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ABSTRACT

After a quarter of a century of rapid and sometimes spectacular growth, an increasing number of school systems are finding themselves faced with shrinking enrollments. The problems have changed from what to do about overcrowding, double sessions, and temporary facilities, to what to do about empty classrooms. The report examines this counter-phenomenon of shrinkage to find its extent, possible duration, and some of the strategies being developed to cope with surplus space. The authors interviewed over 100 school districts in 40 States and invited 25 of the larger cities to respond in writing to questions about their enrollment projections, whether they had excess space, and their plans for using it. The numbers needed to justify a decision to close a school form the basis of an analysis and recommendation. The report deals directly with how future population numbers are calculated and discusses the strategies and procedures that follow when a population is too thin for existing school facilities. (Author/MLF)

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FEWER PUPILS/SURPLUS SPACE

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Foreword

After a quarter of a century of rapid and sometimes spectacular growth, an increasing number of school systems are finding themselves faced with shrinking enrollments. The problems have changed from what to do about overcrowding, double sessions and temporary facilities, to what to do about empty classrooms. The headaches of new construction have been replaced with the difficulties of selling old schoolhouses.

EFL has been part of the growth phase of school planning and construction. It seemed both appropriate and useful to examine this counter-phenomenon of shrinkage to find its extent, possible duration, and some of the strategies being developed to cope with surplus space.

EFL engaged Dr. Cyril G. Sargent, professor of educational administration at The City College of New York, to conduct this study. Cy Sargent has had an impressive career. Among his accomplishments he has been the Director of the Center for Field Studies at Harvard University, and the Chief of the Human Resources Division, Alliance for Progress at the State Department. He was one of the principal authors of EFL's first major publication, *The Cost of a Schoolhouse* and has conducted numerous facility planning studies

in the U.S. and abroad. Judith Handy of the EFL staff collaborated on both the field survey and the writing of the report.

The authors interviewed over 100 school districts in 40 states and invited 25 of the larger cities to respond in writing to questions about their enrollment projections, whether they had excess space, and their plans for using it.

For school board members and administrators, there is no way of avoiding the numbers needed to justify a decision to close a school. Numbers form the basis of any analysis and recommendation, and this report deals directly with how future population numbers are arrived at. Subsequent chapters discuss the strategies and procedures that follow when a population is too thin for existing school facilities.

But in its broader sense, school shrinkage is a human problem pressing on the interest and well-being of administrators, teachers, parents, community, and, most of all, on the children themselves. It is a problem whose just resolution requires a largesse of spirit from us all.

Population and Enrollments

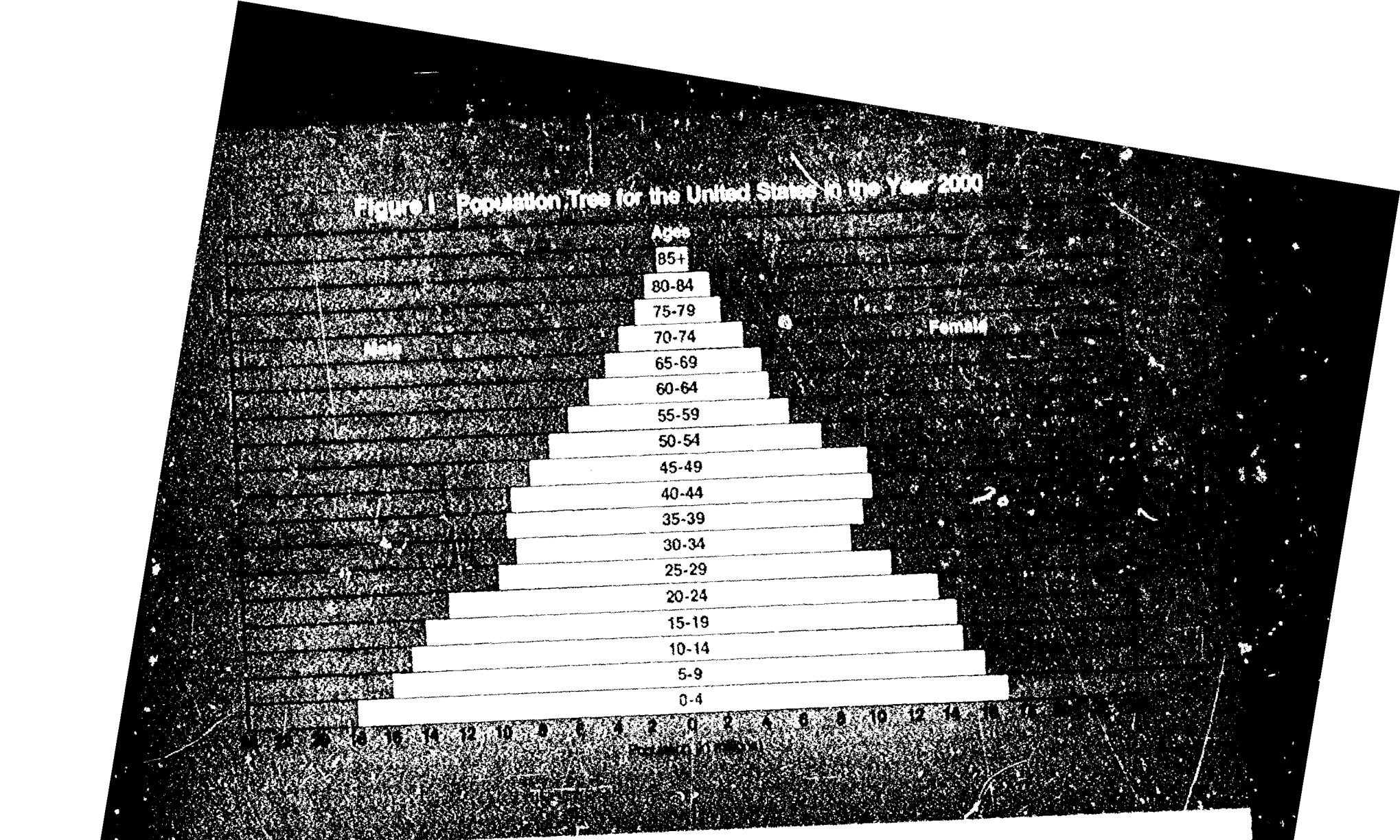
In 1950 there were 28 million pupils in elementary and secondary schools. By 1960 there were 42.7 million—a growth of 52%. That same year births hit an all-time high of 4.35 million. All systems seemed go for larger, and rapidly larger, growth. We had achieved this birth total at a time when the number of women of early childbearing age—20 to 29—had just bottomed out at about 11 million. In the sixties this number would grow to over 16 million. Thus the decade should have seen the largest baby "take-off" in our history. Children from the larger families of the postwar years were beginning to form their own families, and were expected to provide an "echo boom" to the baby-boom generation of the forties.

The country itself was growth-oriented—growth in standard of living, growth in corporations, growth in population. Little wonder that the first drop in the birth rate, which started slipping from a 1957 high, went practically unnoticed. It was probably just repeating the slight drop of 1948-50, a mere fluctuation.

But this time the rate continued to drop until 1968, when it turned around briefly for 1969 and 1970. Then the bottom fell out. As of November 1973, it had hit an all-time low. Estimated births for 1973 were slightly under 3.2 million, more than one million less than in 1960.

Meanwhile, demographers and other social scientists began to refer to the "baby bust" and to examine some of its social and economic consequences. George Grier, of the Washington (D.C.) Center for Metropolitan Studies, led this "alert" with his 1971 report, "The Baby Bust." How did this "baby bust" affect school enrollments? Predictably, for six years after the drop in total births began (1961), school enrollments kept growing, and school systems kept building to keep up with them. It was not until 1969-70 that both kindergarten and first-grade enrollments started systematic declines.

As with population, so with enrollments; the momentum of past growth tended to obscure the effect of current change. Not until 1971 did the total school population (elementary and secondary) peak at 51.4 million. Meanwhile, some elementary enrollments in some communities were down to the point where empty classrooms were appearing, teachers were being dropped, and state aid that was based on an average daily attendance or membership type of formula was being reduced. Shrinkage and how to cope with it has become as much a theme of the seventies as growth was for the forties and fifties. Thus, it may be useful to look a bit more carefully at the complex of phenomena which result in the expansion or contraction of a school system.



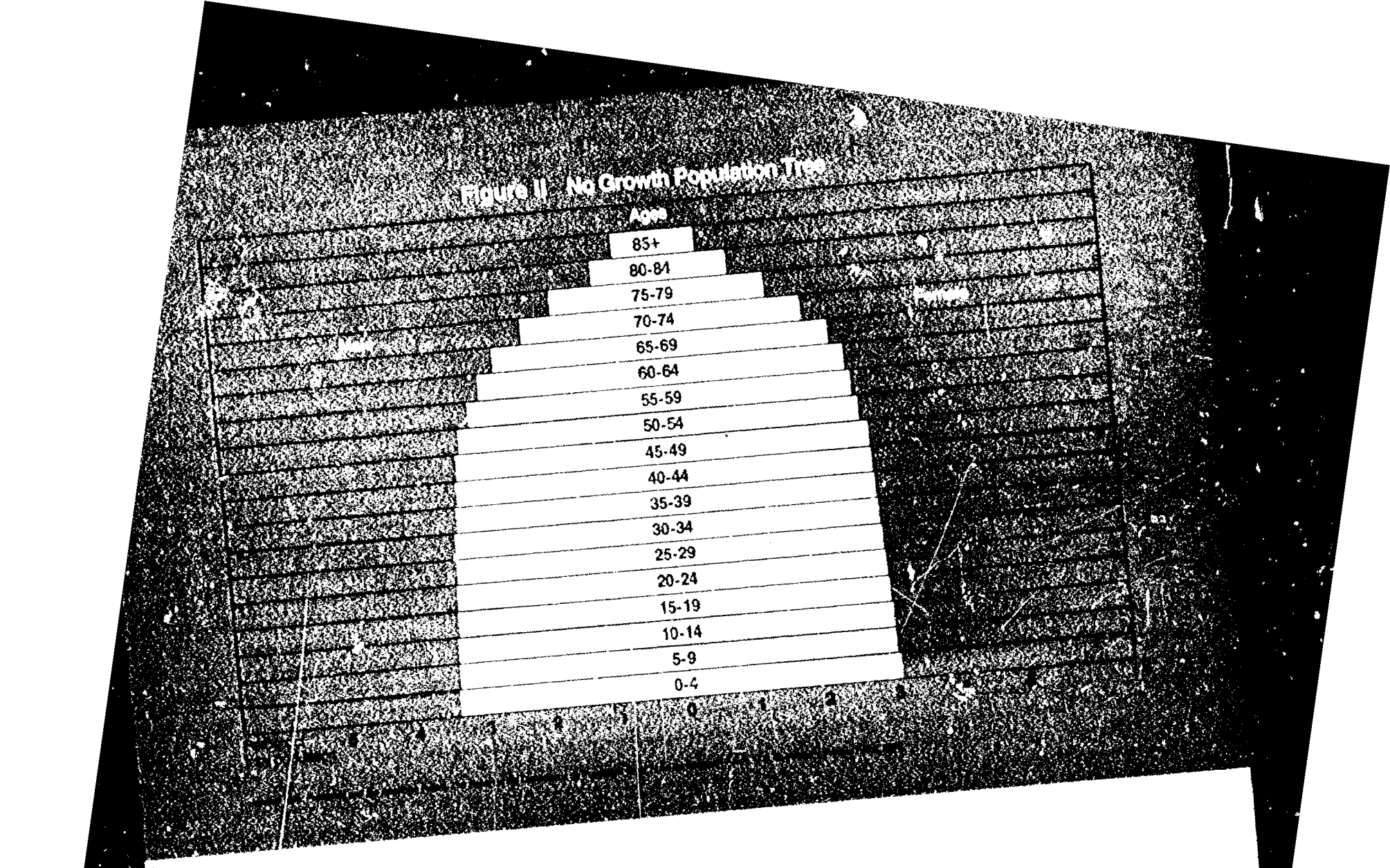
Growth and Decline

The terms are simple—births, deaths, and migration. Leaving migration for later consideration, we have only births and deaths to deal with. Deaths have been increasing slowly but steadily for a number of decades. Births, however, have fluctuated rather widely. Excluding migration, whether a population will grow or decline depends upon these two factors. Demographers like to draw "trees" to show what a population looks like and what is likely to happen as a result of the shape of the tree. (A tree is simply a bar graph depicting the number, or the percent, of a population in each 5-year age group. This enables one to see at a glance the proportion of children, young people, and elderly.) Comparisons with earlier trees for the same community or among trees of different communities help one see what is happening locally.

Figure I is a tree representing the population of the United States in the year 2000 if family size were sustained at the level of the late forties and the fifties. (Total population would be about 320 million.)

Notice that the largest age group is the 0-4 one, and that until age 30-34 each age group is substantially larger than the one above it. Almost 50% of the population is under 20 years of age. Because the 0-4 and 5-9 age groups are substantially larger than those of ages 20-29, the chart shows there would be still further potential growth when these groups reach childbearing age.

Contrast this with the tree in Figure II, which shows the population of the United States if it were to stabilize at 300 million by the year 2015. It shows a "two-child average" population (i.e., zero population growth). Here, it is not until age 40 that 50% of the population is reached. In other words, it is a population with a much smaller percentage of children than that shown in Figure 1. Each age group up to and including 45-49 is only very slightly smaller than the one below it.



Where is the current population of the United States? Figure III shows its profile (as of 1970) overlaid on the zero population growth tree. Compare the size of groups responsible for most births (the 20-29 age groups) with that of their predecessors of 1960 (the groups now in the 30-39 age span). These latter, much smaller groups were primarily responsible for the "baby burst"—represented in the tree by those now in the 10-19 age bracket. But, in spite of the larger size of the 20-29 age group in 1970, the 0-9 bars are shorter than those for the 10-19 year olds. In other words, there are now more women ages 20-29, but fewer births.

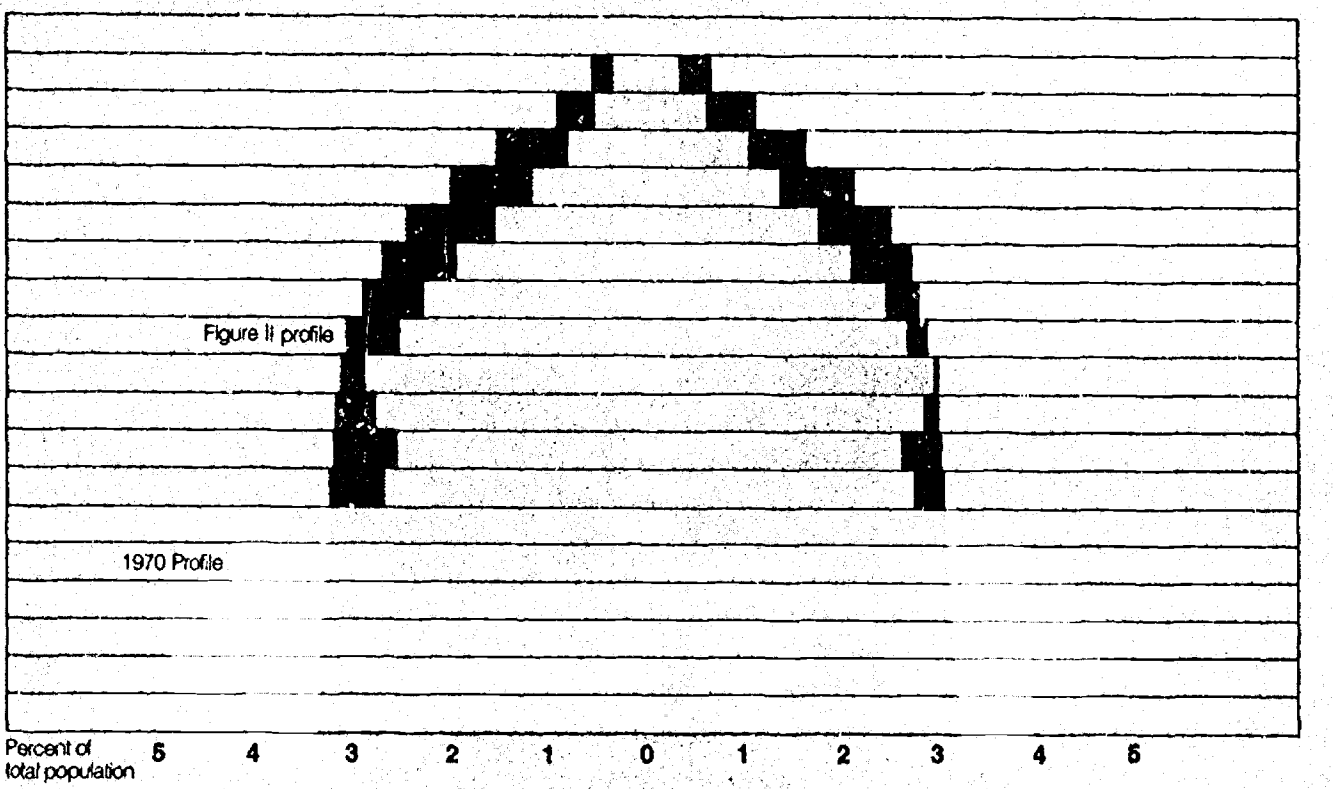
However, the larger 10-19 age group will itself be moving into the 20-29 bracket during the seventies. What will the 0-9 age group look like by the end of the decade? It depends partly on the rate at which women in the broader span of childbearing years (ages 15-44) actually have children. But as far as numbers go they will be a much larger group than they were in the sixties.

The Big Equation

The rate at which women of ages 15-44 have children—to be precise, the number of births per 1,000 women ages 15-44—is called the fertility rate. It is a more nearly accurate index than is the crude birth rate, which is merely the number of births per 1,000 of the total population.[1] A decline in the number of births is generally attributed to a "drop in the birth rate." But, of course, the total number of births can be affected by a change in the fertility rate or by a change in the number of women ages 15-44 or both.

Within reasonable limits of accuracy for discussion purposes, births equal number of women (ages 15-44) multiplied by the fertility rate. If, for example, the number of women doubles while the rate is halved, the number of births remains unchanged. It is, in other words, the combined effect of the changes in these two terms which

1 *Even the fertility rate is not a precise measure since it is an average rate for the years involved.*



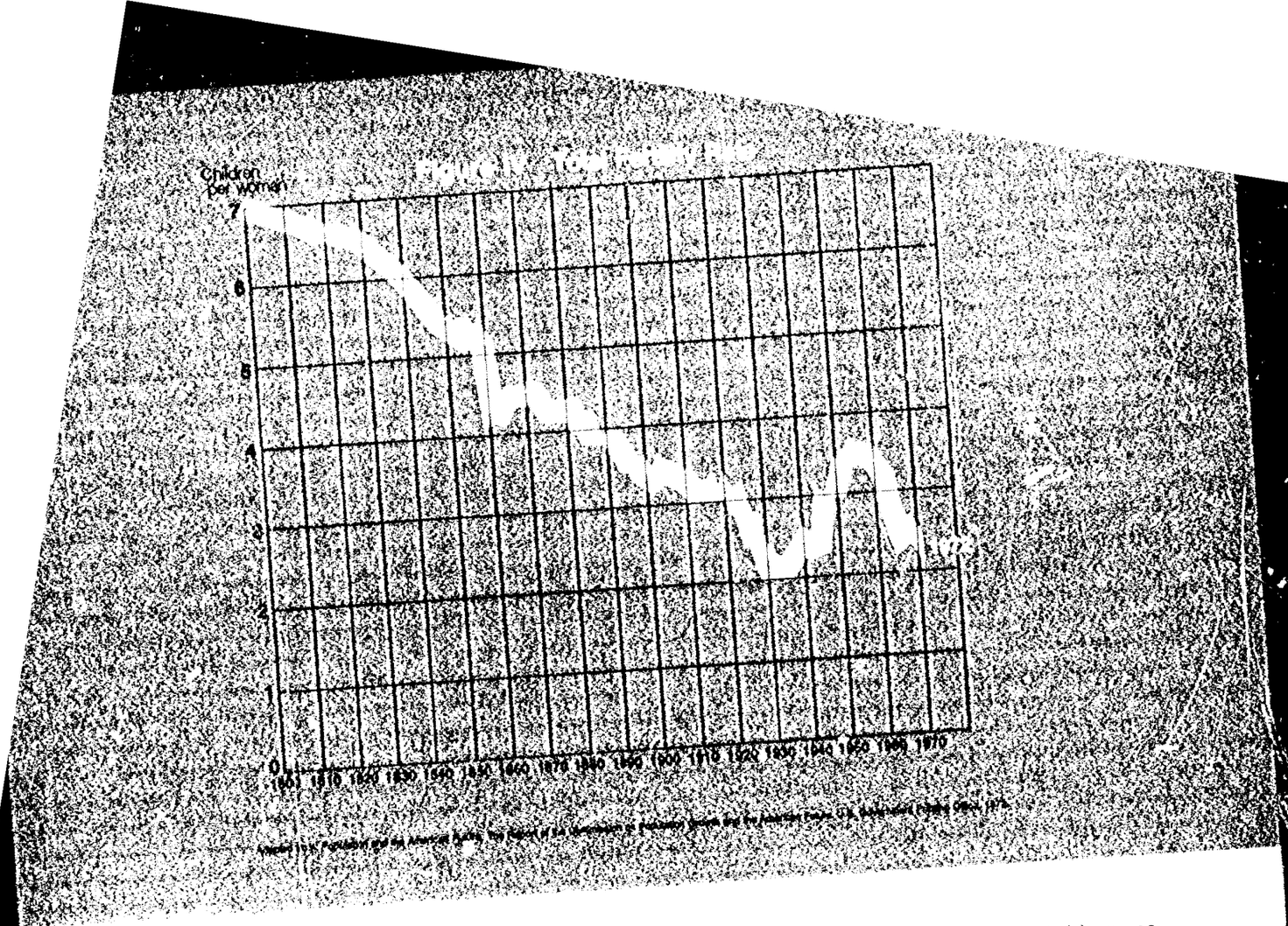
Adapted from: *Population and the American Future*, The Report of the Commission on Population Growth and the American Future, U.S. Government Printing Office, 1972.

results in changes in the total number of births. If both the number and the rate increase then births increase, if both decrease, births decrease. It is when one term increases and the other decreases that the total number of births can result in either a gain or loss over earlier totals. And it is precisely this movement of the two terms in opposite directions in recent years which makes even more dramatic the drop in the number of births.

At present there is a "cross-rip" in which two opposing forces—a rising tide, the number of women of childbearing age, and a countercurrent, the dropping fertility rate—are battling each other. Since 1961 the force of the dropping fertility rate has dominated the rising tide of the number of women. Yet the rising tide must continue through the seventies into the eighties. During the seventies it will rise to 50.9 million women. Will the current of the fertility rate continue to drop? It would take only a 7% reversal of the 1972 fertility rate to again yield 4 million births in 1980.

This question points up another condition. Because we are dealing with larger numbers of the population (42.6 million women, ages 15-44, in 1970 as compared with 31.9 million in 1940), a return to the 1950 fertility rate would mean 900,000 more births than it did in that earlier period. In other words, because we are dealing with a larger population, there is a potential for wider and wider swings in the total number of births, even with quite modest changes in fertility rates.

Perhaps this potential of turn-around is why demographers generally failed to provide an accurate chart for school districts to steer by in the early seventies. Lulled by the potential for growth existing in the sheer size of the childbearing age group, they failed to alert communities to the other possibility—that if the fertility rate continued to decline, there would indeed be a "baby bust." And that is what happened. In spite of there being 900,000 more women of childbearing age in 1972 than in 1970, there were 300,000



fewer births. As of November 1973, the fertility rate had dropped still further to 67.1, just about 55% of what it was in 1957.

The dramatic decline in rate is not just a recent event. Figure IV shows the longterm steady drop in completed family size for this country, except for the short, sharp rise of the forties and fifties. Yet until 1965 the most recent decline was modest enough to still produce more than 4 million babies each year. The growth in the number of women nearly compensated for the decline in rate. Now there is a new ball game. The increase in number of women of childbearing age has not been large enough to counterbalance the drop in the fertility rate.

Put in other terms, in 1800 by the time women had completed raising families they had produced seven children. By 1970 this family size was down to three children. After plunging to 2.2 during the Depression of the thirties, it jumped back to 3.7 in the latter part of the fifties. As of 1972, we are at an all-time low of 2.1 children per family—just enough to support a zero-population-growth pattern.

What if we are approaching ZPG? Clearly school districts have to be more prudent, for in this kind of a situation future growth is not just around the corner to take up the slack of overbuilding. Yet neither is ZPG just around the corner. The momentum of past numbers practically prohibits that. If, for example, the completed family size should stabilize at 2.1 (the ZPG rate of reproduction), the population total would still increase for many years, but very slowly, so that by the year 2050 it would reach 300 million. Our recent rapid growth (the baby burst) has so increased the number of young women that to bring population growth to an immediate stop would mean limiting family size to an average of about one child per family. So if we are moving toward ZPG, we are talking about a slowdown in growth, about a population in which children will represent a smaller and smaller portion of the population.

But children are still going to exist in large numbers; our past baby spurt practically guarantees that.

Predicting the Future

Nevertheless, when we step across the line from history and fact, to the future and speculation, we take a precarious step. Sociologist Philip Hauser has said, "Nobody can predict with accuracy what the future population of the United States will be in the year 2000, and anybody who claims he can is either a fool or a charlatan." Demographers, including those of the U.S. Census Bureau, have been so burned by past predictions that they now eschew them, preferring to project estimates based on past trends rather than to predict. But, in a way, projecting from past trends is to bet on their continuance, and the further away projections get from baseline data, the more frequently they miss the target rather badly. Nevertheless, it is impractical to suggest that we should, therefore, call off asking "what of the future." People in their various professional roles are required to make educated guesses about the future—including those about its future population. And not only about population for the country as a whole, but for counties, cities, and even small school districts. So the hard-pressed school administrator has to reply to all such suggestions of a moratorium on prediction with the resigned response, "I suppose I can't and shouldn't try, but I have to." He would, however, be well advised to bear in mind the admonition of Peter Morrison, of the Rand Corporation, "Projecting patterns of population far into the future is a necessarily contingent exercise. As one of Damon Runyon's characters put it, 'Nothing what depends on humans is worth odds of better than 8 to 3.'"

With such admonitions in mind, prediction or projection must be based on the same two terms: the number of women of childbearing age and the fertility rate. The number of women is the easier to estimate in the near future. Except for immigration, this number of women is reasonably accurately known, for 15 years at least. Applying present mortality rates to the number of females ages 0-29 now living, the number of women ages 15-44 will be 54.7 million in 1985. Table I shows the 29% increase in this number between 1970 and 1985. The year 1985 will see the largest number in this age bracket in the history of the United States.

TABLE I

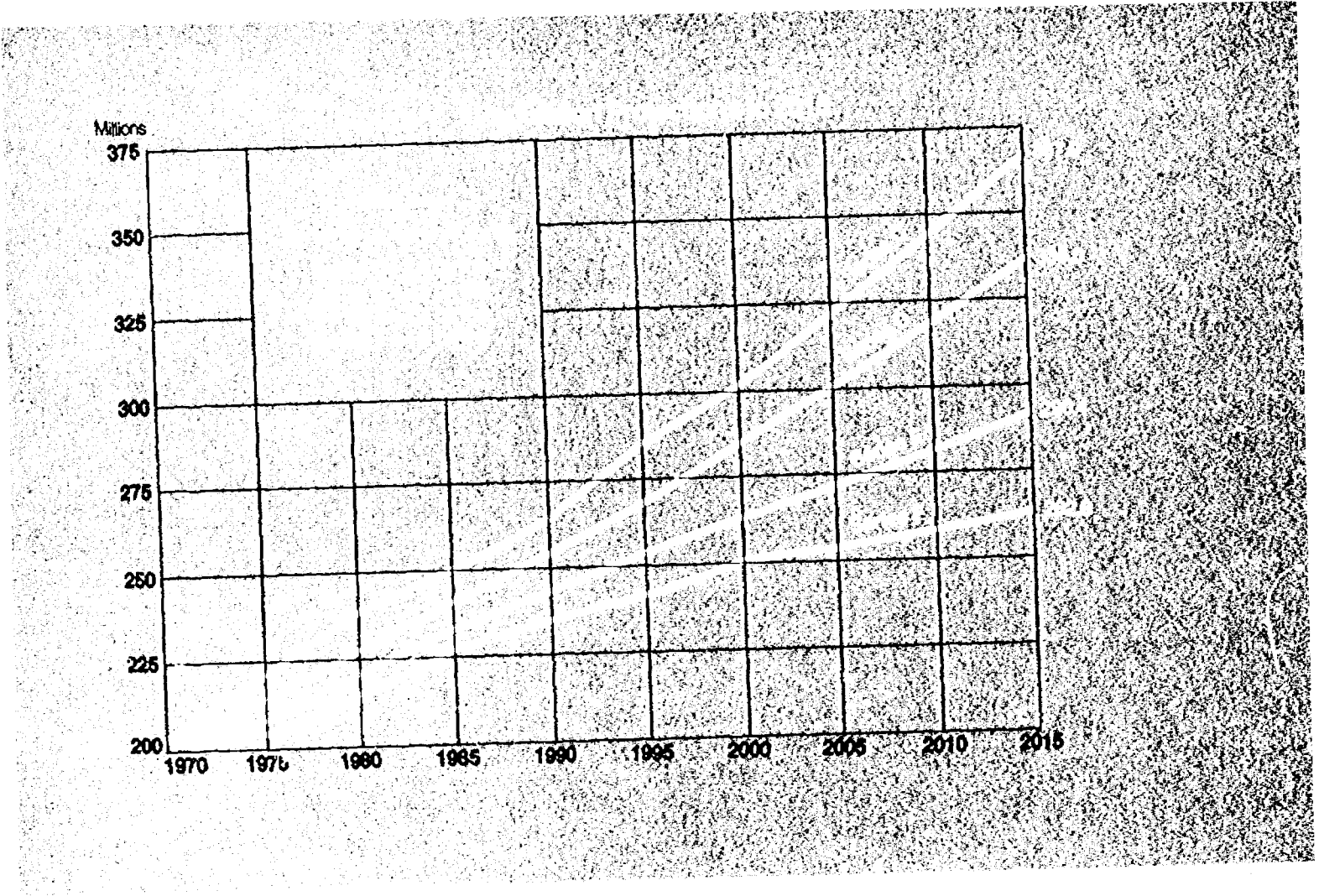
Number of Women of Childbearing Age (15-44)

Year	Number
1970	42,447,000
1975	47,403,000
1980	51,683,000
1985	54,775,000

What of the second term, the fertility rate? We have seen dramatic changes in this rate since 1925. The rather steady decline was subject to a series of three short-term fluctuations: a sharp rise from 1945 to 1957; and two short drops, the first between 1926 and 1939, and the second from 1957 up to and including 1973.

In predicting the future, we can choose from three options. The first is to assume that the rate will start back up again; second, that it will settle where it is now (at about a completed family size of 2.1); third, that it will continue to decline further, say to the point that would result in a completed family size of one child per family. In the first and third situations, further assumptions can be made as to how soon leveling off will occur.

Which path one chooses depends on one's perception of what's going on in society today and how transient or permanent one believes its conditions. But since no easy explanation of past fluctuations appears to hold up, neither will simplistic assumptions about the future have much reliability. Demographers have shown that the fertility rate is not directly correlated with short-term fluctuations in the economy, nor is the recent down trend easily explained by a simple reference to "the pill." There was an equally low rate in the thirties as we have seen, and low fertility rates—"much lower than those which were a characteristic of the United States during



the 50's—have been prevalent in western societies where the pill is not available."[1]

It all comes down to a complex of factors in which a major element must be assigned to changed motivations on the part of parents, an actual preference for small families. Here "the most recent surveys reflect a continuing decline in the number of children that young wives expect to have: 3.1 in 1960, 2.9 in 1967, 2.4 in 1971 and 2.3 in 1972."[2] Certainly these changed motivations at least indicate possible future directions.

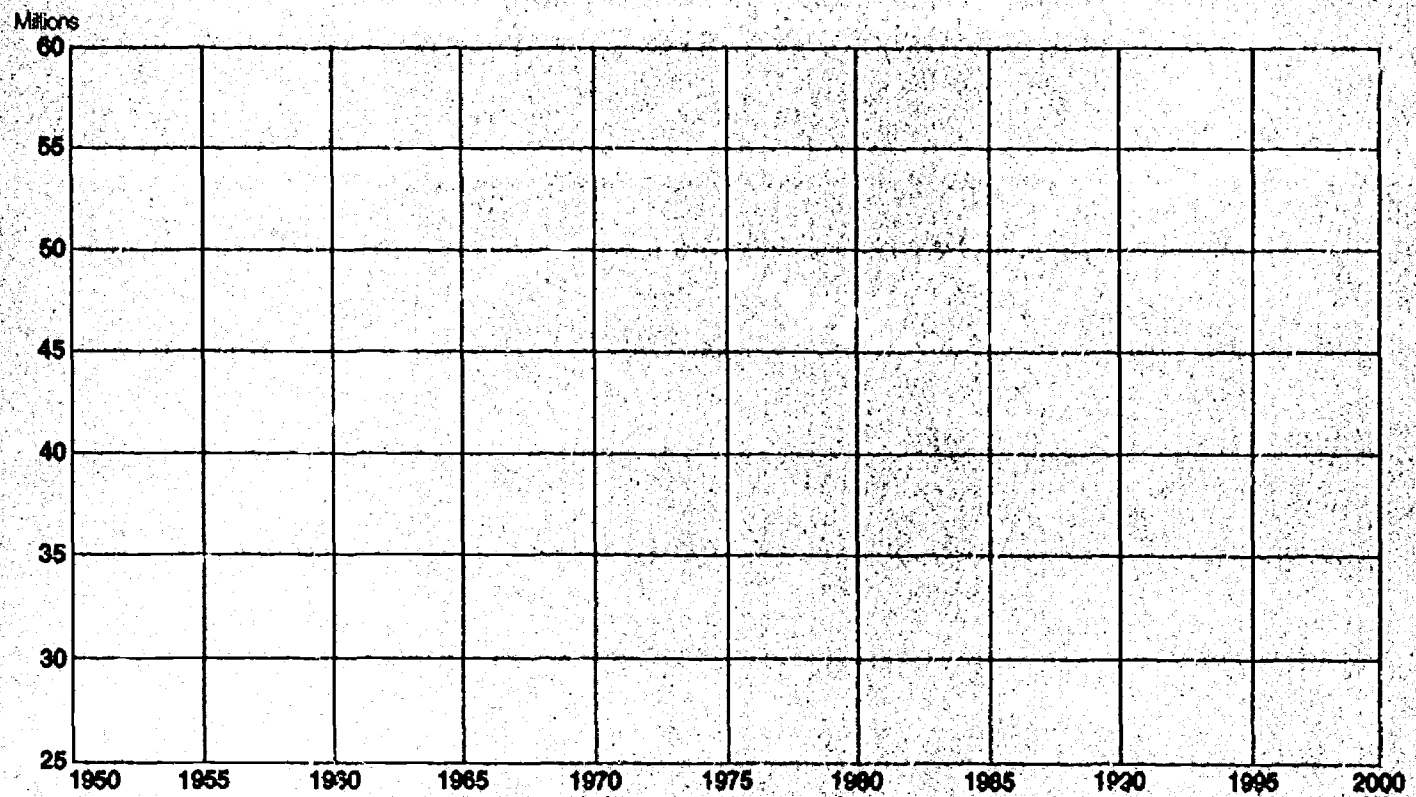
All of this has left a particularly sticky problem for the demographers. In fact, in 1955, the Census Bureau's population projections ranged from Series AA, which assumed a continuation of the 1954-55 birth rate, to Series C, which assumed a decline from a 1953 high down to the pre-World War II level of 2.5 births per completed family. By 1972 they had dropped all series above C and added three new ones, D, E and F to reflect the declining fertility rates from 1955 onward. Series C and D have already proved to be on the high side; Series E, for a completed family size of 2.1, happened to be on target for 1972. Series F projects a family size of 1.8.[3] Under these four different series, the total United States population by the year 2015 would range from 263 million to 368 million. (Figure V)

Each Census Bureau series can, of course, be used to project overall school enrollments by applying the Bureau's median estimates of school retention rates. (Figure VI)

1 *"The Future Population of the United States,"* Population Bulletin, Vol. 27, No. 1 (Population Reference Bureau, Inc., Washington, D.C.)

2 *"Birth Expectations of American Wives,"* Current Population Reports, Series P-20, No. 254, Oct. 1973 (U.S. Bureau of the Census)

3 *EEI gratefully acknowledges the Bureau's cooperation in providing the Series F data prior to publication for analysis and enrollment projection.*



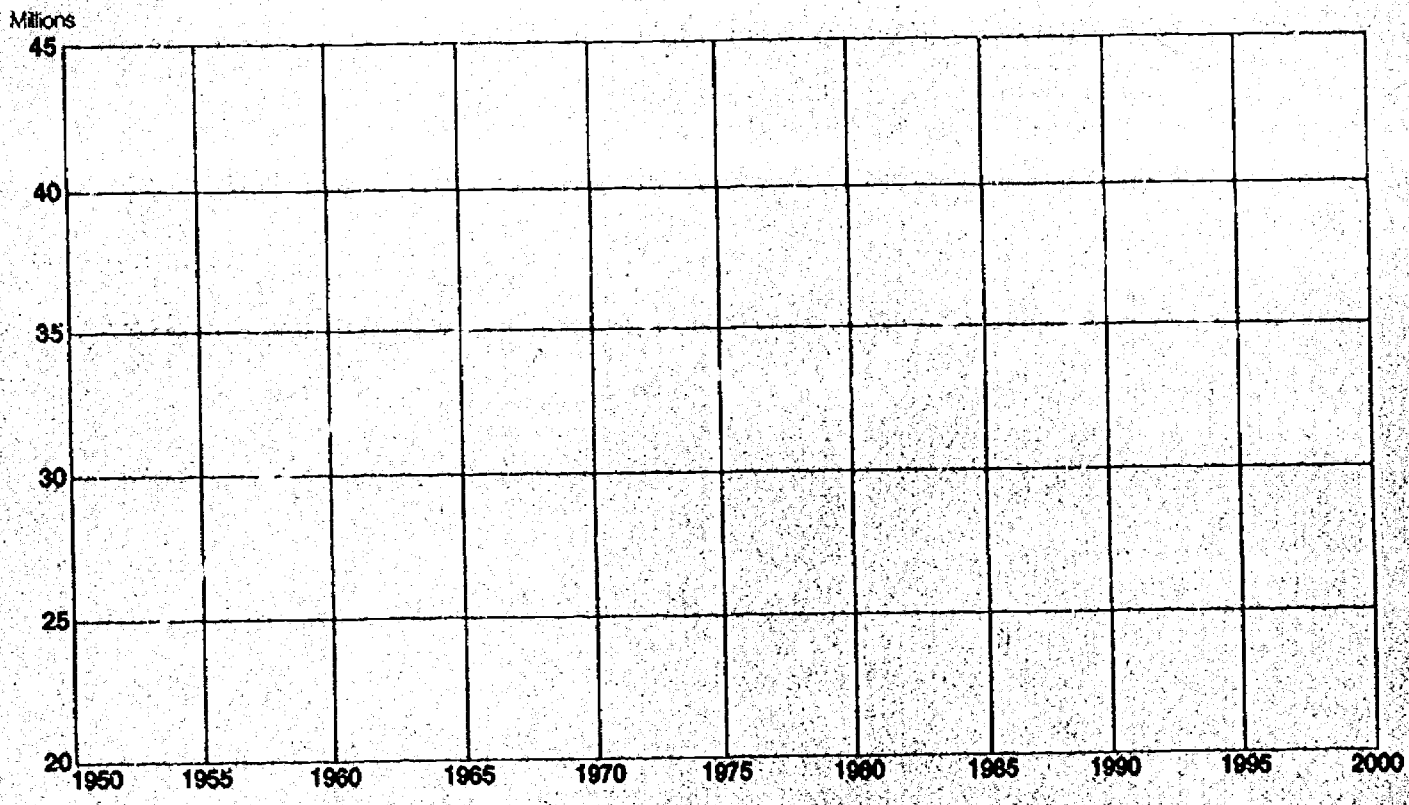
These projections are for a moderate increase in enrollment rates—more than the 1970 rate but less than the 1950-70 rate.

A completed family size of 2.8 (Series D) would mean that enrollments would drop to 47.6 million by 1980—a 7.4% decline from the peak of 51.4—but this would then be followed by a turn-around to 61.5 million in 1995, for a 30% surge upward in that 15-year period!

If, however, the average number of births per woman should continue at its present level of 2.1 (Series E), the turn-around after 1980 would amount to a gain of only 15.5% by 1995. And should the completed family size continue to decline to 1.8 children per woman (Series F), the recovery by 1995 would exceed the 1980 low by only 2.4 million—a 5% growth.

What the school population will be after 1980 is a matter of conjecture. The three projections selected for consideration here yield results for 1995 ranging from a high of 61.5 million to a low of 49 million. But they all agree on about the same low point of 47 million in 1980 because these children are, for the most part, already born. And all three projections show growth after 1980. The wide variation in how much growth reminds us once again of the impact of the size of the population. The number of women of childbearing age is and will be so large that slight changes in family styles can have very large effects on the total number of children. Put differently, small future changes in the fertility rate can result in wider and wider swings in the amplitude of the waves of children moving in cycles through the schools.

This same cyclical effect is one reason why the drop in birth rates has not had a sharper impact on overall enrollment totals. The two separate graphs (Figures VII and VIII) for elementary and secondary enrollments illustrate this. Elementary enrollments show that K-8 totals peaked in 1970 at about 36.7 million pupils. In contrast, secondary enrollments will not top out until 1975.



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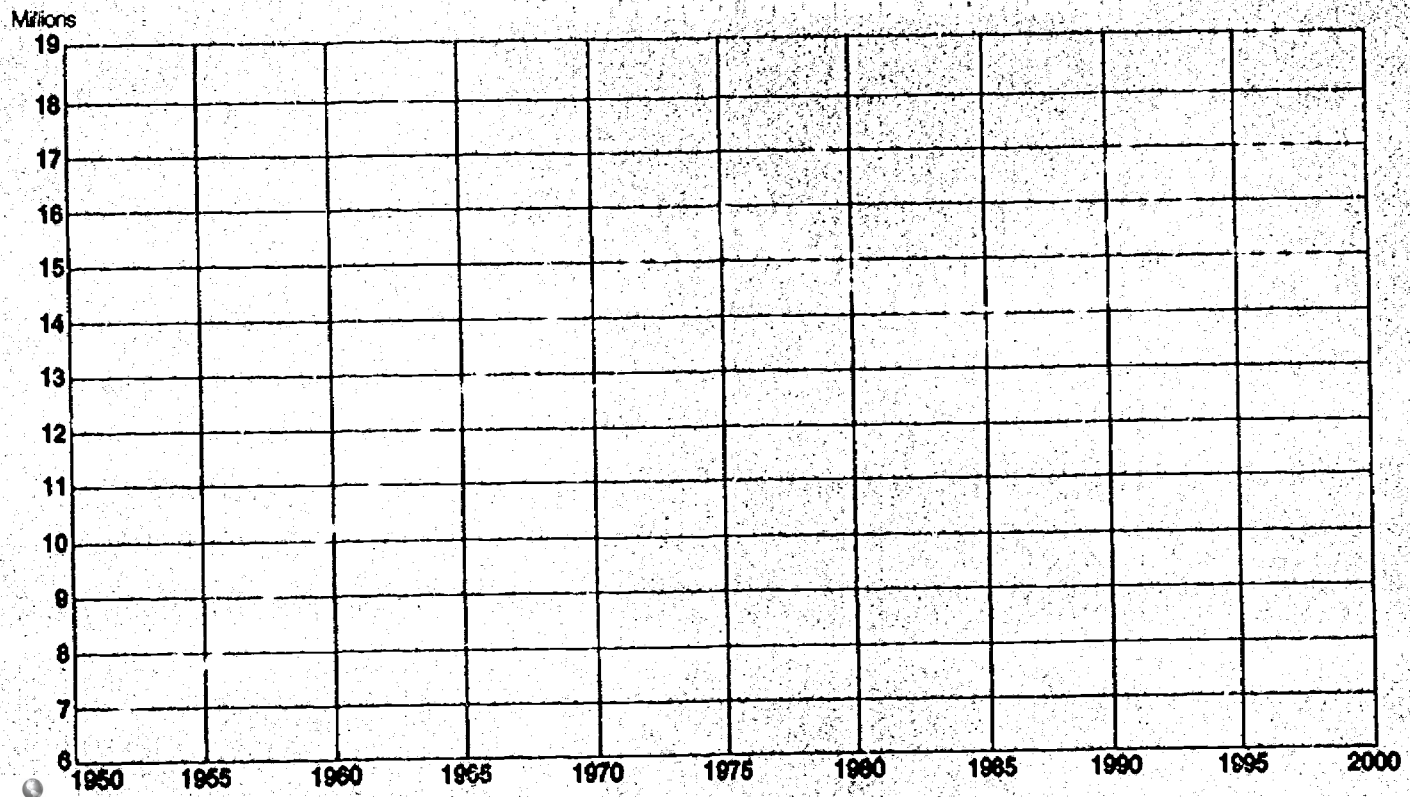


These projections are for a moderate increase in enrollment rates—more than the 1970 rate but less than the 1950-70 rate.

After 1975, both the elementary and secondary figures will decline together, and the full impact of shrinking enrollments will continue at an accelerated pace through at least 1980. At that time, elementary school enrollments will start turning around. We will continue to have the wave phenomenon in enrollments. At times the two waves will flow in opposite directions, producing a cross-rip effect, as they are now; then both will decline in synchronization. Subsequently, the elementary wave will start up, to be followed by the secondary one some eight years later, producing another peak around 1995.

In summary, we can be quite sure of the size of the enrollment decline through 1980. These children are, for ages 7 on, already born, so enrollments between 1973 and 1980 will drop from 49.8 million to 47.5 million or just over 2.3 million. After that, all the projections, D, E and F, start to turn around and we enter the period of uncertainty. How far the numbers will go in the turn-around depends on the size of the families yet unborn.

Mobility and Enrollments

The gross numbers suggest that, during the next few years, declining enrollments could be handled with a minimum of disruption. After all, it's only a drop of about 7.5% over a ten-year period. And some of that decrease will be compensated for by the schools' increased holding power and expansion of clientele. Between 1960 and 1970 the percentage of five-year-olds enrolled in school increased by about 20%, while the percentage of those age 15 and 16 went up 8%. This expansion has taken up some of the slack caused by the declining number of children in the entire span of school-age years. (Figure IX)

But, of course, that 7.5% decline will not be spread evenly across the country. Where children will go to school is not necessarily where their parents have gone. Mobility makes complications for us all. The average American family moves once every five years, and it changes local residence even more often. Between 1960 and 1970, 125 million people moved across county lines. Peter Morrison, of the Rand Corporation, estimates that about half of all the 3,000 counties in the country lost population in the sixties.[1]

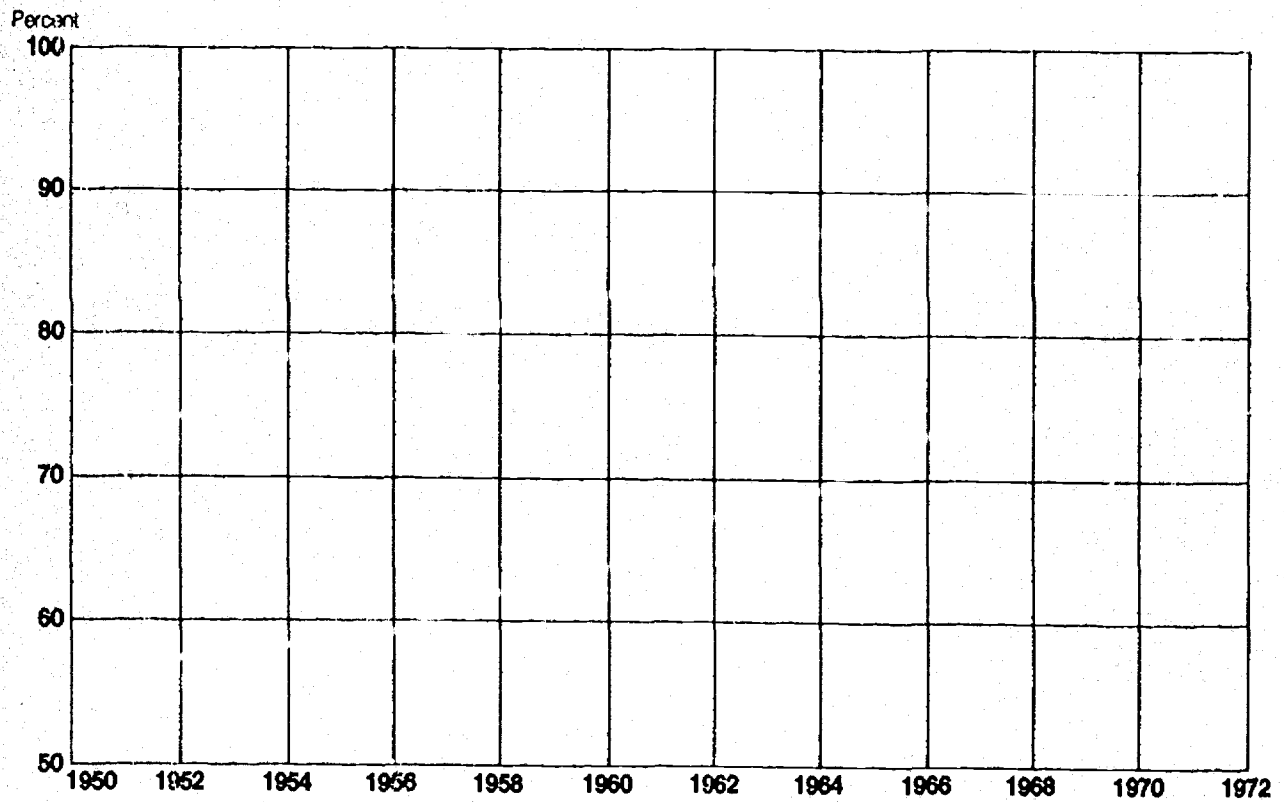
1 *We are indebted for much of the material in this chapter to studies by Peter A. Morrison of the Rand Corporation including:* How Population Movements Shape National Growth, *the Rand Population Series; and* Population Movements and the Shape of Urban Growth *(R-1072-CPG, August 1972, Rand Corporation).*

This mobility resulted in important changes in the concentration of population and, consequently, in the demand for schools. In general people left the heartland of America and sought the coast—east, south, and west, particularly the Pacific.

But the hypothetical average American moving once every five years is misleading for we are a country of both movers and stayers. Those who move are predisposed to move again. Moreover, they tend to be young. The most mobile component of the population is the 18-34 year age group, persons who are likely to be finishing their education, starting a career, marrying, and forming families. So it is not surprising to find that 27% of those married in 1969 migrated that year—more than four times the average rate—and an additional 57% moved locally. (For those married more than 10 years, only 3.7% migrated and 6.3% moved locally.) Since the young are the most frequent movers, their movement can have dramatic impact on schools, particularly since they tend to concentrate in certain geographic centers.

Regional Growth and Decline

Among the most dramatic changes in population concentrations in the sixties were Washington,



D.C., whose metropolitan area increased nearly 40%, and the Anaheim-Santa Ana metropolitan area of California, which doubled in population from 700,000 to 1,400,000. Not surprisingly, the state of California saw the most dramatic in-migration during this period. (Figure X)

Whether a given area grew or declined in the sixties was usually the result of four factors:

A rapid decline in fertility.

A reduction in the migration from rural to urban areas.

A declining desire to live in the central city. (In 1966 a Gallup poll showed only 27% of the population preferred living in a city; by 1970 it had dropped even further to 13%.)

An accentuation of uneven distribution of population through intermetropolitan migration. (Forty-four percent of all metropolitan areas were exporters of population.)

How does all this affect school enrollments? It is precisely this movement of people—and particularly of young people—that compounds the school facility problem. Shrinkage may become much more pronounced than can be accounted for by the drop in births; conversely, it may be slowed down or even reversed. It all depends on the size and age of the migrating groups.

In the case of an established community, if the out-migrants tend to be older and if they are being replaced by younger families with school-age or preschool children, then the schools will soon feel the recycling effect.

In new, rapidly growing communities in-migration may so skew the population profile that the children of school age represent a substantially larger percent of the total population then they do in a mature community. Then, even discounting the general birth decline, as the community matures, it can expect a decline in

Figure X How California's Civilian Population Changed Between 1945 and 1950

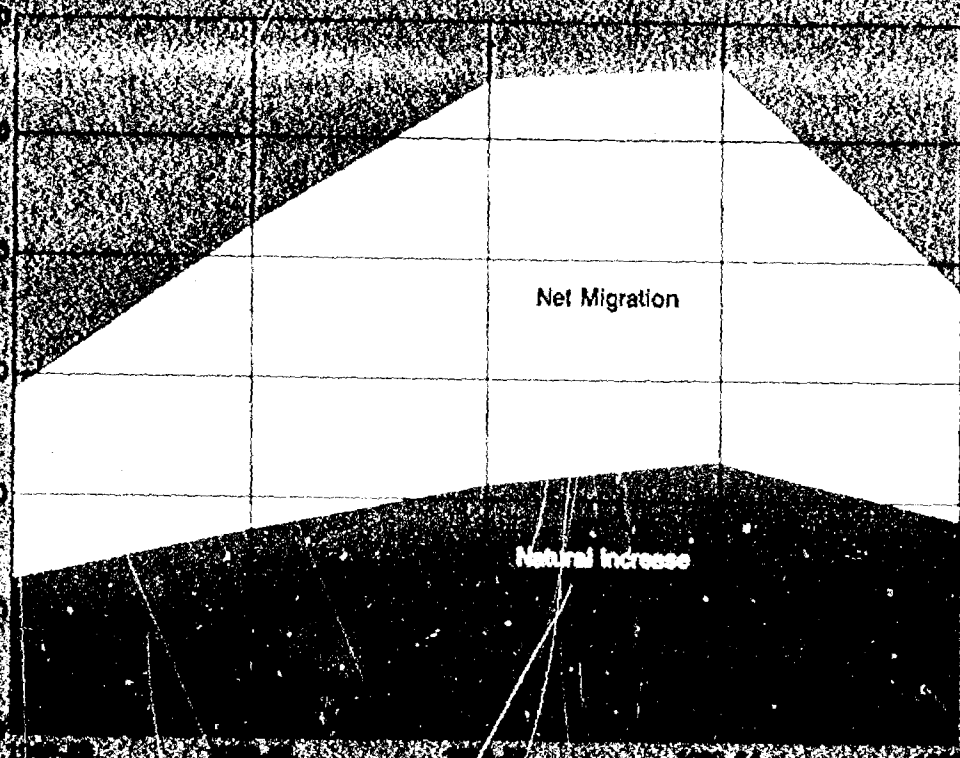


Figure XI Plainview-Old Bethpage Population and School Enrollment

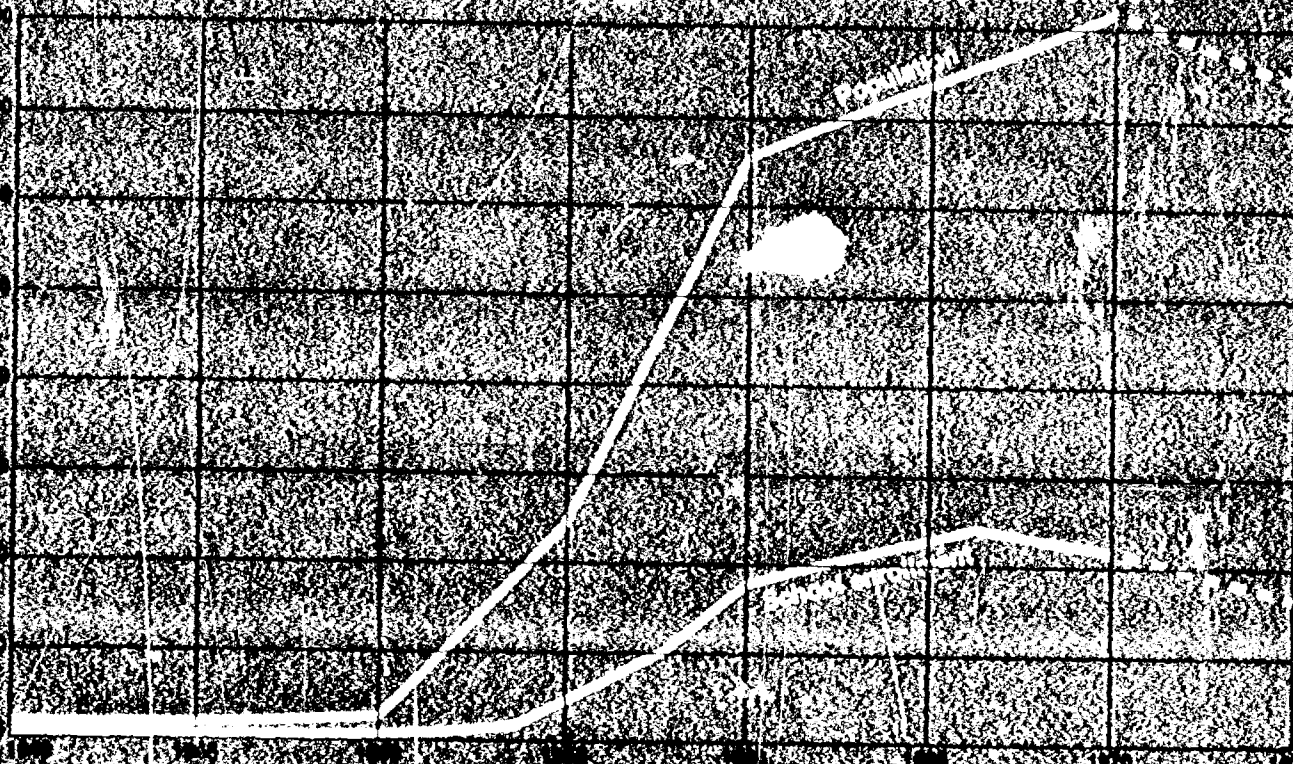
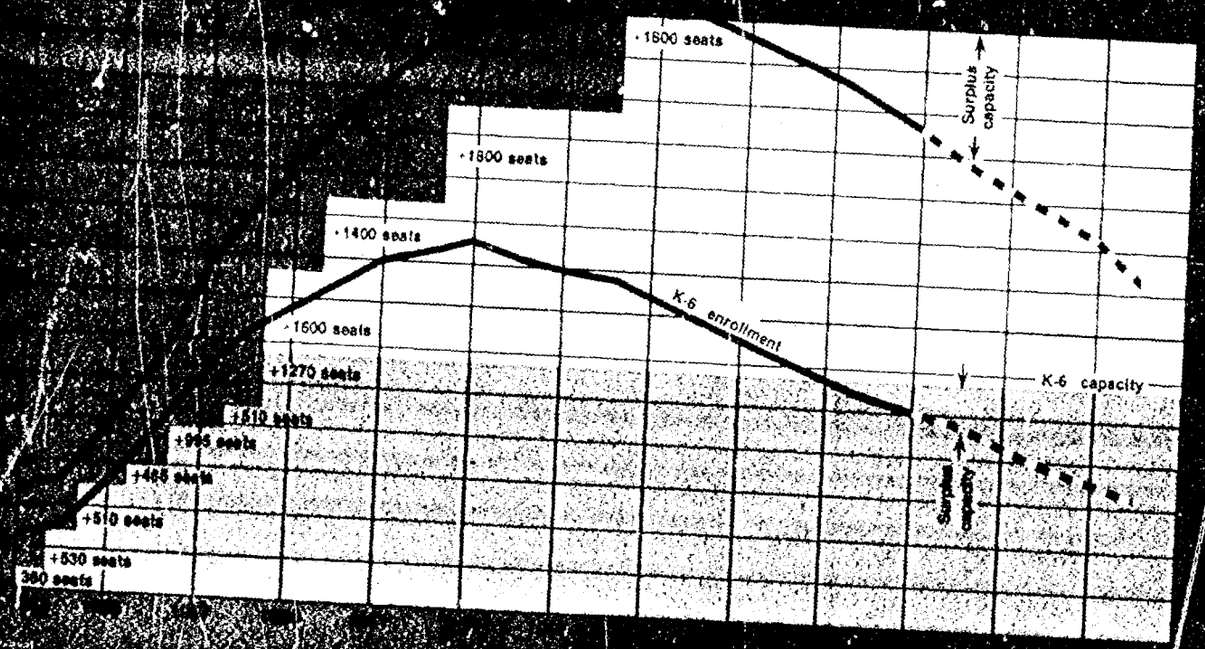


Figure XII Plainview-Old Bethpage School Enrollment and Capacity



school enrollments as the stayers stay, the rate of in-migration drops, and the stayers' children complete their schooling.

The school district of Plainview-Old Bethpage, in Nassau County on Long Island, N.Y., illustrates this "new town" condition. Not much more than a potato field in 1950, Plainview grew to 33,000 by 1960 and to 40,000 by 1970. (Figure XI) Public school enrollments grew from less than 1,600 to 10,000 in 1960 and finally peaked at 11,200 in 1966. In 1960, the school-age population represented 30% of the population, compared with an average of 19% to 24% for "mature" towns in the same region. By 1967, enrollments started to drop off; they will be down to an estimated 6,800 by 1979, just slightly over half the peak figure. Five elementary schools can be eliminated. Yet between 1950 and 1966 the community was frantically trying to build schools. The district caught up with growth just as it peaked out. Figure XII shows this pattern of "growth and build," and the consequent "overkill" from 1956 on.

The impact on the community is reflected in the fact that the district has the highest school tax in the county and none of its schools is yet fully paid off. And it has no industrial tax base to help carry this cost. (The Grumman plant employing 16,000 persons is in the neighboring town of Bethpage.) Most homes are development houses on less than quarter-acre sites, originally costing about $15,000. Many have additions that housed children who have now graduated from school and are no longer living at home. Though they now have completed their children's education and are free of that expense, many residents cannot today move up in the housing market. Their homes are worth perhaps $25,000. To better themselves they would have to jump to the $35,000 to $40,000 bracket, pay higher taxes, and secure a new mortgage at higher interest rates. And their ability to sell has been limited because of the tax rates caused by the heavy capital programs. They are choosing not to move. And so the heavy, front-loaded social costs of a new community will continue to be born by the

"first settlers." But they have had what they saw as the benefits of suburban living for themselves and their children.

In contrast with Plainview's explosion of people, the more modest growth of another Nassau County school district, Glen Cove, shows the more moderate rate of both school growth and decline over a longer period of time and the easier pressure of capital construction. Figure XIII, drawn to the same scale as the Plainview chart (Figure XI) pictures the slow but continued population growth from 1,000 to 24,000, with a very modest decline projected for school enrollments. For Glen Cove, shrinkage is not a major problem (Figure XIV), because by comparison with Plainview it has smaller schools, fewer additions, and more older schools that are paid for.

The more "mature" nature of Glen Cove can be shown by contrasting its population tree with Plainview's. (Figures XV and XVI) In Plainview, note the relative dearth of the 20-34 year olds due to natural mobility or lack of available housing. This decline in the number of women occurs concurrently with a drop in the fertility rate to cause a sharp decline in school enrollment (the 0-4 age group).

Contrast this tree with that of Glen Cove. Notice that Glen Cove's age groups show a much smaller variation in size; consequently, the community can anticipate smaller fluctuations in its social services requirements.

Plainview is on the eastern edge of Nassau County; in 1972-73, the county's overall school enrollments declined by almost 13,000. However, in the neighboring county to the east, Suffolk, they rose by about 5,000. Young families were moving further out from New York City and the older areas of Nassau in search of cheaper land. Suffolk has space for a population substantially larger than Nassau and could easily pass it in total population before 1980. Last year it grew at a rate of 3.3%, while Nassau's rate was

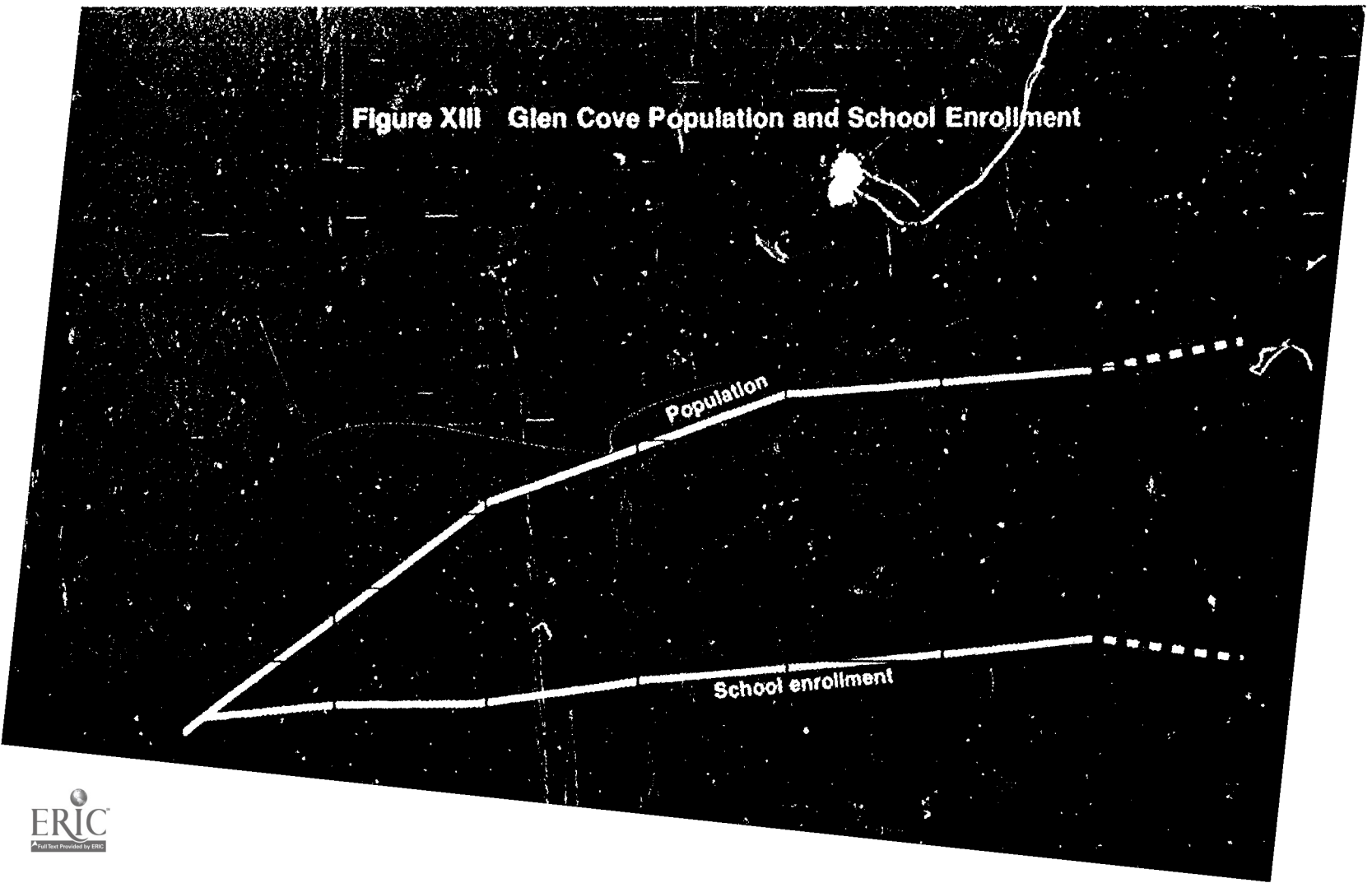
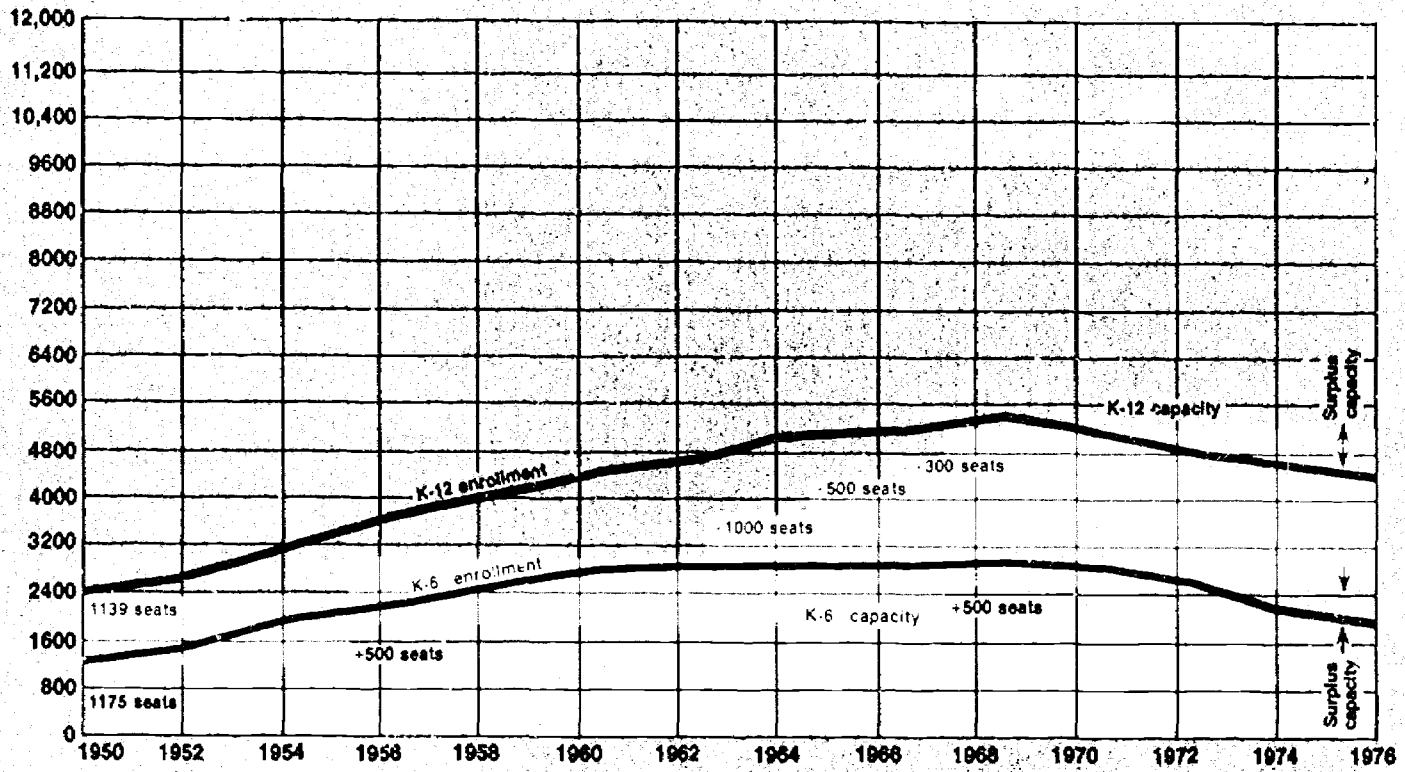


Figure XIII Glen Cove Population and School Enrollment


12,000
11,200
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9600
8800
8000
7200
6400
5600
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4000
3200
2400
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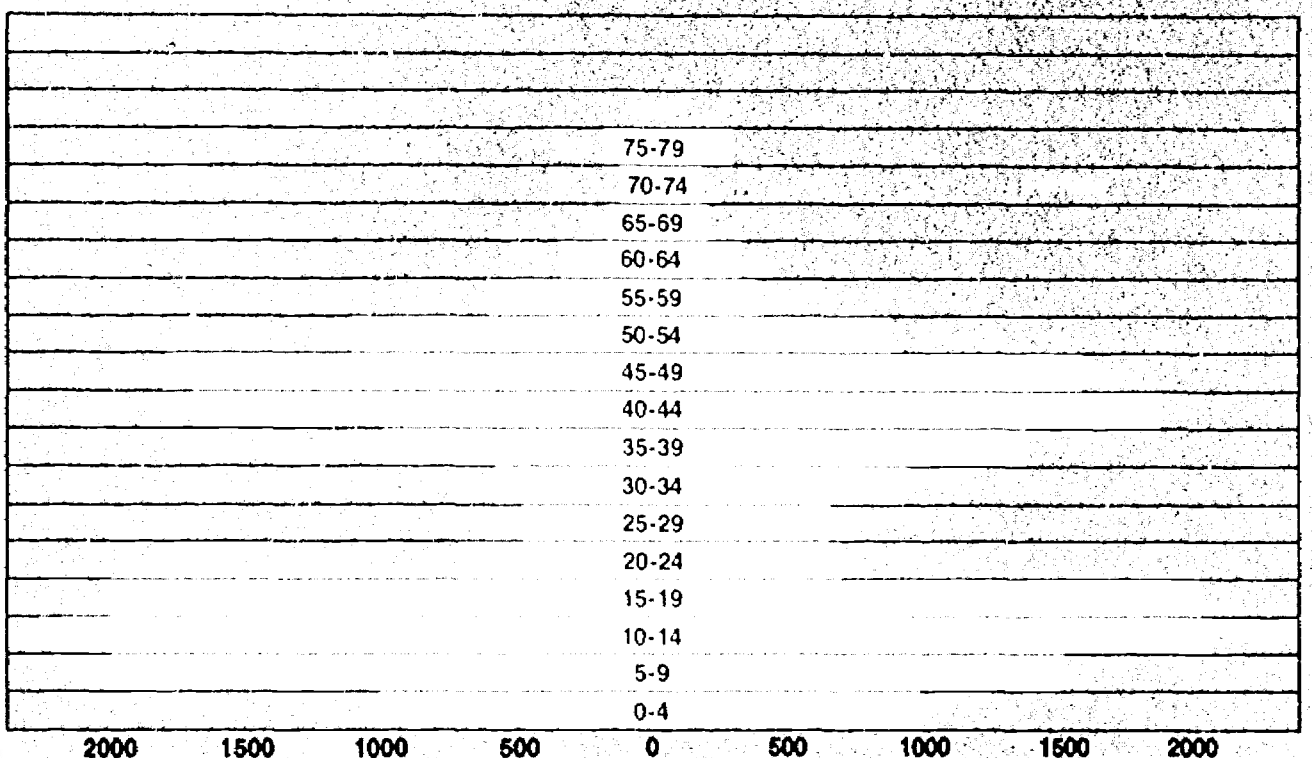
1956
1958
1960
1962
1964
1966
1968
1970
1972
1974
1976
K-12 enrollment
K-12 capacity
Surplus capacity
300 seats
500 seats
1000 seats
K-6 enrollment
1139 seats
K-6 capacity
+500 seats
+500 seats
1175 seats
Surplus capacity


75-79
70-74
65-69
60-64
55-59
50-54
45-49
40-44
35-39
30-34
25-29
20-24
15-19
10-14
5-9
0-4
2000
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1000
500
0
500
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2000

Figure XVI Glen Cove Population 1970

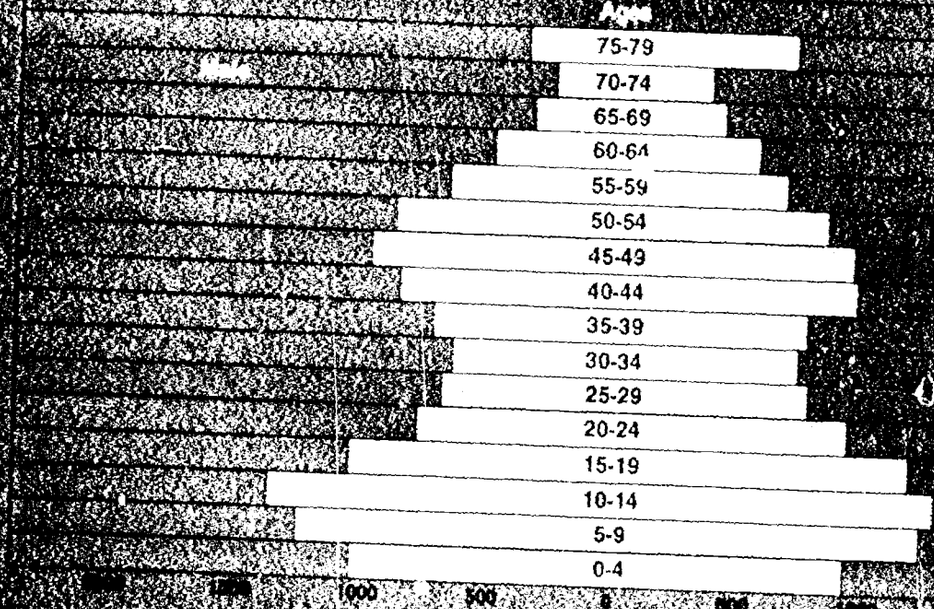
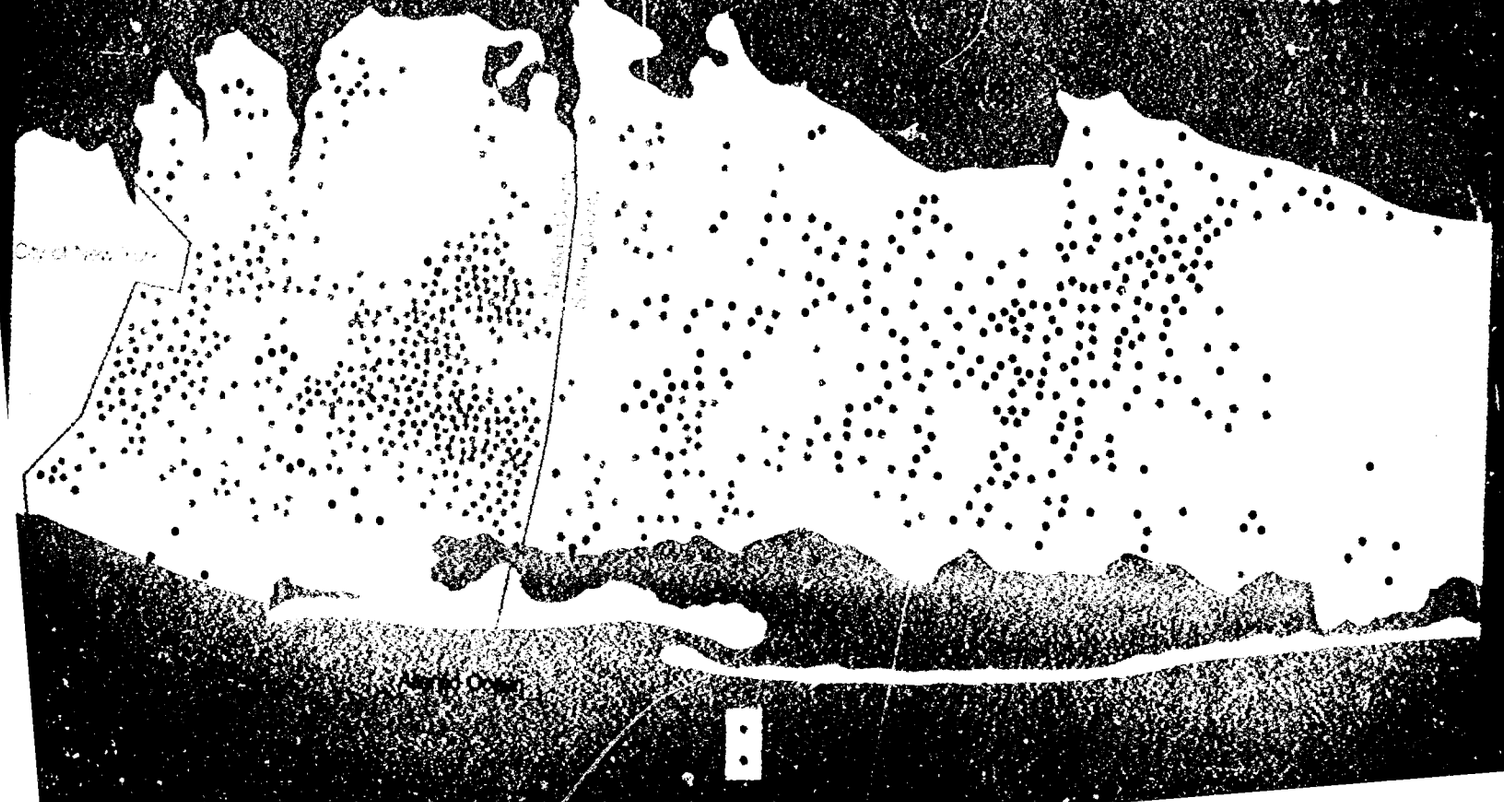


Figure XVII Change in Preschool Population in Nassau and Suffolk Counties 1960–1970



0.3%. (By way of comparison, the national growth rate was 0.8%.)

And Nassau's pattern is repeating itself in Suffolk in the matter of school costs. New developments are bringing young families with their demand for new school facilities; new school construction means increased taxes. This anomaly between the growth and decline of the two counties has led William Haessig, the chief planner for the New York State Department of Education, to say wistfully, "It would be great if we could pick the buildings up and move them east." The dramatic turn-around is shown graphically on the map of Long Island, with each dot representing a decrease or increase of 100 preschool pupils. (Figure XVII)

The Thirty Major Metropolitan Areas

Suburban community growth was a common pattern in the forties through the sixties. Simultaneously, another pattern of migration was developing, that between major metropolitan areas. The consequence of this migration can be illustrated by comparing metropolitan San Jose, where the population grew 66% in the sixties, with Buffalo, an area of about the same size whose population grew only 3%. In San Jose, the 0-4 age group grew 19% between 1960 and 1970; in Buffalo, it dropped 26%. School facilities will be an important issue in both communities in the seventies, but for opposite reasons.

By 1970 shrinkage in school populations was a quite general phenomenon for all major areas of the country. Table II lists the 30 major metropolitan centers and compares their changes in total population and selected age groupings between 1960 and 1970. All areas except Pittsburgh grew in total population. Yet all but five lost in the 0-4 age group. Among the largest losers, Pittsburgh, St. Louis, Cleveland, Milwaukee, Cincinnati, and Buffalo all lost more than 20%.

The drop in the size of the 0-4 age group is all the more striking when compared with the continued growth of the 5-9 and the 10-14 age groups. For example, metropolitan Chicago gained 14% in ages 5-9 and 39% in ages 10-14, while losing 16% for ages 0-4. It took about a 37% growth in total population to avoid a decline in the 0-4 age group. Even rapidly growing areas such as San Jose and Washington slowed down sharply in the 0-4 age category.

Local Mobility

The broad movements between and among regions provide a general background of population change—or as sociologists say the macro-view. School districts, however, also need a micro-view, a means of keeping tabs on what is happening in the way of migration on their own precise turf. Here, unfortunately, the demographers are of little help. They recognize the need and significance of the problem but the methods of analysis are limited. There are of course any number of indicators but, for many of these, data are not available on a sustained basis.

The essential ingredient for a picture of local mobility is an accurately taken preschool census. It simply is not enough to know the number of births and the first grade enrollments six years later. If the movement of people is substantial, a six-year blackout of information can be explosive—or implosive. Other indicators of local mobility include impact factors such as defense industries, military base openings or closings, tract developments, urban renewal actions, shifts in ethnic and racial composition of neighborhoods, zoning changes permitting change in use, sewage system developments (see "A Saga of Sewers" for a dramatic story of Fairfax County, Va.[1]), housing starts, apartment developments. The list is long and the elements selected depend on local availability of data and the ingenuity and alertness of the local planning agency or school system.

Planning for Uncertainty

The future has always been uncertain. Most recently the energy crisis has imposed its terms on any equation seeking to predict what will happen next. Just at a time when the people on the lower half of the economic scale are beginning to possess the financial resources to purchase suburban

1 *Formally known as* Suburban Growth—A Case Study *(Population Reference Bureau, Inc., Washington, D.C., 1972).*

TABLE II

Changes In School Age and Preschool Age Population
(by five-year age groups)
30 Major Metropolitan Areas 1960-1970

Metropolitan Area	Change 1960-1970 0-4 yrs No.	%	5-9 yrs No.	%	10-14 yrs No.	%	1970 Population Total	Changes in pop. 1960-70	Ratio of 0-4 to 5-9 pop. 1970
New York	− 99,642	− 9.5	+94,987	+10.3	+173,100	+20.2	11,571,899	+ 8%	.91
Los Angeles	− 62,019	−10.1	+58,024	+ 9.9	+140,395	+27.3	7,032,075	+16	.91
Chicago	−110,436	−15.6	+84,390	+13.8	+199,921	+38.5	6,978,947	+12	.85
Philadelphia	− 77,215	−16.1	+44,215	+10.5	+116,404	+31.4	4,817,914	+11	.86
Detroit	− 88,883	−19.1	+ 7,356	+ 1.7	+117,012	+33.7	4,199,931	+12	.87
San Francisco	− 39,322	−14.6	+19,559	+ 7.8	+ 48,799	+21.3	3,109,519	+17	.85
Washington	+ 8,942	+ 3.5	+72,288	+33.4	+104,484	+57.2	2,861,123	+38	.87
Boston	− 54,807	−19.9	+11,756	+ 4.9	+ 44,765	+20.6	2,753,700	+ 6	.88
Pittsburgh	− 78,334	−30.5	− 9,075	−10.5	+ 28,821	+13.1	2,401,245	−0.2	.83
St. Louis	− 50,514	−20.2	+20,530	+ 9.3	+ 72,547	+39.7	2,363,017	+12	.82
Baltimore	− 34,855	−16.8	+22,350	+12.1	+ 50,054	+30.3	2,070,670	+15	.84
Cleveland	− 44,985	−20.6	+ 2,031	+ 1.0	+ 44,953	+26.6	2,064,194	+ 8	.87
Houston	+ 8,660	+ 4.8	+48,601	+29.2	+ 78,724	+58.1	1,985,031	+40	.88
Newark	− 17,950	−16.6	+19,739	+12.7	+ 37,846	+26.6	1,906,556	+13	.87
Minn.-St. Paul	− 20,282	−10.7	+31,316	+19.2	+ 61,028	+46.7	1,813,647	+22	.87
Dallas	+ 13,552	+11.1	+43,199	+36.2	+ 56,771	+55.8	1,555,950	+39	.91
Seattle-Everett	− 5,313	− 4.2	+24,387	+21.3	+ 41,461	+40.3	1,421,869	+28	.86
Milwaukee	− 32,293	−20.8	+10,302	+17.7	+ 37,866	+34.4	1,403,688	+10	.85
Atlanta	+ 5,771	+ 4.7	+31,826	+28.9	+ 46,175	+48.6	1,390,164	+37	.90
Cincinnati	− 31,611	−20.4	+ 8,193	+ 6.1	+ 34,878	+30.7	1,384,851	+ 9	.86
San Diego	− 11,735	− 9.8	+22,374	+21.8	+ 37,641	+42.2	1,357,854	+31	.87
Buffalo	− 39,412	−26.0	− 2,468	− 1.8	+ 26,901	+23.4	1,348,794	+ 3	.85
Miami	− 7,201	− 7.7	+20,617	+23.8	+ 37,020	+48.6	1,267,792	+36	.80
Kansas City	− 23,908	−18.3	+13,717	+11.9	+ 36,921	+39.0	1,253,916	+15	.83
Denver	− 6,802	− 5.9	+24,662	+24.2	+ 44,688	+52.9	1,227,529	+32	.85
Indianapolis	− 16,120	−13.9	+16,171	+15.9	+ 34,838	+40.8	1,109,882	+18	.85
San Jose	+ 15,865	+20.0	+43,194	+58.7	+ 52,445	+85.3	1,064,714	+66	.83
New Orleans	− 15,807	−14.1	+ 8,742	+ 8.6	+ 28,778	+34.1	1,045,809	+15	.88
Tampa - St. Petersburg	− 4,619	− 6.4	+14,407	+21.5	+ 25,252	+41.2	1,012,594	+31	.83
Portland	− 2,531	− 3.0	+ 8,195	+ 9.6	+ 22,147	+28.8	1,009,129	+23	.87

Prepared for EFL by The Washington Center for Metropolitan Studies

homes and afford suburban transportation, they are cut off from this option. At the same time, some far-flung suburbanites are either unable to purchase the energy for travel to their jobs or are finding the new energy cost levels prohibitive. What will people do? Will they quit their jobs? Will there be a reverse flight to the ring cities and to the inner city itself? And if they do return, where will they live?

What will happen to the general economic situation and how will that affect population movement? Housing starts at the beginning of 1974 were down to an estimated monthly rate of 1.4 million, but there is already evidence of an upswing. Is sufficient housing being built, and in the right location, to supply the new families being formed? Are housing costs so great as to impose family sacrifices that will further reduce the desired number of children? Is the single family dwelling a home of the past? Will town houses, cooperatives, condominiums, and high-rises, all within short distances from mass transportation, be the homes of the future? Energy—its availability and cost—will shape part of the answer. And what zoning ordinances will be broken, what new towns-in-town will be built? Will New York City's plan for a Linear City of the sixties be dusted off and redesigned for the seventies?

And what of family size? Will it continue to decline? Could it conceivably return to the level of the forties and fifties? Or will there be a spread of the "one plus one" commitment (have one child and adopt another)? One thing is clear. Family size is already down to the point where even those communities that are experiencing a recycling of population will find that the density of children per present dwelling unit is lower, that the same geography of school boundaries does not produce the same number of children. Only fairly intensive new land use or doubling up of families in existing dwellings will reconstitute the number of children per school of the recent past.

Population data used in preceding two chapters is taken from the U.S. Bureau of the Census Current Population Reports, Series P-25, except where noted.

Facility Use

School superintendents across the country must now face a series of harsh questions. What do you do with empty classrooms? Should you close off part of a building? What do you do with an unused school? Can you unload it and to whom? What are the alternatives to just abandoning an excess building?

To learn some of the answers to these questions EFL spoke with administrators in over 100 school districts chosen at random in 40 states. The informal survey revealed a variety of solutions, each one reflecting the make-up of a particular community, and the problems and opportunities that declining enrollments present.

Relief for Overcrowding

Shrinkage doesn't happen overnight; it creeps up. First there's one empty room and you find a use for it, then another and another. Not until this has happened many times over does a pattern emerge.

Many districts have been desperately overcrowded, and those superintendents are delighted to have some slack. The pressure of double sessions begins to lessen; portables are eliminated. There is room for important programs that have been crowded out. For example, shrinkage has given one Ohio community space for an elementary school lunch program that has been on the books for many years.

It is also an opportunity to close and consolidate small schools that cannot offer top-notch schooling by today's standards, even if it made economic sense to try and upgrade them, which in most cases it doesn't. As one superintendent said, referring to several such closings in his district, "You couldn't get the students to go back to their old schools."

For districts in older central cities shrinkage may mean a chance to make good on the renewal demands of outmoded or unsafe school plants. One administrator of construction said, "Now I can finally get rid of some of the worst 'dogs.'" For some California districts it helps solve the problem of meeting the state's anti-earthquake standards. Other school systems are glad to be able to provide lower pupil/teacher ratios that improve instruction and help solve behavior problems. Reduced class size is particularly welcome in areas where shifting population patterns have brought in large numbers of pupils who lack school readiness.

In Philadelphia, where for the past six years an average of 5,000 parochial students have been entering the public schools, shrinkage has made it possible to absorb this "new" clientele with a modest amount of accommodation.

Candidates for Empty Classrooms

When shrinkage first occurs, the survey shows that superintendents tend to follow the same priorities in allocating freed-up classroom space. Primary consideration goes to "curriculum enrichment"; in the case of older schools that usually means recapturing space for art and music rooms, or expanding math and science labs, or setting up long-overdue elementary school libraries. Over and above such catching up, enrichment means the development or expansion of the newer techniques, like audio-visual or media centers and the addition of new programs, such as those for gifted students.

Arlington County, Va., has been adding special programs as space becomes available. The board has proposed a variation on the enrichment theme: day care centers. Setting these up in several underused elementary schools will not only fill up space but will give the schools a valid reason for staying open.

Equally as important as enrichment is the task of accommodating those administrative and pupil services for which space was originally designated but was never available because of crowded conditions. For the first time proper rooms and privacy are available for guidance counseling, remedial reading, psychological testing, and the like, to say nothing of adequate space for offices, files, and storage.

Superintendents have spent years coping with logistics, throwing up partitions, making cubbyholes do. Despite these adverse conditions, the sixties saw much experimentation with new modes of education. Now some superintendents can improve the quality of those efforts under better physical circumstances. And for many others, today's new elbow room means their first chance to try methods like open classrooms, team teaching, open enrollment at the elementary level, all of which may enhance the instructional program.

Legislative acts are also generating increased demands for space. State-mandated kindergartens, vocational training, and special education programs are not new, but, under the impetus of laws that widen the age range and/or services that must be provided for, they have grown to the point where they need more room. Think of the space implications of some recent acts. Virginia is moving to implement a two-year-old law requiring *full-day* kindergartens—using *twice* as much space as the usual half-day programs. Two years ago Michigan shifted the schooling of the severely and trainable mentally retarded from the Department of Mental Health to the Department of Education. Schools are now responsible for their education from birth to age 25. A 1973 Tennessee law, to be implemented within two years, requires every county to provide vocational education for at least 50% of the pupils in grades 7 through 12.

Time for Decision

Decisions about these kinds of programs and spaces are relatively easy. But now the crunch begins. You've done all the "enrichment" and the administrative easing that you can within prudent fiscal limits, but you still have empty classrooms. You can't add to the budget by allowing pupil/teacher ratios to drop still further. How do you hold on to your gains? The answer is you can't if you don't take positive action, if you don't consolidate the scattered empty rooms and close down a school.

Given the necessity of a closing, what do you do with the building? Do you unload it temporarily or permanently? What does the law, the board, the community say? Here are some of the steps that have been taken, some of the solutions communities have come up with.

One answer is to hold on to the empty school and see what happens to enrollment patterns in the future. About half the superintendents we spoke with said that they had "mothballed" schools. The logical choices for mothballing are schools in areas where potential growth or recycled housing would bring in a new school-age population. Age and condition of a building are also used as yardsticks: if it's well-built and well-designed, the district hangs on to it because it might be financially prohibitive to replace it at a later date. But administrators note arguments against this "wait and see" attitude. The number one problem is

vandalism. Next is the pressure from those who can't stand seeing valuable property sitting idle. Finally, it's a psychological thorn in parents' sides: "Since it's not being used for anything else, why can't our children go there?"

New Educational Use

In addition to these pressures against mothballing, it doesn't make sense to have too many buildings standing idle, they will deteriorate. So back to the question—what do you do with an empty school?

Once you close a school, it does not mean that its educational life is over. The most frequent first choice of new use is converting a school to other educational purposes. In view of the legislative measures mentioned before, it is not surprising to find school after school being converted to full use by special programs. (Let's not forget that special education includes the exceptionally gifted as well as the physically and emotionally handicapped. More than one elementary school is now serving only mentally gifted minors.) Educational use is emotionally satisfying—to school people and usually to the community. And there's a very practical bonus: you're less likely to run into zoning problems on conversion.

Alternative Schools

Few areas are without their dropouts, potential dropouts, or even pushouts—hence alternative high schools, or continuing schools, or gateway schools, or street academies. By any name they meet a real need in today's society; witness the rate at which they're proliferating from coast to coast. Significant too, is the fact that many are open at night. California legislation, passed ten years ago, requires all districts to have continuing high schools. Hayward, Calif., has converted two of its four closed elementary schools to this purpose. (Before the closings, portables had been used.)

Canton, Ohio, offers a variation on the alternative high school. The Roosevelt Building, formerly an elementary school, will house educational programs for boys with behavioral problems between the ages of 14 and 17, "family life" (adult education) programs, which are being set up with state funds, the Neighborhood Youth Corps, and such daytime and evening activities as a steering committee of local residents may decide upon. The school system has hired an educator to manage the entire operation; three-fourths of his salary will come from the school district's general fund, the remainder from the Youth Corps, with whom he is scheduled to spend a quarter of his time.

Still another version of continuing education are schools for pregnant girls, who, in most cases, can decide whether to attend these special centers or their own schools.

While on the subject of alternative schools, let's take a look at two extremes of educational philosophy. In one community, which shall be nameless, the superintendent planned to use his school space better by reorganization — converting an elementary school to a middle school, and a junior high school to a small high school, thus achieving smaller units all along the line. The community objected to what they felt would be reduced curriculum, detrimental to the children's education. Their counterproposal was to establish an alternative high school featuring an "academic" program and rigid discipline "with the pupils as well as the desks nailed to the floor." This, too, was turned down. The result was a standoff; the board has declared a moratorium on any and all changes for a year.

On the other hand, where parents believe in alternative patterns of education and new styles of instruction, excess space can offer a chance to do what cannot successfully be tried within the framework of a regular school. If the budget is not yet overcommitted, why not turn over a building to teachers and pupils to set up a structure-free school, perhaps a school of inquiry.

Other Educational Uses

In addition to its alternative high schools, Hayward, Calif., converted another of its excess elementary schools to daytime adult education. Here, as in countless adult education projects, programs range from basic schooling to in-service

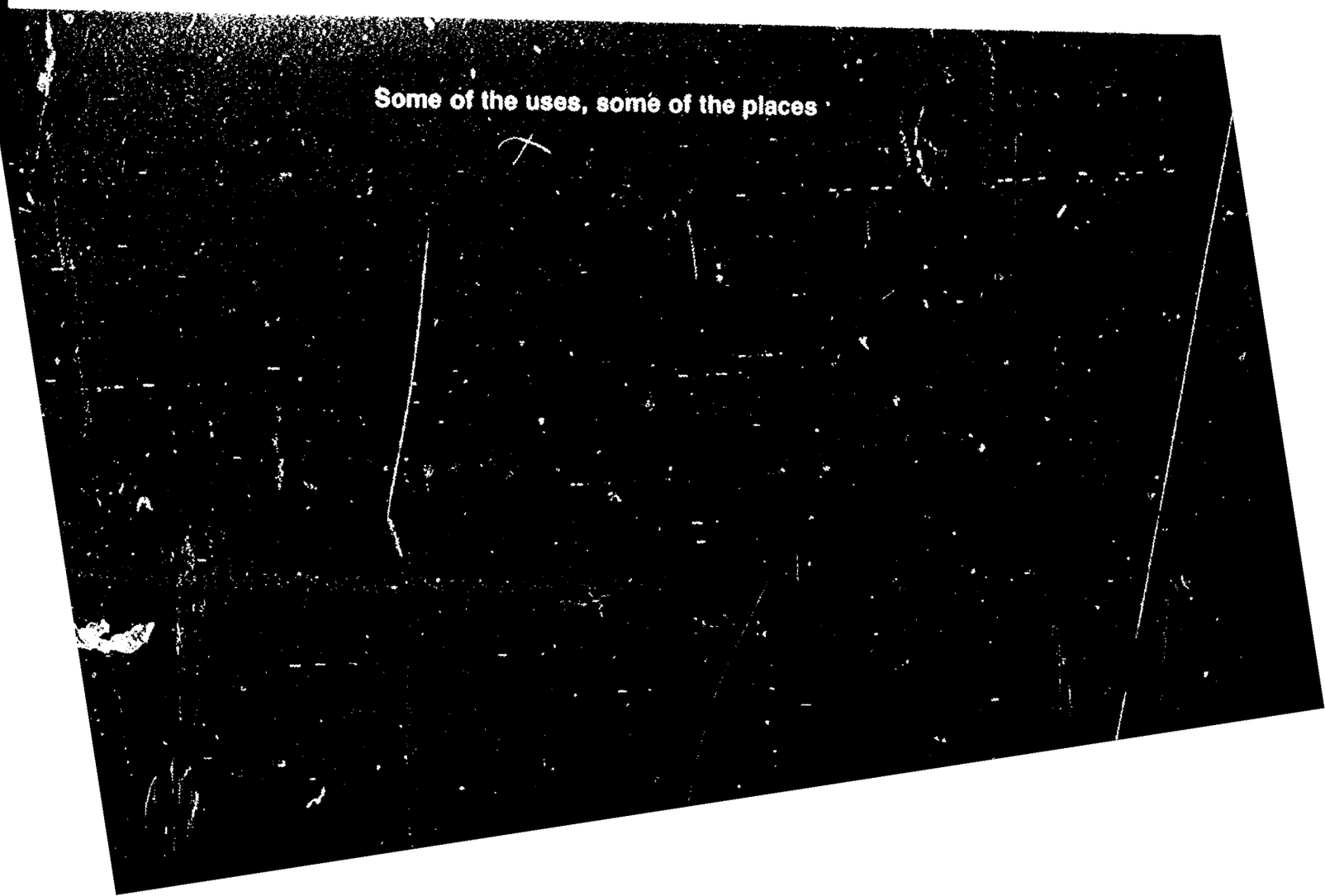
training for job advancement, to career education. Hayward has offered adult evening and Saturday classes since the early days of the Manpower Training Act, but continued demand clearly pointed to daytime classes. In fact, Superintendent Raymond Arveson says that the next school to be closed—and there will be a *next*, probably sometime in 1974—will also be used for daytime adult education.

Further down the age scale come preschool, Head Start, and kindergarten programs, in varying combinations and often operated in conjunction with day care centers. Where preschool programs are not required by law, local boards have voted them in, paying for them out of their own funds. Or parents pay a fee on a sliding scale, as they do for the Montessori programs at four of the Arlington, Va., special learning centers.

Another pay-as-you're-able arrangement operates in a converted elementary school, again in Hayward, Calif. It serves children of working parents—preschoolers up through third grade. (California offers a unique opportunity since schools may operate children's centers under a franchise from the state. Jurisdiction for these centers was transferred from Welfare to Education during 1972-73. The state provides half the funds and the parents pay the balance.)

Other educational needs include those of the school system itself. Some districts have used one closed building to consolidate administrative services—including nutrition, transportation and health—that had been parceled out among several schools. It's surprising, too, the quantity of supplies and equipment that need to be stored. A basement or the back of a gym won't do; a school-turned-warehouse is much closer to the ideal solution.

Federally funded projects can also be useful when searching for educational occupants, as Pontiac, Mich., found. The district participated in two categorical aid programs—a career-education model and a curriculum-development project—that were housed in a small elementary



Some of the uses, some of the places

school on the periphery of the district. The follow-up research and evaluation teams will continue there.

Space to Experiment

In New York State, an elementary school in Freeport and a high school in New Rochelle have made unused space available for unique in-service teacher training projects. One end of the elementary school's gym is being converted by the teachers themselves into a prototype play area. Using inexpensive, flexible components the teachers are learning how to adapt space into a comfortable environment for children, and are creating an "observation post" for visitors with similar space problems.

Vacant for some time, New Rochelle's special education high school is slowly being converted to new uses. Three rooms will be a resource center open to the whole community. Plans include workshops for teachers to be held at the beginning of the school year, and resource staff from the center will take curriculum packages to schools in the area.

Interim Use

Conversion within the educational system may be temporary. One interim use for a closed school is housing students whose home school is being remodeled. This avoids double sessions or using portables at nearby schools and allows the school body to remain a cohesive unit during the upheaval.

Annexation is often a logical step on the road to final use. An elementary school in Florida was annexed to a junior college for temporary use, then converted for adult education. Downey, Calif., like many districts that still have growing enrollments at the high school level, is closing an elementary school this year and will annex it to a high school for a two-year period. After that, who knows?

Short-term arrangements suggest the many possibilities for multiple or sequential conversions. One closed elementary school in Seattle was first converted for joint use by administrators and community groups. Then it was annexed to a high school for art programs. Today it is an alternative elementary school.

Government Agencies Step In

Interim use of a building can be a stage between first and final disposition within the educational matrix; it can also be the transition from one jurisdiction to another. The difference between the two is not always clear-cut, but by and large the options discussed above have taken place within the school system. Now let's look at the role of other branches of local government in the shrinkage picture. What part do city and county agencies play in the use of school buildings?

Two departments come immediately to mind—Health, and Parks and Recreation. Many a classroom is now the waiting room for a prenatal, dental, regular health, or psychiatric clinic. Mini-parks, sandlot baseball, and summer camp programs abound on the razed sites of former school buildings. Other buildings have been left standing for park department indoor activities for all ages.

One county recreation department has found a school ideal for rehearsal space and costume and prop storage. Louisville, Ky., has just started an ambitious undertaking; the city has appropriated funds to operate a variety of community programs—adult and physical education, handicrafts, and just plain recreation—in 23 schools after hours. The Department of Parks and Recreation will run the programs and be responsible for operating, maintenance, and custodial costs. The project was set up to meet community needs rather than in response to dropping enrollments, but its scope indicates the potential of park departments as users of empty space.

Today's scarce and expensive housing is a real concern for most of us, for none more than the elderly. Arlington, Va., has taken advantage of school closings to assist them. A 1973 law permits school buses to be used for nonschool purposes such as county-sponsored recreation programs or transporting senior citizens. Result: a former elementary school now houses a program to feed the elderly. A second school was demolished and

the property turned over to the city for possible housing for low-income residents and/or the elderly. Until a final decision is made, the land is being used for park purposes.

Common Cause with Community Agencies

No catalog of space use would be complete without the ubiquitous community center. Offering a wide range of activities on a neighborhood or city-wide basis, it is a natural for an empty school, particularly if citizens are already used to attending plays, concerts, or meetings at their local school. Some centers concentrate on a particular segment of the population, for example the city-run center for Mexican-Americans in Seattle.

Community centers often unite local government and community agencies. The former may cover maintenance and operating costs while the latter provide personnel and material for the programs.

Communication is, of course, vital to avoid establishing programs that no one is interested in. In Hamilton County, Tenn., community councils serve as a liaison between the communities and the school district. The school district retains ownership of the school buildings and maintains and operates the facilities, while the programs offered are selected by the councils. These programs range from ceramic classes, adult education, service organizations, food stamps, and recreation programs to preschool child development classes. One school has become the district's occupational training center as well as a place for agencies and community groups to meet. The Board of Education assigns and coordinates space; the councils select programs to meet community needs.

Long advocated as an economical approach to the building of a school, joint occupancy is an equally feasible solution for its demise. Some experienced administrators emphasize the importance of matching compatible partners. One commented that he could think of only a single success, and that was because two outfits —Easter Seals and a special education program for the handicapped—had similar objectives. In Virginia, however, a trio of occupants is flourishing under the same ex-high school roof: one-third of the building is an adult high school; one-third is a recreation/community center; and one-third is occupied by Community Action Programs.

When local governments do not have the money to take advantage of empty schools, outside agencies can fill the void. They serve the same clientele and share the same goal of community service. Four unused schools in Atlanta were leased to private, nonprofit agencies: a day care center; an organization receiving federal funds for job training of the unemployed; a center for the treatment of very young multihandicapped children; and a neighborhood civic group organized to act in matters of zoning and planning.

Fee or No Fee

Notice that no substantial sums changed hands in any of the foregoing transactions. Some involved nominal rental fees; in others the facility was just turned over to the city or county agency. "After all," says one administrator, "it's the same tax dollar." Our sampling showed about equal division between lease and no-lease arrangements; some used a letter of agreement. (It's always a good idea to have a record of who's paying for what, and, for the benefit of both parties, to include a cancellation clause.)

One superintendent explained that his board can choose whether to charge or not, but so far has opted not to. As long as the school system is out from under maintenance and operating costs, its philosophy has been to help the community with whatever means at hand. But, he cautions, "Be darn sure you *are* serving the community in case a taxpayer complains."

But situations differ. Sometimes there *is* no government or nonprofit agency eager to take an empty building off the school district's hands. Then the board may choose between renting, trading, selling, or even giving it away.

One community that has achieved a nice mixture of profit and nonprofit solutions is Wichita, Kan., where 13 schools have been closed over the past five years. Of the 12 elementary schools, one is a city-wide special education center; another handles both day and evening adult education. Sev-

eral schools have combined Head Start and preschool activities, the latter funded by the local board since Kansas does not require programs for children under five. Community centers fill three buildings: one is for senior citizens only; another, the West Side Involvement Corporation, houses city and county services, especially their outreach programs and citizen-run Community Action Programs. These schools have been turned over to their respective city or county agencies for a nominal fee—enough to cover utilities, upkeep, and a *very* small space cost. (When renting to profit-making organizations, the going commercial rate is charged.)

One school was sold to the Park Board for recreational development; another was bought by a mental health clinic; and a real estate speculator will soon put up condominiums on his purchase. A local business college has a bid in for a school that was just closed.

The discontinued junior high school was a new building, and the district has worked out an arrangement with Wichita State University for joint use of it as the Community Education Center. Both the university and the school system hold classes there, the latter, mainly adult education and vocationally oriented programs for trainable mentally retarded youngsters. CEC is best known for its reading center, which provides diagnostic and remedial services for public school students as well as adults at the university. The school system still owns the building; the present agreement is a contractual one whereby the two parties exchange services not dollars. Operating and maintenance costs are shared, but the university has paid for improvements such as airconditioning in the areas it uses.

Rental: Keeping Options Open

Keeping your options open applies to both leasing and selling. Don't dispose of a building permanently unless you're reasonably sure you won't need it again. If you rent the building, you can reclaim it at a later date if rising enrollments warrant.

In Madison, Wis., a combination of commercial rentals and sales has proved successful for five out of seven closed schools. Four schools were sold outright: a high school and a junior high went to a technical college; an engineering firm bought a grade school for offices; and the city bought the fourth, which an arts group subsequently rented for $1.00 a year. The Madison Council for the Retarded acquired one school at commercial rates; the district now pays *them* rent for one wing to house an alternative high school.

The two remaining buildings present interesting problems. One school was on land that had been willed to the district, but there was a deed restriction requiring part of the land to be turned into a park at such time as the property was no longer used for a school. The unrestricted 2.2 acres have been up for sale for two years, but there aren't many buyers for a small plot.

The board rented the unused school on another site to community groups for handicrafts, dance, and so forth. But they haven't been able to hold to 100% occupancy and have lost nearly $13,000 in the past year. At this writing the board is considering canceling the lease and, if unable to sell the building, will turn it back to the city.

Which brings up the question of jurisdiction. Technically the City of Madison owns title to all school property. When property remains unsold, the board is supposed to declare it surplus and it reverts to the city. But the board feels it has an obligation to the community to receive fair market value for property and, with city approval, may rent out holdings if they're not sold. This fair-value policy explains why there are no reduced rentals to nonprofit agencies in Madison.

Trading Buildings

Many boards, however, are against commercial rental on principle. They feel that if you have empty buildings you should dispose of them permanently; schools shouldn't be in the real estate business, and surplus property should be returned to the tax rolls.

The obvious solution here is to sell the building. But sale is not the only route to permanent disposal of schools: you can also trade or give them away, as state law permits. For example, in Tal-

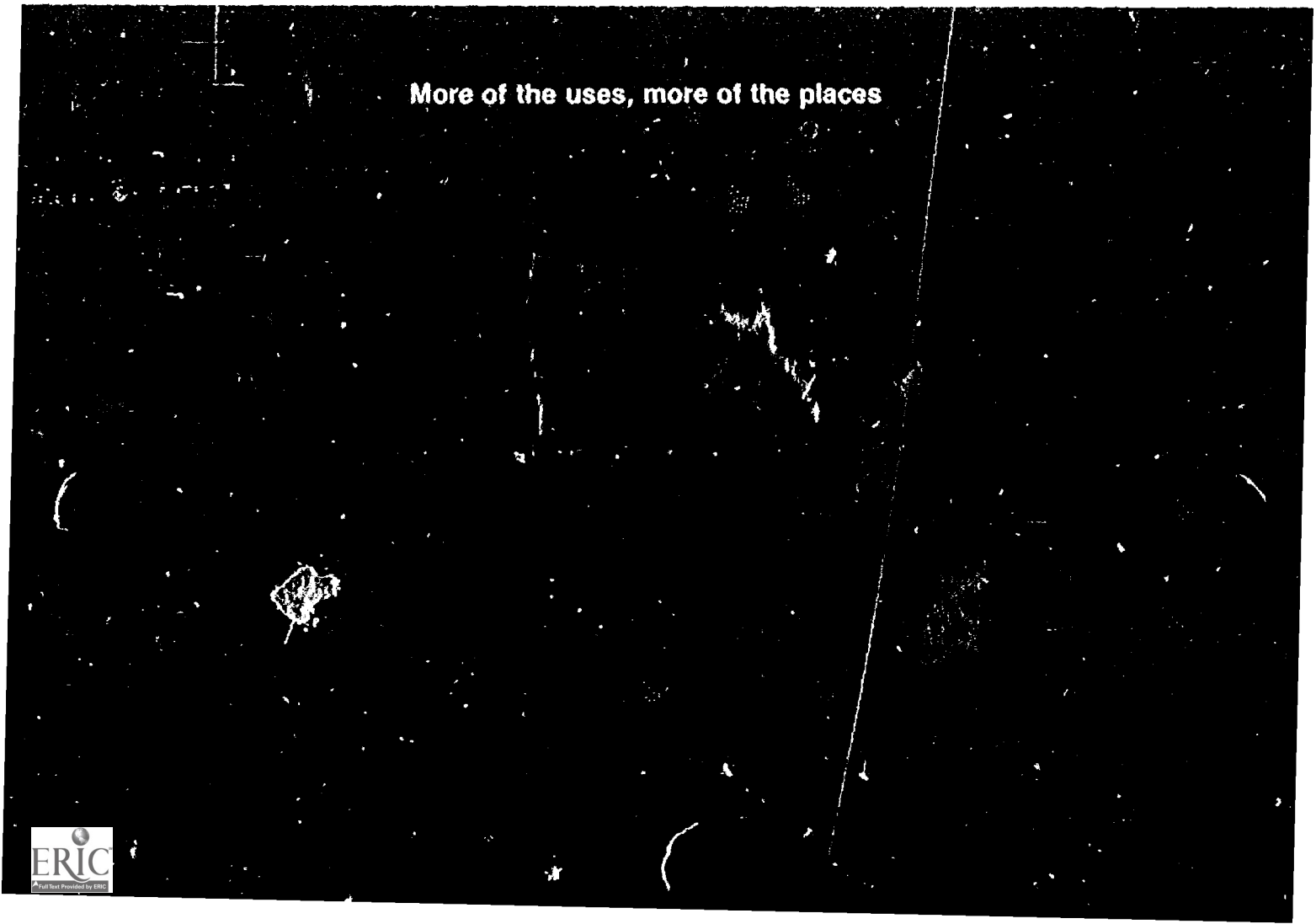
lahassee, Leon County owned 13 acres next to a high school, and the school board had a surplus school in the city's ghetto area. They swapped properties, making it official by exchanging deeds. A community center now stands next to the high school, and there is a much needed recreational park in the heart of the city. The Orleans Parish School Board reports a similar arrangement. There, however, the law requires an exchange of equal value with other government branches—the City of New Orleans or the State of Louisiana, for example. This "equal value" is often difficult to establish and, therefore, exchange of property is not resorted to very often.

Sale of School Buildings

But selling is often the wisest—or only possible—action. There may, of course, be legal or local obstacles here, too. For example, Seattle has two closed elementary schools. Because they're in residential areas, strict zoning and antipollution ordinances limit commercial buyers. And, it's expensive property, too expensive to tempt most developers to tear down the old buildings and put up new ones. The district has yet to dispose of the schools, and prospects are dim.

"No takers" is a familiar theme, but so is internal squabbling. One facilities planner guessed that power struggles or just plain disagreement between an administration and its board is probably the greatest single deterrent to successful negotiations.

But there are happy endings. Birmingham, Mich., tried to sell the Baldwin Elementary School at a public sale. They asked for sealed bids but none was received. The reason was uncertainty as to what zoning would be granted. The district clarified this and then offered the school at auction. It sold for $467,000 to the city, which bid cooperatively with a department store chain. The city plans to use part of the property



for high-rise senior citizens' housing, and the department store will put up a parking structure.

Other successful city and state ventures have included purchases for urban renewal projects, parks, highway construction, and government offices. On the commercial side, schools have been bought by or for a bakery, church, museum, hotels, motels, and condominiums.

Colleges, universities, or hospitals in the area are often interested in buildings. They're good customers according to the superintendent of Jackson, Miss. The University of Mississippi Medical School is renting half a building for a community health center and will establish prenatal programs there. The Hinds County Junior College near Jackson is negotiating to buy an elementary building for a vocational education extension. Virginia Polytechnic Institute is doing the same thing, for a home economics division.

Over in Atlanta, Georgia Tech planned to buy a school within the next few years. It turns out that Georgia Tech has the funds now, but, unfortunately, the city appraiser has revised the price upward, a 25% increase in two years. Which brings up the spectre, for some at least, of what's happening to land and building values. Homeowners feel, and rightfully too, that you are taking away part of their equity when you close a neighborhood school. If good schools within walking distance of home was a persuasive argument in buying a house, what do you offer instead when it's *your* turn to sell. On the brighter side, a combination of school consolidations and soaring land prices has proved a windfall for many southern states. As old schools are eliminated, property is sold and the proceeds used for the building of new facilities. It's a welcome answer to the worsening problem of How to Pass a Bond Issue.

Salt Lake City has had one of the most severe shrinkage problems in the country, having to close 20 schools, including three junior high schools, in eight years because of a 35% drop in enrollments. Nevertheless, the district has been remarkably successful in finding takers for this excess space. Four schools have been sold to private companies for office space, two have been bought by churches, and the site of one school was bought by a motel chain. Three other schools are now up for bids, having been rezoned for commercial status. Salt Lake City is leasing one building for a cultural center for minority groups, and a private school has rented another building. The remaining schools house a variety of special education, Head Start, adult and community education programs.

Legal Requirements

The legal and fiscal conditions that govern the sale or lease of property vary from state to state and from district to district. About the only statute that all schools must observe is that they may neither rent nor sell to agencies that discriminate. In most areas the decision to sell is made by the school board. Iowa, however, requires a referendum for any sale or for lease to a nongovernment agency. But once the ballot is passed, permission to sell is always good. Des Moines' superintendent tells of one "yes" vote that has been on the books for 20 years and that the board is now considering acting on!

The general rule for sales seems to be sealed bids or public auction; Illinois specifies *only* public auction. Property may go to the highest bidder, or schools may set a minimum figure and reject bids under that. In most districts a public appraiser, usually from the City Property Office, sets the rock bottom figure.

California requires a public auction if a private organization is involved, but property may be sold direct to a municipal agency. California's code is very strict on two counts: renovations and sale of schools that are not fully paid for. Any conversion—an elementary school to a children's center, for instance—must conform to the local building code, but schools are not allowed to do renovations for outside agencies. If a school's indebtedness is not paid off, proceeds from sale of property must be applied toward any state loan. It's more complicated than it sounds. Even if a particular school is paid for, if it was part of a "total" capital program, the entire program must be fully paid in order to receive the state's okay for release of funds gained by the sale; otherwise the money must be held in escrow. Downey, Calif., illustrates another exception to the rule. A

school it sold had been owned by a particular district before consolidation; Downey administrators had to prove that the loan had been fully paid off by *that* district in terms of its share of total loan.

State codes sometimes present a stumbling block as Canton, Ohio, has found out. Canton has declining enrollments, and it would like to sell one of its empty elementary schools to a neighboring district that is overcrowded. But the law forbids the sale of schools between districts. Canton is trying to change the law; in the meantime the board is advertising to lease the building to any interested party.

Interdistrict Cooperation

Interdistrict cooperation on shrinkage is fine in theory but is often difficult to execute. Livonia, Mich., had unused facilities that were expensive to maintain while the adjacent districts of Plymouth and Northville needed space for their growing enrollments. The logical solution seemed to be for Livonia to sell or rent classrooms or whole schools to its neighbors.

Despite the obvious advantages of this plan, it never came off because it involved busing in all three districts. However, cooperation of a different sort did result from these negotiations. Plymouth had built ample vocational facilities in anticipation of future growth. Since they were not fully used, it invited Livonia, Northville, and two other districts to use them on an extended-day basis. Having received approval from the state as well as its own board, Plymouth now acts as a quasi area vocational center.

Regional Solutions

Individual school systems are limited in dealing with excess space because they are acting alone. And ad hoc arrangements between neighboring districts may or may not work. A wider range of alternatives and more effective solutions might be possible if several districts planned and acted in concert. But is there any "united front," a larger or regional approach to the problem that works? In a roundabout way, yes. New York State has created BOCES (Board of Cooperative Educational Services). A BOCES is an educational agency that serves a cluster of school districts within a region. The state-sponsored program allows and encourages school districts to form regional cooperatives, to do together what they can't do by themselves. When they need a special program or service, they chip in and provide it through a BOCES.

How do BOCES tie in with shrinkage? Since the legislation that established them expressly forbids construction except when authorized by a referendum of the voters of all constituent districts (57 districts in the case of Nassau), BOCES are logical renters of space. Nassau BOCES has not yet built any buildings of its own even though it operates a $16-million special education program, provides occupational education for over 6,000 youngsters, and offers substantial research, personnel, and business services to its districts. All these programs operate almost exclusively on lease-back arrangements, either with commercial groups or with local school districts. By law, the leases are limited to five years, but they are renewable. Currently they operate in 42 buildings in 18 of the 57 districts and are leasing 37 separate structures.

At present Nassau BOCES is leasing an elementary school from the East Meadow school district and converting it for its own administrative use. The space is needed for expanded administration, and the school rental will get BOCES out of the high-priced commercial space it now occupies. It will lease the school for the maximum five-year period (renewable) at $250,000 per year and will add $500,000 worth of renovations; it has also agreed to return the building in an "as is" condition as a classroom facility. The best commercial price for the same amount of space would have been $325,000. BOCES figures that, including renovations, it will break even in five years; for the second five years, it will be substantially ahead. Meanwhile the community has a $250,000 a year income.

Georgia's counterpart is MCESA (Metropolitan Cooperative Educational Service Agency), also designed to enable school systems to share services across district lines. MCESA rents space in some of Atlanta's 18 vacated schools.

A different kind of "umbrella" exists in Massachusetts. In 1966, Boston created a Public Facilities Department which is responsible for the funding and construction of all public buildings in the city (except some public housing). The Department's responsibility frequently does not end with the completion of a building project but continues for some time because of contractors' warranties. Thus, it acts as something like an official landlord for the city. When shrinkage occurs, which is usually in older buildings to which the school system already has title, the board declares the property surplus and it is then turned over to the Department. The Department can immediately designate its future use, according to neighborhood needs. No waiting, no red tape, no middleman; the Department is its own broker.

A Plan for Facility Use

Establishing priorities ahead of time for the disposal of schools helps to clarify the options and eases the closing process. It can eliminate last-minute decisions that may be controversial or poorly thought out. A number of school boards have drawn up such priority lists. Atlanta's is a useful model.

School closings are almost always viewed negatively, but the name of the game is to see it as an opportunity for making choices that benefit the whole community.

City of Atlanta

Disposition of Discontinued School Facilities

Administrative Regulations

The following regulations for use or disposition of discontinued school facilities are established and are to be implemented in the following order of priority:

1/ Use facilities for other needs of the School System as determined by the Superintendent. (Examples: special schools, adult education, offices, storage, etc.)

2/ For a reasonable time following discontinuance of a facility, receive proposals in writing from agencies or responsible community groups for use of the facility for a needed community service. Such proposals shall be received by the Associate Superintendent for Administration. Any lease recommended to the Board for approval shall have a sixty (60) day cancellation clause and all maintenance and operational expense paid by the lessee. When more than one acceptable lease is possible, the following priority shall be given to the proposals:

a/Other governmental agencies.
b/Private agencies operating on governmental grants.
c/Private agencies receiving funds from United Way.
d/Other private agencies.

3/ Sell the property by the best legal means upon authorization by the Board. A recommendation to sell property will be made only after one (1) and two (2) above have been considered and after no projected or foreseeable future educational use is anticipated.

How to Close a School: The Numbers

How each community will respond to shrinkage will depend on its individual character—its styles of communication, of decision-making, of public action. The experience of others can only suggest the probable responses and ways to turn them to positive reactions. All communities can, however, start from a common premise: any plan for shrinkage—and there must be a plan—should include ways of improving the quality of service the system delivers, or, at the very least, maintaining the current level of services.

A Plan for Planning

The preceding caveat, "and there must be a plan" sounds casual, but it is to shrinkage what the second law of thermodynamics is to energy. It is an absolute if unglamorous rule. A plan must have:

- A set of agreed-on goals, with specific objectives spelled out for each.
- A factual base defining the "givens" upon which the plan can be developed. In the case of a plan for facility use, this base includes enrollments and their projections; schools, their location, capacity, and general level of adequacy; community changes affecting the location of people and the composition of their groupings; and a "picture" of the physical structure of the district. Cost data on a new construction and/or renovation may also be required.
- An analysis of the factual data. This is an exercise in fitting the numbers—pupils and schools—together, and of arranging them in their physical setting.
- A set of possible solutions: alternative grade organizations, patterns of school use, abandonment for outmoded and/or unsafe schools, needed new construction or closings (or both).
- A choice among alternatives for a preferred course of action; a justification for the alternative selected; the preparation of the time sequence for the actions to be taken; a cost analysis of the implications of the selected plan as against alternative options.

Why bother spelling out a plan in such detail? Because there is evidence that some administrators and school boards without a plan have blown themselves and their schools clear out of the water. Such an emotionally laden problem as closure needs factual analysis and a well-based justification.

Communities with a plan are noticeably more successful in closing schools. For example: Downey, Calif.—with a plan—has successfully closed three elementary schools and a junior high, with another elementary school slated for closure in June 1974. Another junior high has

been converted to a continuing high school and adult education center. A reorganization of the entire school system has been built into the plan.

Hayward, Calif., has closed four elementary schools and delayed the construction of a new high school. In the first closing, the administration was taken to court by parents. Since then the board has not only seen the need for and developed a closure plan for the district, but has co-sponsored three clinics on the elements of planning for declining enrollments with the state department of education and the Association of California School Administrators.

Erie, Pa., has also tied in a reorganization study with the problem of shrinkage. The longterm plan will propose a 4-4-4 system, which will be justified both in terms of education and of cost effectiveness. Within this broad framework there will be recommendations for the closing of seven elementary schools.

The schools selected for closing will be chosen on the basis of "characteristics which do not justify their operation—including factors of cost." All of this will be done in concert with the city and metropolitan planning commissions, with whom they coordinate their planning efforts.

In contrast, a West Coast community is suffering the consequences of "no-plan" action. The school district settled into two armed camps—the administration vs. the community. Hostility and suspicion grew. A standoff resulted. The educational program has been damaged, and the children have become political pawns. Now, four years later, an outside consultant is being brought in to make an impartial facility study and resolve the situation. But the basic effort will first have to be to present facts, allay suspicion, and reopen communication.

Actually, more and more school districts are preparing or have developed master plans, but most are not in direct response to shrinkage problems. Many are to meet state requirements for capital program purposes. Filing ten-year master plans has been obligatory in Pennsylvania since 1967, and West Virginia recently enacted planning legislation in conjunction with a state building program. The Field Act in California, which requires replacement or structural modification of all pre-1933 schools on the basis of new earthquake-resistance standards, calls for a plan from each community. Maryland and North Carolina are also among those requiring comprehensive plans to justify individual projects.

Putting the Numbers Together

A district master plan—at least a comprehensive one—deals with policy, program, personnel, organization, and finance, as well as with physical plants. A closure plan focuses on plant, personnel, and finance. Both plans are locked in to enrollments.

So, it's not surprising to find a recurrent admonition from administrators who've been there: *Know your numbers.* Not by district totals only, but by individual schools; not for only this year and the next, but for the next five to ten. Above all, be able to defend your projections. (There's apt to be a community slide-rule or computer wizard ready to take you apart if you're vague or sloppy.)

Yet some school districts—and rather large ones—view the whole matter of numbers quite casually and seem satisfied with little more than a simple head count. Questions about birth rates, women of childbearing age, or mobility draw blanks.

Nor do some seem perturbed by a fairly regular overestimation of one to two thousand pupils each year. (And perhaps they're right; as long as they are *systematically* overestimating, it is possible to discount the errors and come up with workable numbers.) It would seem that a superintendent would do well to ask *why* projections go wide of the mark. Something may be happening in the community he doesn't know about. It may not just be "the pill." He'd better find out what it is and plan accordingly.

This concern for precision in numbers is not limited to the need for predicting enrollments for individual schools. It is equally necessary for budgetary purposes where state aid formulas are determined by ADA (Average Daily Attend-

ance), or where federal money is primarily based on specific elements of the population. If there is a trend toward lower enrollments, then the most precise measures possible are necessary to calculate the magnitude of financial cuts that may be just off stage. Perhaps this latter need is one reason why a community like Sacramento, with a present enrollment of 48,000, has been able to develop a model and methodology that have produced extremely reliable results—last year it missed the actual count by only 18 pupils. This method uses such factors as pupil-yield-per-dwelling-unit, degree of saturation, and mobility rates.

New Orleans takes a resident student survey and locates all the information—where each student lives, how long the family has lived at that location, how many members there are in the family, and so on—on census tracts for analysis. In addition, it gets monthly information from the Department of Regulatory Inspection on construction, alterations, and demolitions.

The City of Ann Arbor has compiled a data bank of information on its buildings and population that the schools are planning to use to project enrollments.

Newton, Mass., has a computerized data bank with an unusual educational twist. The entire operation is in the hands of a small group of high school students. They write the computer programs, do the data tabulations, code, and operate the key punch machines. It's all part of a work-study program in which the students are paid for after-school work—about 12 hours a week at $1.65 to $2.50 per hour. Until recently the students constituted the entire project staff of the Director of Planning and Research. The programming jobs in particular have become so prestigious that the students themselves recruit the best junior high math prospects for the next year with as much enthusiasm as if they were candidates for the football team.

Newton simulates the enrollment changes for each school of the district. Having built a residential history for each school by individual city blocks back through 1968, they can try out a variety of new boundaries and project the future numbers these lines would produce. Newton also is setting up a plan for closing an old if not ancient school; under this plan each parent can choose which of two schools his child will attend. In another simulated closing, five schools will be involved in the dispersal.

Data Banks

Much data for local districts is already available in computer-compatible forms. Gone is the need for laborious and time-consuming local compilation of block and census tract statistics to "fit" a school district's boundaries.

The National Center for Educational Statistics (NCES) has developed tapes and microfiche files that make it possible to apply the 1970 census data on an individual school district basis.

The tapes, of course, cover a huge area (nine reels contain all the information for the whole county) and require sophisticated data retrieval equipment to produce the printouts. Each reel costs $78.00. But for the small district the microfiche card—each of which contains all the data for several school districts—should suffice.

Here is a brief summary of what is available. (There is a modest charge for each item.)

- THE "FIRST COUNT TAPE"
  Contains information on age, sex, race, housing characteristics, and family composition for individual school districts and for each of the community sub-districts of 20 of the largest urban districts. (Available from the U.S. Census Bureau.)
- THE "REFERENCE TAPE"
  Defines the school district in terms of standard census units—census tracts and "block group" or enumeration districts—and provides data for sub-district analysis on the level of these "block groups." (Available from the U.S. Census Bureau.)
- MAPS ON COLORED MICROFILM
  Show census block groups and tracts for each school district. (Available from the National Audiovisual Center of the General Services Administration.)

- SCHOOL DISTRICT "FOURTH COUNT TAPE" Contains social and economic information including: income, educational level, enrollment, mobility (five year and one year), occupation. Available both for the total population and for Black and Spanish Americans separately. (Available from NCES.)

By far the most sophisticated community data system uses the DIME file of the U.S. Census Bureau. (DIME is an acronym for Dual Independent Map Encoding.) Known as Geobasys (Geographic Base System), it uses a network analysis approach to locate each household on a city-wide grid. By a method of automated coding it is possible to convert street addresses to census unit codes and to locate the intersection closest to that address. In effect, the entire city network is available for simulation.

For school planning each child and school can be located in the network. A computer program is available that can search out and add up to the total capacity of a school those students living nearest it. Then, if some of the pupils currently attending are not included, it will identify them and locate the nearest school for each student displaced. The system also has a pedestrian street-walk network so that the minimum path route can be simulated for any pupil and children added to or subtracted from a school roster based on accessibility and minimum distance.

The power of the computer and its program is such that it can solve all of these problems for a city of 100 schools in a matter of seconds. It can take a school out of the network and re-sort all pupils or add a school and analyze its impact.

Charles E. Barb, Jr., associate director of the Geobasys project at the University of Washington's Urban Systems Research Center, reports that the method is available for the 200 largest Standard Metropolitan Statistical Areas of the country. The project in Seattle, supported by a National Science Foundation grant, is, however, the only one fully operational at the present time.

As illustrative of the system's usefulness Barb cites a study of trash truck routings that helped the city realize a 10% to 20% saving in the number of trucks used. He hazards that a similar 20% saving in school buses might be achieved by using the Geobasys method to analyze routes. There is one catch. At present it would cost a city about $250,000 to install the system and make it operable. But Barb feels the potential savings would more than pay off its cost.

To return to a more modest operation, Madison, Wis., has a computer system in which is recorded every plot of land, zoning restriction, apartment condition (whether children are allowed or not), new housing start, remodeling, and conversion. This enables computation of child-yield-per-dwelling-unit. The organization for carrying out these data analyses is rather unusual and promising. The full-time planner is a staff member of the City Planning Commission. He is paid by the school district, with the city reimbursing the district for $6,000 of his salary.

This arrangement merits note because school planning is a part of comprehensive community planning. The luxury of a go-it-alone philosophy is no longer justifiable—if it ever was. The building of sophisticated data banks, the sharing of data collection and detailed analyses, and the making of more precise determinations, all point toward technical collaboration among community planning agencies—including the schools.

Local Data Methods

What does all this add up to? There seem to be several observable trends.

- The building up and use of data banks is increasing. Schools are melding their numbers with those of other community agencies.
- The basic method of projection still is that old standby, the cohort-survival technique. (The method of advancing grade groups through K-12 by applying a "survival" ratio to each group to determine the number of pupils in the next higher grade the following year. This survival ratio—or percentage—is based on a 5-year average of the numbers in each grade compared with the next higher grade one year later.) Significant refinements are, however, being built into this cohort-survival

procedure, using numbers instead of percentages to advance the cohort groups. Nonpublic school factors, migration data (sometimes referred to as turnover data), retention rates, and the like are all being separated and dealt with discretely.

- There has been a recent shift away from state-mandated preschool census. As long as land-grant-income distributions were based on total population counts, states using this method of aid required a complete yearly census count. With these monies either drying up or absorbed in different distribution formulas (regrettably), states such as Michigan and Ohio withdrew the requirement. Yet there is no better warning system for a school district than a preschool census if taken accurately. It's about the only way to close a 5-year information gap.
- There is an increasing awareness that population change is something the school system needs to get a better handle on. The decennial federal census simply leaves too long a gap to be a sensitive enough instrument for detailed planning. So school districts are supplementing it with data from other agencies. Private sources are being tapped, too. Commonly suggested are telephone company installations and population estimates; utility companies' connections and population projections; and even mortgage information from local savings and loan associations (on a confidential basis).
- Local realtors provide yet another data source. They can help assess whether new owners tend to be families with preschool children or older couples who will make no demands on the schools.

When all the techniques of data gathering and manipulating have been assessed and a determination made as to which ones to use, it is well to remember that the level of confidence and the familiarity one can assign to the resulting numbers are perhaps as important as the numbers themselves. Under a grant from EFL, NESDEC (the New England School Development Council) tackled both the problem of prediction and the determination of the probable stability of the projections. A mathematically sophisticated error-estimate was developed that could be applied to the basic cohort-survival method.

Yet such sophisticated techniques should not blind the administrator to the need to work through or with some of the data himself, to get the "feel" of the figures. When it's all put together, it's his—and his staff's—judgment that counts. The numbers can but help.

Costs and Savings

The result of these intensive analyses is a "tip of the iceberg" set of figures showing where a school district's numbers are headed and what is the consequent need for classroom space. Now administrators need another set of figures—those showing how much it costs to keep a low-enrollment school open. Compared with enrollment projections, cost figures are "here and now" kinds of data and reasonably easily constructed.

What is not so simple is to show that cost comparison data are truly comparable. It is enough of a shock for parents to hear that they may have to send their children to other schools. It had better not involve a loss of services at the same time. Ethical obligations suggest that showing what a closing might accomplish for the school budget should be set in the context of "equal or better than" for both facilities and program.

And, of course, estimates of savings are needed for each school involved. Comparisons between schools within the district—not to mention between school districts—are fraught with possibilities for "apples and oranges" fallacies.

For example, subtracting all custodial costs would be an error if it is necessary to have someone "live-in" on the property in order to prevent vandalism. If the grounds must be maintained to prevent the site becoming an eyesore and depressing the community's sense of well-being, these costs need to be factored out.

Obviously, while there can be important savings in custodial services, heating, lighting, and materials, the largest savings will come in personnel costs. This is an exercise not only in numbers but in human relationships. But first the numbers must hold up.

Just as there is no one plan for projecting enrollments, so there is no one template of cost analysis that will fit all school districts. Not many can or will want to drop five teachers as in District A; not all will have the rehabilitation costs of District B. Each district must determine and defend its own approaches. These examples only suggest the facts to assemble.

Here are examples of savings which three districts have used to justify school closings.

District A

Salaries	
Administration (2)	$ 47,035
Specialist teachers (5)	68,470
Clerical (1½)	10,151
Custodial (4)	34,920
Aides (3)	4,416
Related Savings	
a/FICA	8,047
b/Welfare fund	1,465
c/Health insurance	4,618
	$ 179,122

In the following year (1975-76) there would be an additional savings of $30,061 relating to retirement costs which would not have to be paid as a result of the salary savings.

School capacity: 510
Enrollment 1973-74: 450

District B

The estimated savings in tax dollars:	
1/Cost of building operation (1972-73)	$29,509
2/Administrative costs (1972-73)	17,000
3/Rehabilitation cost estimates	152,000
Total estimated costs	$ 198,509
Cost of pupil transportation, 240@$114	−27,360
Estimated savings	$ 171,149

School capacity: 350
Enrollment 1973-74: 242

District C

Elementary Building Operating Cost Estimates 1973-74

School	Capacity	Enrollment 1972-73:	Utilities	Annual Maintenance & Supplies	Custodial Salaries	Admin/and Clerical Salaries	Totals
1	675	474	$16,600	$6,700	$29,400	$34,000	$86,700
2	594	497	13,400	6,700	29,000	33,100	82,200
3	432	195	13,800	6,200	19,900	21,000	60,900

How to Close a School: The Process

On paper, closing a school would appear to be a simple exercise in logistics and costs. It only needs the same kind of numbers as justifying a new school—but in reverse. In fact, however, closure is less a numbers problem than a people problem. Like passing a school bond referendum, it is essentially a political issue.

For a community, adding a new school or subtracting an existing one are two quite different symbols of change. Adding represents growth or renewal and confidence in the future. Closure seems to imply retrenchment and decline. Moreover, a school has usually become woven into the fabric of a neighborhood. Its closing seems to presage the beginning of general decline. Usually the neighborhood will resist the loss of its school and protest: Don't do unto us what you wouldn't have others do unto you.

It is easy to assume that to the cost-conscious citizen, particularly one without children in school, closing a school (or schools) will appear a simple and attractive proposition. A reduction in numbers means a corresponding reduction in costs—a 10% shrinkage in enrollment implies a budget cut of the same magnitude—except, perhaps, for some mandatory increases. But costs have a notorious way of clinging on after the numbers justifying them have disappeared. And there is the symbol of a declining neighborhood to be considered.

Nor can the issues be contained within one neighborhood. Closing a school means changing boundaries; changing geography may mean changing school populations, resulting in different economic, social, ethnic, and racial mixes.

The school's professional staff, who were usually enthusiastic supporters of school bond issues, may also view closing a school with trepidation for it means a loss of teaching positions and a displacement of personnel.

All in all, not having to close a school is a matter fervently to be desired. It is a social and human problem, accompanied by all the stresses and strains that press on an organization in a time of consolidation.

But if the numbers point in the direction of continuing surplus space and excess costs, then the school district has a problem that simply will not go away. Brushing the numbers under the school's new carpeting or delaying action is a sure way to beg for crisis and confrontation. So the numbers and the closure plan have to be put into the hands of the parents, the staff, and the community.

Some administrators have found this is best done as a two-step process. The first step is to present numbers showing the decline in enrollment for the district as a whole. Only after these have been

assimilated, digested, and accepted can one venture to talk about the specific implications this decline may have for closure—especially for the closure of a particular school. Whether or not one can or does accept this method, it suggests the main admonition from those who have already tackled substantial shrinkage problems: *Allow plenty of lead time.*

What "plenty" means may vary, but as one saddened administrator perhaps exaggerating somewhat said, "Figure the time it takes to get a bond issue passed, then double it."

But doubling can mean different time frames to different people. One cryptic recommendation: "You tell them in the spring, you do it in the fall." Des Moines, where shrinkage was less acute, took nearly three years of planning and public discussion prior to closure. Result: three schools successfully closed.

Sharing the Problem

A second general rule is: *Don't do it by yourself.* A narrow interpretation of this negative precept challenges the whole concept of administrator-board leadership. But it can be stated positively: *Involve the community in planning for closings and selecting the choices to be made.* Some successful closings have been accomplished without community participation, of course, but in several cases these seem to have been made in response to some locally perceived crisis. For example, the California earthquake in 1971 resulted in massive closings; Santa Ana closed 16 schools within a week.

Without a crisis context the process is more mundane—and time consuming. It is axiomatic that participation, since its purpose is shared decision-making, takes time. Sweet reason and charity are not the products of time pressures mixed with conflict. A school closing is not a school-design charette in reverse. Shrinkage is so contrary to American values that time and perspective are necessary in order to see it in other than aggressive terms. Participation means, among other things, that the facts must be studied, assimilated and accepted. Criteria for school closings must be selected and arranged by priorities. This exercise in setting criteria can and, in some cases, probably should lead to reassessment of the community's educational goals and expectations. Or, as was the case in Palo Alto, the reverse order was true. Shrinkage was a latecomer on the reorganization scene.

Project Redesign in Palo Alto is an example of a comprehensive reexamination of the goals, programs, organization, and financing of a school system which will involve major citizen participation over several years and within which the problem of school enrollment capacity and shrinkage assumes but one rather modest subanalysis of the total effort.

Some districts are coping with the problem of shrinkage by a plan for reorganization. Fortunate as far as the numbers go is the district which needs some secondary school space and has been organized as K-4, 5-8, 9-12; the older pattern of K-6, 7-9, 10-12 can perhaps help.

Plainview, N.Y., is a district in which reorganization seems a natural. In 1967 the elementary schools, after several years of study, were paired, K-3 and 4-6. Now that closings appear necessary, reverting to the K-6 pattern doesn't change any boundary lines, since the pupils in the closed school of each pair were slated to attend the other school anyway, either during their K-3 or 4-6 years.

Sometimes reorganization can also help with shrinkage problems in another way: the middle school can be set up as a "swing school," at one time for grades 6-8, at another for grades 7-10 or even grades 7-8.

Long-range Options

The test of a longterm plan is that it does not so lock in the structure that there will be an uncomfortable bind unless things work out in one particular way. In other words, *the community must be left some options.* To do this involves planning ahead for more than five years, even if projections can be made only with less and less precision. The logical sequence is to develop a long-term plan first (one with some contingency plans

locked into it), then to select the best compatible short-term strategy.

An example of keeping your options open is the lease-back arrangement worked out with a private developer in Ann Arbor, Mich. The situation there is a familiar story—growth on the periphery, decline in the central and downtown portions of the city. The problem is how to provide needed classrooms without overbuilding. Even though the question here is one of growth, the solution suggests a way of planning for possible shrinkage in the future.

Here's the way lease-back works. A developer builds a multipurpose building that the district leases out of its operating budget, uses until it knows where a permanent school is needed, then returns to the developer. (The city has okayed having the temporary school in a commercial area, such as a shopping center, so there's no problem on that score.) The building is a shell with movable partitions; thus, the transition from school to new owner can be made with minimum difficulty.

Lease-back is one way to build in safeguards to a long-range plan, thus preventing the painful consequences of finding yourself with a school you don't need or one that's in the wrong place. It buys time while the district avoids irrevocable decisions and finds out what its community is willing to "pay" for its schools. Lease-back is one way to avoid being caught between two extremes—needing to build and having to close—which is one of the hardest arguments to present, much less win.

Which leads back to the proverbial jar of worms—costs. Program costs, auxiliary service costs, teacher contract costs (and conditions), as well as busing and its costs may all in some way or another become involved in closure discussions. Again, the key to untangling is time—time for dialogue, time for "task force" reporting, and time for understanding.

One caveat: time must be used. If it is only a moratorium during which little action is taken and positions allowed to harden, confrontation may be avoided, but at the expense of trust and open communication. When the issues are taken up again, you're one year further behind the eight ball.

Community Survey

Plainview-Old Bethpage, N.Y., realized that time was needed to find out just how many "degrees of freedom" it had on closure. In a series of public hearings on the superintendent's plan to close four schools, enough community anxiety, opposition, and even hostility had surfaced to persuade the board and superintendent that they would be well advised to find out in a cool, collected fashion just what the community thought of its schools and how it would like to see them used if they were no longer needed by the board.

The Roper Organization, a nationally known polling group, was engaged to conduct a two-phase survey: a demographic study of enrollment and other data, and a poll of community attitudes. The mail survey on demographic information went to every householder. The opinion study was conducted house-to-house with a sample of 400 residents using nonresident interviewers to encourage minimum resistance to the solicitation of information.

The overall survey results show that people are not about to leave town (the estimated turnover was small) and that, in general, they think well of the schools. On what to do with empty buildings there is an understandable spread: 21% want to use all empty school space for educational programs and community service; 31% want to rent or sell old buildings to keep tax rates down. In the middle are 48% who want some of each.

The middle 48% are obviously the decisive group. What are they willing to go for? Overwhelmingly they want a youth center and alternative school programs for gifted and slow learners. For such space as might be leased or sold they prefer use by the regional education agency (BOCES); their second choice is use of the space by the town (of which the school district is a part) for a recreation center. Those who want to sell all agree on BOCES as first choice, but their second choice is commercial office use.

Plainview still does not have the solution in hand, but it has a knowledge of community opinion —where there is consensus,where disagreement, and some suggested areas of possible compromise.

Enough has been said to prove beyond a shadow of a doubt that school closings are particularly sensitive affairs. Parents, pupils and staff all have a personal stake in the matter, and most other citizens are at least tangentially concerned.

The professional is concerned about loss of position—even if not of a job in the system. Where will the principal go? Will he or she have as "good" an assignment? As large a school? As "good" a community to work with? For the teacher the questions include whom will I work with, will I be "low man on the totem pole" in a new school, will it be as convenient a location, as "safe" an area?

Every attempt to allay anxiety, to give clear messages, to try to meet personal preferences will help enlist the support of the staff. And that can help substantially in securing parental acquiescence, if not active support. At public hearings this "middle management" voice may help persuade the concerned community that the educational program will not suffer.

Task Forces

Concern suggests involvement. If they can participate in decision-making, the community and the staff will not feel shut out; issues will not have been settled in secret.

Task forces are one logical means of involvement. What is the make-up of such groups? They run the gamut from lay committees to a mix of citizens and staff to in-house professionals to outside consultants.

Community conditions determine the wisest composition, but a wholly internal group may be seriously limited in the acceptability of its recommendations. Since closing a school touches sensitive community nerves, the purpose of a study-report-recommend strategy is better served by sharing the problem *before* any recommendations are made.

At the very least, therefore, the initial design should include a community response mechanism in the form of a reaction panel. In this way those who have not been engaged in the study can express their concerns, ask for assurances, and provide a measure of where the community stands.

If task forces are set up, what are they charged to do? The most common assignments are:

1/ a/Project enrollments (although this seems more appropriate for a technical staff).
b/Visit the schools.
c/Determine capacity and rate schools.

2/ a/Set up criteria for closing any school.
b/Recommend which schools should be closed.
c/Report on savings from and any added costs of closing.
d/Establish a priority for closing.

3/ a/Recommend subsequent uses.
b/Find possible takers.
c/Search out legal constraints.

Assignment 3 will enable a group not only to learn about its schools but to discover the legal and practical limitations on disposing of them, and probably to explore the range of educational and social services in the community. Whatever the choices explored, finding possible takers may narrow the range of choice considerably. In one instance, two school districts found they were both suitors for the same client—the local college. (Which suggests the need to find out what your neighbor is up to.) In the small town this task force may find that there simply are not many takers around, particularly those nonprofit social service agencies that they will probably most favor as tenants. Whatever the options, citizens' assistance in and understanding of the difficulties involved in this kind of real estate operation should help the board and the administrator in their search for the best solution.

The three major categories of tasks outlined above are obviously demanding of time. Usually, therefore, separate task forces are chosen for

each assignment, with some form of coordinating structure. Even so the involvement of citizens in the process stretches out the time it takes to determine a course of action. Whether the shared decision-making is worth this added time is, of course, for the individual board and superintendent to decide. But our information tends to support the idea strongly.

Criteria for Closing

Most of these foregoing assignments require analyses specific to each community, but criteria, to some degree, apply across the board. Here are two sets, somewhat different in scope and emphasis.

Birmingham Public Schools, Michigan.

Criteria for Selection of a School(s) to be Considered for Closing

Where it becomes necessary to close one or more schools in a district, the selection process is a difficult one at best. In an attempt to make the procedure objective, three basic criteria have been developed.

1/ Location in Relation to Neighboring Schools
- a/Hopefully a contiguous attendance area could be maintained.
- b/Receiving schools would preferably be adjacent and could adequately house redistricted children.
- c/Closing this school would result in a minimum of redistricting problems.

2/ Adequacy of Facility
- a/This school is educationally less flexible. (Can't accommodate changing and varying programs as well.)
- b/Age of the building is a detriment.
- c/Difficulty and/or cost of ongoing maintenance is greater.
- d/Need for a major (costly) maintenance or renovation.
- e/Size of and/or the layout of the site is less adequate.

3/ Enrollment Factors
- a/Closeness to optimum efficient operating enrollment (450+).
- b/Potential for student gain or loss.

Other less important factors that would be considered where they apply are:

Differences in operating cost savings.
Differences in resulting transportation costs.
Safety implications.
Resale value and/or disposition of property.

The three criteria may be applied to each school. Making use of a rating scale of 0 to 5 for each of the criteria, a numerical school closing "index" can be obtained. This "index" can then be used to rank order the schools in terms of their suitability for closing.

Minneapolis' Building Utilization Study set its criteria as:

1/ The present utilization of the school plant
2/ The available pupil space in adjacent school locations
3/ The present and future enrollments
4/ The life safety of the building (fire rating)
5/ Rehabilitation needs and rehabilitation costs
6/ School-Park Board complexes
7/ Cost of operation
8/ Consolidation costs and transportation
9/ Budget considerations.

Public Hearings

After a task force has reported and recommended specific closings, there's no way around the next step. Public hearings must be held, unpleasant as they frequently are.

Again, the need is for lead time. Hearings provide the only real way to give the opponents a chance to be heard, to ventilate their opposition or hostility. Hearings also are the time and place to marshal public support from as many local school and nonschool groups as possible. Supportive statements by the principals of both sending and receiving schools are desirable, and, of course, task force exposition or clarification should also help. Perhaps this also is the time to bring in outside experts to help deflect some of the flack. Certainly the local real estate people should be encouraged to take a supportive stand. (They can't have it both ways—lower the taxes *and* keep the school open for the sake of possible resale values.) Administration, for its part, must be candid. Who knows, if the atmosphere is constructive, a reasonable accommodation may emerge. Once public debate has taken place, decisive board action and firm, immediate administrative follow-through are the final steps necessary to successful closings.

A Final Word to the School Administrator

Lest in this last section we've seemed too prescriptive, we'd like to remind ourselves and our readers that no two human situations are ever alike.

Our knowledge system and our ways of doing things are based, in large measure, on finding similarities, making categories, and using these commonalities to determine our actions. We tend to search for likenesses and rely on them as the basis for decisions. Hence the popularity of "Superintendents' Round Tables."

We need, however, constantly to remember the uniqueness of events, actors, and situations and to search out these "uniquenesses" as well as similarities.

Perhaps the intricacy of this process is why Henry James said that the art of administration is the highest of all human endeavors.

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Publications

Population Reference Bureau, Inc.
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Washington, D.C. 20036

Peter A. Morrison
The Rand Corporation
1700 Main St.
Santa Monica, Calif. 90406

Current Population Reports (all series)
Superintendent of Documents
U.S. Government Printing Office
Washington, D.C. 20402

George Grier
The Washington Center for Metropolitan Studies
1717 Massachusetts Ave., N.W.
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Reports from EFL

The following publications are available from EFL, 477 Madison Avenue, N. Y., N.Y. 10022

Career Education Facilities
A programming guide for shared facilities that make one set of spaces or equipment serve several purposes. (1973) $2.00

Community/School: Sharing the Space and the Action
How schools share facilities with other public agencies to provide improved social services. The book discusses financing, planning, building, staffing and operating community/schools. (1973) $3.00

The Economy of Energy Conservation in Educational Facilities
Recommendations for reducing energy consumption in existing buildings, remodeled projects and future buildings. Explains the importance of including longterm operating costs and evaluating capital costs of electrical and mechanical systems. (1973) $2.00

Five Open Plan High Schools
Text, plans and pictures explain how five secondary schools operate open curriculums in open spaces. (1973) $3.00

The Greening of the High School
Reports on a conference on how to make secondary school healthy. Includes the life-styles of adolescents and ways to accommodate them, open curriculums and alternative education programs. (1973) $2.00

High School: The Process and the Place
A "how to feel about it" as well as "how to do it" book about planning, design, environmental management, and the behavioral and social influences of school space. (1972) $3.00

Patterns for Designing Children's Centers
A book for people planning to operate children's centers. It summarizes and illustrates all the design issues involved in a project. (1971) $2.95

Physical Recreation Facilities
Illustrated survey of places providing good facilities for physical recreation in schools and colleges. Air shelters, roofing existing stadiums, shared facilities and conversions. (1973) $3.00

The Place of the Arts in New Towns
Reports the experiences of arts in new towns and established communities. Gives insights and models for the support and planning of programs and facilities for arts in new towns. (1973) $3.00

Reusing Railroad Stations
Advocates combining commercial and public use of discarded railroad stations to preserve part of our heritage, keep urban centers alive, and provide facilities (including educational) for public services. (1974) $4.00

Newsletters

BSIC/EFL Newsletter
A periodical recording developments in the systems approach to building educational facilities.

Planning for Higher Education
A periodical produced jointly with the Society for College and University Planning.

Schoolhouse
A periodical on financing, planning, designing and renovating school facilities.

Films

The following films are available for rental at $9.50, or for purchase at $150.00 from New York University Film Library, 26 Washington Place, New York, N.Y. 10003. (212) 589-2250.

New Lease on Learning
A 22-minute, 16mm color film about the conversion of "found space" into a learning environment for young children. The space, formerly a synagogue, is now the Brooklyn Block School, one of New York City's few public schools for children aged 3-5.

Room to Learn
A 22-minute, 16mm color film about the Early Learning Center in Stamford, Connecticut, an open-plan early childhood school with facilities and program reflecting some of the better thinking in this field.