were strongest in agreement (69 per cent). The following groups, although registering agreement, were somewhat less unanimous than the business majors: education majors (61 per cent), humanities majors (61 per cent), science majors (59 per cent), social science majors (56 per cent), and engineering majors (54 per cent). Note that engineering students who had previously exhibited strongly unfavorable attitudes toward state service suddenly dropped to a relatively mild opinion of disfavor on the subject of the competence of first-line supervisors. The least unfavorable attitude toward the state, was once again that held by health and physical education students. Only 36 per cent agreed that supervisors in private employment were more likely to be competent than those in state service; 22 per cent disagreed. In this instance, however, neither of these two categories expressed the prevailing opinion; 42 per cent indicated that they had no opinion on the subject.
Summary. Analysis of the data in terms of college major unearthed no variations in the general tendencies already observed. Only in the areas of job security, promotions and employee benefits was the state rated more favorably than private employment. Favorable rating in these areas was given by all groups without significant difference. Although significant differences of opinions did occur in some areas, they represented only differences in the degree to which opinions unfavorable to state service were held. The only exception to this generalization was the attitude of health and physical education majors that employees do not work harder in private employment than they do in state service. This is the sole manifestation of a positive reaction to state service other than those already mentioned.

Significant differences occurred in the following areas. Students were believed to prefer private employment and to attempt to enter it rather than state employment. Opportunity for professional career development was conceded to be better in private business. Wages and salaries were considered better at all levels in private employment. In regard to working conditions, both top management and line supervisors were considered more efficient, supervisors more demanding and the individual employee more hardworking in business or industry.
Where significant differences did occur, certain general relationships appeared. Business and engineering majors were least favorably disposed toward state service. Education, humanities, science, and social science students tended to group together in their answers into a position which, although still unfavorable to state service, was considerably less so than that of business and engineering majors. Health and physical education majors were consistently more favorably disposed toward the state than any of the other groups. In one instance they manifested a favorable opinion toward the state.

There were two exceptions to this general picture. Engineering majors expressed their belief that supervisors were more competent in private employment with an intensity equal to that of education and social science majors -- much less than their usual strong expression of disfavor. The same behavior was exhibited by business majors in their expression of opinion that salaries at lower levels were greater in private employment. In this instance business majors were replaced in their usual position of strongly held opinion by science majors.

Note that science majors generally were not characterized by the same high intensity of opinion as were engineering majors. Note also that the reactions of engineering students
demonstrated here closely parallel those discovered in the Bush research. In addition the behavior of science majors conforms closely with the results of the Hersh study in which this group favored industry with significantly less intensity than engineering students. These facts give an additional degree of support to the assumption that the sample of engineering students, though small, is nevertheless representative. They also provide a basis for the tentative conclusion that the same difference between engineering and science majors discovered in regard to federal employment exists also for California state service.

A general check on the validity of the answers given by different groups of college majors is provided in item "O" of the questionnaire. This item asks respondents to compare private employment and state service from the viewpoint of their own careers. Specifically, the respondents judge whether they believe there is a better chance for them to develop in their chosen profession in state service or in private business. Significantly, the group consistently most favorably oriented to the state, viz., health and physical education majors, felt most strongly that their best career choice lay with the state. Fifty-seven per cent agreed that they had

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21 Hersh, op. cit., p. 68.
better chances to develop in their chosen professions in state service. Forty-nine per cent of the education majors and the social science majors registered the same opinions.

All other groups of college majors felt that their personal chances for professional development were better in private employment. The two groups which consistently expressed least satisfaction with state service, viz., business majors (67 per cent) and engineering majors (54 per cent), felt most strongly that their own best career opportunities were in private employment. Science majors (54 per cent) and humanities majors (44 per cent) also indicated that their best chances for career development lay outside of state service.

The answers to item "O" establish a strong case for the validity of the responses on the rest of the questionnaire. Different groups of majors preferred state employment in mostly the same ratio as they had previously expressed favorable attitudes toward it.

More interesting, however, is the fact that even in groups which indicate that their best career opportunities are in state employment, there exists a prevalent opinion which is unfavorable to state service.
IV. ANALYSIS BY VOCATIONAL OBJECTIVE

To facilitate analysis and make the data more manageable the vocational objectives of students were classified into general categories. The following is a list of those general categories and the number of respondents in each: professions, 81 respondents; business, 357 respondents; education, 556 respondents; public employment, 268 respondents; undecided as to vocational objective, 109 respondents. A category of agriculture had been tentatively included in the classificatory scheme but is here omitted because only four respondents out of the entire sample fell into it. The size of the sample in each group appears sufficient to give a representative sample.

In three areas no significant differences occurred irrespective of vocational objective. Seventy per cent of the entire sample agreed that there was more job security for the college graduate in state service than in other employments. Seventy and two-tenths per cent agreed that the state had more liberal employee benefit programs than did private employment. In the area of wages and salaries, all groups believed strongly (89.1 per cent) that salaries for top-level executives were better in private business than they were for the state. In

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22 For a complete list of the various occupations represented under each category, see Appendix 4.
addition 75.5 per cent of all groups indicated their belief that salaries at lower levels were greater in private employment than those for comparable jobs in state service.

In the four remaining areas significant differences occurred among the different vocational groups.

Promotions. There was general agreement that promotions in the state service were not likely to result from various forms of influence. This attitude was felt more strongly by those expressing an intention to enter public employment than other occupational groups. Fifty-five per cent of those oriented toward professional careers, 54 per cent of those planning careers in education, 53 per cent of those undecided about their futures, and 51 per cent of those planning to enter the business field agreed to the opinion while 63 per cent of those with futures in public employment assented.

Professional development. In the area of professional development, 74.4 per cent of all respondents irrespective of groups believed that state employment was not a poor work recommendation for future jobs in business or industry. In addition there was general agreement that private employment presented greater career opportunities than did state service. There were, however, significant differences in the extent to which the latter opinion predominated. Those preferring the business field held it most strongly (66 per cent);
those preferring education (58 per cent), those preferring the professions (57 per cent), and the undecided (54 per cent) held it with slightly less intensity. The remarkable fact, however, is that even those whose vocational objective was in the field of public employment concurred in this attitude (44 per cent). Although the percentage concurring in this latter group is slightly less than an absolute majority, it still represents the most prevalent opinion in the group.

Working conditions. In all areas tested private employment was generally favored over state employment. Significant differences between groups occurred in every item.

Potential professional (71 per cent), business (68 per cent), and education (66 per cent) groups were firm in their agreement that top management was more efficient in private employment than in state service. Surprisingly enough, those aspiring to public employment held the same opinion although with markedly less intensity (49 per cent). Approximately the same pattern occurred on the subject of the competency of first-line supervisors, although here three distinct groups emerged. Sixty-eight per cent of the business-oriented and 64 per cent of the professionally-oriented believed immediate supervisors more competent in private business than in state service. The educationally-oriented (58 per cent) and the undecided (59 per cent) held
a slightly less firm conviction. Again, those oriented toward public employment did not express a positive attitude toward state service; they registered 51 per cent agreement with the above attitude.

In the area of work incentives belief was widespread that the state did not provide a better program than private business. Professionally-oriented (87 per cent), business-oriented (75 per cent), education-oriented (70 per cent) and undecided (71 per cent) groups were fairly strong in their agreement that the state's program of work incentives is not better than that of private employment. The public employment-oriented followed their previous trend; although significantly less unfavorable to state service, they nevertheless agreed with the general opinion (61 per cent).

All groups agreed to some degree that first-line supervisors in business and industry demanded a greater volume of production from those under them than their counterparts in state service. The professionally-oriented (61 per cent), the business-oriented (66 per cent), the education-oriented (60 per cent), and the undecided (66 per cent) groups registered more firm agreement than those contemplating careers in public employment (51 per cent). The important fact, however, is that even those oriented toward public employment exhibited an essentially negative reaction to state service. Substantial
agreement was also manifested that the individual employee works harder in private employ than in state service. Once again the business-oriented (61 per cent), the professionally-oriented (65 per cent), the educationally-oriented (53 per cent) and the undecided (54 per cent) held the opinion with greater intensity than did those oriented toward public employment (46 per cent). The attitude of the public employment group, although short of an absolute majority, nevertheless is the predominant opinion in this group and is correctly classified as representative of the group.

**General preference.** There was general agreement that college graduates with the greatest ability enter private business. Business and professionally-oriented groups were strongest in agreement (86 per cent and 85 per cent, respectively); the education-oriented (74 per cent) and the undecided (75 per cent) held it somewhat less strongly. Even the public employment group assented with a substantial degree of firmness (69 per cent). All groups also agreed that college graduates in general would be more likely to seek work in private employment than for the state. The business-oriented held this attitude most strongly (87 per cent). The other groups espoused the attitude with somewhat less intensity -- professionally-oriented, 76 per cent; education-oriented, 73 per cent; public employment-oriented, 73 per
cent; undecided, 71 per cent. Note particularly the firmness of the attitude expressed in both instances by those intending to enter public employment. They represent attitudes distinctly unfavorable to the state.

**Summary.** Once again the state was regarded with outright favor only in the areas of job security, promotional equity, and employee benefits. In the areas of job security and employee benefits there was no significant difference among the groups tested. In the area of promotional policy those students whose vocational objective was in public employment seemed significantly more unanimous in their convictions of the equity of the state's promotional procedures. This is not a surprising variation and is one which needs no explanation.

In all other areas private employment was generally favored over state service. All groups agreed without significant difference that pay in the state service at all levels is generally less than it is in private employment. There was also general agreement, although there were significant differences in the intensity with which each group held such attitudes, that private business offers better opportunities for professional development, that college graduates prefer private employment to state employment, that efficiency and supervisory competence in the state service are below that
of private employment and that private businesses demand more of the individual employee, who actually does work harder.

Where significant differences do occur, they are not basic differences in opinion; rather they represent only differences in the intensity and unanimity with which the various groups hold the same attitudes. In general the following distinctions tend to emerge. Those students whose vocational objectives lie in the business or professional fields have the least favorable attitudes toward state employment. Students intending to enter the field of education and those undecided about their vocational futures tend to have a somewhat less unfavorable attitude toward state service although it is still unfavorable. Lastly, students who intend to enter public employment have a more favorable opinion of state service, although it, too, is a negative opinion.

Item "O! affords a check on the validity of these general attitudes. As was pointed out in the preceding chapter, it measures an individual's opinion whether his personal career and professional development are best furthered in public or private employment. Business-oriented (72 per cent) and professionally-oriented (64 per cent) students showed strong agreement that their personal careers were better furthered in private industry. Even the group undecided about their futures felt that they had better chances for career development in private employment (47 per cent agreed). Those who
planned futures in education understandably felt that state service offered them better career opportunities (58 per cent agreed). Those who planned careers in public employment (60 per cent) also agreed that state service presented them with more career opportunities than private employment.

In one respect the behavior of education and public employment groups conforms to expectations. Since these two groups consistently expressed more favorable attitudes toward state service than the others, it is natural to expect them to express the same attitude in their response to item 0. Although they were the least unfavorably disposed toward state service the prevailing attitude in each group was nevertheless a negative attitude. The behavior of these two groups on item 0 immediately raises the question of why they should express positive attitudes toward state service in terms of personal career development. What extenuating circumstances counteract the effects of the general negative attitudes they express toward state service and make it appear a desirable career alternative? An attempt to answer this question will be made later.
V. ANALYSIS BY EMPLOYMENT PREFERENCE

Respondents were asked to indicate their preference in employers. The results afford a comparison of attitudes of those who desire employment in the various levels of public employment with those who prefer to be privately employed. Students could indicate their preference for an employer in any one of the following classes: private business or industry; the Federal Government; the State of California; a municipal or county agency.23

In three areas there were no significant differences among the groups. Sixty-nine per cent of all respondents felt that college graduates working for the state had more job security than those in similar positions in private employment. Sixty-nine and nine-tenths per cent believed that the state was more liberal in the area of employee benefits than was private employment. In the area of promotions 54.8 per cent of the sample indicated that in their opinion advancement did not rest upon the amount of "influence" an individual was able to exert.

23 On the questionnaire an additional choice of "other" together with space for explanation was allowed the student. All items listed in this space turned out to be classifiable in a "self-employed" category. Further analysis of this category established that it was not significantly different from the "private business or industry" category. Thus it is not included as a separate category in the present analysis.
In all other areas significant differences occurred among the various preference groups. There did not appear to be basic differences in attitude but only differences in the intensity and unanimity with which the same attitudes prevailed among the groups.

Wages and salaries. The private employment group (90 per cent), the federal employment group (90 per cent), and the local employment group (91 per cent) were quite firm in agreement that salaries at top executive levels are greater in private employment than they are in state service. Those who preferred employment for the state held the same opinion with only slightly less conviction (86 per cent agreed). In regard to salaries at lower levels no significant differences occurred among the groups. All felt (75.3 per cent) that salaries in the state service were usually less than those for comparable jobs in business or industry.

Professional development. Seventy-three and six-tenths per cent of all groups felt that employment for the state would not be a poor recommendation for further work in private employment. In general all agreed further that private enterprise presented more career opportunities than state service. There were significant differences of opinion on this latter point: 63 per cent of those preferring employment in private
business agreed with the statement; 57 per cent of those preferring county or municipal employment agreed; 50 per cent of those preferring state employment and 46 per cent of those preferring federal employment registered agreement. Note that the prevailing attitude among those who preferred state employment was unfavorable to the state.

**General preference.** In general there was strong agreement that college graduates with the most ability were likely to enter private employment. The difference in the prevalence of this attitude tended to correlate with the distinction between public and private employment. Eighty-four per cent of the business group registered their agreement while only 74 per cent of the municipal and county group, 72 per cent of the federal group and 68 per cent of the state group held the same opinion. The same pattern of agreement occurred in response to the statement that college graduates in general were more likely to seek work in private employment than in state service. The private employment group (83 per cent) held this attitude more firmly than either the municipal or county group (78 per cent), the federal group (73 per cent) or the state group (67 per cent).

**Working conditions.** Differences in the prevalence of attitudes in this area again tended to correspond to the
distinction between public and private employment. Ninety per cent of the business group agreed that top executives were more efficient in private employment. Agreement was less firm on the part of the local and municipal group (60 per cent), the federal group (56 per cent) and the state group (57 per cent). The same tendencies applied to attitudes about first-line supervisors. Sixty-seven per cent of the private employment groups thought them more likely to be competent in private industry; this attitude was significantly less prevalent in the local and municipal (56 per cent), the federal (52 per cent) and the state (52 per cent) groups.

Sixty-six per cent of the private business group and 61 per cent of the federal group thought that immediate supervisors in private industry demanded a higher volume of work from those under them. This attitude was slightly less prevalent among the state (56 per cent) and municipal (51 per cent) groups. In addition 61 per cent of the business groups felt that the individual employee worked harder in private employment than he did in state service. Federal (52 per cent) and municipal (51 per cent) groups acquiesed, but with somewhat less unanimity. Forty-four per cent of the state group agreed -- a figure which, although less than an absolute majority, is nevertheless indicative of the most predominate opinion.

A variation in the response pattern occurred in the area of work incentives. Both public employment (75 per cent)
and municipal employment (77 per cent) groups felt strongly that private business offered more work incentives to their employees than the state. Federal (62 per cent) and state (63 per cent) groups were only slightly less firm in their agreement. It is interesting that those preferring municipal or county employment should feel so strongly about work incentives.

Summary. Analysis of the sample in terms of employment preference disclosed three areas in which the state is regarded with outright favor, viz., job security, promotions, and employee benefits. In the other areas tested, opinions were generally unfavorable to state service. All groups believed that the most able graduates were likely to enter private employment and that graduates in general were more likely to try to find work in private employment than state service. Pay at all levels was believed better in private businesses. Although experience with the state was not regarded as a hindrance to a career in private employment, it was believed that private employment offered more career opportunities than the state. Management and supervision were considered better in private employment and private businesses were believed to offer greater work incentives to their employees.

Wherever significant differences of opinion occurred, they were differences only in the extent to which one opinion
prevailed and not basically differing attitudes. In all cases the students preferring private employment were significantly more unfavorable to state service than the groups preferring some form of public employment. In general the differences understandably coincided with the distinction between private and public employment.

Within the public employment categories students expressing their desire for municipal or county employment consistently expressed a slightly more unfavorable attitude toward state service than either the group preferring federal or that preferring state service. On the specific matter of work incentives they went so far as to register an attitude equal to that of the group preferring private employment— an attitude not at all comparable to those of the other public employment groups. The group preferring federal employment tended to be slightly more unfavorable to state employment than the group of potential state employees. This was only a slight tendency, however, and not at all so marked as that of the municipal and county employment group.

Most interesting of all was the fact that students indicating a preference for state employment, although they were the group least unfavorable to state employment, were nevertheless unfavorable. This behavior raises the same point noted in the preceding chapter. What extenuating circumstances make an individual want to enter an employment towards which he holds unfavorable attitudes?
VI. ANALYSIS BY FATHER'S OCCUPATION AND FATHER'S EMPLOYER

Father's Occupation

Fathers' occupations were generally classified by source of employment into the following categories: professions (33 respondents), business (915 respondents), education (34 respondents), public employment (228 respondents), and agriculture (53 respondents).\(^{24}\) The original intent was to break down these categories further into mutually similar sub-groupings.\(^ {25}\) Thus, for example, the attitudes of students whose fathers had been employed in accounting and finance in private employment could be compared with those of students whose fathers had worked in similar capacities in public employment. Subsequently, however, it became apparent that the volume of statistical operations involved in a detailed analysis of such numerous horizontal comparisons was beyond the scope of the present research. Accordingly, the analysis was performed at the more general classificatory level. In final form, therefore, the analysis by father's occupation is closely related to the analysis by father's employer; in both instances source of employment provides the basis for classifying the data.

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\(^ {24}\) Those individuals who indicated that their fathers were self-employed did not display significant differences from the group whose fathers were employed in business or industry.

\(^ {25}\) For a complete list of the ways in which each category was broken down see Appendix 5.
At this point the question of the size of some of the groups properly arises. The professional and education categories are admittedly small (33 and 34 respondents, respectively). In absence of any evidence to the contrary, however, they are assumed to be representative. Some substantiation for this assumption lies in the behavior of these groups where significant differences occur. In these cases they behave as expected; the opinion of the education group is not significantly different from that of public employees in general and the opinions of the professional group closely parallel those of the business group.

Analysis of the data by father's occupation disclosed only two areas in which significant differences occurred.

**Promotions.** Although significant differences of opinion existed on the equity of the state's promotional system, they were once again differences in the prevalence of a single opinion rather than expressions of contradicting opinions. In general, all groups agreed that promotions in state service were unlikely to depend upon influence. Students whose fathers had been employed in education (60 per cent) or in some aspect of public employment (67 per cent) were strongest in their assent. Those whose fathers had been employed in agriculture (55 per cent) or private business (51 per cent) were somewhat less unanimous. Although only 42 per cent of those whose fathers were professional people assented to the equity of
the state's promotional system, this still represented the predominant opinion of that group.

Benefits. There was general agreement that the state was superior to private employment in the area of employee benefits. This attitude was held most strongly by students whose fathers were in either the professional (73 per cent) or business categories (72 per cent). Those whose fathers were working in public employment (67 per cent) and those whose fathers were in agriculture (61 per cent) were less firm in agreement. The education group was less favorable still; only 56 per cent registered assent.

In all other areas there were no significant differences in opinion correlative with employment of father. Responses in these latter areas conformed to the general patterns exhibited thus far in the research.

General preference. All agreed that the most able graduates are more likely to enter private employment and that graduates in general are more likely to try to find work in private employment than in state service.

Professional development. All agreed that although experience in state service would not be a poor recommendation for future work in industry or business, private employment offered more opportunity for career service.
Job security. The groups equally acknowledged that the state offered college graduates more job security than private employment.

Wages and salaries. State service was deemed to offer lower salaries than private business or industry at all levels of employment.

Working conditions. Efficiency of top management and competence of first-line supervision were conceded to be greater in private employment than in state service. Immediate supervisors were thought to demand more of their employees and the employees were thought to work harder in private employment. In addition private employment was thought to provide greater work incentives to its employees than state service.

Father's Employer

In the analysis by father's employer the data were broken down into the following categories: students whose fathers were employed by private business (814 respondents), those whose fathers were employed by the federal government (136 respondents), those whose fathers were in state service (76 respondents), and those whose fathers worked for a municipal or county agency (74 respondents).26

26 An "other" category was also included on the questionnaire. Responses here all fell into a "self-employed" category which proved in no way different from the "private business or industry" category. It will, therefore, not be treated separately.
Significant differences between categories were observed in only two areas, the same two in which differences had occurred in analysis by father's occupation.

**Promotions.** The same relationships were observed in the area of promotions which have been mentioned in the analysis by father's occupation. Children of federal employees (67 per cent), those of state employees (63 per cent), and those of county or municipal employees (61 per cent) were most favorably inclined toward the state's promotion policy. In contrast, only 51 per cent of those whose parents were employed in private business were convinced of the equity of the state's promotion system.

**Employee benefits.** Eighty-one per cent of students whose fathers were in state service thought that the state provided more employee benefits than private employment. The children of those in private business (71 per cent) and those in federal service (66 per cent) were less strongly agreed. Least strongly agreed were the children of county or municipal employees; only 53 per cent of them agreed that the state offered more employee benefits than private industry.

In the other areas tested no significant differences of opinion occurred; the general opinions were the same as those listed with reference to father's occupation.
Summary

The results of analysis by father's occupation and by father's employer were quite similar. Undoubtedly this similarity resulted from the fact that groups in both categories were classified on the basis of the source of the fathers' employment. This qualification must be kept in mind whenever these two groups are compared.

Neither fathers' employers nor fathers' occupations tended to affect the attitudes which students manifested toward state employment. The state was regarded favorably only in the areas of job security, promotional policy and employee benefits. In all other areas tested the state was viewed as inferior to private employment.

Significant differences in opinion occurred only in the areas of promotion and employee benefits. In both instances opinion was favorable to state service but there was a significant difference in the extent to which it was held by different groups. The private employment group was less favorable to state service than the groups involved in public employment. In each case there was a tendency for the municipal or county group to have a slightly less favorable attitude toward state service than the other public employment groups.
It is interesting to note that the reactions obtained in this analysis seem quite at variance with those obtained by Charles Hersh in his study of attitudes of college students toward federal government. Hersh concluded that a definite correlation existed between father's occupation and opinion. Students whose fathers had been employed privately were significantly more favorable to private employment than those whose fathers were in the federal service.27

VII. ANALYSIS BY MOTHER'S OCCUPATION AND MOTHER'S EMPLOYER

Mother's Occupation

Occupations of respondents' mothers were classified by source of employment into the following general categories: students whose mothers had been employed in private business (328 respondents), students whose mothers had been employed in education (99 respondents), students whose mothers had been in public employment (110 respondents), and students whose mothers had never been employed, i.e., who had been full-time housewives (756 respondents).28 As was the

27 Hersh, op. cit., p. 69.

28 There were no significant differences between those whose mothers had been employed in private business and those whose mothers had been self-employed. No mothers fell into either a "professional" or an "agriculture" classification. For a complete list of the way in which this category was subdivided, see Appendix 6.
case with fathers' occupations the original intent was to break down these general categories into mutually similar subgroups in order to provide a horizontal type of comparison of equivalent groups in different sources of employment. For the reasons mentioned previously, however, analysis was made at the more general level. Thus there is considerable overlap between the analysis of the data by mothers' occupations and that by mothers' employers.

Analysis by mothers' occupations disclosed no significant differences in students' opinions. The general trends noted previously, especially in connection with the factor of father's occupation, all operated here. The state was regarded favorably only in the areas of job security, promotions and employee benefits. In all other areas tested, opinion was unfavorable to state service.

**Mother's Employer**

In analysis of the data by mother's employer the following categories were used: those whose mothers had been employed in private business (337 respondents), those whose mothers had been employed in federal service (27 respondents), those whose mothers had been employed by the state (27
respondents), and those whose mothers had been employed by a municipal or county agency (99 respondents).²⁹

Significant differences occurred in two areas.

**Job security.** There was general agreement that the state offered more job security to its employees than private employment. This opinion tended to be more prevalent among those whose mothers had been in private employment (71 per cent) or in municipal or county employment (79 per cent). Sixty-six per cent of those whose mothers had been in federal employment and only 57 per cent of those whose mothers had been in state employment held the same opinion.

**Promotion.** In the area of promotions the general opinion was that promotions in state service were less likely to depend on "influence" than in private business. Students whose mothers had been in state employ held this opinion most strongly (64 per cent). The federal (59 per cent), municipal (56 per cent), and private business (55 per cent) categories held this opinion only slightly less strongly.

In all other areas tested no significant differences of opinion were observed. In addition to the favorable

²⁹ An additional category of "other" together with a space for explanation was included. Answers in this category were all classifiable under self-employment. Further analysis discovered no differences between this group and the private business group.
attitudes toward state service described previously, there was also general favor expressed in the area of employee benefits. In all other areas opinion tended to be unfavorable to the state. The trend was not different from the general trend already manifested in an analysis by father's employer. To describe it in detail again at this point would be to reiterate needlessly.

Summary

The factors of mother's occupation and mother's employer (both defined in terms of source of employment) do not appear to exert a great deal of influence upon the opinions of their children toward state employment. Only two significant differences were discovered -- both in the area of mothers' employers. Although it is difficult to generalize from these two isolated differences, the tendency seems to be for students whose mothers have been in state service to be less strongly assured of the job security provided by the state than those whose mothers have been employed elsewhere. On the other hand, students whose mothers have been in state employ seem more convinced of the equity of the state's promotional policy than those whose mothers have been employed elsewhere. There also seems to be a slight tendency for students whose mothers had been employed in municipal or county

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30 Supra, p. 57.
service to be closer in their opinions to the private employment group than to the other members of the public employment classification.

III. ANALYSIS BY PREVIOUS WORK EXPERIENCE

Respondents were asked to indicate previous work experience under the following categories: private business or industry, the federal government, the State of California, a municipal or county agency or self-employment. Many respondents indicated previous work experience in more than one of these categories. Ideally, therefore, an analysis of the data would have included comparison of all possible combinations of previous employment. Because the combinations involved in this type of approach are myriad, the data were tabulated simply according to the number of responses in each category. Admittedly this type of tabulation artificially enlarges the sample and ignores the cumulative effects which combinations of employment experiences are likely to have. The question must be raised, therefore, of the meaningfulness of an analysis based upon this type of tabulation. It is a

31 The self-employment category was listed on the questionnaire as "other" with a space provided for explanation. All answers in this category, it turned out, could be classified under the heading of self-employment.
question which can be answered only when all possible com-
binations of employment experiences have been thoroughly
analyzed. The following analysis is made under the previ-
ously mentioned limitations and is therefore suspect until
proved otherwise.

Analysis of the data in terms of previous employment
experience disclosed no significant differences in opinion
in any of the areas tested. The general tendencies already
noted in previous chapters were once again observed. The
state was favored over private employment only in the areas
of job security, promotions and employee benefits. In all
other areas, viz., general employment preference of college
graduates, professional development, working conditions, and
wages and salaries, prevailing opinion favored private employ-
ment over the state service.

Such conclusions are doubly suspect because they con-
tradict the conclusions of the Hersh survey that "previous
employment in a field tends to be related to favorable atti-
tudes toward that field."32

32 Hersh, op. cit., p. 47.
This study has not fully explored all aspects of all attitudes of college students toward state service and has contented itself with securing opinion on a relatively small number of fairly specific topics. The attitude statements, however, were not restricted in subject matter to only one or two areas but were deliberately scattered over the seven broad subject areas of general student preference, professional development, working conditions, wages and salaries, job security, promotions, and employee benefits. Several different response patterns emerged and it is highly probable that they represent general trends of opinion.

State service was regarded with outright favor in only three areas. Every group agreed that a college graduate in state service would have greater job security than his counterpart in private employment; that promotions in state service were more likely to be on the basis of merit (i.e., there was less chance of promotions being affected by personal influence); and that the state was more liberal than private employment in the area of employee benefits.
In all other areas, private employment was favored over state service. The more able college graduate was thought quite likely to enter private employment and college graduates in general were considered likely to seek initial work in private rather than state employ. Although no group viewed experience in state service as a poor recommendation for future work in private employment, all agreed that private employment offered the graduate more opportunities for career development. Top management efficiency and supervisory competence in private employment were thought to exceed those in state service. First-line supervisors in private industry were believed to demand a higher volume of production from their employees and the employees themselves were thought to work harder in private employment. Business and industry were seen as offering their employees greater work incentives and higher salaries at all levels of employment.

Opinion that salaries for top-level positions were better in private employment was quite strongly held. Opinion that salaries in lower positions were greater in private employment was substantially less strong. Whether this difference represents a manifestation of minority opinion that significant salary differentials do not generally exist between state and private employment in lower level positions
or whether it represents simply a lack of information on the subject is uncertain.

Where significant differences of opinion were discovered, they proved to be differences only in the extent to which a given opinion was prevalent among the various groups rather than fundamental differences in opinion. The only exception to this generalization occurred in the area of working conditions. Women flatly disagreed with the attitude of men that supervisors in private employment demand a higher volume of production from those under them than their counterparts in state service.

Correlations were discovered between attitude and all factors except marital status, geographic location, and previous employment experience. Women were consistently more favorable to state service than men although they manifested a clearly unfavorable attitude.

Younger students exhibited a relatively favorable attitude toward the state which tended to become progressively less favorable with advancing age. Only two slight variations in this pattern occurred. The over-40-year-old group reacted similarly to the 18-20-year-old group in the area of promotions, and the 31-40-year-old group followed the same pattern in their attitude toward the volume of work demanded of employees by their supervisors. Note that even the 18-20-year-old group manifested a general attitude unfavorable to state service.
Engineering and business majors exhibited attitudes most unfavorable to state service; they were followed by education, humanities, social science and science and mathematics majors. Least unfavorable of all groups of college majors were those in health and physical education. An additional reference in terms of where each individual felt his own best chances for career development lay, corroborated the above trends. Health and physical education majors were strongest in favoring state service, followed by education and social science majors. Business and engineering majors felt most strongly that private employment provided better career environment. This same sentiment was echoed to a lesser degree by humanities, and science and mathematics majors.

In terms of vocational choice, those planning careers in business or in the professions were most unfavorable to state service. Somewhat less unfavorable were those planning to enter the field of education or those who were undecided about their futures. Least unfavorable to state service, although still unfavorable, was the group intending to enter public employment. Again, a check on these relationships in terms of where each individual felt his own best chances of career development lay re-enforced the general trends. Potential business and professional groups were strongly unfavorable to state service. The undecided group, though markedly less unfavorable to state service, still favored
private employment. Only potential public employees and teachers expressed belief that their careers could be better fostered in state service.

Analysis by employment preference disclosed the obvious distinction that students preferring private employment were substantially more unfavorable to state service than those preferring public employment. In addition, it disclosed interesting variations within the general category of public employment. Potential municipal and county employees were least favorably oriented toward state service, and there was some tendency for potential federal employees to differ from potential state employees. Those indicating a preference for state employment understandably were least unfavorable toward state service. The most interesting fact, however, is that even the latter group exhibited an essentially negative attitude toward the state.

Neither occupation nor employer of father was related to student attitude. Slight variations occurred in only two instances. Students whose fathers had been employed privately were less favorable to the state in the areas of promotion and employee benefits than those who had been employed publicly.

Equally unrelated to student attitude were the factors of mothers' occupations and mothers' employers. Again, only minor differences in attitude occurred. Those whose mothers
had been employed by the state were less thoroughly convinced of state job security than those whose mothers had been privately employed. Conversely, the same group was more convinced of the equity of the state's promotional system.

The areas in which state employment was favored are well described by the term "passive." All of them -- job security, employee benefits, and promotional policy-- are characterized by their guarantees of security and stability to the individual employee. Conversely, private employment

The question has been raised whether state promotional policy can legitimately be classified as "passive." The questionnaire spoke of promotions in terms of "influence" and the responses indicated that an individual's influence with those in authority was not considered an important factor in promotion within state service. One interpretation of this response is that the operation of the state's merit system is widely known. If such is the case, then the question becomes whether the merit system itself is "active" or "passive."

The answer here is that the merit system is passive in nature and different in kind from the traditional concept of promotion. The traditional concept of promotion assumes that individuals will compete against one another to win favor in the eyes of their superiors. The area of competition, moreover, is confined to the immediate job situation. The individual is called upon to exercise his initiative and sense of innovation in the manner in which he confronts his work. In short, he competes with his peers by attempting to perform his job more efficiently and effectively than they perform theirs. The merit system presents an entirely different type of competition. Employees no longer compete among themselves in their jobs. The competition is removed from the work situation and takes place under conditions not immediately germane to the job. An impersonal agency determines the criteria for advancement and administers various tests to screen applicants. Under such conditions competition becomes little more than a series of hurdles to be crossed. Promotion is assured if the individual can measure up to predetermined standards.

Through the operation of the merit system state service is characterized by a pervading sense of "immanent fruition." With bureaucratic regularity and impersonality the state doles out promotions to those who succeed in achieving its standards. In this context it is correctly classified as "passive."
is favored in characteristically "active," or positive areas, e.g., hard work, efficiency, competency, career opportunity, incentives, pay.

It is not surprising that certain groups are more favorably disposed to state service than others. In some cases, e.g., education majors, health and physical education majors, the state, or at least public employment of some kind, has a virtual employment monopoly over the fields for which students are preparing themselves. In other cases where students exhibit a desire to enter public employment, it is reasonable to expect an attitude more favorable to state service.

It is particularly surprising, however, that potential state employees do not regard state service favorably outside of the areas of job security, promotional equity, and employee benefits. By this action they classify themselves in a group which is not typical of college students in general -- a group from which, according to their own pattern of responses, they consider the more able college students and graduates omitted. They classify themselves as desiring jobs which, relative to those in private business, pay low wages, offer few chances for career and professional development and few work incentives -- jobs in which, again in comparison with private employment, they will be working under inefficient and incompetent supervisors.
Other factors being equal, why do potential state employees express a desire to enter state service? Three alternatives immediately suggest themselves: (1) either the benefits override the disparaging factors, or (2) the students are a group of "second-raters" who lack the ability necessary to survive the rigors of private employment, or (3) the students do not really believe they will be personally affected by the adverse conditions they see in state service. That either of the first two hypotheses is true of the entire group indicating a desire to enter state service seems implausible on its face and is therefore rejected. Inclination leads to the adoption of the third hypothesis.

If this hypothesis is correct, then the data would indicate the existence of widespread stereotyped attitudes about state service. Potential state employees successfully compartmentalize these stereotypes and thus they are not deterred from state employment. The possibility exists, furthermore, that such compartmentalization may also be true of college students generally.

II. RECOMMENDATIONS

Stereotypes. Extended comment is not necessary about the areas of employee benefits, job security and promotional equity in which state service is favored over private employment.
The state should take advantage of these stereotypes and use them to its advantage whenever possible. In so doing it must remember that there is strong evidence that these stereotypes are not major determinants of job choice.

In the other areas tested, officials of the California State Personnel Board assert that the stereotype of state service in relation to private employment as characterized by inefficient management, few work incentives or career opportunities, low pay and employees of inferior ability, is in error. In terms of long range corrective measures the state should make a detailed examination and evaluation of its personnel processes and procedures at all levels (supervisory training, employee relations etc.). Only this type of analysis can determine the extent, if any, to which the state and its employees are guilty of contributing to the stereotypes. Direct and immediate ameliorative measures, however, are functionally best suited to the areas of recruitment and public relations. The following recommendations are designed to provide a basis for such action.

a. Ability of college graduates entering state service: the state must single out the able college graduates who have entered her employ and describe their ability in terminology meaningful to college students. Note should be made, for example, of employees who had won fellowships or scholarships which had enabled them to do graduate work in

\[\text{Cf. footnote 1, page 2.}\]
their fields before entering state service (e.g., Coro Foundation governmental internships, Fulbright fellowships).

Former memberships of employees in recognized undergraduate academic or pre-professional organizations should also be recognized (e.g., Phi Beta Kappa, Blue Key Honor Fraternity). Such assertions furthermore should be made within a specific frame of reference. There is no reason why a college student should display more than passing interest in general information that able college graduates are employed by the state. If a science major, however, were aware of the caliber and background of recently graduated scientists in the state's employ, he would likely regard state service in a new light.

Further research is possible in this area. If the state desires proof of the ability of its employees, it could subject new employees to general aptitude and I.Q. tests at the time of their entry into state service. These instruments would present a fair measure of individual ability in terms concrete enough to permit comparisons.

b. Top management efficiency and supervisory competence: to some extent the previous recommendation counteracts the stereotype in this area. Further correction requires emphasis on demonstrated competence of management in state service. One method of effecting this is through reference to advanced academic and professional training of present management and a fairly detailed explanation of the state's own
management training program. Mention of previous high-level positions held by management as well as of individuals so outstanding in their fields that their advisory services are requested by other states or by private employment would further demonstrate the caliber of management in the state service. Again, reference should be as specific as possible. Sweeping generalizations about the overall quality of management in state service tend to become hollow. The potential employee is more interested in the quality of management in his immediate field.

c. Work incentives: effective counter-action against the stereotypes mentioned previously in (a) and (b) would greatly reduce this stereotype. Prevailing positive opinion about the competence of peers and that of supervisors in state service would, in itself, represent both an indication of high standards and an inducement to work. The only additional point here is one of stress upon the job itself. Here again, only concrete terms can give a potential employee a realistic view of the incentives inherent in the specific positions he is considering.

d. Career opportunities: specificity is the greatest need in this area. Instead of the bullseye slogan depicting "Careers in State Service", meaningful presentation of career opportunities requires a clearly stated outline of the ways
in which an individual career may be developed and what advancement a potential employee may reasonably expect.

e. Pay. The state must admit readily and frankly that pay at its top levels is not so great as that in private employment. At lower levels, however, pay in state service is equivalent to that in private business. Concrete figures should be available to demonstrate this fact. Such demonstration might include an explanation of the methods by which state pay scales are set.

Recruitment. Attention to erroneous stereotypes is not the whole solution to the state's problem of acquiring competent employees. The existence of these stereotypes among groups of students who intended to enter state service has prompted the conclusion that these attitudes are successfully compartmentalized and do not significantly affect employment choice. Although the extent to which such compartmentalization is typical of other groups cannot be assessed at present, there seems no reason to doubt that it is present and functioning. Such a situation raises serious doubt about the influence of stereotypes as employment determinants.

What does influence a college student's job choice? Philip Jacob, in a nationwide study of college students' attitudes, concludes that "The overriding aspiration of the American student is a 'rich, full life' filled with variety, interest
and perhaps excitement . . . . More students consider an opportunity to 'use their talents creatively' or 'to be creative and original' the most important requirement of a satisfying job."35 The way in which a job is presented to a potential employee, therefore, seems of the utmost importance. Other factors equal, if a position is represented as one typifying creativity and originality, the college graduate is likely to accept it.

The nature of the state's recruiting procedures puts it at a marked disadvantage in making such a representation. State recruiters are primarily "professional recruiters"; they are generalists, i.e., they have excellent categorical knowledge of the positions for which they recruit. They know the general duties involved in these positions, the salary scales, the general opportunities for advancement; in addition, they are well briefed on the employee benefits offered by state service. They lack, on the other hand, an intimate familiarity with the positions for which they interview. They can refer to challenge and originality only in the most general terms. Such expressions as "these are the kinds of things you would be doing" followed by a survey of items typify the present generalist approach. In short, the interviewer is unable to "talk shop" with the applicant.

In the light of the previously mentioned student attitudes about satisfying jobs, it appears that such shop talk is the factor most likely to influence an applicant's choice. Specific and detailed explanation of what one particular administrative trainee is doing is more likely to impress an applicant than a handful of statements about the types of things done by administrative trainees in general.

In practice, the recruiter can no longer afford to be a generalist. He must be supplanted by a recruiter of engineers, of chemists or of administrative talent. Even within these specialties he cannot afford to generalize but must remain continuously and intimately conversant with details of job performance.

By the same token a more meaningful approach to recruitment is possible if recruiting is removed from the egis of the "state service." Whenever a state recruiter appears on a college campus he is represented as interviewing for various positions in "state service." "State service" conveys to the job applicant a nebulous organizational reference which connotes little about the job for which he is applying. One remedy is to conduct recruiting on a divisional or departmental basis. To recruit engineers for the Division of Highways, for example, would have the double effect of conveying to the applicant a meaningful impression of the context of
the proposed job and of keeping the Division of Highways continually conscious of its own reputation.

All of the recommendations mentioned are characterized by their emphasis on specificity. Correcting stereotypes will involve the immediate step of eliminating much of the standard general format used indiscriminately throughout present recruitment and public relations media. Revision of recruitment methods would probably involve some increase in staffing. Undoubtedly the initial cost of such revision would be higher than present expenses. Measured in terms of the caliber of personnel these methods are designed to secure, there is every indication that such costs would prove an economy.
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ATTITUDE SURVEY

This is a survey of some of your attitudes toward certain aspects of careers in government service. The individual responses will be held in confidence and you cannot be identified by them in any way. Please respond thoughtfully to each question or statement. You are encouraged to be as straightforward as possible; we are not seeking your knowledge of facts -- only your opinion.

IMPORTANT: If you have already filled out this questionnaire in another class, please do NOT do so again.

Please fill in the following data:

1. Sex: Male______ Female_____
2. Age: _______
3. Marital Status: Single______ Married_____
4. College Major: ___________________________
5. What is your vocational or occupational objective? _______
6. By whom would you prefer to be employed? (Indicate your preference by marking "1" opposite your first choice, "2" opposite your second choice, etc.)

(Choice)
____ a. Private business or industry
____ b. The Federal Government
____ c. The State of California
____ d. A municipal or county agency
____ e. Other (Please specify) _______________

7. What is (was) your father's occupation? _________
8. By whom is (was) he employed? (Check appropriate answer.)
   ______ a. Private business or industry
   ______ b. The Federal Government
   ______ c. The State of California
   ______ d. A municipal or county agency
   ______ e. Other (Please specify) ___________________

9. What is (was) your mother's occupation? ________________

10. By whom is (was) she employed? (Check appropriate answer.)
    ______ a. Private business or industry
    ______ b. The Federal Government
    ______ c. The State of California
    ______ d. A municipal or county agency
    ______ e. Other (Please specify) ___________________

11. What previous work experience have you had? (Check each answer which applies.)
    ______ a. Work in private business or industry
    ______ b. Work for the Federal Government
    ______ c. Work for the State of California
    ______ d. Work for a municipal or county agency
    ______ e. Other (Please specify) ________________
The following statements contrast employment by the State of California with employment in business or industry. You are asked to register the extent of your agreement or disagreement with each statement. Please answer on the basis of your own opinion. Indicate the degree of your agreement or disagreement by circling the appropriate number in front of each statement:

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<th>If you then circle number</th>
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<th>2</th>
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<tr>
<td>(A.) College graduates are more inclined to seek work in private employment than they are for the State of California.</td>
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<td>(B.) Employment for college graduates in a business or industrial concern presents more opportunities for a career service than does employment in a State agency.</td>
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<td>(C.) Experience gained in State employment is a poor work recommendation for future work in business or industry.</td>
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<td>(D.) A college graduate working for the State has greater job security than does a person working in a similar position in business or industry.</td>
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<td>(E.) In general, the efficiency of top management is greater in business or industry than it is in the State service.</td>
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<td>(F.) First-line or immediate supervisors are more likely to be competent in State employment than they are in business or industry.</td>
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<tr>
<td>(G.) First-line supervisors in business or industry demand a higher volume of production from those who work under them than do their counterparts in State agencies.</td>
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State agencies provide greater work incentives to their employees than do business or industry.

A person must work harder in business or industry than he would be required to do in a State agency.

Salaries for higher level positions are likely to be greater in business or industry than they are in the State service.

Promotions in the State service are more likely to be influenced by "whom you know" than they are in business or industry.

College graduates with the greatest ability are more likely to enter private employment than they are to enter State service.

Salaries in the State service are usually less than those for comparable jobs in business or industry.

In the general area of benefits (sick leave, vacation, retirement and other fringe benefits) the State is more liberal than is private business or industry.

There is a better chance for me to develop in my chosen profession in the State service than there is in private business or industry.
APPENDIX II
Courses to which the questionnaire was administered — listed by college.

Chico State College

Economics:
  110 - Economic History of Europe
  135 - Money and Banking

Government (Political Science):
  109 - Public Opinion and Propaganda
  120 - Political Parties and Elections

History:
  105 - Medieval Civilization
  130 - American Colonial History

Psychology:
  102 - Abnormal Psychology
  122 - Psychology of Personality

Sociology:
  101 - Social Change
  150 - Race Relations

Fresno State College

Economics:
  100 - Economic Theory
  180 - Comparative Economic Systems

Government (Political Science):
  101 - The American Constitution
  161 - State and County Government

History:
  111 - Europe in the 17th and 18th Centuries
  171 - Early American History

Psychology:
  152 - Abnormal Psychology
  103 - Psychology of Personality

Sociology:
  111 - Race and Cultural Relations
  1140 - Rural and Urban Problems
Long Beach State College

Economics:
  100 - Fundamentals of Economics
  130 - Money and Banking

Government (Political Science):
  132 - American Government
  140 - Political Parties

History:
  108 - Economic History of the United States
  140 - Europe Since 1914

Psychology:
  130 - Abnormal Psychology
  149 - Industrial Psychology

Sociology:
  110 - The Family
  166 - Contemporary Social Theory

Los Angeles State College

Economics:
  303 - Money, Banking, and the Economy
  480 - Comparative Economic Systems

Government (Political Science):
  301 - American Institutions
  303 - State and Local Government

History:
  435 - Europe: The 19th Century
  467 - The United States: Colonial Period

Psychology:
  410 - Abnormal Psychology
  442 - Industrial Psychology

Sociology:
  432 - Regional Sociology
  440 - Marriage and the Family
Sacramento State College

Economics:
100 - Intermediate Economic Theory
117 - Comparative Economic Systems

Government (Political Science):
151 - American National Government
152 - State and Local Government

History:
151 - History of England
173 - Era of the Civil War

Psychology:
108 - Psychology in Business
145 - Social Psychology

Sociology:
110 - Sociology of Urban and Rural Life
160 - The Family

San Diego State College

Economics:
100A - Intermediate Economic Theory
135 - Money and Banking

Government (Political Science):
115 - American Institutions
142 - State Government

History:
141 - Europe in the 17th and 18th Centuries
174 - Emergence of the U. S. as a World Power

Psychology:
150 - Abnormal Psychology
121 - Personnel and Industrial Psychology

Sociology:
135 - Marriage and Family
153 - Modern Social Theory
San Jose State College

Economics:
  101 - Micro-Economic Analysis
  190 - History of Economic Thought

Government (Political Science):
  102 - State and County Government
  157A - Constitutional Law

History:
  145A - 19th Century Europe and World War I
  171A - History of the United States

Psychology:
  110 - Abnormal Psychology
  170 - Industrial Psychology

Sociology:
  150A - Social Problems
  170 - The Modern Family
Departments and Academic Majors in California State Colleges

General classification refers to departmental area; the subgroups list the various majors as classified for purposes of this survey.

I. Education and Psychology
   1.1 Education
   1.2 Psychology

II. Health and Physical Education
   2.1 Recreation
   2.2 Physical Education
   2.3 Health
   2.4 Safety

III. Engineering
   3.1 General engineering
   3.2 Civil engineering
   3.3 Electrical engineering
   3.4 Mechanical engineering

IV. Social Science
   4.1 Social Science (general)
   4.2 Law Enforcement (including majors in corrections, penology, police, criminology)
   4.3 Social Welfare
   4.4 History
   4.5 Political Science (government)
   4.6 Sociology
   4.7 Public Administration
   4.8 Economics
   4.9 Miscellaneous (including anthropology, international relations, geography)

V. Life Sciences, Physical Sciences and Natural Sciences
   5.1 Mathematics
   5.2 Chemistry
   5.3 Physics
   5.4 Life Sciences
   5.5 Natural Sciences
VI. Business Administration
6.1 Business (general)
6.2 Accounting
6.3 Secretarial
6.4 Personnel
6.5 Industrial Management
6.6 Marketing

VII. Humanities and Fine Arts
7.1 Art
7.2 English, Literature and Language Arts
7.3 Journalism
7.4 Foreign Language
7.5 Music
7.6 Philosophy
7.7 Speech

VIII. Miscellaneous
8.1 Undeclared or undecided major
8.2 Nursing and nursing education
8.3 Home Economics
8.4 Occupational Therapy
8.5 Forestry, wildlife, fisheries, game management, etc.
8.6 Miscellaneous others (including industrial arts and physical therapy)
APPENDIX IV
Vocational Objectives of Students

Those general classifications set off with Roman numerals were the ones used in analysis. The subgroupings give some indication of the composition of the general groups.

I. Professions
   1.1 Professions (viz., law, medicine, ministry, dentistry)

II. Business
   2.1 Sales
   2.2 Personnel
   2.3 Accounting and finance
   2.4 Engineering
   2.5 Semi-professional (including management and various technical specialties, e.g., statistician, clinical psychologist, architect, home economist)

III. Education
   3.1 College teaching
   3.2 Secondary and junior high school teaching
   3.3 Elementary school teaching
   3.4 General educational services (administration, school psychologist, etc.)

IV. Public Employment
   4.1 Personnel
   4.2 Accounting and finance
   4.3 Engineering
   4.4 Semi-professional (including management and various technical specialties not mentioned previously)
   4.5 Law enforcement
   4.6 Welfare
   4.7 Military

V. Agriculture

VI. Undecided
APPENDIX V
Father's Occupation

The general classifications set off by Roman numerals were used in analysis. The subgroups give some indication of the categories within each group.

I. Professions
1.1 Professions (viz., law, medicine, ministry, dentistry)

II. Business
2.1 Sales
2.2 Personnel
2.3 Accounting and finance
2.4 Engineering
2.5 Semi-professional (including management and various technical specialties)
2.6 Skilled labor
2.7 Semi-skilled and unskilled labor

III. Education
3.1 Education

IV. Public Employment
4.1 Personnel
4.2 Accounting and finance
4.3 Engineering
4.4 Semi-professional (including management and various technical specialties)
4.5 Skilled labor
4.6 Semi-skilled and unskilled labor
4.7 Law enforcement
4.8 Welfare
4.9 Military

V. Agriculture

VI. Unclassified
APPENDIX VI