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ABSTRACT

The relationship between educational background and mobility into the executive ranks of state government was examined in a questionnaire survey of 839 state executives at the assistant division chief level and above. This study is part of a large study of the background characteristics of executives from South Carolina, Mississippi, North Carolina, Virginia, Alabama, Kentucky, and Tennessee. The major conclusions are: (1) Over half of the executives had graduate level education, and 48 percent had graduate level degrees, a finding that indicates the declining value of a bachelor's degree. (2) Three primary areas at the undergraduate level allow maximum executive mobility--the physical and biological sciences, business, finance and economics, and engineering--and these are areas in which women and minorities are less likely to major. (3) A select few colleges and universities in the region provide the greatest opportunity for mobility, especially in terms of graduate degree program offerings. (4) The educational system poses barriers for the mobility of women into the executive ranks of government that few policy-makers have adequately analyzed. Recommendations are made for expanding opportunities. (LBH)

# THE EDUCATIONAL BACKGROUNDS OF STATE EXECUTIVES: A STUDY OF POSTSECONDARY EDUCATIONAL PATTERNS OF STATE ELITES



## REPORT AND RECOMMENDATIONS

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The purpose of this study is to determine the relationship between educational background and mobility into the executive ranks of state government. How much and what kinds of education do top level state officials have? Where are they educated? How much is education related to who gets what, when and how in terms of moving into the state executive level? A better understanding of state executives is crucial because of the impact they have on crucial decisions that affect the American public. Also, as educators attempt to design programs that will more effectively educate public officials, our knowledge of their present educational backgrounds is very limited. Essentially, this study addresses itself to the question of the interface of educational systems with the braoder society as it relates to executive mobility. Charles Beard was one of the first of American scholars to systematically recognize the relationship of social background to policy decisions.[1]

Other, more recent, studies have focused on the representativeness of the American executive and have found that, while the public executive is more representative by social background than the business executive, the public executive is nevertheless of considerably higher socio-economic background and educational obtainment level than

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[1]Charles Beard, An Economic Interpretation of the Constitution of the United States (New York: The Macmillan Company, 1913).

the general public.[2]

While this study will focus on the educational backgrounds of state executives, it is part of a larger study encompassing civil service systems, mobility patterns, characteristics of women executives, and psychological predispositions of executives from the seven states of South Carolina, Mississippi, North Carolina, Virginia, Alabama, Kentucky, and Tennessee. Mail questionnaires were sent to a sample of 1173 state executives at the assistant division chief level and above.* This group included department heads, division or unit chiefs, deputy or assistant department heads, field office directors, and deputy division chiefs. The response rate was 839 or 71.5 percent of all questionnaires sent. This figure compared favorably with the response of the seminal Warner federal executive study. The methodological procedures were similar to the earlier Harvard-based Warner Study and are described in the Appendix.

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[2]See Leonard D. White, The Jacksonians (New York: Macmillan, 1954): Donald R. Matthews, The Social Background of Political Decision Makers (New York: Random House, 1954); W. Lloyd Warner, Paul P. Van Riper, Norman H. Martin, Orvis F. Collins, The American Federal Executive (New Haven: Yale University Press, 1963); C. Wright Mills, The Power Elite (New York: Oxford University Press, 1956); W.Lloyd Warner and James C. Abegglen, Big Business Leaders in America (New York: Harper and Brothers, 1955); F.W. Taussig and C.S. Joslyn American Business Leaders (New York: The Macmillan Company, 1932): Thomas R. Dye, John W. Pickering, "Governmental and Corporate Elites: Convergence and Differentiation," Journal of Politics 36 (1974); and Kenneth Meir, "Representative Bureaucracy: An Empirical Analysis," American Political Science Review 69 (June 1975).

*Questionnaires sent from the Bureau of Governmental research at the University of Mississippi.

Since 18 percent of the Americans employed are now in the governmental sector at the federal, state and local levels, a greater concern with present educational levels as well as how to educate individuals for public service has developed.[3] Programs at the academic level to educate public executives have proliferated. In the past fifteen years, despite a recent decline in the ratio of government employees employed to general population, civilian government employment has risen 148 percent and schools of public affairs such as the LBJ School of Public Affairs and the Maxwell School have become more important in the American educational system.[4]

Authors such as Kenneth Meier have emphasized that, because of evidence that formal controls such as legislative budgeting are not always operative in controlling the bureaucracy, if a bureaucracy is more representative, this representativeness is, in and of itself, a needed check toward democracy and the well-being of a diversity of interests. "The test of representative bureaucracy then is whether or not the social characteristics -- the education, occupation, social status, and similar measures of the bureaucracy -- mirror those exhibited by the American public."[5]

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[3]Theodore Leavitt, "Management for the Post-industrial Society." The Public Interest 44 (Summer 1976).

[4]Ibid., p. 70.

[5]Kenneth Meier, "Representative Bureaucracy: An Empirical Analysis," P. 528.

In his recent conclusion which is based on the Warner data that federal executives are hardly representative of the general public, Meier rejects the proposition that executives should be representative of the educational backgrounds of the general population because of the demands for expertise in specialized areas in government. Since recent research indicates a correlation between educational achievement and class background, representation in government executive ranks relates closely to educational achievement which in turn has led inevitably to a non-representative bureaucracy. Yet the paucity of empirical data on educational backgrounds of executives is indicated by the fact that, for the years 1969 to the present, only five studies are listed in the Educational Index which concern themselves with the educational backgrounds of executives. All of these five studies were normative, and none were empirical. At the same time programs proliferate to educate executives for public service, there is only partial knowledge of educational backgrounds of present executives at the state or federal level. Yet, due to the limited statistical data available when many present executives were educated, it is a difficult area to analyze. No comprehensive center for educational statistics existed in 1954 when many present executives were completing college. It takes state executives an average of twenty-two

years from the point they begin their careers to make it into their present positions. During this period, they are often involved in a process of continuing education to maintain upward mobility. The plurality of the American educational system makes this a difficult area to analyze and to further place the data in a systematic format. It is, therefore, with a keen awareness of these difficulties that the present study of 839 executives in seven states is presented.

## Levels of Education of a Public Elite

The importance of educational achievement in the 839 executives studied from the seven states of Kentucky, Alabama, Mississippi, Tennessee, South Carolina, Virginia, and North Carolina can be seen in that 80.7 percent had completed the bachelor's degree. A few of the older executives attended three years of college and then entered graduate school where they obtained a law degree or a medical degree. In some of these cases, a bachelor's degree was never awarded, but, nevertheless, as in the case of the Warner data, these persons were counted as having the equivalent of a bachelor's degree. The figure of 80.7 percent of state executives with college degrees compares closely with the figure of 81 percent of federal executives

in the Warner study and 83 percent in the Stanley study who had bachelor's degrees or above.[6] By 1971 the percentage of federal executives with bachelor's degrees or better had climbed to 91 percent, indicating that larger numbers of federal executives had bachelor's degrees than is the case at the state level.[7] The trend of increased educational obtainment as a prerequisite to mobility is clearly evident.

A higher percentage of career state executives, in contrast to politically appointed state executives, had bachelor's degrees. Political executives were defined as those who were appointed by the Governor of the state in contrast to career executives who were appointed by the department head or a board or commission. Among the career executives, 82.2 percent had a bachelor's degree or its equivalent, and 73.4 percent of the political executives had a bachelor's degree or its equivalent. The educational levels of state political executives depart from the trend in bachelor's degrees shown at the federal level. At the federal level, a higher percentage of the political executives

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[6]David T. Stanley, The Higher Civil Service (Washington, D.C.: The Brookings Institution, 1964), p. 30; and Warner, The American Federal Executive, p. 107.

[7]United States Civil Service Commission, Bureau of Executive Manpower, Executive Manpower in the Federal Service, January, 1972 (Washington, D.C.: Government Printing Office, 1972), p. 19.

(90%) have bachelor's degrees than is the case with the federal career executives.[8] This trend is reversed at the state level as indicated in Table 1.

TABLE 1

STATE EXECUTIVES WITH BACHELOR'S DEGREES OR FOUR YEAR EQUIVALENTS

| Degree | | All Executives | Career Executives | Political Executives |
|---|---|---|---|---|
| Yes | # | 677 | 572 | 105 |
| | % | 80.7 | 82.2 | 73.4 |
| No | # | 153 | 117 | 36 |
| | % | 18.2 | 16.8 | 25.2 |
| Unknown | # | 9 | 7 | 2 |
| | % | 1.0 | 1.0 | 1.4 |

## Graduate Education: The Increasing Prerequisite for Entry into the Elite

A second area of educational achievement that was examined was the graduate level. Forty-eight percent of the 839 executives studied had advanced degrees beyond the bachelor's level. More of the state executives studied (33%) hold Master's degrees than any other advanced degree beyond

[8] Warner, The American Federal Executive, p. 354.

the bachelor's level. Tabulations indicate that 34.9 percent of the career executives in the study have earned master's degrees. This percentage is 10.2 percentage points higher than the 23.7 percent of federal career civil service executives with master's degrees found in the 1963 Warner-Van Riper sample.[9] No data is available on master's degrees alone on the 1971 sample data of federal executives. A slighter difference exists between the number of state political executives having master's degrees (28.3%) and the political executives at the federal level holding master's degrees (19.8%).[10] Career executives on both federal and state levels have more master's degrees than is the case with political executives, but the percentage gap is wider at the state level. The percentages for advanced degrees of state executives are found on Tables 2 and 3.

The M.D. degree is the advanced degree held by the second highest number of state executives in the study. The 10.8 percent who had M.D. degrees compared with 2.7 percent at the federal level.[11] This difference can probably be attributed to the fact that medical and public health programs

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[9] Ibid., p. 357.

[10] Ibid.

[11] Ibid.

TABLE 2

PERCENTAGES AND NUMBERS OF STATE EXECUTIVES HOLDING MASTER'S DEGREES

| Degree | | All Executives | Career Executives | Political Executives |
|---|---|---|---|---|
| Yes | # | 227 | 243 | 34 |
| | % | 33.0 | 34.9 | 23.8 |
| No | # | 553 | 446 | 107 |
| | % | 65.9 | 64.1 | 74.8 |
| Unknown | # | 9 | 7 | 2 |
| | % | 1.1 | 1.0 | 1.4 |

TABLE 3

CAREER AND POLITICAL EXECUTIVES HOLDING ADVANCED DEGREES BY MOST ADVANCED DEGREE HELD WITH PERCENTAGES FIGURED OF TOTAL OF ALL DEGREES INCLUDING BACHELOR'S AND HIGH SCHOOL

| Degree | | All Executives | Career Executives | Political Executives |
|---|---|---|---|---|
| Some Graduate Work | # | 29 | 23 | 6 |
| | % | 3.5 | 3.3 | 4.2 |
| Master's | # | 190 | 167 | 23 |
| | % | 22.6 | 24.0 | 16.1 |
| M.D. | # | 91 | 80 | 11 |
| | % | 10.8 | 11.5 | 7.7 |
| Law | # | 63 | 43 | 20 |
| | % | 7.5 | 6.2 | 14.0 |
| Doctorate | # | 55 | 51 | 4 |
| | % | 6.6 | 7.3 | 2.8 |
| Total # | | 839 | 696 | 143 |

operate primarily at the state rather than at the federal level. The law degree was earned by 7.3 percent of the executives studied and the doctorate degree by 6.6 percent of the executives. The doctorate degree was held by 7.3 percent of the career executives and 2.8 percent of the politically appointed executives. Overall the career executives were a more educated group than the politically appointed executives with one exception. In the area of law, 14 percent of the politically appointed executives had law degrees, and only 6.2 percent of the career executives had law degrees. These data parallel an even more exaggerated gap at the federal level where, as indicated by the Warner-Van Riper research, 9.4 percent of the career executives held law degrees and 39.9 percent of the political executives held law degrees.[12] Since studies indicate that lawyers are represented in elected positions far out of proportion to other professions, a spin-off effect apparently exists in politically appointed positions.

Despite recent pessimism that education is less important now than it was in the past, the significance of graduate work and advanced degrees for recruitment and mobility into the state executive elite can be seen in the

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[12] Ibid.

fact that 47.6 percent of the executives studied had advanced degrees beyond the bachelor's level and 51.0 percent had either an advanced degree beyond the bachelor's level or graduate work toward an advanced degree. Some analysts have been misled by assuming that, because the bachelor's degree is not as much of a door opener in terms of mobility, education is less important now than it has been in the past. It appears that education at the graduate level is increasingly significant, and, therefore, education at the postsecondary level is increasingly important. Since 11.4 percent of the executives who did not have a bachelor's degree had special training at either an institute, special workshop, or night course and only 6.1 percent of the executives indicated they had not had some form of advanced education beyond the high school level, one can conclude that the lack of education or special training in today's complex society is a barrier through which only a select few can pass. This trend is probably irreversible. Educationally, the executives studied are a very select group. Also, based upon advanced degrees held in 1970, state executives have earned advanced degrees at the same level as federal executives. The data indicate that 48 percent of the state executives had advanced degrees at the master's level or above in 1969-70 in comparison with 48

percent of federal executives in 1971.[13] Based upon Stanley data, state executives are more educated at the graduate level than federal executives.[14]

## Specializations of State Executives: A Specialized Elite

Another aspect examined in the study of state executives was their areas of educational specialization. The United States has often been criticized for not having a "cult of the generalist" in its administrative system. Because of the emphasis in the United States on specialization, a concern over the narrowness of executive preparation has been expressed. It is interesting, however, that the British system, traditionally a generalist one, has begun to move more in the direction of the specialist. The Fulton report recently made in Great Britain found that the generalist could not function well in the technical areas he had to comprehend, and the committee stated:

> They do not develop adequate knowledge in depth in any one aspect of the department's work and frequently not even in the general area of activity in which the department operates. Often they are required to give advice on subjects they do not sufficiently understand

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[13] United States Civil Service Commission, Executive Manpower in the Federal Service, p. 18.

[14] Stanley, The Higher Civil Service, p. 30.

> or to make decisions whose significance they do not fully grasp.[15]

In the United States, the educational system is very diverse. This diversity is reflected in the wide range of areas of specialization of state executives. As the data have previously indicated, more than half of the state executives continue in graduate level education. Probably the reason one does not find as much of a generalist-expert dilemma in the United States as one does in Great Britain is that the educational system in the United States is geared to produce a combination generalist-specialist. The engineer is expected at the undergraduate level to acquire knowledge of language, history, and often philosophy. The social scientist is expected to develop some knowledge of math, science, philosophy, and foreign language. If these undergraduates are capable, they are encouraged by the faculty to become specialists through pursuing graduate work. Given the diversity of the United States, the choice is never completely one of the generalist vs. the specialist. Nevertheless, the data have indicated that the state executives tend to be specialists, and the statement made by Leonard White about the federal service also seems to be true

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[15] The Civil Service Vol. 1 Report of the Committee 1966-1968, Lord Fulton, Chairman (London: Her Majesty's Stationery Office, 1968), p. 18.

at the state level.

> The tendency to produce specialists in the public service is very great. The work is specialized and the number of specialists is large. The classification system is built on specialization. Examinations have generally tested for specialist qualities. Promotion has often been geared to the possession of expert skills. Bureau chiefs have usually risen through the ranks of specialty operations. Prestige attaches to specialty success.[16]

The mitigation of the generalist norm and the ready availability of specialized education in which the United States surpasses any other country when diversity of fields is considered may be two key reasons why the system has placed a priority on recruiting specialists into the administrative elites.

Figures are presented on Tables 4, 5 and 6 for the areas of undergraduate specialization at the four year level. A majority of state executives (53.2%) were educated in applied fields which include business, finance, accounting, engineering, education, social work, medicine, public administration, city planning, medicine, and law. The largest single category of these are educated in business departments (21.8% of all undergraduate degrees) in either business, finance, or economics. Engineering with 19.2 percent of all four year degrees ranks second among the areas in which

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[16]Leonard D. White, Introduction to the Study of Public Administration (New York: The Macmillan Company, 1955), p. 92.

TABLE 4

AREAS OF SPECIALIZATION AT THE FOUR YEAR LEVEL*

| Specialization | | All Executives | Career Executives | Political Executives |
|---|---|---|---|---|
| Humanities | # | 100 | 85 | 15 |
| | % | 16.0 | 16.3 | 14.4 |
| Behavioral Sciences | # | 43 | 29 | 14 |
| | % | 6.9 | 5.6 | 13.5 |
| Physical and Biological Sciences | # | 149 | 125 | 24 |
| | % | 23.9 | 24.0 | 23.1 |
| Applied Fields | # | 332 | 281 | 51 |
| | % | 53.2 | 54.0 | 49.0 |
| Total # | | 624 | 520 | 104 |

*In order to provide comparability of data, the categories of specialization were defined in a manner similar to that used in the Warner study of federal executives. The humanities include language, music, art, philosophy, and history. The behavioral sciences include psychology, political science, sociology, anthropology, and economics. The physical and biological sciences include biology, anatomy, physiology, botany, physics, chemistry, and mathematics. Applied fields include business, finance, accounting, engineering, education, social work, medicine, public administration, journalism, city planning, and law. Several executives went immediately into the study of law and medicine after two or three years of college, and these were counted as having applied four year degree equivalents.

TABLE 5

UNDERGRADUATE MAJORS OF CAREER AND POLITICAL EXECUTIVES WITH BACHELOR'S DEGREES OR FOUR YEAR EQUIVALENTS

| Type of Major | Number | Percent | Cumulative Number | Cumulative Percent |
|---|---|---|---|---|
| Physical, Biological Sciences | 149 | 23.9 | 149 | 23.9 |
| Business, Finance, Economics | 136 | 21.8 | 285 | 45.7 |
| Engineering | 120 | 19.2 | 405 | 64.9 |
| Education | 60 | 9.6 | 465 | 74.5 |
| History | 60 | 9.6 | 525 | 84.1 |
| Humanities* | 33 | 5.3 | 558 | 89.4 |
| Medicine | 21 | 3.4 | 579 | 92.8 |
| Sociology | 11 | 1.8 | 590 | 94.5 |
| Political Science | 8 | 1.3 | 598 | 95.8 |
| Liberal Arts** | 7 | 1.1 | 605 | 96.9 |
| Journalism | 5 | .8 | 610 | 97.8 |
| Psychology | 5 | .8 | 615 | 98.6 |
| Law | 4 | .6 | 619 | 99.2 |
| Physical Education | 3 | .5 | 622 | 99.7 |
| Public Administration | 1 | .2 | 623 | 99.8 |
| Social Work | 1 | .2 | 624 | 100.0 |
| City and Urban Planning | 0 | 0.0 | 624 | 100.0 |
| Pharmacy | 0 | 0.0 | 624*** | 100.0 |

*Language, Music, Art, and Philosophy
**Used if this phrase were only information given.
***This information was not given for 53 executives. The term "four year equivalent" is used because some executives went immediately into law or medical school and received no undergraduate degree.

TABLE 6

UNDERGRADUATE MAJORS OF CAREER AND POLITICAL EXECUTIVES WITH BACHELOR'S DEGREES OR FOUR YEAR EQUIVALENTS

| | Career | | | Political | | |
|---|---|---|---|---|---|---|
| Type Major | Number | Percent | Cumulative Percent | Number | Percent | Cumulative Percent |
| Physical, Biological Sciences | 124 | 24.03 | 24.03 | 24 | 23.07 | 23.07 |
| Business, Finance, Economics | 109 | 20.96 | 44.99 | 27 | 25.96 | 49.03 |
| Engineering | 106 | 20.38 | 65.35 | 14 | 13.46 | 62.49 |
| Education | 51 | 9.81 | 75.16 | 9 | 8.65 | 71.10 |
| History | 51 | 9.80 | 84.96 | 9 | 8.65 | 79.80 |
| Humanities | 29 | 5.57 | 90.53 | 4 | 3.85 | 83.60 |
| Medicine | 17 | 3.27 | 93.80 | 4 | 3.85 | 87.50 |
| Sociology | 10 | 1.92 | 95.72 | 1 | .96 | 88.40 |
| Liberal Arts | 5 | .96 | 96.68 | 2 | 1.92 | 90.30 |
| Political Science | 4 | .77 | 97.40 | 4 | 3.85 | 94.20 |
| Journalism | 4 | .77 | 98.20 | 1 | .96 | 95.10 |
| Psychology | 4 | .77 | 98.90 | 1 | .96 | 96.10 |
| Physical Education | 3 | .57 | 99.50 | 0 | .00 | 96.10 |
| Social Work | 1 | .19 | 99.70 | 0 | .00 | 96.10 |
| Law | 1 | .19 | 100.00 | 3 | 2.88 | 99.02 |
| Public Administration | 0 | .00 | 100.00 | 1 | .96 | 100.00 |
| City Planning | 0 | .00 | 100.00 | 0 | .00 | 100.00 |

executives received bachelor's degrees. All other applied fields are less significant numerically when compared with these two fields. The field which ranks third in the applied area is education with 9.6 percent. Only .2 percent of the executives indicated that they had public administration as an undergraduate major. Since public administration is a recently developed undergraduate major, this figure is understandable. The number of executives with public administration backgrounds increases at the master's level.

While the applied areas predominate at the bachelor's level, the physical and biological sciences constitute the second largest category of state executive undergraduate majors. Nearly one-fourth (23.9%) of the state executives studied indicated a major in either the physical or biological sciences. At the undergraduate level, politically appointed executives and career executives are very similar in types of specialization. In the case of career executives, 24.0 percent indicated a physical or biological science major, and 23.1 percent of the political executives indicated one of these majors.

The third categorization utilized in classifying majors was the humanities. The humanities include language, music, art, philosophy and history. Those few who specified only "liberal arts" as a major with no other classification

were also included in the humanities. The humanities were named as an undergraduate major by 16.0 percent of the executives in the sample and constituted the third largest category. History was the largest area in this category and was given as a major by 9.6 percent of those who specified undergraduate majors. Among the executives, 5.3 percent specified language, music, art, or philosophy as a major, and the remaining executives (1.1%) simply specified liberal arts as a major.

The behavioral sciences were the least represented of all categories at the four year level and constituted 6.9 percent of the executive sample giving undergraduate majors. This category includes majors in psychology, economics, political science, sociology, and anthropology. More than twice as many (13.5%) of the political executives as career executives (5.6%) specified that their major was in the behavioral science area. The largest category in the behavioral sciences was economics with 3.0 percent. Sociology and political science followed with 1.8 percent and 1.3 percent, respectively. Only .8 percent of the top executives were psychologists. Anthropology was not represented. When the state executives' undergraduate backgrounds are compared with federal executives', the area of behavioral sciences is most under-represented. Whereas 19.1 percent

of the civilian federal executives had undergraduate majors in the behavioral sciences,[17] only 6.9 percent of the state executives indicated undergraduate majors in this area. The percentages of state executives with undergraduate degrees in the applied area is 5.6 percentage points higher than at the federal level and about the same in the physical and biological sciences. The humanities as an undergraduate major at the state level was 6.7 percentage points higher than at the federal level. In the case of state executive recruitment, apparently a greater emphasis is placed on specialized and applied educational backgrounds.

## Representativeness of Degrees: The Non-Representative Elite

The percentages of state executives in the major areas of undergraduate study in which undergraduate degrees are awarded were compared with the percentages of U.S. 1964-1965 college graduates in these same fields in order to see if the state executive is typical of the educational pattern of specialization in the United States. These years are used because a breakdown of patterns for 1955, the time

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[17] Warner, The American Federal Executive, p. 362. The overall degree of graduate attainment cannot be measured from Warner's tables because the data presents overlapping degrees and not just highest degree obtained.

at which most executives were graduated from college, is not available. They are not a representative group in their majors, and, as the data indicates, the more specialized students are, to a greater extent than one would randomly expect, recruited into the system. For example, nearly one-fourth (23.9%) of the state executives had undergraduate majors in the physical or biological sciences, and only 13.9 percent of all undergraduate degrees awarded in the United States for 1964-1965 were awarded in this area.[18] This means there are 172 executives in the physical and biological sciences at the four year level for every 100 that would be expected on a random basis. Exactly 21.8 percent of the executives studied indicated a business or economics undergraduate major, while only 16.4 percent of the degrees awarded in the United States for the academic year 1964-1965 were in business and economics. The index of over-representation is 1.33. Engineering is an area which is substantially over-represented among the state executives when compared with the total degrees awarded in this field in the United States. Engineering undergraduate backgrounds were indicated by 19.2 percent of the executives

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[18] A Fact Book on Higher Education, 1967-1968 Washington, D.C.: American Council on Education), pp. 132-168. Figures were tabulated from tables on these pages.

studied, but only 7.3 percent of the degrees awarded in the academic year 1964-1965 were in this area. The index of over-representation is 2.6, meaning that there are 2.6 engineers for every one that would randomly be expected based on degrees awarded. At the opposite end of the spectrum, the more general areas, such as the humanities, were under-represented. Whereas slightly over one-fourth (25.9%) of the degrees awarded in 1964-1965 were in the humanities area, only 16.0 percent of the executives had undergraduate majors in this area providing an under-representation index of .62 which indicates that there are sixty-two executives with humanities majors for every 100 that would be expected.[19] Almost all executives will later, at the graduate level, completely shift from the humanities. The behavioral sciences are also under-represented. Only 6.9 percent of all executives studied had an undergraduate degree in this area and 11.9 percent of all degrees awarded (1964-1965) were in the behavioral sciences, providing the most under-represented type degree area with an under-representation index of .58 with only fifty-eight behavioral science majors for every 100 that would be expected. One can conclude that the state executives recruited are more concentrated in

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[19] Ibid. In both figures, history is counted as one of the humanities as in the Warner study.

applied sciences and business than the average college graduate, and, as the data will further indicate, this trend becomes more evident at the master's level. Since most of the executives with a more general education specialize at the graduate level, the figures at the undergraduate level alone obscure the degree of specialization that is required to be recruited into the state executive elite.

## Master's Degree Level

At the Master's level, the degrees of the state executives shift substantially in the direction of applied fields in comparison with undergraduate degrees. Table 7 shows that 76.3 percent of the executives who have master's degrees hold those degrees in applied fields. These data compare with 53.2 percent at the bachelor's level. Applied fields include business, finance, accounting, engineering, education, social work, medicine, public administration, journalism, city planning, and law. Education predominates at the master's level with 35.9 percent of those with master's work indicating this as a field of specialization. Only 9.6 percent of the executives indicated education as an undergraduate major. The area of specialization undertaken by the second largest number of state executives at the master's level is the Master of Public Health (11.9%)

TABLE 7

AREAS OF SPECIALIZATION AT THE MASTER'S LEVEL

| Specialization | | All Executives | Career Executives | Political Executives |
|---|---|---|---|---|
| Humanities | # | 14 | 12 | 2 |
| | % | 4.7 | 4.6 | 5.4 |
| Behavioral Sciences | # | 16 | 10 | 6 |
| | % | 5.4 | 3.9 | 16.2 |
| Physical, Biological Sciences | # | 40 | 35 | 5 |
| | % | 13.6 | 13.6 | 13.5 |
| Applied Fields | # | 225 | 201 | 24 |
| | % | 76.3 | 77.9 | 64.9 |
| Total # | | 295 | 258 | 37 |

followed by business degrees earned by 9.8 percent of the executives with master's work. Master's with specialization in engineering (9.8%) and social work (5.8%) account for most of the remaining executives with master's work. This shift toward applied fields is substantially greater at the state level than at the federal level, where the applied fields drop slightly at the master's level.[20] At the master's level, the area of specialization which proportionately drops the most is the humanities. Whereas 16 percent

[20] Warner, The American Federal Executive, p. 362.

of the executives indicated one of the fields in the humanities to be an undergraduate major, only 4.7 percent indicated graduate work in one of the humanities at the master's level. This shift provides further support for the hypothesis that training in an applied field is a prerequisite for recruitment into the executive elite. This drop parallels the one at the federal level where percentages in the humanities drop from 14.5 to 8.7 at the master's level.[21] The behavioral sciences as an area of specialization among state executives remains relatively constant from the bachelor's level to the master's level with a percentage drop from 6.9 to 5.4. However, a substantially larger percentage (16.2%) of the politically appointed executives have master's work in the behavioral sciences than is the case with career executives (3.9%). Also, the physical and biological sciences drop from 23.9 percent as an area of specialization at the undergraduate level to 13.6 percent at the master's level. The predominance of applied areas of specialization at the master's level can be seen on Table 8. Seven areas account for 86.8 percent of all Master's majors. These seven areas, in order, are education, physical science, biological science, public health, business, engineering, and social work. All

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[21] Ibid.

TABLE 8

MAJORS OF EXECUTIVES ON THE MASTER'S LEVEL

| Major | All Executives | | | Career | | | Political | | |
|---|---|---|---|---|---|---|---|---|---|
| | # | % | Cum. % | # | % | Cum. % | # | % | Cum. % |
| Education | 106 | 35.9 | 35.9 | 94 | 35.43 | 36.43 | 12 | 32.43 | 32.43 |
| Physical, Biological Science | 40 | 13.6 | 49.5 | 35 | 13.56 | 50.0 | 5 | 13.51 | 45.94 |
| Medicine (MPH) | 35 | 11.9 | 61.4 | 32 | 12.40 | 62.4 | 3 | 8.11 | 54.1 |
| Business, Finance, Economics, Accounting | 29 | 9.8 | 71.2 | 25 | 9.70 | 72.1 | 4 | 10.81 | 64.9 |
| Engineering | 29 | 9.8 | 81.0 | 26 | 10.08 | 82.2 | 3 | 8.11 | 72.9 |
| Social Work | 17 | 5.8 | 86.8 | 16 | 6.20 | 88.4 | 1 | 2.70 | 75.7 |
| History | 8 | 2.7 | 89.5 | 7 | 2.71 | 91.1 | 1 | 2.70 | 78.4 |
| Humanities (Art, Music, Language) | 6 | 2.0 | 91.5 | 5 | 1.94 | 93.0 | 1 | 2.70 | 81.0 |
| Public Administration | 6 | 2.0 | 93.5 | 3 | 1.16 | 94.2 | 3 | 8.11 | 89.0 |
| Psychology | 5 | 1.7 | 95.2 | 4 | 1.55 | 95.7 | 1 | 2.70 | 91.9 |
| Political Science | 4 | 1.35 | 96.6 | 2 | .77 | 96.5 | 2 | 5.41 | 97.3 |
| City Planning | 4 | 1.35 | 97.9 | 4 | 1.55 | 98.1 | 0 | 0.00 | 97.3 |

TABLE 8 -- Continued

| Major | All Executives | | | Career | | | Political | | |
|---|---|---|---|---|---|---|---|---|---|
| | # | % | Cum. % | # | % | Cum. % | # | % | Cum. % |
| Physical Education | 2 | .7 | 98.6 | 2 | .77 | 98.8 | 0 | 0.00 | 97.3 |
| Journalism | 1 | .3 | 98.9 | 1 | .39 | 99.2 | 0 | 0.00 | 97.3 |
| Sociology | 1 | .3 | 99.3 | 1 | .39 | 99.6 | 0 | 0.00 | 97.3 |
| Law | 1 | .3 | 99.6 | 0 | 0.00 | 99.6 | 1 | 2.70 | 100.0 |
| Pharmacy | 1 | .3 | 100.0 | 1 | .39 | 100.0 | 0 | 0.00 | 100.0 |
| Totals | 295* | | | 258 | | | 37 | | |

*There are more than the 277 executives with master's degrees included because, although not requested, some executive with work toward the master's degree specified their major. In these cases, the major was included with the master's degrees to give a more complete profile.

of these areas except physical and biological science are applied fields, and the biological and physical sciences are very specialized scientific fields. It is evident that the selection process of the state executive mitigates in favor of the executive with knowledge that can be applied to his job.

The proportion of executives recruited at the master's level is also more skewed in the direction of the applied areas than the proportion of master's degrees awarded in the United States. In the applied areas, 66,269 master's degrees were awarded in the United States in 1964-1965. This figure represents 61.5 percent of the total degrees awarded.[22] Since 76.3 percent of the executives studied had received their degrees in one of the applied areas, there are 124 executives with master's degrees in the applied areas for every 100 that would be expected if recruitment followed normal distribution patterns. In the applied area of education where 35.9 percent of the executives studied received their degrees, only 20.3 percent of the total number of college graduates in the United States for the year 1964-1965 held degrees. Executives in applied areas such as medicine are recruited out of proportion to

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[22] A Fact Book on Higher Education, pp. 132-168.

the number of degrees awarded at the master's level. ... executives had earned 11.9 percent of their master's in either public health or nursing compared with only 2.3 percent of the total number of degrees which were earned by the average college graduate. In contrast to the percentages at the bachelor's level, the behavioral sciences are about equally represented at the master's level to the proportion of degrees awarded in this field. At the master's level, 5.4 percent of the executives had master's degrees in one of the behavioral areas in comparison with 6.9 percent of the 1964-1965 graduates. The humanities are very substantially under-represented since 18.3 percent of all degrees awarded in 1964-1965 were in this area and only 4.7 percent of the executives had their master's in one of the areas of the humanities. The under-representation index for the humanities is .26.[33] This is a very significant degree of under-representation that may have substantial policy implications. This becomes especially true when it is recognized that this is precisely the area in which most women receive their degrees, an implication that is discussed later in this study.

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[23]Humanities were defined to include history as in the case of the Warner study.

## Doctoral Level

As indicated earlier, 7.3 percent of the executives had earned Ph.D. degrees or doctorates related to academic areas excluding the Jurisprudence Doctorate and the M.D. degree. Table 9 shows the data on the areas of specialization at the Doctoral level.

TABLE 9

AREAS OF SPECIALIZATION AT DOCTORAL LEVEL

| Specialization | | All Executives | Career Executives | Political Executives |
|---|---|---|---|---|
| Humanities | # | 5 | 5 | 0 |
| | % | 9.4 | 10.0 | 0.0 |
| Behavioral Sciences | # | 2 | 2 | 0 |
| | % | 3.8 | 4.0 | 0.0 |
| Physical, Biological Sciences | # | 11 | 11 | 0 |
| | % | 20.7 | 22.0 | 0.0 |
| Applied Fields | # | 35 | 32 | 3 |
| | % | 66.0 | 64.0 | 100.0 |

Table 10 indicates that most doctorates (56.6%) are held in the area of education. The second most prevalent area in which doctoral degrees have been earned is the area of physical and biological sciences where 20.7 percent of the state executives holding doctorates specified a specialization. The other areas in which doctorates are held are

TABLE 10

MAJORS OF EXECUTIVES WITH DOCTORAL DEGREES

| Major | All Executives | | | Career | | | Political | | |
|---|---|---|---|---|---|---|---|---|---|
| | # | % | Cum. % | # | % | Cum. % | # | % | Cum. % |
| Education | 30 | 56.6 | 56.6 | 28 | 56.0 | 56.0 | 2 | 66.7 | 66.7 |
| Physical, Biological Sciences | 11 | 20.7 | 77.4 | 11 | 22.0 | 78.0 | 0 | 0.0 | 66.7 |
| History | 3 | 5.7 | 83.0 | 3 | 6.0 | 84.0 | 0 | 0.0 | 66.7 |
| Engineering | 2 | 3.8 | 86.8 | 2 | 4.0 | 88.0 | 0 | 0.0 | 66.7 |
| Humanities | 2 | 3.8 | 90.6 | 2 | 4.0 | 92.0 | 0 | 0.0 | 66.7 |
| Psychology | 2 | 3.8 | 94.3 | 2. | 4.0 | 96.0 | 0 | 0.0 | 66.7 |
| Public Administration | 2 | 3.8 | 98.1 | 1 | 2.0 | 98.0 | 1 | 33.3 | 100.0 |
| Business, Finance, Economics | 1 | 1.9 | 100.0 | 1 | 2.0 | 100.0 | 0 | 0.0 | 100.0 |
| Political Science | 0 | 0.0 | 100.0 | 0 | 0.0 | 100.0 | 0 | 0.0 | 100.0 |
| Sociology | 0 | 0.0 | 100.0 | 0 | 0.0 | 100.0 | 0 | 0.0 | 100.0 |
| Totals | 53* | | | 50 | | | 3 | | |

*Excludes medical and jurisprudence degrees which are included in another table. The majors of two executives with doctorates were unknown.

history (5.7%), engineering (3.8%), and business areas (1.9%). The applied areas of education, engineering, business, and public administration again predominate at the doctoral level. Since 10.8 percent of all state executives have medical degrees and 7.5 percent have law degrees, both of which are degrees in applied areas, one could conclude that the graduate education of state executives is preponderantly in areas that can be categorized as applied fields. This pattern of specialization probably exists because the executive is generally expected to have expertise that can be applied to the work of his department prior to his recruitment.

In the area of recruiting executives who hold doctorates, the applied areas are also over-represented as a proportion of the degree distribution in the United States. While 66.0 percent of the executives who had doctoral degrees indicated that their degrees were in applied areas, only 32.6 percent (a drop from the percentage at the master's level) of the total number of doctoral degrees for 1964-1965 were awarded in this area. But the percentage of doctorates in areas such as business and engineering is substantially lower than the percentage of bachelor's and master's degrees in these areas, and the percentage of doctorates in education is much higher than the percentage at the two lower levels.

The data presented have indicated that the educational background of the state executive represents a pattern of continuing specialization. Since in 1965 only 9.4 percent of the total United States population over twenty-five had four years or more of college in comparison with over 80 percent of the state executives studied, the state executive is not representative educationally of the population in the United States. Even in terms of undergraduate and graduate educational background, the state executive is atypical of the general public with degrees. He is educated more in applied areas than the average populace having degrees. Finally, at the graduate level, the state executive reflects the same educational level attainments as the federal government executive.

## Colleges and Universities Attended by the State Executive Elite

Formal education is such an important aspect of executive mobility that an attempt has been made to see if state executives tend to be recruited disproportionately from any particular type of institution of higher learning. Warner found that, even though there are over 2,000 institutions of higher learning in the United States, thirty of these institutions granted 40 percent of all the bachelor's

degrees held by the federal elite.[24] Mobility into the public elite may be very much related to the college or university one attends. Thomas Dye and John Pickering found in studying top level governmental and corporate elite that 58 percent of the corporate leaders and 44 percent of the governmental leaders were alumni of twelve prestigious private universities which include Harvard, Yale, Chicago, Stanford, Columbia, Massachusetts Institute of Technology, Cornell, Northwestern, Princeton, Johns Hopkins, Pennsylvania, and Dartmouth. They concluded that elites are notably Ivy League.[25]

Table 11 presents the top thirty-three institutions granting the bachelor's degree to state executives in the seven states studied. These institutions are listed in rank order, and the table includes the cumulative percentages by rank order. The executives studied attended a diversity of universities scattered about the country, but many of the universities and colleges were attended by too small a number of executives to be listed, and only predominating institutions are included in the table.

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[24] W. Lloyd Warner, The American Federal Executive, p. 126.

[25] Thomas R. Dye and John W. Pickering, "Governmental and Corporate Elites: Convergence and Differentiation."

TABLE 11

COLLEGES MOST ATTENDED IN RANK ORDER:
B.A. OR EQUIVALENT

| Name | Number of Degrees Granted | Cumulative Total | Cumulative Percent |
|---|---|---|---|
| University of Alabama | 35 | 35 | 5.1 |
| Mississippi State | 35 | 70 | 10.2 |
| Auburn University | 33 | 103 | 15.1 |
| University of South Carolina | 33 | 136 | 20.0 |
| University of Kentucky | 29 | 165 | 24.1 |
| North Carolina State | 25 | 180 | 27.8 |
| University of North Carolina | 22 | 212 | 31.0 |
| University of Tennessee | 21 | 233 | 34.1 |
| University of Mississippi | 20 | 253 | 37.0 |
| Mississippi College | 18 | 271 | 39.6 |
| Clemson University | 17 | 288 | 42.1 |
| Wake Forest University | 14 | 302 | 44.2 |
| Western Kentucky | 14 | 316 | 46.2 |
| University of Virginia | 13 | 329 | 48.1 |
| Millsaps College | 11 | 340 | 49.7 |
| Richmond University | 10 | 350 | 51.2 |
| Vanderbilt University | 9 | 359 | 52.5 |
| George Peabody | 8 | 367 | 53.7 |
| University of S. Mississippi | 8 | 375 | 54.8 |

TABLE 11 -- Continued

| Name | Number of Degrees Granted | Cumulative Total | Cumulative Percent |
|---|---|---|---|
| Virginia Military Institute | 8 | 383 | 56.0 |
| Virginia Polytechnical Institute | 8 | 391 | 57.2 |
| Pennsylvania State | 7 | 398 | 58.2 |
| Wofford | 7 | 405 | 59.2 |
| Duke University | 6 | 411 | 60.1 |
| Eastern Kentucky | 6 | 417 | 61.0 |
| George Washington | 6 | 423 | 61.8 |
| Louisiana State | 6 | 429 | 62.7 |
| Tennessee Tech | 6 | 435 | 63.6 |
| Birmingham Southern | 5 | 440 | 64.3 |
| Furman University | 5 | 445 | 65.1 |
| Middle Tennessee State | 5 | 450 | 65.8 |
| University of Pittsburg | 5 | 455 | 66.5 |
| Washington and Lee | 5 | 460 | 67.3 |

A select group of universities and colleges do, in fact, educate the majority of state executives. The College Blue Book lists 352 institutions of higher learning in the seven state region in which the executives work;[26]

[26]Christian E. Burckel, publisher, The College Blue Book, Vol. I (Yonkers, N.Y.: The College Blue Book, 1965).

yet the top fifteen colleges and universities from which state executives reported receiving their undergraduate degrees granted half of the total degrees held by state executives. These top fifteen institutions constitute the "Ivy League" of the region studied. An outsider trying to break into this elite would experience some of the same difficulties that one outside the educational Ivy League might experience breaking into the national corporate and governmental elite. It is notable that neither elite includes predominately minority institutions. This is significant.* Yet as all elites, both guard the doors of entry with the appropriate levels of disdain toward outsiders. While it may appear initially that there is no overlap between the education of state and federal elites, the degree of overlap in educational backgrounds becomes more apparent at the graduate level.

The top five universities attended by executives in the seven state region were the University of Alabama, Mississippi State University, Auburn University, the University of South Carolina, and the University of Kentucky. These top five universities granted 24.1 percent of the undergraduate degrees. State universities predominate in the education of state executives. Only three private colleges are included among the top fifteen undergraduate institutions

*While no data is presented on number of minority executives, follow-up personal interviews indicate they are few in number. Universities such as Virginia State or Jackson State have not broken into the elite.

from which the sample of state executives were recruited. The three private colleges were Mississippi College, Wake Forest University, and Millsaps College. At the state level, the brokers of entry into the executive ranks have been the so called "major" state universities. Data indicating that 67.5 percent of all executives received their undergraduate degrees from state institutions of higher education and 30.7 percent received their degrees from private and religious institutions are presented on Table 12.

State-supported universities and colleges were divided into two categories: state universities and universities which had their origins as land-grant colleges or were primarily technological in orientation. For example, the University of Mississippi and the University of North Carolina at Chapel Hill were classified as state universities. The University of North Carolina State and Mississippi State, because they had their origins as land-grant colleges and are more technological in orientation, were classified as technological. The classification is a bit arbitrary in view of the broadened role which now exists for former land-grant universities, but it does indicate the significant role the land-grant universities have played in the states. Of the executives studied, 40.6 indicated that they had received their undergraduate degrees at state

TABLE 12

TYPE COLLEGE AND UNIVERSITY ATTENDED AT UNDERGRADUATE LEVEL

| Type University | | All Executives | Career Executives | Political Executives |
|---|---|---|---|---|
| State | # | 278 | 238 | 40 |
| | % | 40.6 | 41.1 | 38.1 |
| Private and Religious | # | 210 | 178 | 32 |
| | % | 30.7 | 30.7 | 30.5 |
| Land Grant and Technological* | # | 184 | 152 | 32 |
| | % | 26.9 | 26.2 | 30.5 |
| Foreign | # | 12 | 11 | 1 |
| | % | 1.7 | 1.9 | .9 |

*Also includes U.S. Academies.

universities not having their origin as land-grant universities or not being primarily technological in nature, and 26.9 percent received their degrees from universities that were land-grant in origin and primarily tehcnological in orientation. The fact that private colleges have played a more significant role among federal executives than among state executives can be seen in the data which show 42.4 percent of the civilian federal executives studied by Warner as having received their degrees at private colleges and universities[27] as compared with 30.7 percent among the sample of state executives.

[27]Warner, The American Federal Executive, p. 128.

Few of the top thirty-three institutions that the sample of state executives attended and from which they received 67.3 percent of their undergraduate degrees were outside of the seven states studied. The four exceptions were Pennsylvania State which ranked twenty-second, George Washington which ranked twenty-sixth, Louisiana State which ranked twenty-seventh, and the University of Pittsburgh which ranked thirty-second. At the undergraduate level, little overlap exists between the institutions attended by state executives and those attended by the federal executives. The main exceptions were Pennsylvania State which ranked seventeenth at the federal level and twenty-third at the state executive level and George Washington which was third among federal executives and twenty-fourth among state executives. This lack of overlap can be explained by the locations of the top thirty schools represented among federal executives. Only those in the Washington, D.C. area are located in the South and Southwest.[28] The lack of representation of the Southern universities among the federal career executives is probably explained by the size factor unless recruiting biases toward southern universities exist at the federal level.

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[28]Ibid., p. 133.

Although only 28.2 percent of the state executives attended colleges in states other than the ones by which they were employed, considerable variation existed from state to state. For example, in Virginia, 51.6 percent of the state executives received their undergraduate degrees out of the state. This percentage is a higher proportion than any of the other six states studied. This data is presented in Table 13.

TABLE 13

PROPORTIONS OF EXECUTIVES HAVING OUT-OF-STATE DEGREES AT THE FOUR YEAR LEVEL

| State | Total | Out-of-State | Percentage |
|---|---|---|---|
| Tennessee | 104 | 38 | 36.5 |
| Kentucky | 81 | 17 | 21.0 |
| N. Carolina | 100 | 26 | 26.0 |
| Mississippi | 114 | 21 | 18.4 |
| S. Carolina | 94 | 24 | 25.5 |
| Alabama | 96 | 18 | 18.8 |
| Virginia | 95 | 49 | 51.6 |
| Totals | 684 | 193 | 28.2 |

In Mississippi, which had the lowest percentage of out-of-state undergraduate degrees, 18.4 percent received their degrees from out-of-state. This difference in levels of

executives with out-of-state degrees may provide a rough index of diversity in recruiting patterns in a state. Since students are more likely to attend universities in their home states for their undergraduate degrees, states such as Virginia and Tennessee with higher proportions of out-of-state undergraduate degrees represented among their executives apparently are more willing to recruit their executives from a wider range of universities than states such as Mississippi and Alabama with lower percentages of executives with out-of-state undergraduate degrees.

The data also indicate that state universities are over-represented among state executives at the bachelor's degree level in comparison with normal distribution patterns of private and public universities. In the years 1947-1948, private universities awarded 50.0 percent of the bachelor's degrees, and public universities awarded 50.0 percent of the bachelor's degrees. By 1970, 8.5 million students were enrolled in 2,500 higher educational institutions with one-fourth in private institutions.[29] Since 71.3% of the executives studied had bachelor's degrees from public institutions and their period of attendance would fall within the

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[29]Thomas R. Dye, "Government and Corporate Elites: Convergence and Differentiation," p. 903.

time period of declining enrollment in private institutions, public institutions are over-represented in the sample in terms of what might be randomly expected.

At the graduate level, private universities and colleges assume a greater role in educating state executives. The top five degree granting institutions at the master's level are George Peabody, the University of Tennessee, the University of Kentucky, the University of North Carolina, and the University of Alabama. These top five institutions grant 30.0 percent of all degrees. Three private universities are among the top ten master's degree granting institutions among state executives in government. These private institutions are George Peabody, Johns Hopkins, and Harvard University. Only one private college is found among the top ten at the undergraduate level, and it ranks tenth. A second notable factor determined from the graduate degree rankings is that the land-grant universities play a less prominent role at the graduate level than was the case at the undergraduate level. Only two land-grant colleges are found in the top fifteen degree granting institutions at the master's level. These two colleges are North Carolina State University which ranks thirteenth and Ohio State University which ranks fourteenth. At the undergraduate level, Mississippi State ranked second and North Carolina State ranked sixth. At the doctoral level, private institutions

TABLE 14

COLLEGES AND UNIVERSITIES MOST ATTENDED FOR MASTER'S IN RANK ORDER

| Name | Number of Degrees Granted | Cumulative Total | Cumulative Percent |
|---|---|---|---|
| George Peabody | 25 | 25 | 8.7 |
| University of Tennessee | 17 | 42 | 14.5 |
| University of Kentucky | 16 | 58 | 20.1 |
| University of N. Carolina | 15 | 73 | 25.3 |
| University of Alabama | 13 | 89 | 29.8 |
| Johns Hopkins University | 13 | 99 | 34.3 |
| University of Michigan | 11 | 110 | 38.1 |
| Harvard University | 10 | 120 | 41.5 |
| University of Virginia | 10 | 130 | 45.0 |
| University of S. Carolina | 9 | 139 | 48.1 |
| Tulane University | 8 | 147 | 50.9 |
| Columbia University | 7 | 154 | 53.3 |
| N. Carolina State U. | 7 | 161 | 55.7 |
| Ohio State University | 7 | 168 | 58.1 |
| Duke University | 7 | 174 | 60.2 |
| Virginia Polytechnic Inst. | 5 | 179 | 61.9 |
| University of Chicago | 4 | 183 | 63.3 |
| Florida State University | 4 | 187 | 64.7 |
| Yale University | 4 | 191 | 66.1 |

also assume a more prominent role than was the case at the undergraduate level. Two private universities, George Peabody College and Columbia University, granted 21.8 percent of all doctoral degrees.

TABLE 15

COLLEGES AND UNIVERSITIES MOST ATTENDED FOR DOCTORAL DEGREES IN RANK ORDER

| Name | Number of Degrees Granted | Cumulative Total | Cumulative Percent |
|---|---|---|---|
| George Peabody College | 7 | 7 | 12.7 |
| Columbia University | 5 | 12 | 21.8 |
| University of N. Carolina | 5 | 17 | 30.9 |
| Ohio State University | 4 | 21 | 38.2 |
| University of Illinois | 3 | 24 | 43.6 |
| University of Tennessee | 3 | 27 | 49.1 |
| University of Kentucky | 2 | 29 | 52.7 |
| University of Michigan | 2 | 31 | 56.4 |
| University of S. Mississippi | 2 | 33 | 60.0 |
| University of Virginia | 2 | 35 | 63.6 |

Non-southern universities also play a more important role at the graduate level than was the case at the undergraduate level. Johns Hopkins University, the University of Michigan, and Harvard University rank sixth, seventh, and

eighth, respectively, at the master's level. Tulane University, Ohio State University, the University of Chicago, and Yale University are all in the top twenty institutions which awarded master's degrees to state executives; and Columbia University, Ohio State University, the University of Illinois, and the University of Michigan are in the top ten doctorate awarding institutions among state executives. Data presented on Table 16 indicate that, at the master's level, over half of the state executives in every state except Tennessee, Kentucky, and North Carolina received their degrees in a state different from the one in which they were employed. Mississippi is highest in this category with 75.6 percent of the executives having master's degrees from another state. This data shows a complete reversal of the pattern seen at the undergraduate level and indicates that many of the executives earning their bachelor's degrees in Mississippi go elsewhere for graduate study. The institutions at which graduate degrees are earned are more concentrated in number. At the master's level, the top fifteen institutions awarded 60.2 percent of all degrees, and at the doctoral level, the top ten institutions awarded 63.6 percent of all degrees. At the undergraduate level, the top ten institutions awarded 39.6 of all degrees.

TABLE 16

PROPORTION OF EXECUTIVES HAVING OUT-OF-STATE DEGREES AT THE M.A. LEVEL

| State | Total | Out-Of-State | Percent |
|---|---|---|---|
| Tennessee | 53 | 25 | 47.2 |
| Kentucky | 34 | 10 | 29.4 |
| North Carolina | 42 | 19 | 45.2 |
| Mississippi | 41 | 31 | 75.6 |
| South Carolina | 31 | 19 | 61.3 |
| Alabama | 39 | 24 | 61.5 |
| Virginia | 49 | 32 | 65.3 |
| Totals | 289 | 160 | 55.4 |

As indicated earlier, at the graduate level, more overlap occurs among the institutions federal and corporate executives attend and those state executives attend. This overlap is a result primarily of the state executives receiving their graduate degrees from outside their respective states. The overlapping universities are as follows: Columbia, North Carolina, Ohio State, Illinois, and Michigan. Columbia University ranks second for the doctorate at the state level and fourth at the federal level; North Carolina ranks third at the state level and twenty-fourth at the federal level; Ohio State ranks fourth at the state level and

twelfth at the federal level. Illinois ranks fifth at the state level and eleventh at the federal level, and Michigan ranks eighth at the state level and fourteenth at the federal level.[30] The fact that such a large proportion of the top thirty undergraduate degree granting institutions were in the region studied and one-half at the doctoral level are outside the region studied is indicative of the larger number of doctorates being awarded outside the region studied. However, the intermixture of a diversity of regional institutions at the graduate level to a degree that exceeds that at the federal level, which is mainly composed of doctorates from the Northeast and North central portion of the United States, probably provides a more diverse viewpoint for the state executive with a graduate education than is the case with the federal executive with the same educational level. In this respect, the state executives with graduate education are a rather cosmopolitan, educationally mobile group. Yet the pluralistic elitism of the American educational system is very much evident at the state, corporate, and federal levels. The pattern at both levels is notably similar in its elitist construct.

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[30]Warner, The American Federal Executive, p. 132.

## The Woman Executive: A Case Study in Discrimination

Thirty of the executives studied were women. They represented 3.6 percent of the total sample. Even though, as a group, women represent a very small proportion of the total sample, an attempt will be made to compare them, in terms of educational backgrounds, with the male executives in order to see if women executives' careers and educational backgrounds differ significantly from those of the male executives.

By 1971, women constituted 75 percent of all federal employees at the G.S. 1-4 level positions and only 3 percent of the positions at the G.S. 14 and above levels.[31] One 1975 study of corporate and top governmental elites concluded that male dominance is nearly complete at the corporate and governmental level.[32] It is clear from the data that the state and federal executive positions are the domain of the male. The state executive is apparently no more open to women executives than his federal counterpart, except in the deep south where there are more women

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[31] Civil Service Commission, Study of Women in the Federal Government (Washington, D.C.: Government Printing Office, 1971).

[32] Thomas R. Dye and John Pickering, "Government and Corporate Elites: Convergence and Differenitation," p. 915.

executives. The female executive is conspicuously absent at both state and federal levels. Recent administrations have made some inroads into recruiting a higher proportion of women executives. In the Stanley study of federal executives, there were so few women executives that the author did not include a chapter on women.

The woman executive is not located proportionately throughout the states in the sample. Table 17 presents data on the distribution of the women respondents among the states studied, and Table 18 presents figures on the percentage of responding executives from each state who were women.

TABLE 17

DISTRIBUTION OF 30 WOMEN EXECUTIVES AMONG SEVEN STATES STUDIED

| State | Number | Percentage of Distribution |
|---|---|---|
| South Carolina | 8 | 26.7 |
| Tennessee | 5 | 16.7 |
| Mississippi | 6 | 20.0 |
| Alabama | 4 | 13.3 |
| Kentucky | 4 | 13.3 |
| North Carolina | 2 | 6.7 |
| Virginia | 1 | 3.3 |

TABLE 18

PERCENTAGE OF WOMEN EXECUTIVES IN EACH STATE STUDIED

| State | Executives | Number of Women | Percentage of Women |
|---|---|---|---|
| South Carolina | 124 | 8 | 6.4 |
| Mississippi | 129 | 6 | 4.6 |
| North Carolina | 111 | 2 | 1.8 |
| Virginia | 128 | 1 | .8 |
| Alabama | 120 | 4 | 3.3 |
| Kentucky | 99 | 4 | 4.0 |
| Tennessee | 128 | 5 | 3.9 |

With 6.4 percent of the executives studied being women, South Carolina was the highest of the seven states. Mississippi, Kentucky, and Tennessee with percentages of 4.6, 4.0, and 3.9, respectively, were closer to state norms, and North Carolina and Virginia were lowest with 1.8 and .8 respectively.

On a percentage basis, the numbers of women executives are fairly representative of the numbers of women holding professional positions in the United States as a whole in male-dominated professions. Table 19 presents comparative data on eight western nations in terms of the numbers of

TABLE 19

WOMEN IN THE WORK FORCE: PERCENTAGES OF SELECTED JOBS HELD BY WOMEN

| Country | Lawyers | Judges | Physicians | Dentists | Total Work Force+ |
|---|---|---|---|---|---|
| United States | 3.5 | 2.0 | 6.5 | 2.1 | 37.0 |
| United Kingdom | 3.8 | * | 16.0 | 6.9 | 34.4 |
| Sweden | 6.1 | 6.7 | 15.4 | 24.4 | * |
| West Germany | 5.5 | * | 20.0 | * | 36.7 |
| Italy | 2.8 | 0.5 | 4.9 | * | 28.8 |
| Denmark | * | * | 16.4 | 70.0 | * |
| Poland | 18.8 | * | 36.4 | 77.0 | * |
| U.S.S.R | 36.0 | 30.5 | 75.0++ | 83.0 | * |

* Indicates that the information was not available.
\+ This is the percentage of women actually in the work force.
++ The figure for physicians in the U.S.S.R. is not strictly comparable as it also includes some other medical personnel.
Sources: Cynthia F. Epstein, Woman's Place (Berkley, Calif.: University of California Press, 1970) from Robert S. Benson and Harold Wolman, Counterbudget (New York: Praeger Publishers, 1971), p. 288.

women lawyers, judges, physicians, and dentists in the work force along with the numbers of women in the work force. The U.S.S.R. has the highest percentage of women lawyers (36.0%), judges (30.5%), medical personnel (75.0%), and dentists (83.0%). The United States has the lowest percentage of any of the other seven Western nations shown

on the table except Italy. In the United Kingdom, which is probably most similar to the United States culturally, there is a higher percentage of lawyers and substantially more women physicians and dentists than in the United States.

At both the state and federal levels, women executives tend to be concentrated in a select few agencies. Forty percent of all women executives studied in the seven states are in departments of public or mental health. According to the Warner study, about one-third of the women who had obtained executive status at the federal level were in the Department of Health, Education, and Welfare.[33] At the state level, the departments in which the second largest number of women executives were employed were state libraries and departments of archives and history where 16.7 percent of the women executives studied were located. The remaining women were primarily concentrated in departments of labor, correction, and public welfare. Such state departments as commerce, general administration, conservation, finance, revenue, highway, public safety, and public utilities did not have female executives represented in the study. Also, in view of the large number of women in the field of public school teaching, women were surprisingly under-represented

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[33]Warner, The American Federal Executive, chapter 11.

in the departments of education at the executive level where 6.7 percent of the women executives were located. Health, library, and historical agencies afford women the best opportunities for mobility into the executive ranks in the seven states studied.

Also, the women executives studied in the seven states tend to be unmarried. Slightly over half of the women executives (51.7%) were single, and 13.8 percent were either widowed or divorced. The remaining 34.5 percent were married.[34] This means that 65.5 percent of the women executives studied were unmarried at the time of the survey. This figure closely parallels the two-thirds of the federal level women executives who were unmarried in the Warner study.[35] At the federal level, only 5 percent of the men are unmarried. These data indicate that women are still confronted with the choice between a career or a family and that those who make it to the executive level with a family are still in the minority, whereas this conflict does not exist with male executives.

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[34]Since no data was available on the marital status of the women in the first survey, a second survey was sent out on June 20, 1971, to forty women executives from the original sample. The purpose of this survey was to determine the marital status of female executives and to obtain suggestions for change. Seventy-two and one-half percent of the women contacted responded to the questionnaire. Three of the women contacted had retired.

[35]Warner, The American Federal Executive, Chapter 11.

One of the factors examined in the present study was the number of years it took an executive to reach the initial appointment to his or her present position. This factor was classified as "years to reach the top." The data were tabulated based upon the interval between the time the executive began full-time employment and the time he or she took to get to his or her last position. Military service was included in this figure whenever the respondent reported this as part of his or her career history. Tabulations were also made regarding the number of years the executive had been employed in the state government by which he or she was employed at the time of the study. If it took women longer to reach the top than men, it was hypothesized that this would be a measure of resistance to women's mobility into the executive ranks of government. Table 20 presents data on mobility factors. The data indicate that women do encounter resistances along the rise to the executive level that men do not experience. The fact that well over one-third of the women in the United States work and only 3.6 percent of the sample of state executives studied were women would in and of itself indicate the presence of sex-based barriers in the system. It took the women executives studied in the seven states 26.3 years to reach the top (present position), and men on the average of only 21.8

TABLE 20

AGE AND MOBILITY LEVELS OF MEN AND WOMEN

| | Average Age | Years Employed in Present State Government | Years in Present Position | Years to Get to the Top |
|---|---|---|---|---|
| Women | 54 | 20.0 | 10.2 | 26.3 |
| Men | 52 | 18.0 | 8.3 | 21.8 |

years. This figure respresents a difference of 4.5 years. In addition, the women were two years older at the time of the survey than the men (54 years in comparison to 52 years) and had been employed an average of two years longer in the state government for which they worked at the time of the survey (20 years in comparison to 18 years). Also, resistances are indicated by the fact that the women executives studied have spent 10.2 years in their present executive positions in comparison with 8.3 years for their male counterparts. If the 4.5 year lag for women to reach their present positions is added to the 1.9 years' average time longer women have been in their present positions, the result is a total time lag of 6.4 years longer than men in career time it took women to get where they presently are in the executive ranks. Apparently, the 4.5 years' difference in time it takes women to reach the initial appointment to their

present positions can be accounted for by a longer period of time taken by women to move from one position to the next.

Only very few studies have been undertaken concerning the educational backgrounds of women executives. State executives are a highly educated group and college attendance is almost a prerequisite to executive mobility. While 2.1 percent of the men studied had not graduated from high school, all of the women studied had a high school diploma. Also, a higher percentage of the men (5.9%) had not attended college than was the case with women (0.0%). These figures indicate that the relatively rare executive who makes it into state executive ranks without a high school education or college attendance is not usually a woman and that for a woman without a degree or college attendance, mobility to the executive ranks is very rare if not impossible.

More women executives (66.7%) than men (50.8%) have done graduate work. This represents a gap of 15.9 percentage points. Yet at this point, discernible patterns in educational attainment become evident. More of the women (66.5%) have master's degrees than men (32.5%). There were no women lawyers in the sample compared with 7.5 percent of the men who had law degrees. Only 3.3 percent of the women held doctorates compared with 6.7 percent of the men, and

TABLE 21

PERCENTAGES OF MEN EXECUTIVES AND WOMEN EXECUTIVES WITH GRADUATE WORK BY HIGHEST DEGREE GRANTED

| Highest Degree | Number of Men | Percentage of All Male Executives | Number of Women | Percentage of All Female Executives |
|---|---|---|---|---|
| Some Graduate Work (No Degree) | 28 | 3.5 | 1 | 3.3 |
| Master's Degree | 177 | 21.9 | 17 | 56.7 |
| M.D. | 91 | 11.2 | 1 | 3.3 |
| L.L.B. or J.D. | 61 | 7.5 | 0 | 0.0 |
| Doctorate | 54 | 6.7 | 1 | 3.3 |

11.2 percent of the men had medical degrees in comparison with 3.3 percent in the sample of women executives. One can conclude that, while more of the women executives than men do graduate work, men have more graduate degrees in such areas as law, medicine, and the various doctorate degrees.

TABLE 22

MALE AND FEMALE EXECUTIVES HAVING MASTER'S DEGREES

| | | Yes | No | No Answer |
|---|---|---|---|---|
| Men | # | 263 | 938 | 8 |
| | % | 32.50 | 66.50 | 1.00 |
| Women | # | 19 | 10 | 1 |
| | % | 63.33 | 33.33 | 3.33 |

Another area in which women and men executives were compared was in the area of their educational specialization. It was initially felt that women executives might be less specialized than men and that this fact might account for the discrepancies in time it took to reach their present positions. The data presented on Tables 23, 24, 25, and 26 show an interesting pattern which indicates that the women with graduate education who made it to the executive level, to a greater extent than men, did their graduate work primarily in applied fields. At the undergraduate level, several significant differences in educational patterns emerge which are characteristic of male-female differences in undergraduate patterns in the United States as a whole. A significantly greater proportion of men are in business areas, physical and biological sciences, and engineering. The study indicates that 66.6 percent of all the male executives studied with undergraduate degrees received their degrees in these three fields in comparison with 20.8 percent of the women. Also, the women are substantially more concentrated in the humanities (20.83%) than is the case with men (4.67%). Another area in which there are more women with undergraduate degrees than men is in the area of education in which 16.7 percent of the women studied received their degrees in comparison with 8.3 percent of the

TABLE 23

AREAS OF SPECIALIZATION OF MALE AND FEMALE EXECUTIVES AT THE FOUR YEAR LEVEL

| Type of Major | Men | | Women | |
|---|---|---|---|---|
| | Number | Percent | Number | Percent |
| Business, Finance, Economics | 134 | 22.3 | 2 | 8.33 |
| Physical, Biological Sciences | 146 | 24.3 | 3 | 12.50 |
| Engineering | 120 | 20.0 | 0 | 0.00 |
| Education | 50 | 8.3 | 4 | 16.67 |
| Humanities | 28 | 4.7 | 5 | 20.83 |
| Physical Education | 2 | .33 | 1 | 4.16 |
| Library Science | 4 | .66 | 2 | 8.33 |
| City Planning | 0 | 0.00 | 0 | 0.00 |
| History | 59 | 9.8 | 1 | 4.16 |
| Journalism | 5 | .8 | 0 | 0.00 |
| Liberal Arts | 7 | 1.17 | 0 | 0.00 |
| Political Science | 8 | 1.33 | 0 | 0.00 |
| Psychology | 4 | .66 | 1 | 4.16 |
| Sociology | 8 | 1.33 | 3 | 12.50 |
| Public Administration | 1 | .17 | 0 | 0.00 |
| Law | 4 | .66 | 0 | 0.00 |
| Medicine | 19 | 3.16 | 2 | 8.33 |
| Pharmacy | 0 | 0.00 | 0 | 0.00 |
| Social Work | 1 | .16 | 0 | 0.00 |

men. At the undergraduate level, the men executives (53.5%) are more often found in the applied areas than is the case with women (45.8%). Whereas education (20.8%) and library science (8.3%) predominate for women in applied areas, business and engineering are more typical of the undergraduate majors for the male executives.

When the master's data are tabulated, a substantial shift occurs on the part of both male and female executives into the applied areas. This shift is, however, more exaggerated in the case of women who are executives. At the master's level, 89.5 percent of all the women with master's degrees held their degrees in applied areas, and only 5.2% percent were in the physical and biological sciences. The only case of a woman executive in the behavioral sciences was a woman with a master's and a Ph.D. in psychology. At the master's level, 75.4 percent of the men's master's work is in the applied fields. One of the suprising factors was that, at the graduate level, none of the women executives studied remained in the humanities, although this is an area in which more women traditionally have done undergraduate and graduate work. The data indicate that there is a tendency for applied fields to be over-represented in the office of state executive and provide support for the conclusion that a woman needs graduate work for mobility more than a

man does and needs that work to be in an applied area to make it into the state executive ranks.

TABLE 24

AREAS OF SPECIALIZATION OF MALE AND FEMALE EXECUTIVES AT THE FOUR YEAR LEVEL BROKEN DOWN INTO BROAD CATEGORIES*

| Sex of Executive | | Humanities | Behavioral Sciences | Physical & Biological Sciences | Applied Fields |
|---|---|---|---|---|---|
| Female (Total = 24) | # | 6 | 4 | 3 | 11 |
| | % | 25.0 | 16.7 | 12.5 | 45.8 |
| Male (Total = 600) | # | 92 | 41 | 146 | 321 |
| | % | 15.3 | 6.8 | 24.3 | 53.5 |

*The categories of specialization were defined in a manner similar to that used in the Warner study of federal executives in order to provide comparability of data. The humanities include language, music, art, philosophy, and history. The behavioral sciences include psychology, political science, sociology, anthropology, and economics. The physical and biological sciences include biology, anatomy, physiology, botany, physics, chemistry, and mathematics. Applied fields include business, finance, accounting, engineering, education, social work, medicine, public administration, journalism, city planning, and law. Several of the executives went immediately into the study of law and medicine after two or three years of college, and these were counted as hving applied four year degree equivalents.

One could conclude from the data that since more of the women executives have both undergraduate degrees and graduate degrees than their male counterparts, the time lag in reaching the top cannot be attributed to educational

TABLE 25

AREAS OF SPECIALIZATION AT THE MASTER'S LEVEL
BY SEX OF EXECUTIVE

| Type of Major | Men | | Women | |
|---|---|---|---|---|
| | Number | Percent | Number | Percent |
| Business, Finance, Economics | 29 | 10.5 | | 0.0 |
| Physical, Biological Sciences | 39 | 14.1 | 1 | 5.26 |
| Engineering | 29 | 10.5 | 0 | 0.0 |
| Education | 94 | 34.1 | 4 | 21.05 |
| Humanities | 6 | 2.2 | 0 | 0.0 |
| Physical Education | 2 | .7 | 0 | 0.0 |
| City Planning | 4 | 1.4 | 0 | 0.0 |
| Library Science | 4 | 1.4 | 4 | 21.05 |
| History | 8 | 2.9 | 0 | 0.0 |
| Journalism | 1 | .4 | 0 | 0.0 |
| Liberal Arts | 0 | 0.0 | 0 | 0.0 |
| Political Science | 4 | 1.4 | 0 | 0.0 |
| Psychology | 4 | 1.4 | 1 | 5.26 |
| Sociology | 1 | .4 | 0 | 0.0 |
| Public Administration | 6 | 2.2 | 0 | 0.0 |
| Law | 1 | .4 | 0 | 0.0 |
| Medicine | 31 | 11.2 | 4 | 21.05 |
| Pharmacy | 1 | .4 | 0 | 0.0 |
| Social Work | 12 | 4.3 | 5 | 26.31 |

26 men and 1 woman did not give information on majors.

TABLE 26

AREAS OF SPECIALIZATION OF MALE AND FEMALE EXECUTIVES AT THE MASTER'S LEVEL BROKEN DOWN INTO BROAD CATEGORIES

| Sex of Executive | | Humanities | Behavioral Sciences | Physical & Biological Sciences | Applied Fields |
|---|---|---|---|---|---|
| Female (Total = 19) | # | 0 | 1 | 1 | 17 |
| | % | 0.0 | 5.3 | 5.2 | 89.5 |
| Male (Total = 276) | # | 14 | 15 | 39 | 208 |
| | % | 5.1 | 5.4 | 14.1 | 75.4 |

differences. This finding seems to coincide with the President's report on the status of women in which findings are reported that at the federal level men with similar educations fare better than women in their career progress, that grade for grade, men are younger with fewer years of service, and that grade for grade, women are better educated than men.[36] Since women have to be more educated than men in order to make it into the executive ranks, the conclusion that women encounter sex-based resistances to executive recruitment that are not present with men is reinforced.

Even though the women executives studied were a highly educated group, the fact remains that few women (3.7%)

[36]Evelyn Harrison, "The Working Woman: Barriers in Employment," Public Administration Review 24 (June, 1963): 82.

were recruited into the executive ranks. While educational levels of the women executives studied in the seven states do not account for the time differences in male-female mobility, different educational patterns of men and women executives probably place most women at a disadvantage in terms of executive recruitment. The areas in which U.S. women get their degrees at the undergraduate level differ from those of U.S. males. Three fields -- physical and biological sciences, business, and engineering -- predominate as undergraduate majors at the state executive level. These three fields account for the bachelor's degrees of 64.9 percent of all the executives studied. These figures are presented in Table 27. Comparative figures are presented for males and females in Tables 28, 29 and 30.

TABLE 27

THE FIELDS WHERE MOST STATE EXECUTIVES HOLD BACHELOR'S DEGREES

| Field | Number | Percentage | Cumulative % |
|---|---|---|---|
| Physical, Biological Sciences | 142 | 23.9 | 23.9 |
| Business, Finance, Economics | 136 | 21.8 | 45.7 |
| Engineering | 120 | 19.2 | 64.9 |

TABLE 28

PERCENTAGE OF U.S. MALES GETTING BACHELORS DEGREES IN FIELDS WHICH PREDOMINATE AMONG DEGREES OF STATE EXECUTIVES*

| Area | Number of Degrees Awarded to Males in 1964-1965 | Percent of Total Degrees Awarded to Men | Cumulative Percentage |
|---|---|---|---|
| Physical, Biological Sciences | 51,877 | 18.1 | 18.1 |
| Business, Finance, Economics | 70,926 | 24.7 | 42.8 |
| Engineering | 35,698 | 12.4 | 55.2 |

*287,277 four year degrees were awarded to men based on figures derived from The Fact Book on Higher Education 1967-1968, pp. 132-180.

TABLE 29

PERCENTAGE OF U.S. FEMALES GETTING BACHELOR'S DEGREES IN WHICH PREDOMINATE AMONG DEGREES OF STATE EXECUTIVES*

| Area | Number of Degrees Awarded to Females in 1964-1965 | Percent of Total Degrees Awarded to Females | Cumulative Percentage |
|---|---|---|---|
| Physical, Biological Sciences | 16,992 | 8.0 | 8.0 |
| Business, Finance Economics | 10,820 | 5.1 | 13.1 |
| Engineering | 122 | .06 | 13.2 |

*211,693 four year degrees were awarded to women based on figures from The Fact Book on Higher Education, Ibid.

TABLE 30

TOTAL BACHELOR'S DEGREES AWARDED IN THE PHYSICAL AND BIOLOGICAL SCIENCES, BUSINESS, AND ENGINEERING FOR THE YEAR 1964-1965

| Sex | Total Number | Percent |
|---|---|---|
| # awarded to Men | 158,501 | 85.0 |
| # awarded to Women | 27,934 | 15.0 |

It is extremely significant to note that among United States males, as indicated in Table 28, 55.2 percent received their degrees in business, one of the biological or physical sciences, or engineering. These are the same fields from which most of the state and federal executives are recruited. Figures on Table 29 indicate that only 13.2 percent of the females in the United States received their degrees in these predominately male areas, and, as indicated on Table 30, 85 percent of all degrees awarded in these three fields at the bachelor's level are awarded to males. The question arises as to whether or not these degrees are over-represented at the state executive level simply because males predominate in state executive ranks. This question has to be answered with a partial "no" since there are higher percentages of male executives with degrees in physical and biological sciences and engineering than there are males

receiving these degrees for the 1964-1965 period. In other words, males with general degrees are also at a disadvantage in terms of recruitment into the state executive level.

One could conclude that the undergraduate backgrounds of women put them at a disadvantage in terms of being recruited into the state executive level, since few of them fit the predominate educational patterns found at the state executive level or federal level. Judging from the backgrounds of the women executives studied who were able to move into the executive ranks, women are best able to compensate for lack of degrees in the three predominate fields by obtaining a master's degree as a means of mobility. While 35.5 percent of all women awarded bachelor's degrees in 1964-1965 received them in the humanities, none of the women executives in this sample obtained their graduate degrees in the humanities but rather shifted to applied areas predominately in library science or education. The women executives studied in this sample are atypical of educated women in the U.S. population where the humanities are more represented in that many have moved away from the traditional areas in which women have been educated at the graduate level. Since the United States has operated on a dual track for males and females in the postsecondary area, one might conclude that a more equitable system will involve

both a more integrated system of education where women obtain more degrees in such areas as business and engineering as well as opening the executive ranks to women educated in the liberal arts and humanities.

## Conclusions

Much of the preceding report has involved analyzing data and reaching narrow-based conclusions, and the question arises as to whether any broad-based conclusions can be reached. The decreasing and marginal utility of a bachelor's degree can be observed for executive mobility. Over half of the executives had graduate level education, and 48 percent of the executives studied had graduate level degrees. As one projects toward the future, the major advantage of a bachelor's degree in terms of high level public official mobility will be whether or not it affords one the opportunity for graduate study especially in an applied area. For equality, the diminishing value of the Bachelor's degree in terms of executive mobility and the increasing need for graduate study poses the dilemma of what Thomas Green calls the "law of last entry."[36] That is, it is precisely at the point tha minorities gain access to a higher level of education that

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[36]Paper presented at the National Institute of Education.

the value of the degree diminishes because of its general availability. Secondly, three primary areas at the undergraduate level are predominate in executive mobility, and these are physical and biological sciences, business, finance and economics, and engineering, and these are areas in which women and minorities are less likely to major. The road toward equality of educational opportunity is a rocky one. At the same time that the bachelor's degree has become more and more available to minority groups, graduate level work has become more and more necessary for those who would obtain high level mobility in public service, and graduate education is an exceedingly expensive proposition.

A second broad trend is that of concentration. Fifteen colleges and universities awarded 50 percent of all bachelor's degrees to public executives and, except for three private colleges among the top fifteen which awarded 6.3 percent, all these degrees were awarded at state universities. When it is recognized that 352 colleges and universities are in this seven state region, the magnitude of concentration becomes very evident. As one examines the distribution of graduate level degrees, the pattern of concentration becomes greater. At the master's level, eleven institutions award 51 percent of all degrees, and

at the Ph.D. level six institutions grant fifty percent of all degrees. The data indicate that, unless significant changes occur, all colleges will not afford equality of opportunity for mobility into the executive ranks. Rather, a select few provide the greatest opportunity for mobility. Entry into the public executive ranks is the perogative of those with highly specialized degrees, degrees which are best obtained at either well-endowed private colleges with comprehensive programs or at major state universities. The assumption that all bachelor's degrees are equally viable for high level public mobility is questionable and is a significant factor in the equation for equality of educational opportunity.

Finally, the dilemma of women executives is analyzed in terms of educational patterns. The dilemma stated simply is that 65 percent of all state executives have degrees in the physical-biological sciences, business-finance-economics, or engineering, yet 85 percent of bachelor's degrees of this type awarded in the United States are being awarded to men and only 15 percent to women. Therefore, the author must conclude that the educational system poses barriers for the mobility of women into the executive ranks of government that few policy makers have adequately dealt with or analyzed. The women making it

into the executive ranks were atypical of women in general in that their degrees were mostly in applied areas at the graduate level of their educations.

In conclusion, the author must point out that the quest for equality of educational opportunity in terms of mobility must be pursued within the context of an empirical analysis of degree usage which few educators have been willing to make at the post-secondary level. The public executive ranks is a vital place to pursue such an analysis because of the strategic role played by these executives. The ensuing analysis should afford some policy implications. This area must be entered with even more trepidation than the sorting of postsecondary educational patterns because an adequate analysis must involve projecting into the future.

## Recommendations

In making recommendations for change and stability, one is caught in the dilemma of projecting trends from the past and at the same time developing an awareness of the needs of both the present and the future. The empirical data presented in this report have dealt with the interplay of educational backgrounds and the selection of state executives. As David Mathews has recently emphasized, in

dealing with opportunities for change, we have to look "where the rubber meets the road." Few researchers have been willing to take a tedious look at the point at which the rubber meets the road as it relates to the functional usage of academic degrees in terms of occupational mobility. Any recommendations for change must be grounded in an understanding of the function education plays in our society. In understanding the functions of education, we have been "caught with our parameters down," to quote Walter Heller. In successful periods, institutions do not search for a sense of mission, and at a certain point their very success may lead them astray.

Our postsecondary educational system fulfills many functions. Among these is the development of human capital and potential. The fulfillment of this function provides the talent and technology which has made the United States the most economically developed nation in the world. John Kennedy called education the most profitable investment society can make. According to Walter Mondale, for every four dollars spent on education, there is a seven dollar return to society in terms of increased productivity, income and resulting taxes.[37] These figures would appear to provide

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[37]Walter Mondale, "Education, Congress, and the Budget," Education Forum 60 (May 1975): 446.

an extremely conservative estimate when one considers research and development, a function closely intertwined with human capital and potential. This function of education enables society to create new technology and new techniques of evaluating social programs and to develop new knowledge in any number of fields. These activities have economic utilities, but one must also make a case for the development of knowledge as a means of better understanding the world in which we live. Education has an intrinsic value which cannot be measured. Another very important function and one often overlooked by institutions of higher learning is the function of serving as a reservoir for the maintenance of our cultural heritage through books, museums, research, discussions, and performances.

Aside from these functions is the more obvious function of teaching. Some might say that teaching is merely the dissemination of knowledge, but others would agree with Confucius that the teacher reveals one corner of truth and encourages the student to find the other three. Education is a continuing quest. It is easy for legislators, and often administrators, to think only in terms of the dissemination of knowledge, a view which results in the reduction of the student-teacher relationship to ratios of full-time equivalent students. This is unfortunate. Often

parents view postsecondary education in terms of another function--providing individual job mobility and additional income opportunities and class status opportunities for their sons and daughters. Postsecondary education provides education for all of the many professions. The individual job mobility function is a differing function from the capital investment one, although they are related. When he has viewed education from the mobility perspective, many a father has been disillusioned when a shaggy headed son or daughter came home talking about the marxist revolution and the pervertedness of materialistic values. The philosophy professor, however, who perhaps views education as a process of obtaining higher truths and values, might be quite happy with the student's critical perspective toward society. The mobility function is closely related to the preparation of an individual for a career, and the close relationship between educational level and career mobility is clearly indicated in the study of state executives. However, mobility will increasingly require graduate education as earlier indicated.

It is evident from the preceding analysis that one of the functions that certain types of postsecondary institutions fulfill is a sorting and selecting role in terms of leading elites. Select universities and colleges

seem to play this role. The state executives studied were highly educated and nearly half had graduated from graduate school. As one projects into the future, graduate education will be increasingly important, and, in a pluralistic society such as ours, the leaders are relatively large in number. This understanding of the role of elites was very crucial to Arnold Toynbee in his analysis of the rise and fall of nations. He analyzed historical periods in terms of small groups of elites of creative genius who set a system into motion with new ideas. As long as the emerging leadership can respond creatively to the blows and problems of the society, then the system survives. But at a certain point, the system is endangered by becoming rigid; the leadership capitulates and no longer leads creatively; large numbers of people become isolated within the system; and, finally, the system topples from within out of its own rigidity. If our system is to survive and continue to develop, it will take expertise at the apex of the system, but more than this will be required of our leaders. One of the profound thinkers of this period, Walter Lippman, pointed out the precarious balance upon which a democracy stands. Lippman's concern becomes passing down the western liberal tradition within the educational system:

> That is the central and critical condition of the western society: that the democracies are ceasing

> to receive the traditions of civility in which the good society, the liberal, democratic way of life at its best, originated and developed. They are cut off from the public philosophy and the political arts which are needed to govern the liberal democratic society. They have not been initiated into its secrets, and they do not greatly care for as much of it as they are prepared to understand. In Toynbee's terrible phrase they are proletarians who are "in" but not "of" the society they dominate.[38]

Walter Lippman cautioned against the narrow careerism which seems to pervade so much of our public service and educational system of today:

> If it is the role of reason merely to be an instrument of each man's career, then the mission of the schools is to turn out efficient careerists. They must teach the knowhow of success, and this -- seasoned with the social amenities and some civic and patriotic exhortion -- is the subject matter of education. The student elects those subjects which will presumably equip him for success in his career -- the rest are superfluous. There is no such thing as a general order of knowledge and a public philosophy which he needs to possess.[39]

The interconnectedness of our educational system and public service is crucial. As one reviews the many roles of education, one deals in a precarious balance of diverse functions and needs and, much as in the balance of nature, when one role is diminished, it can have unintentional or detrimental consequences on the other parts. One of the problems of education seems to be its very successes, as

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[38] Walter Lippman, The Public Philosophy (New York: Mentor Books, 1955), p. 75.

[39] Ibid.

Alan Pifer recently pointed out in his annual report.[40] During a period of success, education seems to have lost its way. While in the past acadamicians called on the public service to reform, now they must turn inward and reform themselves, but not in the masochistic self-flagellation manner in which some Europeans have noted about American educators. It is ironic that it is precisely in the priods of a nation's success that it gets away from the very values which led to its greatness. It would be the premise of this report that change and innovation must be grounded in basic values of the fundamental purposes of education but not in the sense of a simplistic notion of a return to basics. Our society is changing too rapidly for us not to continue to adapt and move forward.

Educational System

1. One prominent educational leader has emphasized that opportunities for activism through quantitative means (more and larger programs) must be replaced by concern for quality.[41] The well-documented trend in declining academic

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[40]Alan Pifer, Annual Report, Carnegie Corporation of New York 1975 (New York: Carnegie Foundation, 1975).

[41]David Mathews, "Qualitative Activism," The Educational Forum 40 (May 1976).

standards and grade inflation should be reversed. In most institutions a "B" has become the average grade. The role of professor as evaluator is very much related to student development and growth and a student graduating with a degree which is qualitatively diminished does not serve the public interest. In the words of David Riseman, "the basic career insurance higher education can provide is self confidence that one can do something hard because one already has."[42]

2. As one examines the diverse missions colleges and universities play, legislative and administrative systems which place undue emphasis on F.T.E. (full time equivalent students) as a measure of progress unduly deemphasize quality, research, teaching, and leadership development and substitute a quantitative measure of progress. As indicated earlier, universities have a much broader function than teaching. New and more balanced systems that do not

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[42]David Riseman, "Thoughts on the Graduate Experience," Change, April, 1976.

threaten the basic integrity of academia need to be developed. Greater attempts must be made to differentiate between the needs and the functions of universities, comprehensive colleges, liberal arts institutions, and community colleges, and more care must be taken by legislators to develop appropriate funding and evaluative procedures which are appropriate to differing types of institutions in accordance with their particular unique missions.

3. In a period of financial difficulties, the liberal arts and humanities which form such a vital part of western civilization and values should not be deemphasized lest the basic fabric of civilization be diminished. Ways must be determined to maintain the fabric of our liberal arts tradition which affords society the flexibility to adapt.

4. Nevertheless, if liberal arts is viewed as a broad education within the context of an historical period, many liberal arts majors of today do not understand the technological base of the society in which we live. Requirements in the

area of engineering and computer science should be considered as a basis of reform. Massachusetts Institute of Technology is in the early stages of experimenting with a college which will combine science and engineering curricula with the humanities and social sciences. Such curricular reforms may better equip liberal arts majors to serve at the executive levels of government and to better understand today's world. Too many educators equate liberal arts with a particular curriculum rather than as a concept. All too often attempts at reform deteriorate into an interdepartmental poker game of adding six hours at one level and subtracting six hours at another level and debating over the number of hours required for graduation. This is not reform.

5. Since the study of executives indicates applied areas such as business, engineering, science and public administration constitute such an important basis of recruitment into executive ranks of government, more women and minorities should be counseled into these areas and more scholarships should be made available for women

and minorities in engineering, law, medicine, and public administration. Also placement centers at universities should provide more programs related to the woman executive which extend beyond graduation.

6. In a complex age, one of the striking aspects of the study was the limited number of academic majors of executives. Both at the undergraduate and graduate levels, about five majors accounted for the educational background of most executives. Due to the apparent need for specialization in terms of executive mobility, one innovation that has apparently been highly successful at the University of Florida in the College of Arts and Sciences seems appropriate. Students there who can present an adequate case are permitted to design their own interdisciplinary majors with the assistance of a faculty committee of three. Examples of recent majors are atmospheric sciences, biochemical neural science, architectural economics, Latin American Trade Relations, film studies, and agricultural economics. The capstone of the program is a ten hour senior thesis. Placement for such students has been highly successful.

State Personnel Systems and Recruiting Patterns

1. More attempts should be made to recruit professional women and women executives into the ranks of state governmental service since there are so few women executives and apparently a limited mid-career base from which women executives can be selected.

2. The data also indicates that state agencies should recruit at predominately minority colleges and universities at entry level since they are not represented in the state executive ranks, indicating that recruitment at these institutions has not been effective or adequately attempted.

3. Due to the increased specialization needs in government, especially in areas of research and development, state governments should provide more incentives for new Ph.D. graduates in government. The study indicated that few Ph.D.'s have chosen to pursue careers in state government at the executive level.

4. State officials should work closely with colleges and universities in setting up public service internships, and state legislatures should

adequately encourage and fund such programs as related to career service in all academic fields.

5. Due to biases identified in promotion of women, a system should be set up at the state level to determine if women and minority personnel presently employed in state government have been discriminated against and need to be upgraded in salary and rank. Since the federal government has not been very effective in reforming itself, states should not wait for federal initiatives in this area.

6. Each of the states studied that does not presently have such a system should set up the equivalent of an entry level Civil Service Examination open to college graduates in all fields including liberal arts that would be an entry level examination for college graduates planning careers in state public service. But this should not constitute the only mechanism for entry into public service at the state level. State recruiting systems as presently constituted and examined at the executive level do not have equitable numbers of behavioral science or

humanities graduates indicating the lack of broad-based entry level examinations.

National Level

1. One of the factors noted in the study is that state executives as a pattern tend to obtain their bachelor's degrees within their respective states. Crossing state lines becomes a perogative of the wealthy because of out-of-state tuition. Yet, increasingly our society has become a national society in which a mobile population changes residences rapidly and where things have become more regionally rather than state oriented. In recognition of the national society in which we live, it is time for the federal government to establish four national universities in the northeast, northwest, southeast and southwest. George Washington considered this a matter of deep concern. He hoped such a national university would create a class of men free from the restricting prejudices of sectionalism and provincialism. While some may argue that this is not in the American tradition, we presently have several national academies for the educating of the

military. West Point and Annapolis are a highly respected part of the American tradition. Harold Hodgkinson has proposed federally financed "Model Colleges" as a means of trying out innovations.[43] These federally financed institutions would solve several problems. First, they would provide a high quality education for those young people who have the qualities necessary for leadership and would alleviate the problem of "residency" for tuition required at state universities. Second, they would provide a place for the establishment of innovative educational techniques at the post-secondary level. Third, they would maintain a high standard of excellence which could be enjoyed by bright young people whatever their socio-economic backgrounds and regardless of which state they live in. This would enhance further our quest for equality of educational opportunity. Academic excellence and not state birth, race, or sex would govern admission. Research and development would be major

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[43] Harold Hodgkinson, Institutions in Transition (New York: McGraw Hill, 1971), p. 278.

functions of such national universities. This is an idea whose time has come, and increasing research and planning should take place in this area. Such universities should be governed by independent governing boards. The question becomes whether they would supplant or weaken existing state universities and private institutions. Similar questions were asked about state universities when they originated. Also, when the federal government helped originate the land-grant universities, some felt that they would weaken or supplant the state universities and private colleges. Such fears were misplaced, and the entire system was strengthened. Pluralism in education has always provided a more competitive and stronger system.

2. Since in the 1947-48 period private universities were awarding half of all bachelor's degrees awarded in the United States and by 1970 were awarding around one fourth, the role of the private colleges and universities has diminished from a quantitative perspective. Yet they are a significant factor in the education of state executives in that 31 percent of the state

executives studied received their bachelor's degrees at a private college or university, and at the graduate level, they play an even more predominate role in the education of state executives. Yet the problems of the private colleges and universities can be seen in that one recent study found 87 percent of all private colleges to be either relatively unhealthy financially or unhealthy with long term survival problematical.[44] In contrast to present mythology many early private colleges originated with public funds. While periodic outright lump sum grants from state governments to selected private institutions would be very much in the American tradition of our early heritage, more tax incentives for private contributions are also needed.

## Summary

In conclusion, as Thomas Jefferson examined the

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[44]Andrew Lupton and John Augenblick, "The Financial State of Higher Education," Change, September, 1976.

curriculum of his own alma mater, William and Mary, from the perspective of the College Board of Visitors, he was concerned essentially with the interface of the post-secondary institions with the broader civilization or society. Within the existing framework, he saw a system that emphasized Latin, Greek, Logic, Rhetoric and Natural Philosophy with heavy doses of Moral Philosophy. To this inoculation of what he perceived as superstition, he proposed more emphasis on utility by adding such professorships as law and police, modern languages, anatomy, medicine and chemistry. His proposals were initially turned down at William and Mary, but his concern with the interface of college and society made him a national leader in the reform movement. This question of interface between educational institutions and society remains one of the crucial questions of today and tomorrow for those who would lead in American education.

## APPENDIX

## SAMPLING AND PROCEDURE

Four questionnaires were utilized in this study. The first, a mail questionnaire, was sent to 1,173 executives with two follow-up mailings in 1970. The second and third were personally administered to 104 executives in the summer of 1970, and the fourth was administered by mail to a sample of forty women executives in 1971.* In order to obtain a sample for the study of state executives, a letter, indicating that a study of state executives was planned and requesting a list of state executives was sent to the personnel directors of each state. The states selected included Tennessee, Kentucky, Alabama, Virginia, North Carolina, South Carolina, and Mississippi. These particular states were selected because they were broadly representative of the Southeast and also because the top officials in each state indicated interest and willingness to cooperate. The letter, which was sent requested that the list include only officials of the executive branch of government and exclude executives in the legislative and judicial branches and in institutions of higher learning. In terms of the positions held, it was requested that officials closely parallel the executives at

*These questionnaires were sent from the Bureau of Governmental Research at the University of Mississippi.

GS 15 and above at the federal level and be at least assistant division chief or above. The states put together lists by using salary cutoff points which fitted into the assistant division chief and above pattern. The type of positions covered included department heads, division or unit chiefs, deputy or assistant department heads, staff assistants to department heads, field office directors, and deputy division chiefs. The executives' salaries ranged from $10,000 to $26,000 but averaged $16,000. No executive with a salary below $10,000 was included. The names of all executives were placed on individual cards, and random samplings were obtained in each state by shuffling the cards.

A random sample of 185 was selected from each of the seven states, The sample was then sent to each state, and a request was made that the personnel directors verify the lists and provide the official title of each executive when it had not already been provided. They were also asked to eliminate those executives who had retired or left the state government since the initial list had been compiled. In many cases, the appropriate department had to be contacted. A request was also made that they eliminate any elected officials, judicial officials, and legislative officials from the sample list. The remaining executives were then sent questionnaires and follow-up mailings. The usable

response rate moved up to 70.5 percent from an initial 40.0 percent response after the follow-up mailing. An additional fifty-three responses were received but had to be eliminated for several reasons which include the following: the person had retired when the questionnaire was received by the department of the state for which he worked, the responses were too incomplete to use, or the person was an elected official. If these additional responses had been counted, the total response rate would have been 76.0 percent. The usable rate of returns for the Warner-Van Riper federal research study, also using a mail survey, was 69.4 percent.

The first questionnaire dealt with attitudes toward civil service systems and state executive careers. An educational and career history along with place and time of birth were also obtained from each executive. The advantage of a mail survey for this phase of the study was in its facility for the researchers. To conduct a personal survey of such a large sample of executives would have required considerable expense, time, and money. The advantage to the state executive was that he could fill out the questionnaire at his own convenience.

Second and third questionnaires were then designed and personally administered to fifteen executives in each state in June, 1970. These questionnaires dealt with the

personnel systems, occupational backgrounds of the executives' fathers, organizational discretion levels, and the executives' political activity levels, and a separate questionnaire on their psychological characteristics was administered. These 104 executives were chosen from three departments of state government: the department of education, the department of finance or revenue, and the highway department.* These categories were selected so that interdepartmental comparisons would be possible. Whenever possible, the sample of five executives and one alternate from each department of each state was randomly selected from executives who had filled out the initial questionnaire. This random selection was also made by shuffling the cards bearing the executives' names. In cases where there were not enough respondents from the initial survey in the three departments, random samples of non-respondents from the original sample were utilized. These questionnaires were administered by a project team of three interviewers, including the project director Dr. Gordon Mercer, during the time period between June 8 and June 30, 1970. Fifteen interviews were made in each state with the exception of one where only fourteen were obtained.

While writing a chapter on the woman executive, the decision was made to conduct a supplemental mail survey because data were lacking on the marital status of the

*All departments were included in the intitial questionnaire.

TABLE A

SURVEY RETURNS

| State | Number of Questionnaires Sent out to Executives | Usable Responses | Percent of Returns Usable |
|---|---|---|---|
| South Carolina | 184 | 124 | 67.4 |
| Mississippi | 183 | 129 | 70.5 |
| North Carolina | 145 | 111 | 76.5 |
| Virginia | 170 | 128 | 75.2 |
| Alabama | 182 | 120 | 65.9 |
| Kentucky | 138 | 99 | 71.7 |
| Tennessee | 171 | 128 | 74.8 |
| Totals | 1173 | 839 | 71.5 |

Women executives. Forty women executives from the original sample were contacted by mail on June 20, 1971. The response rate for this survey was 72.5 percent, and no second mailing was attempted. Three of the women in the original sample had retired. Each woman executive was asked to comment on ways of improving opportunities for women interested in pursuing careers in state government, and, in addition, each woman was asked to categorize her marital status and, if she were married, her husband's occupation.