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# THE PROBLEM OF DUPLICATION

As Attacked in Certain State Surveys of  
Higher Education

By

JOHN H. McNEELY

*Research Assistant, Division of Higher Education  
Office of Education*



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## FOREWORD

Higher education under State control and partial State support has been accepted in principle by each of the 48 States. The extent of support and the method of control vary greatly from State to State but there has been universal acceptance of the principle that higher education is at least in part a State responsibility.

In carrying out this responsibility, States have been concerned too often more with the development of individual institutions than they have with a State system of higher education. Of late years, however, this policy has begun to embarrass the States somewhat because it has been discovered that by the policy of developing institutions more or less independent one of the other, the States' interests were not always being best served. The costs were not always as low as they should be.

The crux of the problem was usually found in the duplication of courses or curricula in the several institutions. As one after another of the States instituted surveys to help in the solution of their problems, duplication was found to take first place in most cases as the point of greatest difficulty. Accordingly, it has been thought useful to make a study of the question of duplication as it has been treated in each of the five recent surveys of higher education conducted in different States. The results of this study are reported in the present manuscript and should be an aid to the many States struggling with the problem of duplication in their institutions of higher education.

BESS GOODYKOONTZ,  
*Acting Commissioner.*

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# THE PROBLEM OF DUPLICATION

As Attacked in Certain State Surveys of Higher Education

## CHAPTER I

### INTRODUCTION

A PROBLEM confronting many States is the reorganization of their State-supported programs of higher education so as to eliminate duplication of functions among the institutions. The problem has become more acute in recent years and may possibly jeopardize in a measure the future success of State-supported higher education.

What are the fundamental causes and effects of duplication of functions among the institutions?

What steps should be taken by the State to reorganize its program so as to minimize such duplication?

What criteria should be utilized to determine whether duplication is necessary or unnecessary in the several major fields or professional branches of higher learning?

What procedure should be followed in the allocation of curricula to individual institutions in a State to prevent unwise duplication and overlapping?

States have encountered difficulty in finding answers to these questions. The purpose of this study is to present such solutions of them as are contained in certain State surveys made by commissions or committees created largely for this purpose and composed of higher education specialists. In all cases the members serving on the commissions or committees came from without the particular State where they conducted surveys and were not susceptible, therefore, to the pressure of local influence and interests. Their opinions and recommendations for the most effective means of reorganizing the State-supported programs of higher education and of eliminating duplication were based on unprejudiced and unbiased investigations.

The situation existing in these individual States differed radically. In some of the States a large number of institu-

tions had been established, many of which were found performing similar functions. There were other States where the institutions were not so numerous, yet overlapping and duplication of curricula occurred in certain major fields or professional branches of higher education. On this account no assumption is made that the proposals and recommendations made by the commission or committee for one State will apply with equal force to another State. General principles, however, should be disclosed that may be applicable and useful to all States.

*Method of treatment.*—In conducting their investigations, the commissions or committees made different approaches to the problem in the individual States. As a result some of the surveys were comprehensive in scope and dealt with a wide range of higher educational questions. This study will be confined to those phases of the surveys relating only to the reorganization of the State programs and to the elimination of duplication among the institutions. The method of treatment consists of showing the character of the problem confronting each State, including the fundamental causes and effects of duplication and the plan of reorganization proposed by the survey commission or committee. Next will be presented the criteria utilized by the commission or committee in each State to determine the question of whether duplication in the various major fields or professional branches of higher education was necessary and whether it should be eliminated. The number of institutions where duplication was found by the survey in specific major fields or professional branches including teacher training, graduate work, research, and extension together with the recommendations of the commission or committee will then be shown for each State.

*Source of data.*—This study is based on an analysis of the published reports of these commissions or committees, the surveys in every instance with one exception being authorized by legal enactments of the State legislatures. State surveys comprising the study include those made in Georgia in 1933, North Carolina in 1932, Oregon in 1930, Texas in 1932, and Virginia in 1928. The reason for the selection of these particular surveys was their recency.

The Georgia survey was published in the form of a report to the board of regents of the university system of

Georgia and was conducted by a survey committee composed of George A. Works, chairman, professor of higher education, University of Chicago; Edward C. Elliott, president of Purdue University; L. D. Coffman, president of the University of Minnesota; George F. Zook, president of the University of Akron; and Charles H. Judd, dean of the school of education, University of Chicago. The committee was assisted in the survey by a group of 15 additional specialists in different fields of higher education, none of whom was a resident of Georgia.

The North Carolina survey was printed as a report of the North Carolina Commission on University Consolidation made by a survey committee composed of George A. Works, chairman, dean of students and university examiner, University of Chicago; F. L. McVey, president of the University of Kentucky; and G. S. Ford, dean of the graduate school, University of Minnesota. Six specialists in the different fields of higher education, none of whom was a resident of North Carolina, assisted the committee in the survey. A number of other leaders in higher education served in a consultative capacity. These included: L. D. Coffman, president of the University of Minnesota; E. C. Elliott, president of Purdue University; Fred J. Kelly, chief of the division of higher education, United States Office of Education; Henry Suzzallo, president of the Carnegie Foundation for the Advancement of Teaching (deceased); and George F. Zook, president of the University of Akron (now director, American Council on Education).

The Oregon survey was published under the title, Survey of Public Higher Education in Oregon, and was conducted by the United States Office of Education at the request of the Oregon State Board of Higher Education. The survey commission as organized by the Office of Education included: Arthur J. Klein, director, formerly chief of the division of collegiate and professional education, United States Office of Education, and now professor of higher education, Ohio State University; George A. Works, professor of higher education, University of Chicago; and Fred J. Kelly, chief of the division of higher education, United States Office of Education. Special assistants participating in the survey were Palmer Johnson, University of Minnesota; Thomas E.

Benier, Teachers College, Columbia University; E. E. Lindsay, University of Pittsburgh; Victor H. Noll, University of Minnesota; Benjamin W. Frazier, John H. McNeely, and Walter J. Greenleaf, United States Office of Education.

The Texas survey was a part of a printed report of a joint committee of the Texas Legislature composed of 2 members of the State senate and 3 members of the State house of representatives. This committee was created by a concurrent resolution adopted by the legislature in 1931 for the purpose of investigating all State institutions, departments of any and all kinds, including the judiciary, eleemosynary, and educational institutions, with the view of ascertaining whether such institutions and departments could not be operated at greater efficiency and less expense to the taxpayers of the State. The committee was especially charged with the duty of making recommendations for the elimination of duplications, changing of policies, and consolidation of institutions and departments in order to reduce the cost of conducting the government. In making its investigation the committee employed the services of Griffenhagen & Associates, specialists in public administration and finance, to conduct a study of the entire State government. In the report of the joint legislative committee as prepared by the staff of Griffenhagen & Associates, were contained three large volumes devoted entirely to the institutions of higher education. The report was submitted by the committee to the 1933 session of the Texas Legislature.

The Virginia survey was included in the Report of a Survey of the Public Educational System of Virginia made by an educational commission. This commission was composed of 2 members of the State senate, 3 members of the State house of delegates, and 6 members appointed by the Governor, who were residents of the State but not professionally connected with the State educational system. A staff of educational experts and specialists, who were non-residents of Virginia, were employed by the commission to conduct the survey. The survey staff comprised: M. V. O'Shea, University of Wisconsin, director; Julian E. Butterworth, Cornell University; F. G. Bonser, Teachers College, Columbia University; Calvin O. Davis, University of Michigan; Fred J. Kelly, University of Minnesota (now chief,



division of higher education, United States Office of Education); W. Carson Ryan, Swarthmore College; Charles McKenney, State Teachers College, Ypsilanti, Mich.; W. T. B. Williams, Tuskegee Institute and Slater Foundation; C. J. Anderson, University of Wisconsin; John G. Fowlkes, University of Wisconsin; and Messrs. Griffenhagen & Associates, Inc., Washington, D. C., and Chicago, Ill. In addition, 13 associates assisted in the survey.

*Limitations of Study.*—In the interpretations of the contents of this study, it must not be concluded that these States have reorganized their systems of higher education or eliminated duplication in accordance with the recommendations of the survey commissions or committees. No attempt has been made to ascertain the steps taken by the individual States to carry into effect these recommendations.

*Acknowledgment.*—Before the final publication of the bulletin, proof sheets were submitted to the directors of the several surveys for criticism. The author, therefore, wishes to express his appreciation to Dr. George A. Works for reviewing the sections relating to the Georgia and North Carolina surveys, to Dr. Arthur J. Klein for the Oregon survey, and to Griffenhagen & Associates for the Texas survey.

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## CHAPTER II

### CHARACTER OF PROBLEM AND PROPOSED PLAN OF REORGANIZATION

THE CHARACTER of the problem of duplication confronting each of the five States was dependent in a large measure on the State's policy in the development of its program of higher education. In order to present this problem, the survey commission or committee made a careful analysis of the prevailing policy. A complete appraisal of the institutions existing at the time of the survey was also made revealing the principal defects in the State's program and the fundamental causes and effects of duplication.

As a solution of the problem the commission or committee proposed a general plan of reorganization for each State. This plan involved the determination of the number of institutions to be supported by the State and the particular type of institutions to be included in the system. Guiding principles for the coordination of the institutions into a State-wide program of higher education were presented in connection with the plan.

*Georgia.*—Over the course of its history, the State of Georgia had established a total of 25 institutions maintained under State control and at State expense. Of these, 20 were institutions for white students and 3 for Negroes. The other 2 were agricultural experiment stations. The original policy of Georgia was that the State should have only a State university with branches. In the early constitution it was specifically provided that appropriations should be made by the legislature only for the support of educational institutions that were branches of the University of Georgia. As a result all 25 institutions were nominally branches of the university. In reality, however, each institution had its own governing board and executive officer. State appropriations for support were made in the name of the individual institution.

The first legal step toward the reorganization of the program was taken in 1931. In that year the State legislature

enacted a law abolishing the separate governing boards for each institution and creating a single board of 11 members to exercise control over all the institutions to be known as the Regents of the University System of Georgia. When the board legally came into existence in January 1932, a single executive officer for the entire system was appointed as chancellor. Shortly afterwards the present survey was inaugurated to be used as a basis for the reorganization of the system.

In its analysis of the State's policy, the survey committee emphasized as a foremost defect the maintenance of such a large number of State-supported institutions. The effect of this arrangement was that the financial resources of the State devoted to higher education were being utilized in the support of a great many institutions largely with duplicating functions instead of being concentrated in a few principal institutions. Quality of higher education was thus being sacrificed in response to the demands of local communities that the State maintain colleges in their midst. With such a large number of institutions it was impossible for the State to provide sufficient funds to maintain a high standard of efficiency even in the stronger institutions.

A further difficulty resulting in the general lowering of the quality of higher education as well as duplication was the expansion of the program of the smaller institutions. Although having only limited incomes, some of them had developed 4-year programs without adequate faculty, library, and laboratory facilities to justify such expansion. Another outstanding deficiency found in the Georgia program was the fact that a considerable number of institutions were conducted either as high schools or combined high schools and junior colleges. The State, as a result, was furnishing funds for the maintenance of public secondary education that is generally regarded as a responsibility of the local communities in which the institutions were located. In the distribution of institutions several were located in the same geographical sections of the State.

The plan of reorganization for Georgia centered in the proposal that the university system comprise only a few institutions instead of a large number; that its financial resources devoted to higher education be concentrated in

them; and that they develop the highest standards of educational efficiency. As a guiding principle in accomplishing this object, a sharp distinction was to be made between higher education on the senior college and junior college level. Institutions of senior college level were to be controlled and supported by the State as part of the university system. Institutions of junior college level including secondary schools previously controlled and supported by the State were to be transferred to local communities to be maintained as a part of their public-school systems with the exception of the State normal schools. The recent rapid development of the junior college throughout the United States and the growing tendency to incorporate it in the local public high school were cited as justification for the adoption of this policy.

The following tabulation shows the plan of reorganization proposed for Georgia. In the first column are given the number and types of the institutions existing at the time of the survey. The second column indicates the number and types to be included in the reorganized university system. Corresponding letters are used in both columns to facilitate identification of the items.

EXISTING	RECOMMENDED
A. Institutions for white students included:	A. Institutions for white students to include:
State University..... 1	State University..... 1
College of agriculture..... 1	4-year college of technology..... 1
Medical college..... 1	4-year women's college..... 1
Agricultural experiment station..... 2	4-year teachers college..... 1
4-year college of technology..... 1	2-year normal school..... 3
4-year women's college..... 2	Total..... 7
4-year men's college..... 1	
4-year coeducational college..... 2	
4-year teachers college..... 1	
2-year normal college..... 1	
Combined junior college and secondary school..... 3	
Agricultural and mechanical secondary school..... 6	
<b>Total..... 22</b>	

EXISTING—Continued		RECOMMENDED—Continued	
B. Institutions for Negro students included:		B. Institutions for Negro students to include:	
4-year agricultural and mechanical college and secondary school.....	1	4-year agricultural and mechanical college.....	1
Combined junior college and agricultural and mechanical secondary school.....	1	2-year normal school.....	2
Combined 2-year normal college and secondary school.....	1	Total.....	3
Total.....	3		

As shown above, the plan of reorganization provided for the reduction in the number of institutions from 25 to 10. State-supported higher education for white students was to be concentrated in three principal institutions of senior college grade, a State university, a college of technology, and a women's college. One 4-year teachers college and three white 2-year normal schools were also to be maintained, each serving a certain geographical area of the State. Higher education for Negro students was to be provided by the State in one 4-year college and two normal schools located in Negro centers of population.

In the reorganization plan the college of agriculture, a teachers college, and two agricultural experiment stations previously conducted as independent institutions were to be merged with the State university. The medical college was to be discontinued. In the case of the other institutions for white students, 3 were to be changed to 2-year normal schools, 4 discontinued, and 7 transferred from the State to the local communities in which they were located to be maintained as local junior colleges and high schools. In making the latter recommendation the point was emphasized that practically all these institutions were local in character and most of their students were residents of the local community. Ownership of the physical plants of the institutions was to be transferred from the State to the local public-school districts.

The survey committee recognized that in Georgia a period of transition would occur in the development of public junior colleges as local institutions to be supported by the

local communities as a part of their public-school systems. During this interim, the State university, women's college, the teachers college, and three State normal schools for white students were to maintain junior colleges as separate units. A similar program was to be adopted by the three State Negro institutions. Curricula in the junior colleges of the State institutions as well as those conducted by the local communities in connection with their public-school systems were to consist entirely of general education without any specialization. Substantially the same courses of study were to be given in all junior colleges in the State and developed cooperatively. The practice of duplicating junior college work was to be regarded as necessary duplication.

*North Carolina.*—Unlike Georgia, with its unusually large number of institutions, the problem in North Carolina centered in the maintenance at State expense of three major institutions, a State university, a college of agriculture and engineering, and a women's college. North Carolina opened the first State university in the United States in 1795. For almost 100 years this was the only State-supported institution of higher learning in the State. When the question arose of establishing a land-grant college, the State followed its original policy and combined it with the State university, but later this decision was reversed and a separate institution was founded. Similarly, a separate college for women came into existence. Separate teachers colleges and colleges for Negroes were subsequently developed. As a consequence North Carolina in place of a single central institution had developed three major institutions with duplication and overlapping in their functions, exclusive of its teachers colleges and Negro colleges.

At its session in 1931 the North Carolina Legislature took a radical step toward the solution of this problem. A law was enacted abolishing the three institutions as separate entities and providing for their consolidation into a single institution, the University of North Carolina. The separate board of trustees for each institution was likewise abolished and a single board created to govern the consolidated university. Not only did the legislature make these changes mandatory, but established a commission to carry them into effect. This commission, known as "the Com-

mission on University Consolidation", was empowered to work out a scheme of centralized executive control of the combined institutions, to find a means by which the problem arising out of the consolidation might best be solved, and to unify and coordinate the general educational program of the consolidated university. To accomplish these purposes the commission was authorized to employ competent experts in higher education to make a detailed study of the offerings of the institutions in relation to the needs of the State for the different types of higher education. On a basis of their scientific findings the experts were to prepare a report with recommendations for a plan of reorganization of the several institutions into a consolidated university and for the allocation of functions among them so as to remove duplication.

The chief defect found by the survey committee in North Carolina's policy was the failure to base its program of higher education on the interest of the State as a whole. The creation of three independent major institutions had been due largely to the pressure of local communities to have State-supported institutions situated in their localities. After their establishment influence had been exerted both by the individual institutions and by the local communities to secure increased State funds for their expansion apparently without regard to whether the expanded programs were duplicating those in the other institutions.

Another deficiency was that the resources of the State for the support of higher education were not being distributed so as to obtain the largest possible returns. Funds provided by the State had been utilized for the operation of three institutions providing higher education through the senior college level. The State was thus compelled to defray the cost of duplicated physical plants, staffs, equipment, and other facilities in three institutions that could be maintained at a much less expense in a single institution. This situation had been further aggravated by the fact that the three institutions were in close proximity to each other. Two institutions were approximately 30 miles apart, while the third was located at a distance of 50 miles. In the operation of institutions situated so near to each other, no cognizance had been taken of the modern improvement in transportation and

communication, which permits students to attend colleges at considerable distance from their homes.

The proposed plan of reorganization for North Carolina was concerned chiefly with the similarity in types of the existing institutions and the determination of the types of reorganized institutions to be included in the consolidated university in order to eliminate the defects in the State's program. The first column below shows the number and types of institutions existing at the time of the survey. The second column presents the number and types recommended by the survey committee.

EXISTING		RECOMMENDED	
A. Types of institutions included:		A. Types of institutions to be included:	
State university.....	1	State university with branch 4-year women's college and branch junior college.....	1
4-year women's college....	1		
4-year agricultural and engineering college.....	1		
Total.....	3	Total.....	1

The three existing institutions, as above indicated, were similar in type, each being of senior college grade. Under the plan of reorganization the consolidated university was to consist of a single central State university with two branches. The women's college was to continue on a 4-year basis. The 4-year agricultural and engineering college was to be converted into a junior college. A further change in the latter institution was proposed, dependent upon the policy to be pursued in North Carolina with respect to the expansion of the local public-school systems upward through the junior college years. In the event that this development occurred in the State, the branch junior college was no longer to remain a part of the university, but was to be transferred to the local community in which it was located to be operated in connection with its local public-school system. The consolidated university in this instance would have but one instead of two branches.

An important phase of the proposed reorganization was to make one unit of the consolidated university the main center of the State's higher educational facilities, where all the various fields of instruction were to be concentrated. The



State university proper was designated as this unit. With the change of the agricultural and engineering college to a junior college, all work at the institution on the senior college level was to be transferred to the State university. Another feature of the plan was to make a complete segregation of junior and senior college work in each of the units. Duplication in junior college work was looked upon as necessary. Junior college divisions were to be established in all three units of the consolidated university giving instruction in approximately the same subjects. Duplication of courses on the senior college level in a large number of subjects, however, was to be eliminated. Data collected by the survey showed that classes in such courses were generally small in size, resulting in high costs to the State. To solve this problem, classes for these senior college courses wherever possible were to be consolidated in a single unit of the university instead of being given in two or three units, and full advantage was to be taken of the mobility of both student and faculty members. Transportation of a small number of students from one institution to another to attend senior level classes was recommended. Faculty members were also to travel to the different branches for the purpose of meeting scheduled classes.

*Oregon.*—The development of State-supported higher education in Oregon created a problem different in some aspects from that in the other States. Only five institutions, a State university, an agricultural college, and three normal schools had been established in the State, yet duplication among its institutions had been a problem for more than two decades. The main source of duplication centered in the university and agricultural college, due to the competition that had developed between them. As in the case of North Carolina, three institutions were located only a short distance apart. In 1909 Oregon created a State Board of Higher Curricula, the first ever established in the United States, to solve this problem. The board was vested with powers to determine the courses of study to be offered and the departments of instruction to be conducted in the institutions. No new courses were to be introduced or changes of curricula permitted without the specific approval of the

board. During the course of its existence, the Board of Higher Curricula succeeded in eliminating duplication in most of the branches of engineering at the two institutions, but in the case of many other fields its efforts were of little avail.

Convinced of the futility of the existing plan the State legislature in 1929 enacted a law not only abolishing the State board of higher curricula but also the separate governing boards of the State university, agricultural college, and three normal schools. In their place was created a new department of higher education of the State government conducted by a board of nine members with authority to control the institutions. This new central board was specifically charged with the unification of the functions of the institutions. Full power was given the board to reorganize the work of each institution so as to eliminate unnecessary duplication in equipment, courses, departments, schools, extension activities, summer sessions, offices, laboratories, and publications. The law empowered the board to allocate all State funds for the support of higher education to the several institutions with this specific purpose in view.

In order to prevent further competition between the institutions, the board was required to assume responsibility for all publicity and advertising on behalf of the institutions so that the citizens and prospective students of the State would be presented with a fair and impartial view of the higher educational facilities available at each institution. A special provision of the statute authorized the board to secure the services of some nationally recognized authorities on higher education for the conduct of a complete survey of the institutions. The findings of the survey were to serve as a basis for future action of the board.

The survey commission in its analysis of the Oregon situation concentrated its attention on showing the striking effects of the duplication existing in the State. Notwithstanding the fact that at the time of the survey Oregon was making proportionately large expenditures for higher education as compared with other States, data collected by the commission showed that the State's program of higher education was considerably distorted. Certain fields of higher learning in the State's two principal institutions had been

overdeveloped beyond the industrial needs and the occupational opportunities in the State. In most instances, the overdeveloped fields represented those in which there existed duplication at the two institutions. Underdevelopment had occurred in other fields of higher learning where a genuine demand existed for trained people.

Oregon ranked high among the States in the total number of college students enrolled in its institutions indicating that the State was receiving returns in the way of student attendance. The commission's survey, however, indicated that this was due in part to the student-recruiting campaigns conducted by the two institutions. So keen was the desire of each institution to increase its annual enrollments that students of mediocre ability and poor preparation were frequently admitted. Moreover, each institution had a low percentage of graduation.

The proposed plan of reorganization for Oregon was based on a different arrangement than that in either Georgia or North Carolina. In these States practically all the major fields or professional branches of higher education were to be concentrated in a single institution with the other institutions serving more or less as contributory branches. The plan proposed in Oregon provided for the division of the different fields or professional branches between the State's two principal institutions. This was to be accomplished by the assignment of particular subject-matter courses to one institution and their discontinuance in the other. The State's three normal schools were to be continued without change in their status.

A fundamental phase of the plan was the drawing of a line of demarcation between lower-division or junior college courses and upper-division or senior college courses. Offering of the same lower-division courses was regarded as necessary duplication. Such courses were to be available in both institutions on identically the same terms, their purpose being to afford a broad general education. Duplication of upper-division courses was regarded as unnecessary. They were, therefore, to be distributed between the two institutions on a basis of lines of specialization. One institution was to specialize in natural sciences. All upper-division subject-matter courses in natural sciences, including the professional schools resting

on the natural sciences, such as engineering, agriculture, forestry, mining, and home economics in the realm of foods, were to be confined to this institution. The other institution was to specialize in arts, literature, and social sciences offering all upper-division subject-matter courses in these fields. Such related professional schools as architecture, music, law, medicine, public health, nursing, social service, journalism, and commerce and business were to be centered in this institution.

By this arrangement a student could pursue junior college work at either institution. Two of the three State normal schools were also to offer junior college work where the student was to receive the same credit as at the two principal institutions. At the end of the first 2 years the student was thus to be able to transfer to either of the principal institutions for continuance of his college work in accordance with the upper-division specialization selected by him. The plan likewise provided for the exchange of professors between the institutions or for joint service by a single faculty member in two or more institutions. Transportation of students from one to the other institution was to be arranged on occasions when this was the only method by which the student might secure courses in his special field. Joint curricula were also to be provided by the institutions in certain fields, such as agricultural economics, rural sociology, industrial journalism, architectural engineering, and similar specialties. Students specializing in these fields were to do part of their upper-division work in one institution and part in the other institution.

*Texas.*—Among the five States, Texas was another that had developed a large number of institutions. On account of the high cost of maintaining them, the problem of duplication of their functions had been a subject of concern for 10 years or more. All told, there were 17 separate institutions being operated at State expense. These included a State university, agricultural and mechanical colleges, technical colleges, and teachers colleges. Control of the institutions was vested in six different governing boards.

An interesting phase of the situation was that the original policy of the State was intended to prevent the creation of independent institutions. The Texas Constitution of 1876 provided that the State legislature should establish a university of the first class to be styled, "The University of

Texas", that the agricultural and mechanical college already in existence was to be a branch of the university, and that an institution for the instruction of colored youth was also to be established as a branch of the university. Furthermore, an act of the State legislature passed in 1866 had specified that a system of normal schools was to be added to the State university, thus providing that the State teacher-training institutions were likewise to be branches of the State university. Notwithstanding these constitutional and legislative provisions, the legislature proceeded over a period of half a century to establish independent institutions in no way connected with the State university as branches. Of the 17 institutions, only the medical school and the school of mines and metallurgy were actually made branches of the university.

Cognizance of duplication among the various institutions was taken in 1921, when the legislature appointed a committee to survey the State program of higher education. Another survey of the entire educational system of Texas was made in 1925 in which the institutions of higher education were included. The part of this survey dealing with higher education was conducted by a committee of specialists who were nonresidents of the State. The survey under review was the third authorized within a period of 10 years.

The committee in its survey found that the principal defect in the State's policy was its attempt to furnish higher education in so many localities that students would be able to pursue college work in State-supported institutions while residing at home. The effect was that Texas was maintaining a plethora of duplicating institutions, many of which were local in character with constituencies consisting mostly of students residing in the communities in which they were located. Some of the institutions had been designated as technical schools and teachers colleges when in reality they were almost entirely general colleges of arts and sciences offering the same or similar services. Although providing 4-year curricula leading to degrees, a considerable number of the institutions were actually junior colleges, the greater proportion of their students being enrolled in freshman and sophomore courses.

The survey committee in its proposed plan of reorganization for Texas made an appraisal of each institution on a basis of its usefulness and need to the State at large. The measures used to determine this question were whether its student population was mainly local or State-wide, whether its functions were duplicating those of other institutions, and whether its particular academic program was such that a genuine demand existed for the work offered.

The following parallel columns give the number and type of existing institutions at the time of the survey and those recommended by the plan of reorganization:

EXISTING	RECOMMENDED
A. Institutions for white students included:	A. Institutions for white students to be included:
State university..... 1	State university with 6
Medical school..... 1	branch junior colleges... 7
4-year college of mines and metallurgy..... 1	Medical school..... 1
4-year agricultural and mechanical college..... 1	4-year agricultural and mechanical college..... 1
2-year agricultural and mechanical college..... 2	4-year college of arts and sciences..... 3
4-year college of arts and industries..... 2	Total..... 12
4-year technical college... 1	
4-year teachers college... 7	
Total..... 16	
B. Institutions for Negro students included:	B. Institutions for Negro students to be included:
4-year agricultural and mechanical college..... 1	4-year college of arts and sciences..... 1
Total..... 1	Total..... 1

As shown above, the number of institutions were to be decreased from 17 to 13 under the plan of reorganization. Except for the State university, medical school, and 4-year agricultural and mechanical college, a complete change was proposed in the types of the institutions. Both 4-year and 2-year technical colleges as well as teachers colleges were to be converted either into junior colleges or general arts and sciences colleges. One institution was to be discontinued entirely and two others were to be transferred to local com-

munities to be maintained in connection with the local public-school systems as junior colleges. One of the 4-year technical colleges was to be consolidated with a State teachers college, the combined institution to be a general college of arts and sciences. Both of them were located in the same community and were found to be performing practically the same functions. Two other institutions, one a technical college and the other a teachers college, were to be changed to general arts and sciences. The reason assigned was that these institutions were technical and teachers colleges only in name, their work being confined largely to arts and sciences.

The main feature of the proposed reorganization plan was the conversion of six institutions into branch junior colleges of the State university. Upon the assumption of jurisdiction over the branch junior colleges, the university was to district the State and require students desiring to enter the university to attend the branch junior college of the university in their particular district rather than come to the main campus. The courses of study in the branch junior colleges were to duplicate each other and were to be the same as those given on the junior college level in the university proper. Credits obtained at these junior colleges were to be recorded as university credits.

*Virginia.*—In Virginia the State had developed 10 institutions, including a State university, an agricultural and mechanical college, 2 medical colleges, a military institute, a liberal arts college and 4 teachers colleges for white students. There was also a normal and industrial institute for Negro students maintained by the State.

Most of the institutions had been established in the early history of the State. They were surrounded, therefore, by a wealth of tradition and sentimental attachment on the part of its citizens. In the creation of the different institutions, no provision had been made for a unified State system as was attempted in the case of some of the other States. Each institution had been founded as a separate entity governed by its own board of visitors. Throughout their existence the institutions had operated independently with the exception of the 4 teachers colleges, which had been placed under the control of a single governing board. As a consequence considerable duplication had developed among them. Official

recognition of this problem was taken at an extra session of the State legislature in 1927. An act was passed creating a commission to conduct a survey of the public educational system of the State. One of its provisions specified that the institutions of higher education should be included in the survey and that a study should be made especially of the question of unnecessary and wasteful duplication of courses and functions among them.

The commission conducting the survey found that the primary defect in the existing program was the failure of the several institutions to adjust their work to the needs of the State. Due largely to their independent origin and to their distinctive individual history, the predominating aim of the institutions apparently was to attain general institutional distinction. Instead of limiting their functions to the particular type of work that they were best equipped to perform, most of the institutions had been endeavoring to expand into comprehensive and complete universities. In the desire for self-development, little attention had been paid to what was being done in other State institutions with the result that many of them were offering specialized work which belonged properly to another institution as part of the field that it had been especially designed to cover.

The effect of this policy of institutional self-aggrandizement was that the resources of the institutions had been used principally to increase their range of offerings with the resultant extreme division of subject matter in the various departments. A multiplicity of courses were given, many of which duplicated those of other institutions. The practice of expansion had led to the maintenance of a large number of small classes. In the 4 leading institutions, the survey commission discovered that there were given 359 classes enrolling fewer than 5 students each and 271 classes enrolling between 6 and 10 students each.

Another defect pointed out by the survey commission was that some of the institutions were attempting to establish themselves as national institutions. That the needs of the youth of Virginia had not been determining factors in their development was indicated in the strong appeal made to students residing outside the State. Approximately one-third of the enrollments of the institutions were out-of-State



students. On the other hand a great many students whose homes were in Virginia attended institutions in other States largely because of their inability to secure the type of higher education desired by them in their own State-supported institutions.

The plan of reorganization for Virginia proposed a reduction in the number of institutions together with a scheme for the coordination of their functions. Of the State's 10 institutions it was recommended that the military institute be discontinued on the ground that the particular type of service rendered by it was no longer needed. Another institution, a teachers college, was to be changed into a women's college and operated as a branch of the State university.

For the purpose of coordinating the work of the remaining institutions the office of State chancellor of higher education was to be created. The chancellor was to be responsible for defining the scope and character of the work to be performed by each institution. In cooperation with the presidents and governing boards of the institutions, he was to arrange a unified program of higher education so that each institution would perform the particular function for which it was best equipped and that was most needful for the progress of the State. No institution was to be permitted to establish any school or department which duplicated in whole or in part any school or department existing in any other institution. All courses of study for which there was an unusually small demand at the several institutions were to be eliminated and no new courses were to be introduced that were not elected by at least 10 students.

*Summary.*—The foregoing analysis of the policy prevailing in each of the five States at the time of the survey indicates striking similarity in the problems confronting them.

In the States having a large number of institutions the outstanding defect in the State's program was that their financial resources devoted to higher education were being utilized to support a great many institutions instead of being concentrated in a few principal institutions. This was due largely to an effort on the part of the State to furnish higher education in so many communities that students would be able to pursue college work at State expense while living at or near home. Pressure of local communities to have State

colleges established in their localities was primarily responsible for this situation. After the establishment of the institutions further influence was exerted both by the individual institutions and the communities to secure increased State funds for their expansion regardless of whether the expanded programs were duplicating those in other State institutions. The result of the scattering of State support among a great many institutions was the general lowering of the quality of higher education provided in all of them.

An analogous defect was found in the States even where the number of institutions was not large. In such cases the State was utilizing its resources in defraying the costs of maintaining duplicating physical plants, equipment, and other facilities at several institutions that could have been maintained more economically at a single institution. Moreover, where only a few institutions existed, competition developed among them. The institutions offered certain curricula in practically identical fields of higher learning, their programs in some cases being developed upon an almost equally extensive scale. In several of the States, the duplicating institutions were located in close proximity to each other. Some of the additional causes of duplication revealed in the several States were:

Devotion of the institutions to the goal of institutional distinction rather than of service to the interests of the State as a whole.

Failure of the institutions to limit their functions to the particular type of work that they were best equipped to perform.

Development of expansive and duplicating programs by smaller institutions which were without sufficient income to provide essential facilities.

Among the other important effects of duplication disclosed in the different surveys were the following:

Distortion of the State's higher educational program by the overdevelopment of some fields of higher learning and the underdevelopment of others.

Creation of an oversupply of trained persons beyond the occupational needs of the State in the fields overdeveloped by the institutions.

Conduct of student-recruiting campaigns by the competing institutions in order to maintain large student enrollments.

The proposed plans of reorganization in the five States consisted in general of making one or two institutions the main centers of the State's higher educational system. The financial resources of the State devoted to higher education and the various major fields of higher learning were to be concentrated in them rather than in a large number of institutions. To accomplish this object, the number of existing institutions were to be reduced through consolidations, changes of type, discontinuances or transfer from the State to local communities.

The guiding principles upon which the plans were based in most of the States provided for making a sharp distinction between higher education on the junior and senior college levels. Duplication of junior college work among State-supported institutions was regarded as necessary and junior college curricula were to consist of general education without specialization. Approximately the same courses of study were to be given in all institutions of junior college grade. Recognition was also to be given of the tendency to incorporate the junior college as a part of the local public-school system to be supported by the local community rather than the State.

In the States having a large number of institutions the plan in one State provided that institutions of senior college level be maintained at State expense and those of junior college level be supported by the local communities in conjunction with their local public high schools. The State university, college of technology, and women's college were to be the main centers of senior college and professional work. The remaining institutions, which were largely local in character, were to be changed from 4-year to junior colleges and transferred from the State to the local communities in which they were located with the exception of several State normal schools. The plan in the second State having a great many institutions was based on the same principles except that most of the institutions were to be made branch junior colleges of the State university. All the various major fields of higher learning in this State were to be concentrated in the State university and the State agricultural and

mechanical college with several exceptions. In order to reduce the number of institutions, some technical colleges and teachers colleges were to be changed to junior colleges and others to general liberal arts colleges while several were to be consolidated or discontinued.

In the States having a small number of institutions performing the same or similar functions, segregation of junior and senior college work was also the guiding principle of the proposed plan of reorganization. The plan in one case provided for the merging of the State's three major institutions into a single consolidated university. One of the existing institutions was to be made a women's branch of the consolidated university and the other a junior college branch. The State university proper was to be the main center of the State's higher educational activities with the two branches serving as contributory or auxiliary units. Junior college curricula of the same general type were to be offered in each of the three units. A fundamental feature of the plan in another State having a small number of institutions was a differentiation between junior and senior college work. Senior college courses including professional schools relating to them were to be divided between the State's two principal institutions according to general lines of specialization. Junior college courses were to be offered at both institutions including two of the State's normal schools on identically the same terms.

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## CHAPTER III

### CRITERIA FOR ELIMINATING DUPLICATION

IN THE proposal of a plan of reorganization determining the number and type of institutions to be included in the State's system of higher education, an important phase of the problem was the criteria utilized by the commission or committee in each survey to decide whether specific functions should be duplicated in two or more institutions. As shown in the preceding chapter, duplication of junior college work was regarded as necessary. The criteria, therefore, applied mainly to major fields or professional branches of higher learning above the junior college level.

*Georgia.*—Criteria used in the Georgia survey were based on several factors. Foremost among them was whether the State's need for trained persons in the particular field was sufficient to justify the cost of maintaining the duplicating work in two or more institutions. A second factor was whether an adequate demand existed among the students for the duplicating field. Information on this point was ascertained by an analysis of student enrollments, size of classes, and number of annual graduates in the duplicating field at each of the institutions. Where it was found that the enrollment of students, size of classes, and number of graduates were so small as to result in high unit costs, the recommendation was made that the major field in this particular institution be discontinued in favor of the other institution where the greater demand existed. A third factor was whether the work being conducted was of a normal standard of quality. The position was taken that the State could not afford to maintain instruction in a major field or professional branch that was of high quality in one institution and of poor quality in another.

Another criterion applied in Georgia was in connection with the advisability of the State's maintaining work in certain professional branches which was duplicated in neighboring States. Among these fields were medicine, mining engineering, veterinary medicine, and agricultural engineering. Because of the limited number of trained persons needed in these

fields and the heavy expense of providing instructional facilities, it was proposed that the country be divided into areas consisting of groups of States and that only one institution in each area offer work in them. The State of Alabama was supporting schools of mining engineering and veterinary medicine for the area comprising the Southeastern States. Instruction in these fields by the Georgia institutions, therefore, was to be discontinued in order to avoid duplication with the Alabama institutions.

*North Carolina.*—Duplication in North Carolina was approached from a different angle than in the other States. Instead of considering the duplication of specific major fields or professional branches, an analysis was made showing the institutions that were maintaining the same major divisions, such as colleges, schools, or departments.

Criteria used to determine whether justification existed for the maintenance of duplicating major divisions in more than one institution were based mainly on the proposition that higher education provided by the State should be of the highest level of excellence. Where several institutions were conducting the same colleges, schools, or departments, the question as to whether the duplication should be eliminated depended on the efficiency and standard of the work given. To decide this issue, a careful appraisal was made of the qualification of the faculty, scientific equipment and library, and physical plant facilities in each duplicating major division in the existing institutions. Another factor given consideration was whether basic courses of study were available in the institution to provide the necessary background for the particular type of specialized and professional work.

*Oregon.*—As previously shown, the plan of reorganization in Oregon provided for a division of subject-matter courses on the senior college level including related professional fields between the State's two principal institutions. The question, therefore, was whether senior college courses in one institution which were duplicating those in another institution should be eliminated.

Several criteria were adopted to decide this question. One was whether the courses were the same or similar in objective, subject-matter, and content. This was ascertained by a detailed examination of the description of each individual senior college course contained in the catalogs of

the institutions. Where the description indicated that duplication existed, the recommendation was made that the particular course be discontinued at one of the institutions. Another criterion was the number of students enrolled in the various senior college courses. A special study of this problem was conducted on the ground that the State was not justified in defraying the double expense of maintaining duplicating courses in two institutions, each with small enrollments, when by combining them in one institution the cost would be greatly reduced.

*Texas.*—Criteria in Texas centered chiefly in a comparison of the cost of duplicating work in the individual institutions. To secure this information extensive statistical data were compiled on the annual expenditures for the various major fields at each institution, number of departments of instruction, hours of credit, staff members, training of staff, teaching loads, and class sizes. Enrollment of students in the fields were equated on a full-time basis and unit operating costs were computed. In the case of two or more institutions offering curricula in the same fields, the work was to be eliminated in the particular institutions where the expense of its maintenance was so high that the State was not warranted in continuing it.

A further criterion was whether institutions which were duplicating each others' work and were located in approximately the same geographical area of the State were in direct competition. Compilation of data on the students attending the institutions classified according to the distance of their homes from the campus was made to show whether they were drawing their students from the same territory. Where this was found to be the case the existing duplication was to be eliminated. These data were likewise used to determine whether an institution offering curricula in a given field was sufficiently accessible to another institution so that the duplicating curricula in the second institution could be discontinued.

Other criteria dealt with the practice of the institutions in the enforcement of admission requirements. An investigation was conducted to find out whether students without full high-school credentials were being admitted to particular

schools or departments where duplication existed in order to increase enrollments and thus justify the offerings.

*Virginia.*—A number of criteria were utilized in Virginia. Where a professional field requiring costly equipment, specially trained and highly paid teachers was being duplicated in two or more institutions, the work was to be continued only in the institution where the number of students electing the work was large enough to use the expensive facilities to the limit. In the case of other major fields, the deciding factor was whether the cost per student would be essentially larger if the particular field was divided between two centers or confined to a single center. The question of whether the annual quota of graduates essential to supply the State's requirements was being exceeded by providing duplicating instruction in a given field was another criterion used.

*Summary.*—Essentially the same criteria were utilized by the surveys to determine the question of whether duplication in specific major fields or professional branches of higher learning should be eliminated in the different States. The most frequent criterion was whether the State's need for trained persons in the particular field was sufficient to justify the State in defraying the cost of duplicating the work in two or more institutions. Another criterion commonly used was whether the demand for instruction among the students in a given field warranted the expense of its continuance in each of the duplicating institutions. Among the other criteria were:

Whether the duplicating work in the particular field offered at two or more institutions was being conducted at the highest level of excellence and efficiency, the position being taken that the State could not afford to maintain instruction that was of high quality in one institution and of poor quality in another;

Whether institutions conducting duplicating fields were located in the same geographic area of the State and whether in such case one institution was sufficiently accessible to the other institution so that the duplicating curricula in the second institution could be eliminated;

Whether the cost per student would be essentially larger if the particular field was divided between two centers or limited to a single center;

Whether work in certain professional branches was duplicating that given by institutions in a neighboring State.



## CHAPTER IV

### DUPLICATION IN MAJOR FIELDS

APPLYING the criteria just presented, the survey commission or committee showed the existing duplication of various major fields or professional branches of higher learning among the institutions in each State at the time of the survey and made recommendations for its elimination.

The accompanying compilation contains this information in tabular form. In the first column are listed the several fields or branches. The second column gives for the State of Georgia the number of existing institutions found at the time of the survey offering duplicating curricula in each field or branch. In the third column are shown the number of its institutions recommended by the survey to continue the curricula. The remaining columns in the compilation give the corresponding data for the other States with the exception of Oregon. On account of the fact that the plan of reorganization for that State provided for a division of senior-college courses between its two principal institutions, Oregon is treated separately. Institutions for Negro students are omitted from the compilation as their work did not duplicate that of white institutions in any of the States.

*Duplication of major fields and professional branches among State-supported institutions and recommendations for its elimination in four States*

Major field or professional branch	Georgia		North Carolina		Texas		Virginia	
	Number of existing institutions offering duplicating curricula	Number of institutions recommended to continue curricula	Number of existing institutions offering duplicating curricula	Number of institutions recommended to continue curricula	Number of existing institutions offering duplicating curricula	Number of institutions recommended to continue curricula	Number of existing institutions offering duplicating curricula	Number of institutions recommended to continue curricula
1	2	3	4	5	6	7	8	9
Arts and science.....	6	2	3	2	14	4	4	2
Engineering.....	2	1	2	1	6	2	3	2
Agriculture.....	2	1			11	2		
Home economics.....	3	2			13	3	2	2
Commerce and business.....	5	1	3	1	12	2	3	1
Library science.....			2	1	6	1		
Medicine.....	1	0	1	0			2	2
Law.....							2	1

*Georgia.*—As disclosed by column 2 of the compilation, curricula in five fields were duplicated in from 6 to 2 institutions in Georgia. The greatest duplication was found in arts and sciences and in commerce and business. Other duplication of a more expensive type existed in engineering, agriculture, and home economics, where the costs of laboratory equipment and other facilities were high. It was recommended that only one institution continue to offer curricula in each of these fields with the exception of arts and sciences and of home economics which were to be given in two institutions. Duplicating curricula in the other institutions were to be discontinued.

The survey committee's viewpoint in this allocation was, in general, to concentrate all fields at a single institution rather than scatter them among a number of institutions. Under the plan of reorganization proposed for Georgia, the State's university system was to consist of a State university, a college of technology, a women's college, a teachers college, and three normal schools. The single institution in which all fields were to be concentrated was the State university excepting engineering which was to be centered at the college of technology. The fields of arts and sciences and of home economics were to be offered at both the university and women's college. A two-year curriculum for the training of secretarial workers was to be given also at the woman's college, but this was not regarded as duplication of the regular commerce and business curricula centered at the State university.

Medicine, another field given in only one institution, was to be discontinued entirely. This recommendation was based on the fact that no need existed for the college of medicine and that it was handicapped by a lack of funds for its maintenance. Only through a large outlay by the State was it possible to make the institution a first-rate medical school. With its discontinuance the State was to establish a limited number of scholarships to be awarded medical students in defraying the cost of their attendance at other medical schools. By this arrangement a large saving for the State was to be effected.

*North Carolina.*—Duplication among the three institutions of North Carolina, as indicated by column 4 of the compila-

tion, was found in half of the fields listed. The fields of arts and sciences and of commerce and business were duplicated in all 3 institutions while engineering and library science were duplicated in 2 of them. One institution was recommended to continue curricula in each of these fields with a single exception. This was arts and sciences, which was to be offered in two institutions.

The plan of reorganization of North Carolina provided for the merging of its three principal institutions into a consolidated university with a branch women's college and a branch junior college. The State university proper was designated as the institution where all fields were to be offered. Fields, such as commerce and business, engineering, and library science duplicated previously in the separated institutions, were to be transferred to the main university. A similar transfer was to be made of agriculture and home economics, which had been offered at only one institution. Arts and sciences and certain teacher training were to be continued at both the university and branch women's college. Medicine, which was offered as a 2-year curriculum in only one institution, was to be discontinued entirely when certain favorable conditions developed with respect to the admission of students to a privately controlled medical college in the State. Although library science was recommended to be continued in 1 instead of 2 institutions, doubt was expressed whether any justification existed for giving any work in this field at State expense.

*Texas.*—Column 6 of the compilation reveals that there was duplication among the institutions of Texas in all the fields except law and medicine. Arts and sciences were duplicated in 14 and home economics in 13 of the State's 17 institutions while engineering was duplicated in 6 and agriculture in 11. The extensive duplication in both home economics and agriculture was attributed in part to a State law requiring all seven teachers colleges to provide instruction in these fields. Commerce and business was offered in all the State's institutions with four exceptions, the duplication being almost as great as in arts and sciences and home economics.

Recommendations provided that arts and sciences be offered in 4 instead of 14 institutions. Engineering and

commerce and business were each to be continued in 2 institutions, while home economics was to be given in 3 instead of 13 institutions. Only 2 institutions were to offer curricula in agriculture, the other 9 institutions discontinuing work in this field. With a few minor exceptions all fields were allocated either to the State university or the agriculture and mechanical college, the proposed plan of reorganization making these two institutions the main centers of the State's system of higher education.

*Virginia*—As shown by column 8 in the compilation, duplication in 6 of the 8 fields was found among the institutions in Virginia. Arts and sciences curricula were duplicated in 4 institutions; engineering and commerce and business in 3; and law, home economics, and medicine in 2.

According to the recommendations, each field was to be restricted to 1 or 2 institutions. To eliminate the duplication in engineering, this field was to be discontinued in 1 institution entirely and continued in 2 other institutions providing a plan to coordinate the work could be devised. In the event that such coordination could not be effected, engineering was to be offered in only one institution. The field of medicine was to be continued in two institutions on a cooperative basis. Law curriculum leading to a degree for practicing lawyers was to be offered in one institution. Another source of duplication not shown in the compilation was in 2-year preprofessional courses for law, medicine, pharmacy, and dentistry. Courses of this character were given in 5 institutions including 1 of the medical colleges. It was recommended that such preprofessional courses be continued in only two institutions.

*Oregon*.—The problem in Oregon was approached from the point of view of duplication in subject-matter courses on the senior college level between the State's two principal institutions rather than in specific major fields. A considerable amount of duplication was found between senior college courses. Other duplication was discovered between junior college courses in one institution and senior college courses in the other. There was also duplication in miscellaneous courses of various types.

In the first column below are presented some of the more prominent duplications of senior college courses in the general

branches of higher learning. The second column shows the recommendations for their elimination.

EXISTING	RECOMMENDED
A. Senior college courses offered in:	A. Senior college courses:
1. Social sciences in two institutions.	To be continued in one institution.
2. Natural sciences in two institutions.	Do.
3. Humanities in two institutions.	Do.
4. Mathematics and engineering in two institutions.	Do.
5. Journalism in two institutions.	Do.
6. Commerce and business in two institutions.	Do.
7. Psychology in two institutions.	Do.
8. Arts and music in two institutions.	Do.
9. Health and physical education in two institutions.	Do.

As indicated above, senior college courses were duplicated in practically all the main subject-matter branches. In examining into the extent of duplication the survey commission found that from 11 to 39 percent of the total senior college courses just listed at 1 of the institutions were duplicated in the other institution. Similarly, from 26 to 100 percent of the total senior college courses at the second institution duplicated those at the first institution. Other duplication existed in architectural engineering, rural architecture, and industrial journalism.

For the elimination of these duplications it was recommended that subject-matter courses on the senior college level in each branch were to be given in only one institution. All such subject-matter courses dealing with natural sciences were to be offered in the institution, which under the plan of reorganization was to specialize in natural sciences including professional schools resting upon them, and all those dealing with arts, literature, and social sciences in the other institution, which was to specialize in these branches including their related professional schools.

*Summary.*—More or less extensive duplication of various major fields or professional branches of higher education was found in the five States. Recommendations of the survey commission or committee for the elimination of the duplication were much the same in the case of each State. Curricula in each specified field or branch with a few exceptions were to be continued in only one institution. Duplicating work in the particular field given in the other institutions was either to be transferred to this institution or discontinued entirely.

Of the different fields, the greatest duplication appeared in arts and sciences and in commerce and business. This applied equally to States with a large and small number of institutions. Responsibility for this situation was attributed to the practice of institutions of different types, such as technical schools, agricultural and mechanical colleges, and teachers colleges, of developing 4-year curricula in these fields. Engineering in some of its specialized branches was duplicated in from 2 to 6 institutions in 4 of the States. Because of the high cost of providing laboratory and other facilities duplication in this field was especially expensive.

Considerable duplication was also revealed in home economics, curricula in this field being offered in from 2 to 13 institutions in 4 States. Agriculture was found to be duplicated in two States. In 1 of them the survey showed 11 institutions offering curricula in agriculture. Additional fields duplicated in two or more institutions were law, library science, and medicine. In two States it was recommended that medicine be discontinued altogether and that other arrangements be made by the State to provide medical instruction.

In the allocation of specific fields to institutions so as to eliminate duplication, the plans provided for the concentration of all fields in either 1 or 2 institutions in practically all the States. The State university was designated as the institution in the States where the fields were to be centered in one institution. The State university and the agricultural and mechanical college were so designated in the States where they were to be concentrated in two institutions.

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## CHAPTER V

### DUPLICATION IN TEACHER TRAINING

TEACHER TRAINING in general was regarded as one of the chief sources of duplication among State-supported institutions. For this reason the commission or committee in the different surveys made duplication in this field the subject of special study treating it separately from the other major fields or professional branches.

In the accompanying compilation are presented the results of this study in tabular form for the individual States. The first column lists the various types of teachers. The second column shows for the State of Georgia the number of institutions offering duplicating curricula for the training of each type of teacher, while the third column presents the number of its institutions recommended to continue the curricula. In the remaining columns is given the same information for the other four States. The survey in North Carolina comprised only the State's three principal institutions, the teacher-training colleges not being included. On this account the compilation contains only the teacher-training duplication in these three institutions. The survey commission in another State, Virginia, did not show specifically the number of institutions having duplicating curricula for high-school teachers of specialized subjects so that it was necessary to omit them from the compilation. Institutions for Negro students are excluded from the compilation since their teacher-training programs did not duplicate those of institutions for white students in any of the States.

*Duplicating curricula in teacher training among State-supported institutions and recommendations for their elimination in 5 States*

Type of teacher	Georgia		North Carolina		Oregon		Texas		Virginia	
	Number of existing institutions offering duplicating curricula	Number of institutions recommended to continue curricula	Number of existing institutions offering duplicating curricula	Number of institutions recommended to continue curricula	Number of existing institutions offering duplicating curricula	Number of institutions recommended to continue curricula	Number of existing institutions offering duplicating curricula	Number of institutions recommended to continue curricula	Number of existing institutions offering duplicating curricula	Number of institutions recommended to continue curricula
1	2	3	4	5	6	7	8	9	10	11
1. Elementary school teachers	10	5	2	1	3	3	14	10	7	5
2. Junior high-school teachers					3	1	13	4		
3. High-school teachers of:										
(a) Academic subjects	7	2	3	2	2	1	14	4	8	4
(b) Agriculture	2	1					9	1		
(c) Industrial arts	1	0					7	1		
(d) Home economics	4	2				2	11	4		
(e) Commerce and business	3	2	2	1	3	1	5	3		
(f) Music					3	1	10	3		
(g) Art					3	1	8	2		
(h) Physical education	3	1			5	1	11	2		
4. Administrative or supervisory officers			3	1	3	1	11	4		

*Georgia.*—Duplication in teacher training was found on a large scale in Georgia. Every State-supported institution of collegiate grade with one exception was offering curricula for elementary or high-school teachers of one type or other at the time of the survey.

As indicated in column 2 of the compilation, elementary teachers were being trained in 10 institutions and high-school teachers of academic subjects in 7. Curricula for high-school teachers of such special subjects as agriculture, home economics, commerce and business, and physical education were duplicated in from 2 to 4 institutions. In order to eliminate the duplication, a greatly reduced number of institutions was recommended to continue curricula for each of the different types of teachers. The plan of reorganization for Georgia provided that the university system should include a State university, a women's college, a school of technology, a teachers college, and 3 normal schools. Elementary teachers were to be trained in 5 institutions, the women's college, the



teachers college, and 3 normal schools, instead of 10 institutions. Curricula for high-school teachers of academic subjects, of home economics, and of commerce and business were to be restricted to 2 institutions, the State university, and women's college. Only 1 institution, the State university, was to train high-school teachers of agriculture and physical education. Duplicating curricula for all these types of teachers offered in other institutions were to be discontinued.

The compilation shows that high-school teachers of industrial arts were being trained in only 1 institution, the school of technology. Because of the small demand for this type of teacher and the expense connected with the maintenance of instruction, it was recommended that the work be discontinued by the college and transferred to the university extension division.

*North Carolina.*—Teacher-training duplication, as previously pointed out, was shown only for North Carolina's 3 principal institutions, since the survey did not include the State teachers colleges.

In these 3 institutions, column 4 of the compilation reveals that duplication existed chiefly in the training of elementary teachers, high-school teachers of academic subjects and of commerce and business, and administrative and supervisory officers. Curricula for teachers of other special subjects, such as agriculture, industrial arts, or home economics, were not being offered in more than 1 institution. With the 3 institutions combined into a consolidated university composed of a main university, a branch women's college, and a branch junior college, only 1 institution was recommended to continue curricula for each type of teacher, with the exception of high-school teachers of academic subjects. Such teachers were to be trained at 2 units, the university proper and the women's branch college. In accordance with the reorganization plan to concentrate all the major fields of higher learning at the main university, this institution was also to be the center for the training of all the various high-school teachers of special subjects as well as administrative and supervisory officers.

*Oregon.*—The greatest duplication in Oregon was found in the training of high-school teachers. In examining into this

question the survey commission discovered that as a result of this duplication the number of students preparing for high-school teaching exceeded considerably the available high-school positions within the State. A large oversupply of high-school teachers had thus been created.

In column 6 of the compilation is disclosed that duplicating curricula for high-school teachers of all types except those of agriculture and industrial arts were offered in two or more institutions. Work for high-school teachers of physical education or athletic coaches was duplicated in five institutions. There were three institutions having duplicating curricula for junior high school teachers and for regular high-school teachers of commerce and business, music, and art. The duplication existed not only between the State's two principal institutions, the university and agricultural college, but also among its three normal schools. Although the normal schools were supposed to confine their functions to the training of elementary-school teachers, these institutions had been offering curricula for the training of certain types of high-school teachers.

For the purpose of eliminating the duplication, it was recommended that curricula for each type of high-school teacher be continued in one of the two principal institutions through a division of functions on the same basis as that made for senior college subject-matter courses. High-school teachers of special subjects including natural sciences and their applications were to be trained in the institution specializing in natural sciences. High-school teachers of subjects including arts, literature, and social sciences with their applications were to be trained in the institution assigned these particular branches. In the case of high-school teachers of physical education, joint curricula were to be offered in the two institutions, the students taking part of their work in one and part in the other. The three normal schools were to restrict themselves entirely to the training of elementary school teachers.

*Texas.*—Due to its large number of institutions, Texas had developed teacher-training work on an elaborate scale. Seven teachers colleges had been established by the State to fulfill the function of teacher preparation. In addition, the State technical schools as well as institutions of other types had

installed programs of teacher training. Thus, duplication was found not only among the teachers colleges, but between the teachers colleges and other State institutions.

Column 8 of the compilation shows that curricula for the various types of teachers were duplicated in from 5 to 14 institutions. Elementary school teachers were trained in all the State-supported institutions with three exceptions. An analogous situation existed with respect to regular high-school teachers of academic subjects. There were from 5 to 11 institutions having duplicating curricula for high-school teachers of special subjects, such as agriculture, industrial arts, home economics, commerce and business, music, art, and physical education. Another source of duplication was in the training of administrative and supervisory officers.

The recommendations for the elimination of the duplication provided for the discontinuance of teacher-training work by many of the institutions. Curricula for elementary teachers were to be continued in ten institutions including the proposed six junior college branches of the State university. Junior high school teachers, regular high-school teachers of academic subjects and of home economics, and administrative and supervisory offices were to be trained in only 4 instead of from 11 to 14 institutions. All training of high-school teachers of agriculture and industrial arts was to be limited to one institution, the State's agricultural and mechanical college. Curricula for high-school teachers of the other special subjects were to be confined to from 2 to 4 institutions where previously such curricula had been maintained in from 5 to 11 institutions.

*Virginia.*—At the time of the survey, every State-supported institution in Virginia with one exception was found offering duplicating curricula either for elementary or high-school teachers of one type or another.

Of the State's 9 institutions, elementary teachers, as shown by column 10 of the compilation, were being trained in 7 and high-school teachers of academic subjects in 8. It was recommended that the number of institutions continuing curricula for elementary teachers be reduced to 5 and that the number continuing work for high-school teachers of academic subjects be limited to 4. In its survey, the commission did not describe in detail the duplication of curricula for high-school teachers of the different special

subjects, but proposed that such curricula be so distributed among the institutions as to avoid duplicated effort and expense.

*Summary.*--A large amount of duplication was found by the surveys in the field of teacher training. This was especially true with respect to elementary teachers and high-school teachers of academic subjects.

In all 5 States, duplicating curricula for elementary teachers were offered in a total of 36 State-supported institutions. The recommendations provided that only 24, or two-thirds of these institutions, continue the curricula. There were 34 institutions having duplicating curricula for high-school teachers of academic subjects. The number of institutions recommended to continue such curricula were 13, a greater reduction than in the case of elementary teachers. In the individual States institutions having duplicating curricula for both these types of teachers varied from 14 in one State to 2 in another.

Considerable duplication was found in the training of high-school teachers of special subjects. Curricula for such teachers of agriculture, home economics, commerce and business, and physical education were duplicated in from 2 to 4 institutions in 1 State. There were from 2 to 5 institutions in another State having duplicating curricula for high-school teachers of home economics, commerce and business, music, art, and physical education. The greatest duplication existed in a third State where from 5 to 11 institutions offered duplicating curricula for the training of all the different types of specialized high-school teachers. Work for the training of administrative and supervisory officers was likewise duplicated in 3 institutions in 2 States and 11 in another.

In eliminating the duplication, it was recommended that curricula for the training of each type of high-school teacher of special subjects be limited to either one main institution or several central institutions. The State university and the agricultural and mechanical college were designated in practically all the States. Other institutions offering the duplicating curricula were to discontinue the instruction. A similar recommendation was made in regard to administrative and supervisory officers.

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## CHAPTER VI

### DUPLICATION IN GRADUATE WORK AND RESEARCH

IN ADDITION to the major fields and professional branches of higher learning, the survey commission or committee analyzed the extent of duplication in graduate work and research in each State. Recommendations for its elimination were made as in the case of the other fields.

*Georgia.*—Notwithstanding the fact that the State was maintaining 25 institutions at the time of the survey, graduate work in Georgia was confined to 2 institutions, the State university and college of technology. It was recommended that this arrangement be continued and none of the other institutions be permitted to offer graduate work. No duplication existed in the graduate work offered by the two institutions except in civil engineering. The recommendation was made that the State university discontinue work in this branch, leaving the engineering field entirely to the college of technology. With the development of new fields of graduate work, the position was taken that all such work should be concentrated in the State university. No step, however, was to be taken toward this end until ample funds were provided by the State.

Considerable duplication and lack of coordination were found in research being conducted by the institutions. There were six institutions conducting agricultural research independently of each other. Three of them were experiment stations under the jurisdiction of the State department of agriculture and not a part of the Georgia university system. To remedy this condition, it was proposed that a State director of research for agriculture be appointed with the responsibility of supervision and coordination of the research being done in all the institutions. The three experiment stations under the State department of agriculture were to be transferred to the university system.

*North Carolina.*—Graduate work was being offered in all three principal institutions of North Carolina. The main duplication was in the field of education, although in the case

of two institutions similar graduate programs in a number of academic departments had been maintained. Discontinuance of graduate work at all institutions except at the main State university was recommended. According to the plan of reorganization, this unit of the State's consolidated university was to be the only institution offering graduate work.

While research was being conducted in two institutions, little or no duplication existed. The agricultural and engineering college had been devoting itself almost entirely to research in agriculture. Other fields were confined to the State university, which possessed superior facilities both in the way of an extensive library and scientific equipment. With the conversion of the State agricultural and engineering college into a branch junior college and the transfer of its principal functions to the main university, the latter institution was to be made the main center of all research in the State.

*Oregon.*—It has already been shown that extensive duplication was found in senior college courses between Oregon's two principal institutions. A similar amount of duplication existed in graduate work. For its elimination the recommendation was made that graduate work be divided between the two institutions on the same basis as that adopted for the senior college courses. Graduate work in natural sciences and their related fields was to be offered only in the institution specializing in natural sciences, while graduate work in arts, literature, and social sciences together with their related fields was to be limited to the institution allocated these particular branches.

Each of the two institutions had its own organization for the conduct of research. Their programs consequently were being pursued independently of each other. As a result there was considerable overlapping of research work, particularly in problems dealing with economics, sociology, business, finance, transportation, taxation, and other scientific fields. To avert such overlapping, it was proposed that research be articulated through cooperative projects with the scientists of both institutions participating. A cooperative research council was to be organized consisting of representatives of the five State institutions, of the State board of higher education, and of the regular State department of education.

Through consultation with the scientific and professional staffs, major research projects of prime importance to the welfare of the State were to be selected. Scientists from both institutions qualified to conduct research into the problems were then to be assigned to them and the necessary funds provided to defray their costs. The cooperative research council also was to be authorized to approve individual research projects conducted within the institutions and not connected with the major cooperative problems in order to prevent duplication.

*Texas.*—Graduate work was found to be an expensive source of duplication in Texas where a large number of institutions were being maintained by the State. This duplication was particularly serious in graduate work leading to the master's degree. The following parallel columns indicate the number of institutions offering graduate work in each major field at the time of the survey and the number recommended to continue the work:

EXISTING	RECOMMENDED
A. Graduate work leading to master's degree offered in:	A. Graduate work leading to master's degree:
1. Arts and sciences subjects in six institutions.	To be continued in one institution.
2. Education in six institutions.	Do.
3. Engineering in two institutions.	Do.
4. Architecture in two institutions.	Do.
5. Home economics in two institutions.	Do.
6. Commerce and business in two institutions.	Do.
7. Agriculture in two institutions.	Do.
B. Graduate work leading to doctor of philosophy degree in one institution.	Do.

Graduate work in arts and sciences and in education leading to the master's degree, as shown above, was duplicated in six institutions. There were two institutions offering duplicate graduate work in engineering, architecture, home economics, commerce and business, and agriculture. Only

one institution, the State university, maintained graduate work leading to the degree of doctor of philosophy. The recommendations provided that graduate work in each major field be limited to one institution. The State university was designated as the institution in which all graduate work was to be given with the exception of that in agriculture and veterinary medicine, which were to be offered at the State's agricultural and mechanical college. In addition to the institutions for white students, the State college for Negro students had been maintaining graduate work, principally in the field of education. This work was to be discontinued entirely.

Two institutions in Texas were conducting research. The State university was devoting itself to research in natural sciences, social sciences, and other related professional fields, while the research program of the agricultural and mechanical college was concentrated largely in agriculture. Notwithstanding this arrangement, some overlapping and duplication were found in the different research projects undertaken by the two institutions in connection with taxation and rural banking. One institution had also established a division of rural home research, which duplicated in some respects home economics research at the other institution. It was proposed that the agricultural and mechanical college confine itself strictly to research in agriculture. Research in the remaining fields was to be centered at the State university.

*Virginia.*—Graduate work was being given in three institutions in Virginia, involving duplication in a number of their offerings. It was recommended that one institution, the State university, be assigned the graduate field. Work of graduate standing was not to be permitted in any other institution except in the case of agriculture and engineering, which were to be available at the State's agricultural and mechanical college.

No serious duplication was found in research among the institutions. Proposals were made that research for the most part be concentrated in the State university, although the pursuit of research was to be encouraged by individual staff members of the other institutions. An exception was the State's agricultural and mechanical college, which was to do research in agriculture and engineering.

*Summary.*—Duplication of graduate work in 1 or more fields was found in all 5 States. The number of institutions



in which such work was duplicated varied from 2 institutions in one State to 6 in another. The main duplication was in arts and sciences subjects and in education, although in several instances there was duplication of graduate work in engineering and agriculture. The surveys also disclosed duplication in such fields as architecture, home economics, and commerce and business in one State.

Unanimity of opinion prevailed among the commissions or committees that no duplication of any character in graduate work should be permitted in any of the States. Their recommendations provided in general that the State university be assigned the graduate field and that all other institutions discontinue work of a graduate standing. An exception was made in the States that had separate agricultural or mechanical colleges which were to give graduate work in agriculture; engineering, or veterinary medicine instead of the State university.

Duplication in research consisted chiefly of overlapping of research projects conducted by the institutions operating independently of each other. In 1 State research in agriculture was being conducted by 6 institutions, 3 of which were experiment stations under the jurisdiction of the State department of agriculture and not connected with the State's system of higher education. In another State the two principal institutions had their own organization for the conduct of research, the programs in certain fields frequently overlapping each other. A similar lack of coordination resulted in minor duplication in a third State. No significant duplication in research was found in the two other States.

Recommendations for the elimination of the duplication in the different States were much alike in principle. In the State where overlapping existed in agricultural research, a State director of research in this field was to be appointed with responsibility for the supervision and coordination of the work in all the institutions. A State research council was to be organized in the second State with authority over the entire State program of research. Projects dealing with questions of prime importance to the welfare of the State were to be selected by the council and scientists chosen from the staffs of both institutions were to conduct research into them cooperatively. It was recommended in general that the State university be made the center of research.

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## CHAPTER VII

### DUPLICATION IN EXTENSION AND MISCELLANEOUS ACTIVITIES

**E**XTENSION was another educational function frequently duplicated among the institutions within a State. In each of the surveys, the commission or committee conducted special inquiries into this question and made recommendations for eliminating the existing duplication.

*Georgia.*—Prior to the survey in Georgia, the board of regents of the university system had already taken steps toward the removal of duplication in extension work among its many institutions. This step consisted principally of confining all extension to six institutions. Notwithstanding the effort of the regents, duplication continued to exist. A new plan, therefore, was proposed by the survey committee. It provided that a State division of general extension be organized under the control of a director responsible to the chancellor of the university system. The director was to develop a coordinated and State-wide program of extension in which faculty members from all State-supported institutions were to participate. Cooperation of privately controlled institutions was to be secured wherever possible. The board of regents was to make special budgetary provision for the support of the division of general extension.

Another source of duplication was the operation of a large number of summer schools by the various institutions. It was recommended that many of them be discontinued and that summer schools be maintained at only six or seven centers. In the determination of these centers care was to be taken to avoid the conduct of summer schools by State-supported institutions in the same communities where summer schools had already been established by privately controlled institutions.

*North Carolina.*—Extension was found to have been developed on a large scale in North Carolina, this State being one of the leading Southern States in this development. Extension classes were being conducted by the 3 existing

institutions, correspondence courses by 2, and special activities of different types by all 3. Notwithstanding this situation, no unjustifiable duplication or wasteful competition existed among them. Through a program of cooperation, the State had been geographically zoned and each institution confined its extension work to a particular area.

In the plan of reorganization the three institutions were merged into a single consolidated university, with the result that a similar unification of their extension activities was recommended. This unification was to be effected through the creation of a division of extension for the consolidated university in charge of a director. An integrated State program was to be developed by the director and instead of several branches of the university conducting their extension separately each was to be assigned a share of the work in accordance with the interests and qualifications of its staff. The desirability of enlisting the cooperation of the privately controlled institutions of the State in the program was especially emphasized.

Each of the three existing institutions was operating a summer school. Numerous small classes were taught in which the same courses of study were found. It was recommended that only a single summer school be conducted by the consolidated university.

*Oregon.*—Extension services of various types were found to have been developed in the two principal institutions of Oregon. One of them conducted extension classes in as many as 15 communities and offered correspondence courses for college credit on a large scale. The other institution's main interest was in agricultural and home economics extension, although some extension classes as well as other special activities were maintained. A number of cases of duplication were found. The three normal schools had not been conducting extension.

Recommendations of the survey commission provided for a complete reorganization of the extension services through the establishment of a central council to have charge of all extramural and extension activities. The council was to consist of representatives of the five institutions, of the State

board of higher education, and of the State department of education. A director was to be elected by the council with full authority to develop a unified State program of extension. All extension classes, correspondence courses, and other special activities were to be administered by the council and director as a State enterprise rather than by the individual institutions. Members of the staffs of all five institutions were to be utilized to perform the different extension services. The plan provided for the creation of a separate budget, the funds of which were to be expended by the council and its director.

*Texas.*—Considerable duplication was found to exist among the many institutions of Texas in providing extension services of different types, such as extension classes, correspondence courses, and special activities. A similar situation prevailed in the operation of summer schools. The first column below gives the number of institutions conducting the several types of extension services and operating summer schools at the time of the survey. In the second column are presented the number recommended to continue these functions.

EXISTING	RECOMMENDED
A. Extension classes in 12 institutions.	A. To be continued in five institutions.
B. Correspondence courses in seven institutions.	B. To be continued in one institution.
C. Other special activities in five institutions.	C. To be continued in two institutions.
D. Summer schools in 17 institutions.	D. To be continued in six institutions.

As just indicated, the greatest duplication existed in the case of extension classes, correspondence courses and summer schools. Extension classes were conducted in a large number of centers throughout the State and included classes of small size in a variety of subjects. Correspondence courses offered in the different institutions were the same or similar in subject matter while many of the summer schools also duplicated each others' work. To avoid the duplication 7 of the 12 institutions were to discontinue their extension classes and

correspondence courses were to be centered in a single institution, the State university, the other institutions being required to abandon correspondence work. Summer schools were to be operated by 6 instead of 17 institutions.

*Virginia.*—At the time of the survey in Virginia, the extension services of the several institutions were limited in their scope. Only 2 institutions conducted extension classes and 1 institution offered correspondence courses. Little or no duplication was found.

*Summary.*—Duplication in extension was of frequent occurrence in some of the States. The greatest duplication existed in extension classes and correspondence courses. Extension classes in many cases were small and comprised a variety of subjects while correspondence courses offered by the different institutions were the same or similar in subject matter.

In three States the recommendations provided that the extension services be conducted as a State enterprise rather than by the individual institutions. Existing work was to be consolidated into a unified State program under the control of a State director or council of extension. The director or council was to utilize the services of the faculty members of all the institutions in conducting the program. In a fourth State extension classes were to be discontinued in seven institutions and correspondence courses confined to a single institution, the State university.

Further duplication was shown in the operation of summer schools by institutions within the same State. Such duplication was especially pronounced in States having many institutions. It was recommended that summer schools should be operated at a few centers instead of a large number.

*Miscellaneous activities.*—In two of the State surveys, the committee or commission made studies of duplication in non-educational or miscellaneous activities among the institutions.

Oregon was one of these States. The following parallel columns show some of these activities found duplicated in that State and the recommendations made to eliminate them.

EXISTING	RECOMMENDED
A. Annual catalogs published by each of five institutions.	A. One annual catalog for all institutions.
B. Statistical and recording division maintained by five institutions.	B. One statistical and recording division for all institutions.
C. Publication division maintained by two institutions.	C. One publication division for all institutions.
D. News and information bureau maintained by two institutions.	D. One news and information bureau for all institutions.
E. Organization for recruiting students maintained by two institutions.	E. To be discontinued.

A number of the foregoing recommendations were innovations that had never before been attempted in coordinating a State program of higher education.

In the survey in Texas, duplication was found in the activities of some of the agencies of the regular State government and the institutions. As a result the recommendations were made that the gin, markets, pecan, seed laboratory, field seed certification, seed and plant, predatory animal control, pink bollworm, horticulture, and entomology divisions, boards, or commissions be discontinued as branches of the State government and transferred to the State's agricultural and mechanical college. The Texas library and historic commission and the State library were to be transferred to the State university. Another proposal was that the functions of the State board of library examiners be performed by the State university and those of the State board of veterinary medicine by the State's agricultural and mechanical college.