Selected CHARACTERISTICS of Reorganized School Districts

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FOREWORD

This report is an outgrowth of a study conducted by the Office of Education for the purpose of providing information concerning some of the major characteristics of reorganized districts established in recent years and of indicating some of the most noteworthy educational changes resulting from their establishment. The second part of the study, dealing with educational changes in reorganized districts, will be made the subject of a separate report.

This study has been a cooperative undertaking throughout the various stages of its development. The chief State school officers in each of the eight States approved the study as one which should be undertaken and in each instance designated a staff member to assist in conducting it. The State department of education officials who carried the responsibility for the study in their respective States were:

Drayton B. Nuttall, Chief, Bureau of School District Organization	California
George E. Denman, Supervisor, Transportation and Reorganization	Idaho
Luther J. Black, Secretary, State Teachers Certification Board	Illinois
Edgar L. Grim, Assistant State Superintendent in Charge of Instruction	Michigan
T. J. Berning, Assistant State Commissioner of Education	Minnesota
Arthur L. Summers, Director of School District Reorganization and Transportation	Missouri
Francis E. Griffin, Chief, Bureau of Rural Administrative Services	New York
Elmer L. Breckner, Assistant State Superintendent in Charge of Administration and Finance	Washington

Assistance was received from these State school officials in the development of data-gathering schedules used for collection of information. They also designated the districts to be included in the study. In most instances they carried the entire burden of circulating the inquiry forms to the local districts and collecting the completed returns. The Office of Education is indebted to these State leaders in school district reorganization and expresses appreciation for the major contribution which each made to the study.

To the county superintendents in Illinois, as well as to those in other States who gave assistance, to the supervisory district superintendents in New York State, and to the superintendents of reorganized districts in each of the eight States, the Office of Education expresses appreciation for their efforts in supplying the information upon which the study is based.

Wayne O. Reed
Assistant Commissioner
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INTRODUCTION

Few educational responsibilities have greater far-reaching importance to the people of a State than the establishment of a sound local district structure for administering the schools. Keeping that structure adapted to changing conditions in our society by reorganization of small ineffective districts into larger administrative units more capable of providing needed educational services has for many years been a persistent problem in American education. It is also one in which much progress has been made, especially during the past 10 years when the total number of local school districts in the Nation has been reduced by more than one-fourth.

Although that reduction has been accomplished by means of various procedures, a major portion of it has come as the result of State programs of local school district reorganization providing for the active participation of local people in developing local reorganization plans and delegating to them the responsibility of establishing new districts proposed in such plans. Since 1940 a number of State programs of this nature have been initiated while others having the same general characteristics of local participation and decision have been in operation considerably longer.

The success of many of these programs in eliminating large numbers of small districts has attracted Nation-wide attention. The real significance of what has taken place lies in the characteristics of the new districts established and in the educational improvements resulting from their establishment. While it would be difficult to overemphasize the importance of improvements in educational services which reorganization makes possible, there are certain characteristics of reorganized units, such as those relating to size, physiographic features, population factors, and property valuation which are likewise of significance.

This report presents information obtained from a survey of a sizable group of reorganized districts in California, Idaho, Illinois, Michigan, Minnesota, Missouri, New York, and Washington. It represents part of a larger study undertaken to obtain information relating to the educational changes made in these districts in addition to their major characteristics. Because it was necessary to get information concerning conditions both before and after reorganization, efforts were made to confine the survey to districts which had not been established so long that it would be impracticable to obtain reliable data about the old districts which had been combined in reorganized units.

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The State department of education officials assisting with the study designated a total of 858 districts to be included in the survey. Of the 858 inquiry forms distributed, 552 (64.3 percent) were returned in time to be used in preparation of this report. The distribution in California was unavoidably delayed resulting in a much smaller sampling of the districts designated for inclusion in the survey than was the case with the other seven States.

The 552 districts on which this report is based includes all except four of the New York State central school districts established since 1943 and three-fourths or more of the districts designated by State department of education officials in Michigan, Minnesota, Missouri, and Washington. It also includes 117 of the 244 community unit districts in Illinois. Although the number of districts included from California, Idaho, and Washington is relatively small their characteristics as will be noted subsequently illustrate the great variation in types of communities influenced by school district reorganization.

WHEN THE DISTRICTS WERE ESTABLISHED

Of the 552 reorganized school districts included in the study, the reports from 543 gave the year when they were reorganized. This information is summarized in table 1.

The great majority of these reorganized units were of recent origin. Almost nine-tenths of them (89.3 percent) had been in operation for 6 years or less. The greatest concentration (81.8 percent of the total number) were established during the 4-year period from 1948 to 1952. More than half of the total number (52.7 percent) were established during 1948 and 1949.

None of the districts included from Idaho, Illinois, and Missouri were established earlier than 1947 and only two in California, one in Michigan, and two in Minnesota were created before that year. However, about a third (40 of the 123) of the New York districts were established between 1944 and 1947, and all those in Washington were created between 1941 and 1946.

In many respects this distribution directly reflects the school district reorganization programs in the eight States. Washington's program was most active prior to 1946. New York's program has been active since 1925 and Michigan's since 1912 (in both instances information was not sought on districts established prior to 1944 for reasons already mentioned). The reorganization programs in the other five States were initiated more recently—California and Illinois in 1945, Idaho and Minnesota in 1947, and Missouri in 1948. Of the 115 Illinois districts, 99 were established during 1948 and 1949. All except two of the 145 in Missouri were created during 1948, 1949, and 1950. It seems probable that the California district reported as established in 1944 and the two Minnesota districts established in 1946 were organized under the consolidation laws in existence in both States prior to enactment of reorganization legislation.

It should be mentioned here that the terms "reorganization" and "reorganized school district" are both used throughout this report in a generic sense. Thus, the process by means of which all districts were established is referred to as reorganization although some districts, especially in Minnesota, were formed under consolidation laws. Likewise, all new districts established are referred to as reorganized school districts although their legal designations may be different. For example, the Illinois districts included in this report are designated in that State as community unit school districts; those included from New York are officially termed central school districts; on the other hand, all Missouri districts which have been included are officially designated in that State as reorganized school districts.

Table 1

Year of establishment of reorganized school districts in eight States

Year	Number of districts									
	Calif.	Idaho	Ill.	Mich.	Minn.	Mo.	N. Y.	Wash.	Total	Percent
1941	--	--	--	--	--	--	--	5	5	0.9
1942	--	--	--	--	--	--	--	3	3	.6
1943	--	--	--	1	--	--	--	1	2	.4
1944	1	--	--	--	--	--	13	3	17	3.1
1945	1	--	--	--	--	--	11	1	13	2.4
1946	--	--	--	--	2	--	16	--	18	3.3
1947	1	2	6	14	--	--	6	--	29	5.3
1948	2	9	71	12	2	1	12	--	109	20.1
1949	4	2	28	10	23	86	24	--	177	32.6
1950	2	2	6	3	22	11	28	--	74	13.6
1951	1	--	4	4	16	46	13	--	84	15.5
1952	1	--	--	1	9	1	--	--	12	2.2
Total districts	13	15	115	45	74	145	123	13	543	100.0

OLD DISTRICTS COMBINED IN REORGANIZED UNITS

One of the most obvious outcomes of school district reorganization is the establishment of larger administrative units. Old districts, incapable of providing needed educational services effectively and economically, are abolished and their territory combined in newly created districts of larger size. A commonly used measure of the success of reorganization programs is the number of old districts eliminated by incorporating their territory in larger units. Likewise, one of the distinguishing characteristics of a reorganized district is the number and types of old districts it replaces.

Number Combined

When viewed in relation to the total number of local school districts in thie country (in 1949-50 there were 83,237), the number of old districts eliminated by the 552 reorganized units is impressive. A total of 8,424 old districts were combined, with an average of 15.3 per reorganized unit (table 2).

The total number combined would have been larger had it included portions of old districts combined by a number of reorganized units, notably in Illinois and Minnesota. The reorganization laws in both these States permit division of the territory of an old district in establishing a reorganized unit and several reports from each indicated the number of portions of old districts which had been combined. To avoid the possibility of counting divided districts more than once, these portions where reported as such have not been included in this analysis.

The average number of old districts combined per reorganized unit varied markedly among the eight States, ranging from an average of 5.8 in California to an average of 21.6 in Illinois. Except for California no State average was less than 10 old districts per reorganization. Missouri, with the largest number of reorganized units included in the study, had an average of 12.7 old districts per reorganization. New York, with the second largest number, had an average of 17.5.

Variations within States were greater than variations among them. There were some reorganizations in each of the States which involved very few old districts. All States, except Idaho, New York, and Washington, had one or more reorganized units composed of two old districts. At the other extreme, all except California had one or more reorganized units each of which included more than 25 old

Table 2

Number of old districts combined in reorganized school districts, by State

State	Number of reorganized districts	Old districts combined		
		Total number	Range in number per reorganized unit	Average per reorganized unit
California	13	75	2 - 15	5.8
Idaho	15	248	5 - 44	16.5
Illinois	117	2,525	2 - 83	21.6
Michigan	45	484	2 - 27	10.8
Minnesota	75	840	2 - 28	11.2
Missouri	151	1,923	2 - 48	12.7
New York	123	2,157	4 - 50	17.5
Washington	13	172	4 - 31	13.2
Total	552	8,424	2 - 83	15.3

districts. Thus, in Illinois the number ranged from 2 to 83; in New York, from 4 to 50; and in Missouri, from 2 to 48.

As will be indicated later, the number of old districts combined did not always indicate the size of the reorganization as measured by other factors. Some reorganizations involving less than five old districts had large numbers of pupils.

Types of Old Districts Reorganized

The information obtained from 520 of the 552 reorganized districts was sufficiently complete so that an analysis could be made of the types of old districts they replaced.

From an operational standpoint, there were four types: (1) old districts which operated schools for both elementary and high-school pupils; (2) old districts which operated a school for high-school pupils only; (3) old districts which operated one or more elementary schools only; and (4) old districts which maintained their corporate identity but operated no school of any kind.

The 520 reorganized units had a combined total of 7,975 old districts which fell in these four categories (table 3). Every State had some of each type which were reorganized. The most common type, constituting 58.8 percent of the total number, operated elementary schools only. The vast majority of these were districts operating a single one-teacher school. Idaho's reorganized units had the smallest proportion of this type (45.6 percent) and California's had the largest (82.3 percent).

One-third of the old districts operated no schools. Except in California these "closed" districts, as they are commonly termed, constituted a sizable proportion of the total number reorganized in each of the States. Slightly over two-fifths (40.6 percent) of all those reorganized in New York did not operate a school. In Minnesota the percentage of closed districts was almost equal to the percentage operating elementary schools only.

Old districts which operated a high school constituted a small proportion (7.9 percent) of the total number reorganized. Most of these (5.6 percent of the total number reorganized) operated both elementary and high schools, the State percentages of this type ranging from 1.8 in Illinois to 13.5 in Idaho. While all the States had reorganizations involving high-school districts, only in California and Illinois was this type more commonly found than districts operating both elementary and high schools.

Table 3

Distribution of types of old districts combined in reorganized units, by State

State	Number of reorganized units	Types of old districts combined									
		Number operating					Percent operating				
		No schools	Elem. schools only	High schools only	Both elem. and high schools	Total	No schools	Elem. schools only	High schools only	Both elem. and high schools	Total
California	12	2	60	9	2	73	2.7	82.3	12.3	2.7	100.0
Idaho	14	88	105	6	31	230	38.3	45.6	2.6	13.5	100.0
Illinois	113	553	1,703	125	45	2,426	22.8	70.2	5.2	1.8	100.0
Michigan	42	129	280	7	35	451	28.6	62.1	1.6	7.7	100.0
Minnesota	70	356	368	2	47	773	46.0	47.6	.3	6.1	100.0
Missouri	134	609	959	20	124	1,712	35.6	56.0	1.2	7.2	100.0
New York	122	868	1,112	6	152	2,138	40.6	52.0	.3	7.1	100.0
Washington	13	48	105	8	11	172	27.9	61.0	4.7	6.4	100.0
Total	520	2,653	4,692	183	447	7,975	33.3	58.8	2.3	5.6	100.0

Distribution in Reorganized Units

Although the foregoing section shows the relative numbers of different types of old districts reorganized, it does not answer questions concerning how they were distributed among the 520 reorganized units. For this reason an analysis was made to determine (1) the number of reorganizations which included each type of old district and (2) the relationships between the number of old districts per reorganization and the types reorganized. This information is summarized in table 4.

Over three-fourths of the 520 reorganized units included old districts which did not operate a school. The larger the number of old districts per reorganization the greater was the likelihood that some of them were closed districts. Of the reorganized units composed of fewer than 10 old districts, almost half (49.7 percent) included closed districts. For each succeeding size category the percentage was progressively higher, rising to 97.7 percent for those containing a total of 30 or more. Only 6 of the 138 reorganized units composed of 20 or more old districts did not include closed districts.

Although, as pointed out earlier, districts operating elementary schools only were the most common type reorganized, there were 19 reorganized units which did not include any of this type. Fifteen of the 19 fell in the smallest size category (less than 10 old districts per reorganization). Eight of the 19 were in Minnesota, 6 in Missouri, and 5 in Michigan. In every case except one they involved combining the territory of a number of closed districts with that of a district operating both elementary and high schools.

There were 130 reorganized units (25 percent of the total number) which included old districts operating high schools only. In these, the process of reorganization involved elimination of the dual structure of elementary districts overlaid with a high-school district. Three-fourths of the Illinois reorganized units, two-thirds of those in California, and over two-fifths of those in Washington involved creation of unified 12-grade districts where a dual type of structure existed earlier. Over half (52.3 percent) of the reorganizations involving 30 or more old districts were of this type; all of these except one were in Illinois. There were 35 reorganized units, 26 of them in Illinois, which included two or more high-school districts.

Of the 520 reorganized units, 357 (68.6 percent) included one or more old districts which operated both elementary and high schools. Those containing this type were unevenly distributed among the four size categories, with the smallest proportion (56.8 percent)

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Table 4

Number and percent of reorganized districts that included specified types of old districts, by number of old districts per reorganization

Number of old districts per reorganization	Total number reorganized districts	Reorganized districts that included old districts operating—							
		No schools		Elementary schools only		High schools only		Both elementary and high schools	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent
Less than 10	167	83	49.7	152	91.0	36	21.6	103	61.7
10 - 19	215	192	89.3	211	98.1	46	21.4	159	73.9
20 - 29	94	89	94.7	94	100.0	25	26.6	70	74.5
30 and over	44	43	97.7	44	100.0	23	52.3	25	56.8
Total	520	407	78.3	501	96.3	130	25.0	357	68.6

in the group containing 30 or more old districts per reorganization. Ten of the 357 reorganized units also contained high-school districts as well, and therefore were counted among the 130 in the preceding paragraph. A sizable number also contained two or more districts operating both elementary and high schools.

For these reasons the composition of the 520 reorganized units was carried one step further to determine (1) the number of old districts operating a high school that each contained and (2) the relationship between this factor and the total number of old districts per reorganization. The information obtained from this analysis is summarized in table 5.

Forty-one reorganized units (7.9 percent of the total number) did not include any old districts operating a high school. Of the 41, Minnesota had 19, Missouri had 9, New York had 6, Michigan had 4, California had 2, and Illinois had 1. Six of these 41 districts did include an old district which operated a junior high school, however. It should also be pointed out that several others established secondary schools after they were reorganized.

There were 379 (72.9 percent) of the 520 reorganized units which included one old district operating a high school. In addition, there were 67 (12.9 percent) each of which included two old districts of that type and 33 (6.3 percent) which included three or more.

A close relationship was found between the size of the reorganization (measured in terms of the total number of old districts per reorganized unit) and the number of old districts operating high schools. Over half of the reorganized units which did not include any old districts operating a high school were in the smallest classification and none were in the largest. But half of those in the largest classification involved reorganization of two or more old districts which operated a high school.

Table 5

Number and percent of reorganized districts involving combination of old districts operating high schools, by number of old districts per reorganization

Number of old districts per reorganization	Reorganized districts that included—									
	No old districts operating a high school		One old district operating a high school		Two old districts operating high schools		Three or more old districts operating high schools		Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Less than 10	29	17.4	118	70.6	14	8.4	6	3.6	167	100.0
10 - 19	11	5.1	171	79.5	24	11.2	9	4.2	215	100.0
20 - 29	1	1.1	68	72.3	20	21.3	5	5.3	94	100.0
30 and over	--	--	22	50.0	9	20.5	13	29.5	44	100.0
Total	41	7.9	379	72.9	67	12.9	33	6.3	520	100.0

PHYSICAL FEATURES OF REORGANIZED DISTRICTS

There are certain physical characteristics which require consideration in describing school administrative districts, particularly those which include rural territory as was the case with almost all of the 552 reorganized units in this study. The fact that most of them included the territory of sizable numbers of former districts raises several questions with respect to their major physical features. How large is their area? What is the relationship of area to the number of old districts combined? How closely does the territory of reorganized districts correspond to that of counties? Are many reorganized districts so large that they contain geographic barriers handicapping transportation and communication within them? This section provides answers to these questions.

Area

The exact area of a school district is not always as easy to obtain as that of other units of local government such as a township. Although it was recognized that some superintendents would probably not be able to give the exact area to the nearest square mile, there was good reason for believing that most of those not knowing the exact area would be able to give reasonably accurate estimates.

There were 515 responses to this item. The great majority stated the area without qualification, for some of the smaller units to a fraction of a square mile. However, a few used such qualifying terms as "approximately" or "estimated" and in the case of some larger units a range was given such as "475–500 square miles."

As might be expected in view of the great differences of population density in the eight States, there were great variations in the areas of 515 districts. The smallest, a densely populated 12-grade administrative unit in California, had an area of 4 1/2 square miles. The largest, a sparsely settled unit in Idaho, had 3,400 square miles.

There were wide variations both among the States and within them. All except Idaho had districts with less than 30 square miles. Each of the three Western States had districts of more than 1,000 square miles. Of those above 400, all but three (two in New York and one in Minnesota) were in that region.

The median for the 515 districts was 90 square miles, indicating that 257 districts had areas of less than 90 square miles and 257 had areas larger than 90 square miles (table 6). State medians varied significantly. Michigan had the smallest median—52 square

Table 6

Area of reorganized school districts in eight States

State	Number of reorganized units	Area in square miles			
		Range	First quartile	Median	Third quartile
California	13	4.5 - 2,500	20	150	660
Idaho	11	75 - 3,400	460	705	2,408
Illinois	113	12 - 345	74	99	147
Michigan	42	12.25 - 324	35	52	97
Minnesota	71	21.6 - 680	68	107	151
Missouri	139	14 - 400	58	86	147
New York	114	8 - 775	50	72	115
Washington	12	25 - 1,100	33	115	291
Eight States	515	4.5 - 3,400	58	90	144

miles—and Idaho had the largest—705 square miles. In addition to Michigan, the medians in Illinois, Missouri, and New York were each less than 100 square miles.

Despite the variations noted above, the majority of districts were neither very large nor very small when considered in relation to their total range in area. In this connection it is revealing to compare the range in area as shown for the first and third quartiles which sets the limits for the middle 50 percent of the districts. Thus, half of the 515 districts had areas ranging from 58 to 144 square miles. The inter-quartile range (the range within which the middle 50 percent of the districts fell) was the largest in California and Idaho and the smallest in Michigan. Illinois, Minnesota, Missouri, and New York, each had relatively narrow ranges within which the middle half of their districts fell.

Except for those above 400 square miles, there was a close relationship between the area of reorganized districts and the number of old districts combined in them (table 7). Up to 400 square miles, the larger the area of a reorganized unit the greater was the likelihood that a large number of old districts had been combined in it. Thus, the majority of those under 50 square miles had fewer than 10 old districts per reorganization. But of those between 125 and 400 square miles, the majority had 20 or more per reorganization. No district under 100 square miles in area contained as many as 30 old districts, but for each group above that area the percentage was progressively higher up to 400 square miles.

Those above 400 square miles were markedly different from those that were smaller. Although several of them contained small cities, the population density in all but one was quite low and at least 10 of them were very sparsely populated. In all probability these conditions of extreme population sparsity account for the small number of old districts which most of them contained.

Relation to Counties

One of the important decisions which must be made in establishing a reorganized school district is the location of its boundaries with respect to county boundary lines. The results of that decision also constitute one of the important characteristics of the newly created administrative unit.

For all except 4 of the 552 reorganized districts, the relationship of their territory to that of counties was indicated. In each instance the response indicated whether the district included an entire county, or a part of a county, or parts of more than one county.

Table 7

Distribution of reorganized school districts, by area and by number of old districts per reorganized unit

Area in square miles	Number of reorganized districts	Percent of reorganized districts composed of —				
		Fewer than 10 old districts	10 - 19 old districts	20 - 29 old districts	30 or more old districts	Total
Less than 25	20	95.0	5.0	--	--	100.0
25 - 49	72	62.5	33.3	4.2	--	100.0
50 - 74	120	40.8	55.8	3.4	--	100.0
75 - 99	76	23.7	56.6	19.7	--	100.0
100 - 124	74	21.6	41.9	29.7	6.8	100.0
125 - 174	65	18.5	29.2	35.4	16.9	100.0
175 - 249	47	12.8	21.3	34.0	31.9	100.0
250 - 399	21	4.8	23.8	23.8	47.6	100.0
400 and over	20	40.0	40.0	15.0	5.0	100.0

Of the 548 districts, there were 11 having areas that covered an entire county. Five of these county-unit districts were in Idaho, four in Illinois, and one each in Minnesota and Washington (table 8).

The most common type of reorganized unit included a portion of the territory of a single county. There were 320 of these. In every State except Idaho most of the reorganized units were of this type. This is not surprising in view of the fact that the areas of three-fourths of them as shown above were under 144 square miles, while very few counties in these eight States have areas less than that. But what is surprising is the degree to which county lines were disregarded.

Striking evidence of this disregard for county boundary lines is revealed by the fact that 217 of the 548 districts had territory in more than one county. It is important to recognize that these were not county-unit districts with territory extending into other counties. They contained only the parts of more than one county. All the States except Washington had some of these districts. More than two-fifths of those in Illinois and Missouri and three-eighths of those in Michigan, Minnesota, and New York contained portions of the territory of more than one county.

That so many districts contained parts of more than one county immediately raises a question concerning their size as compared with the area of those containing only a portion of a single county or as compared with county units. Such comparisons could not be made for all of the 548 districts because, as already indicated in the preceding section, there were only 515 responses giving the area in square miles. The relationship of their areas to county boundaries is shown in table 9.

Of the 515 districts that could be analyzed, 58.6 percent had areas that included part of a county, 40.0 percent had areas composed of parts of more than one county, and 1.4 percent included an entire county.

There was a very small degree of relationship between the area of a district and whether it was part of a single county or contained portions of more than one. Although a much larger proportion of those under 75 square miles were each a part of a single county, most of those having larger areas were also of the same type.

Moreover, each size-group had sizable proportions of districts with territory in more than one county. Even among those under 25 square miles a fifth were of this type. The highest proportion (50.0 percent) was in the group ranging between 75 and 100 square miles and next to the lowest (35.0 percent) in the group having 400 or more square miles.

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Table 8

Distribution of reorganized school districts in relation to counties, by State

State	Number having an area that included —			
	An entire county	Part of a county	Parts of more than one county	Total
California	--	11	2	13
Idaho	5	5	4	14
Illinois	4	61	52	117
Michigan	--	27	17	44
Minnesota	1	46	28	75
Missouri	--	85	66	151
New York	--	73	48	121
Washington	1	12	--	13
Total	11	320	217	548

Table 9

Area of reorganized school districts in relation to counties

Area in square miles	Number of reorganized districts	Percent having an area that included —			
		An entire county	Part of a county	Parts of more than one county	Total
Less than 25	20	--	80.0	20.0	100.0
25 - 49	72	--	62.5	37.5	100.0
50 - 74	120	--	65.8	34.2	100.0
75 - 99	76	1.3	48.7	50.0	100.0
100 - 124	74	--	56.8	43.2	100.0
125 - 174	65	--	56.9	43.1	100.0
175 - 249	47	4.3	55.3	40.4	100.0
250 - 399	21	4.8	47.6	47.6	100.0
400 and over	20	15.0	50.0	35.0	100.0
Total	515	1.4	58.6	40.0	100.0

Barriers

One of the factors which may influence the effective functioning of a local school administrative unit is the presence of conditions handicapping transportation and communication within it. There is general agreement that barriers of a geographic nature should be avoided to the maximum extent practicable in forming reorganized districts, but it is also recognized that in occasional reorganizations certain barriers may be unavoidable. Obviously such situations would be encountered more frequently in some regions than in others, but the fact that reorganized units typically involve combination of sizable numbers of old districts embracing relatively extensive areas make this a fairly common problem. For this reason respondents were asked to state whether barriers existed within their districts which handicapped transportation and communication and, if so, to indicate what they were.

Admittedly the superintendents had a wide latitude for interpretation. What might be regarded as a handicapping barrier in one area might not be so considered in another. Obviously rigid standards of judgment would be impossible to apply. However, the crux of the matter lies not in whether such barriers were everywhere of equal severity, but in how local people were affected and how they adapted to them. Viewed in those terms, local superintendents were considered to be in good position for judging whether barriers were present which had a handicapping influence.

Responses were obtained from 546 of the 552 districts. A total of 410 (75.1 percent) reported no handicaps of any kind. Of the remainder, 74 districts were reported to have physiographic features which handicapped transportation and communication to some extent within them.

As might be expected, the number and types of these handicaps varied greatly among the eight States. California had four districts, all having mountain roads difficult to keep open during the snow season. In Idaho where 9 of the 15 districts had physiographic barriers, mountains were reported as barriers in seven districts, in another a strip of desert divided the district, and another had a lake within its borders. In Washington, two districts had steep mountain roads considered handicaps; one had small lakes; another was divided by a river; another, by a coastal bay, and inlets; and still another had an off-shore island included in its territory.

In Illinois two districts had within their boundaries rivers and streams considered handicaps and another had a lake. Michigan had two districts with lakes in their territory—in one needed crossroads

could not be built because of this handicap—and another district was divided by a bay. Minnesota had 10 districts containing lakes or swamps and three with rivers running through their territory. Missouri had 13 districts having rivers and streams considered handicapping to some degree, four with lakes or swamp lands, and four with hilly roads or rough terrain. In New York six districts had hilly territory with difficult road conditions in winter—three were crossed by a barge canal and two by rivers, one was divided by hills and deep valleys, and one contained a lake.

In addition to the unfavorable physiographic conditions mentioned above, a number of superintendents specified other factors handicapping travel and communication. A total of 40 districts were reported as having unbridged streams and unimproved or otherwise unsatisfactory roads. Idaho had one district handicapped by poor roads and another district had an unbridged river which was crossed by means of a ferry. In Illinois unbridged streams were reported as handicaps by seven districts and poor road conditions were specified by four. Michigan had one district located on the State boundary line where road conditions were unsatisfactory. Poor road conditions, including unbridged streams were reported as handicaps in 24 districts in Missouri. Three New York districts had inadequate bridge facilities across rivers.

It is noteworthy that most of the unfavorable conditions reported were due not so much to their being natural obstacles as to the fact that modern highway improvements had not been provided which would have overcome them. Certainly this was true for the districts reported as having poor roads and unbridged streams. A river or stream crossing a district is not commonly a handicap to effective transportation and communication if the territory of the district is adequately provided with highways and bridges.

It should be recognized that because a district had some handicapping feature, even if due wholly to natural barriers which modern highways could not overcome, this would not necessarily mean that its territory had been determined on an unsound basis. There is a possibility some may have been, but the evidence presented here is not sufficient to substantiate such a view. There are many areas in the Western States where it would not be possible to reorganize districts leaving out the mountains, or in Michigan and Minnesota where it would not be possible to combine the territory of several old districts without also taking in a lake or two. Neither could it be said that a district was unsoundly formed because the roads were unimproved or the streams unbridged. In fact, there would be better reasons for concluding that in most of the reorganizations described above the

people preferred the educational benefits which a larger district would make possible despite barriers or handicaps to effective transportation they were unable to avoid at the time the new district was formed.

An analysis was made to determine the relationship between the area of districts and the presence of handicaps to transportation and communication. This could not be done for all districts, because the size of several were not stated, but was confined to the 515 districts whose areas were analyzed in the section dealing with area. All handicaps reported, whether caused by natural barriers or by poor highway conditions, were included.

Of the 515 districts, a total of 114 (22.1 percent) reported handicaps of some type. None of these had areas less than 25 square miles, but of those above 400 square miles 65 percent reported handicaps to transportation and communication. It will be remembered that all except three of these largest units were in the western part of the country.

Among the districts ranging between 25 and 250 square miles the relationship between size and the presence of transportation barriers was not as close as might have been expected. Within that range the highest percentage of those having handicaps had areas between 125 and 175 square miles. Those with areas between 25 and 50 square miles had a higher percentage than those having areas ranging from 50 to 100 square miles.

Table 10

Distribution of reorganized districts having conditions handicapping transportation and communication, by area in square miles

Area in square miles	Total districts	Districts with barriers and related handicaps	
		Number	Percent
Less than 25	20	--	--
25 - 49	72	15	20.8
50 - 74	120	17	14.2
75 - 99	76	10	13.2
100 - 124	74	18	24.3
125 - 174	65	20	30.8
175 - 249	47	13	27.7
250 - 399	21	8	38.1
400 and over	20	13	65.0
Total	515	114	22.1

POPULATION FACTORS

Another group of factors revealing significant characteristics of a reorganized school district relates to the number of people living in it and to their places of residence, whether in the open country or in hamlet, village, or city centers. The number and size of population centers in districts are likewise important because they indicate in a general way when compared with total population, the frequency which school district reorganization affects village and city people as well as those living in the open country.

Total Population

Because the boundaries of most districts are not coterminous with those of other local governmental units used as the basis for reporting population information by the Census Bureau, it was not expected that most superintendents would know the exact number of people living in their districts, particularly the number living in the open country. However, the size of villages and cities is generally common knowledge among local leaders in the community, including superintendents. Moreover, all incorporated centers and all those above 1,000 population that are unincorporated are listed in Census publications. But the open country population is more difficult to determine and primarily for that reason superintendents were asked to give estimates where the total population was not known. While a certain margin of error no doubt resulted, there is little likelihood it was large enough to make any significant difference in this analysis.

Responses were received from 508 of the 552 districts. As was the case with their area, one of the striking features about the population size of these districts was the great range of difference among them. The smallest, a Minnesota unit with 182 square miles of territory, had 85 persons living in it. The largest, a 25-square-mile suburban area adjacent to Seattle, Wash., had a population of 75,000 (table 11).

Each of the States except Michigan had one or more districts with populations of 15,000 or more. Four States (California, Illinois, Missouri, and Washington) had one or more districts above 25,000. Those above 15,000 constituted only 4.4 percent of the total number, although more than a third of those in California and more than a fifth of those in Washington were in this group.

Three States had districts with less than 1,200 population. A seventh of those in Idaho, almost a third of those in Minnesota, and slightly over a fifth of those in Missouri had less than that number.

Table 11

Total population of reorganized school districts, by State

State	Number of districts reporting	Largest district	Smallest district	Median	Percent of districts having a population of —							
					Under 1,200	1,200-2,499	2,500-4,999	5,000-7,499	7,500-14,999	15,000-24,999	25,000 and over	Total
California	11	45,000	1,382	7,200	--	18.1	9.1	27.3	9.1	9.1	27.3	100.0
Idaho	14	15,000	800	3,800	14.3	14.3	21.4	21.4	21.4	7.2	--	100.0
Illinois	108	40,000	1,200	3,391	--	26.8	39.8	13.0	14.8	3.7	1.9	100.0
Michigan	44	8,000	1,200	3,400	--	36.4	31.8	22.7	9.1	--	--	100.0
Minnesota	68	18,000	85	1,633	32.4	35.3	23.5	4.4	2.9	1.5	--	100.0
Missouri	139	31,000	500	3,164	21.6	43.9	18.7	10.1	3.6	1.4	.7	100.0
New York	111	23,000	1,250	5,257	--	9.0	32.4	32.4	22.6	3.6	--	100.0
Washington	13	75,000	2,800	7,100	--	--	15.4	38.4	23.1	7.7	15.4	100.0
Eight States	508	75,000	85	3,142	10.6	28.3	27.8	17.3	11.6	2.8	1.6	100.0

Despite the extremes noted above, the majority fell within a relatively narrow size range. Over half (56.1 percent) had populations ranging between 1,200 and 5,000. Two thirds of those in Illinois, 68.2 percent of those in Michigan, 58.8 percent of those in Minnesota, and 62.6 percent of those in Missouri had populations between 1,200 and 5,000. Of New York's 111 districts, 64.8 percent ranged between 2,600 and 7,500.

The median for the entire group was 3,142 meaning that half the districts had populations below that number and half above it. The highest State median, that of California, was 7,200. The lowest, that of Minnesota, was 1,633. New York and the three far western States had higher medians than the Midwestern States where the highest, that of Michigan, was 3,400.

Relationship of Population to Area

The fact that both the area and total population of districts varied so greatly raises a question concerning the relationship of these two factors. This was determined for the 478 districts reporting both their area and total population (table 12).

As might be expected, some districts were very sparsely populated while others had a high density. Most districts with a large population were small in area. Over half of those above 15,000 population had areas of less than 50 square miles, some of them being suburban districts adjacent to large cities. The small areas of these units were in marked contrast to those under 15,000 population, very few of which were less than 25 square miles.

Districts below 1,200 population ranged from less than 25 square miles to more than 400. Measured by most standards almost all of them would be considered as sparsely settled. A district 25 square miles in area with 1,200 population would have 48 persons per square mile as compared with an average of 50.7 for the entire country. However, one-third of the districts under 1,200 population had areas of more than 100 square miles. Two of these districts were in Idaho, 10 in Minnesota, and 6 in Missouri.

The areas of districts between 1,200 and 2,600 population were very similar in size to those below 1,200. Slightly over two-thirds (68.4 percent) of those between 1,200 and 2,600 population had areas ranging from 25 to 100 square miles, while 64.8 percent of those under 1,200 had the same range in area.

Over half of the districts between 2,600 and 15,000 population had areas of more than 100 square miles. However, sizable percentages having populations of this size ranged between 25 and 75

Table 12

Percentage distribution of the total population of reorganized districts, by area in square miles

Total population	Number of districts	Percent of districts having areas in square miles of —									
		Less than 25	25-49	50-74	75-99	100-124	125-174	175-249	250-399	Over 400	Total
Under 1,200	54	1.8	18.5	27.8	18.5	11.1	11.1	3.7	1.9	5.6	100.0
1,200 - 2,599	133	1.5	15.0	31.6	21.8	14.3	5.3	7.5	2.2	.8	100.0
2,600 - 4,999	132	2.3	11.4	18.2	15.1	18.9	18.2	11.4	1.5	3.0	100.0
5,000 - 7,499	83	6.0	9.6	21.7	6.0	18.1	13.3	9.7	8.4	7.2	100.0
7,500 - 14,999	54	3.7	20.4	14.8	7.4	5.6	20.4	13.0	9.2	5.5	100.0
15,000 - 24,999	14	14.3	35.8	14.3	--	--	7.1	7.1	7.1	14.3	100.0
25,000 and over	8	37.5	25.0	12.5	12.5	--	12.5	--	--	--	100.0

square miles in area. Thus, there was a marked tendency in this middle group of 269 districts to be either relatively large or relatively small with no marked concentration in the middle area range, particularly between 75 and 100 square miles.

The question naturally arises concerning the existence of distinctive State patterns with respect to relationships between population size and area of these districts. There were differences as might be expected. All of Idaho's districts except two with small populations were large in area, indicating absence of any direct relationship. In Washington there was an inverse relationship between area and population. On the other hand none of Michigan's districts under 2,600 population had areas above 75 square miles and most of those above 2,600 had areas less than that. In New York there was a very marked concentration of districts of all population size groups between 25 and 75 square miles. Most of Minnesota's districts had a small population but a large area, and the same was true for several districts in Missouri. However, there was a direct relationship between area and size, for the majority of districts in Missouri and Illinois had a larger proportion than any of the other States where this was true.

Population Centers

Although school district reorganization is predominantly a rural problem it is by no means limited to improving the school district structure in the open country. As already indicated, some of the 552 districts in this study had small densely populated areas which were suburbs of larger metropolitan centers. Although such districts were not typical of the entire group studied, it has been common practice for reorganization leaders to encourage formation of reorganized units, wherever practicable, which include a trading center such as a village, town, or even a small city.

There are several reasons why this is desirable. In the first place a village or other center of some size must almost always be included in the new district if it is to be large enough to provide a 12-grade school program. Sometimes it is necessary to include more than one center. Even before the reorganization is made the general practice has been to send high-school pupils living in open-country elementary districts to the nearest village district operating a high school, so it is logical to include such centers in the new administrative unit.

Certain other sociological factors likewise have an important bearing. The typical rural village functions as a sort of

socio-economic service station for people living in the surrounding countryside and is the center for many common activities which bring villagers and open-country people together. There is a community of common interests binding the people together into a cohesive group. The area within which this takes place is commonly termed a rural community. Thus, the area of the rural community is determined by the boundary within which the village forms the center for the common activites of most of the families.

Often a smaller city functions as a trade and service center quite similarly to the typical rural village. The fact that a center may have more than the 2,500 population necessary for it to be classified by the U. S. Census as a city does not always eliminate the types of socio-economic relationships characteristic of the typical village-centered rural community, although sociologists have found that as the size of the center increases beyond a certain point its strength as a cohesive force tends to diminish. On the other hand, centers with less than 250 population, commonly designated as hamlets, may function to a limited degree in the same way for a smaller open-country area. In many situations several hamlets, each being a center for a limited number of services, may be found within the service area of a larger center where people go for most services.

The modern rural community—village-centered and encompassing the surrounding trade and service area—has highly significant implications for reorganization of school districts on the basis of the accustomed patterns of association of local people. While it was not within the scope of this study to determine how nearly the areas of the 552 reorganized districts corresponded to the areas of natural sociological communities, some of the information obtained from them indicated that certain sociological factors characteristic of rural communities were influential in their formation.

The fact that so few districts included the territory of an entire county was in itself revealing. While some counties may correspond closely to natural sociological communities, most have more than one community within their borders. Some estimates indicate there are more than ten times as many trade-centered rural communities than there are counties.

Moreover, county boundary lines established by State legislatures years ago when small neighborhoods constituted the strongest and most characteristic associational pattern of rural people are usually disregarded in the typical rural community. For example, the trade and service area of a village located near a county boundary line may extend into the adjoining county—the people living across the county border do not shun such a trading center because of its

location in another county but use it because that is the natural and convenient thing to do. That such conditions may have been influential is indicated by the fact that 40 percent of the districts included in this study, as shown in the section dealing with area, had territory in more than one county.

Thus, the existence of a population center in a newly reorganized district may not only be one of the important factors in its formation but may also be influential in the effective functioning of the district after its establishment.

Number of population centers.—For these reasons respondents were requested to state the size of each city, village, or other population center in their districts. In a sizable number of instances no response was made concerning this item. In other cases the sizes of population centers were listed but not the total population of the district, and because of the direct relationship between these two factors such returns could not be used. However, usable responses were obtained from a total of 472 districts.

Of these 472 districts, only 11 were reported as having no population centers (table 13). Six of these were in Minnesota, 2 each in Missouri and New York, and 1 in Washington. Five of the 11, all of them in Minnesota, had less than 1,200 population. The other Minnesota district as well as the 2 in Missouri were also relatively small. The largest, a 172-square-mile unit in Washington, had a population of 6,000.

There were 19 districts in which the largest center was a hamlet—that is, under 250 population. Fourteen of these were in Missouri and 5 were in Minnesota. Eleven of the 19 had populations under 1,200 and only 2 were above 2,600. Eight of those in Missouri and 1 in Minnesota had 2 or more hamlet centers, indicating that small clusters of hamlet-centered neighborhoods had been combined. While it would be pointless to speculate on the strengths or weaknesses of these hamlet centers, it may be pertinent to point out that rural sociologists have found that in some of the less populous sections of the corn and wheat belts rural community boundaries have not become stabilized and that there is a distinct tendency where this is true for smaller centers to remain relatively strong in their attraction for open-country people. Whether this was true for the centers in these 19 districts could not be determined in a survey such as this. However, only 3 of the 19 had areas under 50 square miles and 12 of them were over 100 square miles. This clearly indicates that most of them had a higher degree of population sparsity than was characteristic of districts having a total population below 2,500.

Table 13

Population centers in reorganized school districts, by total population of districts

Total population of district	Number of districts reporting	Number of districts having —							Percent of districts having —							
		No population centers	Hamlet centers only	Centers above 250 population					No population centers	Hamlet centers only	Centers above 250 population					
				One	Two	Three	Four	Five or more			One	Two	Three	Four	Five or more	Total
Under 1,200	51	5	11	34	1	--	--	--	9.8	21.5	66.7	2.0	--	--	--	100.0
1,200 - 2,999	140	4	6	107	16	6	1	--	2.8	4.3	76.5	11.4	4.3	0.7	--	100.0
3,000 - 4,999	131	1	2	75	38	9	6	--	.7	1.5	57.3	29.0	6.9	4.6	--	100.0
5,000 - 7,499	76	1	--	33	21	9	8	4	1.3	--	43.4	27.6	11.9	10.5	5.3	100.0
7,500 - 14,999	53	--	--	14	11	9	10	9	--	--	26.4	20.7	17.0	18.9	17.0	100.0
15,000 - 24,999	15	--	--	3	3	4	1	4	--	--	20.0	20.0	26.7	6.6	26.7	100.0
25,000 and over	6	--	--	3	--	1	--	2	--	--	50.0	--	16.7	--	33.3	100.0
Total	472	11	19	269	90	38	26	19	2.3	4.0	57.0	19.1	8.1	5.5	4.0	100.0

A total of 442 districts reported one or more centers above 250 population. Many also reported one or more hamlets in addition to village or city centers. In fact, so many hamlets were reported, most of them very small, that it seemed best to disregard all places under 250 population in this group of districts in order to present a clear picture of those which had but one village or city and those which had more than one. The fact that rural sociologists generally regard a population of 250 as the maximum for hamlets appeared to justify elimination of all centers below that size for purposes of this particular analysis.

Perhaps the most striking feature of this analysis is the large number of districts which had but one center above hamlet size. There were 269 districts (57.0 percent of the 472 included in table 13) which had a single village or city center. However, almost a fifth (19.1 percent) had two such centers and slightly over a sixth (17.6 percent) had more than two.

As might be expected, there was a relatively close relationship between the total populations of these districts and the number of centers above hamlet size in them. The distribution of the 269 districts having but one center is quite interesting in this respect. Two-thirds of those below 1,200 population had but one center (it should be noted that 16 districts in this group had no center as large as a village). Slightly over three-fourths (76.5 percent) of those ranging between 1,200 and 2,600 had but one village center. But the percentage for each succeeding size category was progressively smaller except for the group above 25,000 population, most of which were suburban. However, despite the fact that districts with a single center were relatively more numerous in the smaller size groups, over two-fifths (43.4 percent) of those between 5,000 and 7,500 and over a fourth (26.4 percent) of those between 7,500 and 15,000 also had but one.

The distribution of districts having two or more centers likewise shows a direct relationship with total population. Relatively few districts below 2,600 had more than one center above hamlet size. The highest proportions with two centers were concentrated among those having total populations between 2,600 and 7,500. Only 22 districts under 5,000 population had more than two centers and none below that size had more than four. However, 19 districts above 5,000 population had five or more.

State variations in number of centers per district.—Comparison of the 472 districts by States revealed some noteworthy differences in the number of village or city centers per district and also

certain significant similarities. Some of these differences and similarities are shown in table 14.

Of the five States having most of the districts, Michigan's, Minnesota's, and Missouri's districts were markedly similar with respect to the number of centers in them but contrasted sharply with those in Illinois and New York which also had some similarity. Thus, slightly over three-fourths (76.3 percent) of the districts in Minnesota and almost the same proportion (72.7 percent) of those in Michigan and Missouri had but one center.

Less than half (48.1 percent) of Illinois' districts and but slightly over a third (34.4 percent) of those in New York had one center. One-third of those in Illinois and almost the same proportion (32.3 percent) in New York had two centers. However, New York had much higher proportions with three or more centers than had Illinois.

The fact that a sizable proportion of districts had more than one center in no way indicates that such districts were unsoundly formed from a sociological standpoint or otherwise. All the evidence points to the fact that often it was necessary to include more than one center in order to establish a good-sized district.

In many instances where a district had two centers one of them was much larger than the other, often several times as large. The same situation was found in most districts having more than two. Usually the largest center had a population substantially higher than the combined size of all the other centers in the district. Where such smaller places are located within the trade and service area of the larger center, then it would seem entirely logical to include them in the new district.

There were several instances where a district had two centers of approximately the same size. Some of these were small villages but others were relatively large. This type of situation was more common in New York than in the other States. Illinois also had several districts having two centers in the same general size range.

Size of village and city centers.—The fact that all except 30 of the 472 districts had at least one center larger than a hamlet raises a question concerning the size of these places. Analysis of their size presented no problem in the case of districts having but one center, but for districts having more than one it was necessary to confine the analysis to the largest center in each. Thus, table 15 shows the size of village or city centers in districts having but one and the largest in districts having more than one.

Table 14

Percentage distribution of reorganized districts in eight States, by number of population centers above hamlet size

State	Number of districts	Percent of districts having —						
		None	One	Two	Three	Four	Five or more	Total
California	4	--	--	--	--	25.0	75.0	100.0
Idaho	14	--	28.6	7.1	14.2	21.5	28.6	100.0
Illinois	108	--	48.1	33.3	12.1	4.6	1.9	100.0
Michigan	33	--	72.7	12.1	6.1	3.0	6.1	100.0
Minnesota	72	15.3	76.3	4.2	1.4	1.4	1.4	100.0
Missouri	132	12.1	72.7	9.9	3.0	.8	1.5	100.0
New York	96	2.1	34.4	32.3	13.5	12.5	5.2	100.0
Washington	13	7.7	38.4	15.4	23.1	15.4	--	100.0
Total	472	6.3	57.0	19.1	8.1	5.5	4.0	100.0

In 346 districts (78.3 percent) the largest center was a village. In the remaining 96 districts (21.7 percent) the largest center was a city. This clearly shows that school district reorganization is not confined to rural areas and smaller centers only but relatively often includes urban centers as well. As mentioned earlier, a small number of districts were in suburban areas adjacent to large cities, but most of the 96 districts shown in table 15 were not suburban. Sixty-four of the 96 had small cities under 5,000 population and 19 of the 96 had cities between 5,000 and 10,000 in size.

Of equal significance is the fact that most districts which did not have a city center had a medium- or large-sized village. Thus, in but slightly over a sixth of the districts was the largest center a village under 500 population. Almost the same proportion (16.5 percent) had a village between 1,000 and 1,500 and nearly a fifth (19.7 percent) had a village above 1,500 population. Districts in which the largest center was a village between 500 and 1,000 population constituted almost one-fourth (24.9 percent) of the total.

In general, there was a close relationship between total population of districts and the size of the largest village or city centers in them. Almost three-fourths (74.3 percent) of the districts with a total population of less than 1,200 had a village with fewer than 500 people. Slightly over half (50.8 percent) of those with a total population between 1,200 and 2,600 had a village between 500 and 1,000. But almost two-thirds (65.7 percent) of those with a total population between 2,600 and 5,000 had a village above 1,000 population.

Only five districts with a total population under 5,000 had a city, but over two-fifths of those with a total population between 5,000 and 7,500 had one. There were only 15 districts above 7,500 in total population which did not have a city.

Comparison of the relationships shown in table 15 with those shown in table 13 indicates that the factors of total population, size of largest center, and number of centers per district are interrelated. This would be expected in the case of smaller districts, but it is significant that such interrelationships also held for larger districts as well. For example, nearly three-fourths of the districts having a total population between 7,500 and 15,000 had more than one center and almost the same proportion had a city. It would appear that the larger the district in total population the greater the likelihood that it had more than one center and the greater the likelihood that one of these centers was a city.

The significance of this is that in reorganizations involving an urban center the boundaries of the new district were not limited

Table 15

Size of the largest village or city center in reorganized school districts, by total population of districts

Total population of district	Total number of districts	Number of districts with largest center having a population of —							Percent of districts with largest center having a population of —							
		250-499	500-999	1,000-1,499	1,500-2,499	2,500-4,999	5,000-9,999	10,000 and over	250-499	500-999	1,000-1,499	1,500-2,499	2,500-4,999	5,000-9,999	10,000 and over	Total
Under 1,200	35	26	9	--	--	--	--	--	74.3	25.7	--	--	--	--	--	100.0
1,200 - 2,599	130	37	66	17	10	--	--	--	28.5	50.8	13.1	7.6	--	--	--	100.0
2,600 - 4,999	128	9	30	41	43	5	--	--	7.0	23.4	32.1	33.6	3.9	--	--	100.0
5,000 - 7,499	75	2	3	14	24	32	--	--	2.7	4.0	18.6	32.0	42.7	--	--	100.0
7,500 - 14,999	53	2	2	1	10	23	13	2	3.8	3.8	1.9	18.9	43.4	24.4	3.8	100.0
15,000 - 24,999	15	--	--	--	--	4	6	5	--	--	--	--	26.7	40.0	33.3	100.0
25,000 and over	6	--	--	--	--	--	--	6	--	--	--	--	--	--	100.0	100.0
Total	442	76	110	73	87	64	19	13	17.2	24.9	16.5	19.7	14.5	4.3	2.9	100.0

to the open country in the immediate vicinity of the city but were extended to include the smaller centers in the area around it. Such a procedure would be equally important in the case of smaller villages and hamlets surrounding a large village. From a socio-economic standpoint there are interdependencies between a large village or small city and smaller centers within their trade and service areas which have important implications for school district reorganization. Obviously, there may be situations where other factors have to be weighed more heavily in the formation of new districts. In many sparsely settled areas it is not always practicable, or even possible in some cases, to have a large village or small city in every local school district without encompassing a very large territory.

State variations in size of largest centers in reorganized districts.--With respect to the size of their largest centers, the districts were very unevenly distributed among the eight States. This was particularly true both in the case of districts with small village centers and those having a city. The percentage distribution for each State by size of the largest center in each district is shown in table 16.

Of the five States having the most districts, Minnesota's and Missouri's districts were quite similar with respect to size of their largest centers. In both a majority of districts had a village of less than 1,000 population and in each more than a third of the districts had a village of less than 500 population.

In Illinois, Michigan, and New York the distribution contrasted sharply with that in Minnesota and Missouri. Although Illinois had a number of districts in which the largest center was a village below 1,000 population, in almost one-fourth (24.1 percent) the largest center was a city. Although Michigan had a relatively small proportion (9.1 percent) of districts having a city, almost half (48.5 percent) had a village above 1,000 population.

New York's districts contrasted sharply with those in the four States mentioned above. In relatively few districts (11.7 percent) was the largest center a village of less than 1,000 population. On the other hand, almost a third (31.9 percent) had a village center above 1,500 population and almost two-fifths (39.4 percent) had a city.

Portion of the total population living in the cities.—Table 17 shows the distribution of districts by the percentage of their total population that lived in hamlets, villages, and cities. In every instance the percentage is based on the combined size of all centers reported by each district.

Table 16

Percentage distribution of reorganized school districts in eight States, by size of largest village or city center

State	Number of districts	Percent of districts with largest village or city center having a population of —							
		250-499	500-999	1,000-1,499	1,500-2,499	2,500-4,999	5,000-9,999	10,000 and over	Total
California	4	--	--	--	25.0	75.0	--	--	100.0
Idaho	14	7.1	21.4	21.4	7.1	28.6	14.3	--	100.0
Illinois	108	10.2	23.1	23.1	19.5	12.1	4.6	7.4	100.0
Michigan	33	3.0	39.4	24.3	24.2	9.1	--	--	100.0
Minnesota	61	34.4	39.4	8.2	9.8	6.6	1.6	--	100.0
Missouri	116	36.2	29.3	11.2	12.1	8.6	1.7	.9	100.0
New York	94	1.1	10.6	17.0	31.9	28.7	9.6	1.1	100.0
Washington	12	--	8.3	25.0	33.4	8.3	--	25.0	100.0
Total	442	17.2	24.9	16.5	19.7	14.5	4.3	2.9	100.0

In districts the number of people living in centers was less than 20 percent of the total population. In other words, in each of these districts more than 80 percent of the people lived in the open country. They include the 11 districts previously mentioned as having no centers of any size as well as most, but not all, of those where the largest center was a hamlet. Thirty-seven of these 45 districts were in Minnesota and Missouri.

At the other extreme were 41 districts where 80 percent or more of the total population lived in cities, villages, and hamlets. Some of these districts were in suburban areas. However, most of them had a city or large village and included open-country territory in which there was usually one or more smaller centers. Twenty-eight of these districts were in Illinois and New York. Each of the other States except California had two or more.

In 153 districts, almost one-third of the total number, the proportions of the total population living in cities, villages, and hamlets ranged between 40 percent and 60 percent. Exactly one-third of Michigan's, Minnesota's, and Missouri's districts, slightly over one-third of those in Illinois, and slightly under one-third of those in New York were in this group.

The median for the 472 districts was 46.9 percent, indicating that in 236 districts less than 46.9 percent of the people lived in city, village, and hamlet centers, while in the other 236 districts more than 46.9 percent of the people lived in such centers.

There were significant differences in State medians, indicating that some States had more districts in which most of the people lived in the open country than was the case with most of the districts in other States. However, of the five States having the most districts the medians in Minnesota and Missouri were almost the same (39.3 percent in Minnesota and 38.6 percent in Missouri). Michigan's median (43.6 percent) was not significantly larger. It is probable that a number of factors were responsible for this relatively close similarity in these three States. Both Minnesota and Missouri had relatively more districts with small centers than Michigan. On the other hand, Michigan had relatively more districts which were smaller in area than was the case in Minnesota or Missouri. It appears likely that the degree of population sparsity in the open country as well as the size of village centers were influential factors in each State.

The situation both in Illinois and New York was in marked contrast to that of Michigan, Minnesota, and Missouri. Both had medians of approximately the same size (53.7 percent in Illinois and 56.2 percent in New York). It may be recalled that on the average

Table 17

Distribution of reorganized school districts in eight States, by percentages of their total population living in city, village, and hamlet centers

State	Number of districts reporting	Number of districts having percentages of —					Median percentage*
		Under 20	20-39	40-59	60-79	80 and over	
California	4	--	--	--	4	--	66.7
Idaho	14	--	3	--	7	4	68.0
Illinois	108	2	25	37	27	17	53.7
Michigan	33	1	13	11	5	3	43.6
Minnesota	72	14	23	24	9	2	39.3
Missouri	132	23	46	44	17	2	38.6
New York	96	4	19	31	31	11	56.2
Washington	13	1	4	6	--	2	51.0
Total	472	45	133	153	100	41	46.9

* Computed from 10-step intervals each having a 10-point range.

New York's districts had a larger total population and that they had more and larger centers than any of the other four States mentioned above. However, New York's districts for the most part were smaller in area than those of any State except Michigan. The total population of most districts in Illinois was considerably smaller than the majority of those in New York, but the median area of Illinois' districts was one-third larger, indicating on the average a greater degree of population sparsity.

PUPIL ENROLLMENT

Probably the most revealing single characteristic of a local school district is the number of pupils living in it and attending schools operated by it. The size of the pupil enrollment directly indicates the magnitude of the educational enterprise for which the district is responsible. Pupil enrollment is often used as a basis for comparing local districts, for classifying them in size categories, and even as one of the major factors for evaluating their adequacy. Small districts particularly are often evaluated in terms of pre-determined standards of size, based on the minimum pupil enrollment that some people believe every school district ought to have.

Important as well-developed standards of optimum and minimum size undoubtedly are and valuable as they may be when used to best advantage, there appears to be good reason for recommending considerable caution in their use as the sole criterion for judging the adequacy of a local school administrative unit. In other words there may be extenuating circumstances which limit the use of standards of size to the exclusion of other factors.

The degree to which this holds for the 552 reorganized districts in this study is unknown. However, while many districts were relatively small in terms of pupil enrollment, there were a number of conditions which would appear to account in large part for this.

In the first place it is important not to lose sight of the fact that these districts were in each instance established as the result of a vote of the local people concerned. In some States the reorganization legislation did not specify or provide for the establishment of standards of size or else specified minimums which were quite low. In at least two States reorganization proposals could be brought to a vote without prior approval of the plans by any educational agency other than the county reorganization committee.

Moreover, there was evidence indicating that in some quarters school district reorganization was, and still is, regarded as an ongoing process which may in the years to come result in combining small reorganizations into larger units. Thus, it appears likely that a number of reorganizations even though small in size were regarded by some leaders as a first step ultimately leading to the establishment of still larger units. It might be mentioned that such action has taken place in New York with the result that relatively small reorganized districts established a number of years ago are being combined into larger units.

Finally, it appeared that conditions of population sparsity may have been determining factors in a number of instances. As previously indicated a sizable proportion of districts with a small total population were large in area. Undoubtedly there are sparsely settled areas where it would have been necessary to include a very large territory in order to have the number of pupils advocated by some as the minimum a district ought to have.

All this is not intended as a complete justification of the soundness of all of the 552 districts. Rather, it is intended to point to some of the difficulties which may be encountered in evaluation of results of school district reorganization in terms of a single factor, such as pupil enrollment, when a number of other influential factors may also be present.

The pupil enrollments of the 552 reorganized districts are shown by State in table 18. The enrollment for each district includes only the public-school pupils living in it and does not include parochial school or nonresident pupils. In the case of elementary school districts only the elementary school pupils were counted. There were 35 districts which were reported as operating schools for elementary pupils only. Twenty-one of them had enrollments of fewer than 500 pupils, but 14 had enrollments of more than 500 pupils and 8 of the 14 had enrollments above 1,000.

The median enrollment for the 552 districts was 626 pupils, indicating that half the districts had enrollments larger than 626 pupils and half had enrollments smaller than that number. Of greater significance is the distribution of districts above and below the median of 626. This was determined by calculation of the first and third quartiles which marked the limits of the lower and upper quartiles of this distribution. Thus the smallest one-fourth of the districts, measured in terms of pupil enrollment, had fewer than 380 pupils in them, while the largest one-fourth had enrollments of more than 1,037 pupils.

With respect to the smallest one-fourth of the districts, some had very few pupils. One district, previously identified in the section on total population as a 182-square-mile unit in Minnesota, had but 20 elementary pupils. A total of 25 districts, all except one of them in Minnesota and Missouri, had fewer than 200 pupils.

At the other extreme were some very large districts. The largest, also previously identified in the section on total population as a densely populated suburban unit in Washington, had 13,351 pupils. California had a district with an enrollment of 12,400. However, none of the States except California and Washington had a district with as many as 6,000 pupils.

Table 18

Distribution of reorganized school districts in eight States, by total enrollment of pupils living in each district

Pupil enrollment	Calif.	Idaho	Ill.	Mich.	Minn.	Mo.	N. Y.	Wash.	Total
Fewer than 200	1	--	--	--	13	11	--	--	25
200 - 299	--	--	5	2	13	36	--	--	56
300 - 399	--	--	14	6	19	27	5	--	71
400 - 499	1	2	17	6	6	23	5	1	61
500 - 699	2	2	30	9	11	29	16	1	100
700 - 899	1	1	17	11	7	11	24	1	73
900 - 1,299	3	4	9	5	3	8	32	2	66
1,300 - 1,899	1	1	13	5	1	3	27	3	54
1,900 - 2,499	--	2	6	1	2	1	8	2	22
2,500 - 3,499	1	2	3	--	--	1	5	--	12
3,500 and over	3	1	3	--	--	1	1	3	12
Total districts	13	15	117	45	75	151	123	13	552
First quartile enrollment*	625	675	460	464	244	274	740	1,350	380
Median enrollment*	1,050	1,025	650	689	360	406	1,044	1,450	626
Third quartile enrollment*	2,850	2,025	1,019	896	596	612	1,471	2,450	1,037

* Computed from 18-step intervals instead of the 11 intervals in the above distribution.

Perhaps the most significant aspect of the over-all distribution of the 552 districts is indicated by the range in pupil enrollment between the first and third quartiles. Thus, despite the wide ranges noted above, the middle 50 percent of the districts had pupil enrollments ranging from 380 (the first quartile) to 1,037 (the third quartile). In view of the wide variations in the characteristics previously described with respect to the 552 districts it is somewhat surprising that this range was not greater than it actually turned out to be. However, when it is compared with the range between the first and third quartiles for each of the States some highly significant variations become apparent.

It may be noted that the inter-quartile ranges for California, Idaho, and Washington were much wider than those of any of the other five States. Although the number of districts from these three States constituted but a relatively small proportion of the total number, they varied greatly in size, and a much higher proportion were large than was the case with districts in the other five States. Thus, of the twelve districts having more than 3,500 pupils, seven were in these three States.

There were significant variations and also some notable similarities among the other five States. Minnesota's and Missouri's districts were quite similar with respect to the size of their pupil enrollments. In Minnesota, half of the districts had enrollments ranging between 244 (the first quartile) and 596 (the third quartile), while the middle 50 percent of those in Missouri ranged between 274 and 612. It is significant that the third quartile in both of these States was lower than the median for the 552 districts.

The distribution in Illinois and Michigan was quite similar although differing significantly from that in Minnesota and Missouri. The middle 50 percent of Illinois' districts ranged in pupil enrollment from 460 to 1,019. In Michigan the range for the middle 50 percent was from 464 to 896. The median both in Illinois and Michigan was higher than the third quartile in either Minnesota or Missouri.

The distribution in New York was markedly different from that in any of the other four States from which a sizable number of returns were received. The middle 50 percent of the districts in this State had pupil enrollments ranging between 740 and 1,471. Thus, the first quartile in New York State was higher than the third quartile in either Minnesota or Missouri. It was also higher than the median in either Illinois or Michigan.

It may be pertinent here to point out that the New York districts described above are much larger than those established in former

years. For example, in the 1943-44 school year the median enrollment of the 319 central rural school districts then in existence was 470 pupils, the first quartile was 322, and the third quartile was 649.[1] Thus, the third quartile for these 319 districts was lower than the first quartile for the most recently established units included in this study. This clearly indicates a policy in that State of establishing larger-size districts.

[1] New York State Education Department. Improving Educational Opportunities in Rural Areas. Bulletin No. 1322, August 1, 1946. Albany, N. Y., the Department, p. 79.

ASSESSED VALUATION OF PROPERTY

Since practically all local funds for school support come from property taxes, the value of the property in a school district when considered in relation to the number of pupils indicates local ability to finance the educational program needed. Admittedly, local ability often cannot be determined with a high degree of accuracy by this method because it is usually necessary to rely on the assessed valuation of property and this may differ markedly from the actual value. However, when applied to sizable numbers of school districts for purposes of making relatively rough comparisons this method has definite values.

Information was obtained concerning the valuation of property in 547 of the 552 districts. The total valuation of each district was divided by the number of enrolled public-school pupils living in it to obtain the property valuation per pupil. This is shown in table 19.

Obviously, any attempt to make comparisons with a high degree of accuracy on the basis of this analysis would be subject to error. This would most likely be true in comparing the local ability of districts in States from which relatively few returns were received, such as California, Idaho, and Washington. Where larger numbers of districts are involved it would appear that the chances for error would be considerably lessened.

However, there are certain variations in assessment practices among States which should be mentioned. For example, in Minnesota the statutes divide property in several classes and specify a different percentage of the true value, ranging from 10 to 50 percent, for assessment of each class. In Washington, efforts are made to set the assessed valuation at 50 percent of the true value for all property subject to local taxation. In New York the statutes require assessment at true value and local deviations from that requirements are subject to correction by equalization procedures. In Illinois, efforts are likewise made to equalize assessed values at the full or market value.

Undoubtedly, variations in State assessment policies accounted for a part of the differences among them which are shown in table 19. Thus, the general level of valuation per pupil would have been much higher in Minnesota had assessed valuations been set at the full value. The same would also have been true in Washington whose median per pupil valuation of $3,167 was roughly half the size of the medians in Michigan, Missouri, and New York.

Table 19

Assessed valuation of property, per pupil, in reorganized school districts, by State

Assessed valuation per pupil	Calif.	Idaho	Ill.	Mich.	Minn.	Mo.	N. Y.*	Wash.	Total
Less than $1,000	--	--	--	--	15	--	--	--	15
$ 1,000 - 1,999	--	--	--	--	23	9	--	1	33
2,000 - 2,999	--	1	--	2	12	17	2	5	39
3,000 - 3,999	--	7	--	7	13	18	8	3	56
4,000 - 4,999	4	2	1	6	8	17	17	--	55
5,000 - 5,999	1	4	--	13	4	17	20	2	61
6,000 - 6,999	--	1	--	6	--	16	20	--	43
7,000 - 7,999	--	--	--	6	--	15	18	--	39
8,000 - 8,999	2	--	1	--	--	10	14	--	27
9,000 - 9,999	--	--	--	1	--	9	4	--	14
10,000 - 11,999	1	--	3	1	--	6	8	--	21
12,000 - 13,999	1	--	14	2	--	8	3	--	28
14,000 - 15,999	1	--	7	--	--	2	3	1	14
16,000 - 17,999	2	--	9	1	--	1	3	--	16
18,000 - 19,999	--	--	9	--	--	--	1	--	10
20,000 - 24,999	--	--	22	--	--	1	1	1	25
25,000 - 29,999	--	--	26	--	--	--	--	--	26
30,000 - 34,999	--	--	13	--	--	--	--	--	13
35,000 and over	--	--	11	--	--	--	1	--	12
Total	12	15	116	45	75	148	123	13	547
Median	$8,500	$3,788**	$23,000**	$5,877	$1,975**	$5,765	$6,725	$3,167	$6,372

* Based on valuations reported as "true" rather than assessed value.
** Calculated from distributions arranged in smaller-step intervals than shown above.

But even if a generous allowance were made for variations in State practices, large differences would still remain in the case of some States. This is most strikingly revealed by comparing the per pupil valuations in Illinois with those in Michigan, Minnesota, Missouri, and New York. The median in Illinois was $23,000 which was more than eleven times greater than Minnesota's median, four times greater than the medians in Michigan and Missouri, and nearly three and a half times that of New York's. Thus, it would appear there is little question that most Illinois districts were in a much stronger position to finance an educational program than most of those in Michigan, Minnesota, Missouri, and New York. Further evidence of the more favorable position of Illinois is revealed by the fact that 50 of the 116 districts in that State had per pupil valuations of $25,000 or more. Only one other district, and it was in New York, had a per pupil valuation that high.

The ranges within States were in most instances much larger than the differences in State medians. In Illinois the highest district had a valuation of $44,621 per pupil, while the lowest district had $4,393, a difference in local ability of 10 to 1. In Michigan the range was from $16,486 to $2,965, a difference of more than 5 to 1. In Minnesota the range was from $5,706 to $509, a difference of 11 to 1. Missouri's range was from $23,058 in the highest district to $1,258 in the lowest, a difference in local ability of 18 to 1. In New York the range was from $42,900 to $2,707, a difference of nearly 16 to 1.

Such variations even though large in some instances are to be expected in school district reorganization. It is well known that property wealth and the number of children to be educated are often highly disproportionate from community to community. Although an adequate local tax base is of undoubted importance, it cannot rightly be given top priority in forming new school districts. This does not mean it should not be given careful consideration, however.

In that connection it may be pertinent to point out that assessed valuation of property is specified by legislation in three of the eight States as one of the factors to be considered in school district reorganization. The Illinois statutes specify that the territory to be included in a community-unit district must have a minimum population of 2,000 people and an assessed valuation of $6,000,000 or more. The Michigan statutes providing for the formation of rural agricultural school districts (not all Michigan districts included in this study were that type) specify that the territory must have a minimum assessed valuation of $1,000,000 or have an area of at least 18

governmental sections of land. In Missouri the statutes provide that if the reorganization plan developed by a county board is disapproved by the State Board of Education and a revision of it is similarly disapproved, then the county board must submit its own plan to the voters but every proposed district in such a plan must have an assessed valuation of at least $500,000 or an average daily attendance of at least 100 pupils.

APPENDIX

Items from Inquiry Form

The information on which this report is based was obtained from responses to the following items in the inquiry form which was circulated:

1. Month and year when present district was established . . _____

2. Total enrollment of pupils living in district: (Do not include parochial school or nonresident pupils)...Elementary _____ High School _____

3. Total population of district (estimate if necessary).. _____

4. Estimated population of each city, village, or other population center in district .....(1)_____(2)_____(3)_____ (4)_____(5)_____(6)_____

5. Area of district in square miles ..... _____

6. Territory of district includes (check which): an entire county_____; part of a county_____; parts of more than one county _____

7. Are there geographic barriers that handicap transportation and communication within the district? Yes_____; No_____ If "yes", specify the nature of these barriers: _____

8. Assessed valuation of property in district (to nearest $1,000): _____

9. Total number of old districts that were combined to form present district: _____

10. Number of old districts that (at time of reorganization) operated:
    no schools . . . . . _____
    elementary schools only . . . . . _____
    high schools only . . . . . _____
    both elementary and high schools . . . . . _____
    (Total here should agree with total in No. 9)

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