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An Economical, Thorough and Efficient School System and the West Virginia School Building Authority Economy of Scale Numbers

Deirdra Purdy
West Virginia University College of Law

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I. INTRODUCTION ............................................. 175

II. CONTEXT IN WHICH THE SBA WAS CREATED ................. 179
   A. Pauley v. Kelly, the Recht Decision, the Master Plan .... 179
   B. Rural West Virginia: Poverty, Sparsity, and
      Difficult Geography ................................... 184

III. THE SBA AND THE TEN-YEAR SCHOOL BUILDING PLAN ........ 185

IV. ECONOMIES OF SCALE ................................... 188
   A. Bigger Isn’t Necessarily Cheaper ...................... 188
   B. West Virginia Economy of Scale Numbers .............. 190
   C. Economies of Scale and the Seven Other Goals ......... 192
   D. Have the SBA Economy of Scale Numbers
      Saved Money? ........................................ 195

V. LARGE SCHOOLS: NOT ECONOMICAL, BUT PERHAPS MORE
   COMPREHENSIVE? ....................................... 197

VI. LARGE SCHOOLS: NOT MORE ECONOMICAL OR COMPREHENSIVE,
    BUT PERHAPS MORE THOROUGH? .......................... 199
   A. Developing Minds and Bodies ............................ 199
   B. Developing Social Morality ............................. 202

VI. A PROPOSAL ............................................. 204

I. INTRODUCTION

The West Virginia School Building Authority (SBA) was created by the
 legislature in 1989 at the behest of Governor Caperton to carry out a mandate of
the Recht Decision. The "Recht Decision" is comprised of the findings of fact, conclusions of law, and orders in West Virginia's major education reform case which found the West Virginia school financing system to be largely unconstitutional. The Recht court ordered a high quality education system to be put in place and financed "at the earliest practicable time." The court, however, left implementation of its order to the legislature, the state superintendent of schools, and the state board of education. They have carried out very little of the court-mandated program. The one major piece of the Recht Decision which has been implemented is state-wide facility financing through the SBA. The SBA was created to sell bonds and distribute the money raised to county school boards

1 Pauley v. Bailey, No. 75-1268 (13th Cir. W. Va.) (May 11, 1982, finding that the system of financing public schools in West Virginia is unconstitutional, violating article XII, section 1 because the legislature has not provided for a "thorough and efficient" system of free schools, and violating article III, sections 10 and 17 related to equal protection, because the system permits discriminatory classifications in financing education and in educational offerings to exist [hereinafter Recht Decision I]; May 21, 1982, finding that Recht Decision I followed the mandate given by the Supreme Court of Appeals of West Virginia on remanding the case [hereinafter Recht Decision II]; Sept. 1, 1982, finding that the State Superintendent of Schools and the State Board of Education, having abandoned any appeal of this case, be permitted to develop a master plan for education required by the court's previous orders [hereinafter Recht Decision III]; Mar. 4, 1983, finding that the master plan so developed was a commendable document, however a thorough and efficient system of free public schools should be available "at the earliest practicable time," and a grievance procedure should be added [hereinafter Recht Decision IV]).

The case was originally styled Pauley v. Kelly, John H. Kelly being the State Treasurer, but Larrie Bailey's name was substituted when he was elected Treasurer. The original complaint was dismissed by the Kanawha County Circuit Court and appealed to the Supreme Court of Appeals of West Virginia. The Supreme Court of Appeals reversed and remanded the case. Pauley v. Kelly, 255 S.E.2d 859 (W. Va. 1979). The court appointed the Honorable Arthur M. Recht to hear the case, now styled Pauley v. Bailey, on remand. For the purposes of this article, any references to the Pauley case or the Pauley court shall refer to the entire line of decisions.

2 Recht Decision I, slip op. at 222-24.

3 Recht Decision IV, slip op. at 5.

4 Recht Decision III, slip op. at 1-3.

5 The Pauley case, which resulted in the Recht Decision, was not closed. Although the court deferred to the legislative and executive branches of state government, the circuit court retained jurisdiction. Recht Decision IV, slip op. at 7. The case has now been re-opened with new plaintiffs as Tomblin v. Gainer. Attachments to the motion for enforcement of judgment detail the Legislature's failure to alter most elements of the funding formula found unconstitutional by Judge Recht in 1983. Am. Mot. for Enforcement of J. at apps. B-C, Tomblin v. Gainer, No. 75-1268 (13th Cir. W. Va. Feb. 23, 1996).
based on need for school building and maintenance. In this manner, school facility needs were to get equal attention whether they occurred in a poor county or a rich one.

The statute empowering the SBA set out seven goals that the agency should use to judge county facility plans for funding: student health and safety, economies of scale, reasonable travel time, multi-county and regional planning, curricular improvement, innovations in education, and adequate space for projected student enrollments. Since its inception, however, the SBA has emphasized economies of scale over the other goals. This has been accomplished in two ways: first, by arbitrarily interpreting economies of scale as required school sizes and second, by weighting the economy of scale factor when evaluating projects.

As one of its initial acts, the SBA generated a one-page Economies of Scale regulation. This document does not actually discuss or refer to economies of scale at all, but instead sets minimum student enrollment requirements “needed for a school to be eligible for SBA funding” for new buildings or additions or major improvements for existing schools.

The minimum required student enrollments to meet SBA guidelines for economies of scale are:

- Kindergarten: 2 classes of 20 students
- Grades 1-8: 2 classes of 25 students per grade level
- Grades 5-9: 150 students per grade level
- Grades 10-12: 200 students per grade level

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6 W. VA. CODE §§ 18-9D-1 to -16 (1994 & Supp. 1996). The SBA’s initial financing mechanism was found unconstitutional in 1993 and funding was reorganized. See infra note 72.

7 W. VA. CODE § 18-9D-16 (Supp. 1996). See infra note 68 for discussion of current statute which was amended in 1994 to add one goal.

8 See discussion infra parts I, IV.B, IV.C.


10 Id.

11 Id. Although the document title says that these school sizes are required to “meet . . . guidelines for economies of scale,” there are no separate or additional economy of scale guidelines. Id. (emphasis added). These required school sizes are the economy of scale guidelines. Id.
These numbers produce basic required school sizes of:

- K-8 grade school: 440 students
- 5-8 middle school: 600 students
- 9-12 high school: 750 students

Compared to existing West Virginia schools sizes, these required school sizes were very large. In 1992, after seventy-five small schools had been closed, sixty-one percent of West Virginia schools were still too small to be eligible for SBA funding according to the economy of scale numbers. Existing schools were generally smaller than these SBA-required school sizes because the SBA requirements fail to factor in the population sparsity of much of this rural state. Pocahontas County, for example, has only one 488-student high school because that is all the high school students there are in the county’s 943 square miles. Sparsely populated counties must gather widely scattered students from much larger geographic areas — the larger the school the larger the area — with attendant increases in transportation cost and students’ time on school buses. In other words, inappropriately sized schools may suffer from diseconomies of scale. To some extent, existing school sizes reflected geographic and demographic realities; the SBA school size requirements ignored them in favor of a one-required-size-fits-all formula.

The SBA evaluates county facility plans in order to award funding, using a scale of one to nine to measure how well a plan meets each statutory goal. Without legislative mandate, however, the authority has also weighted these

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12 School Building Authority, supra note 9, at 68.


15 M. David Alexander, Public School Pupil Transportation: Rural Schools, 16 J. Educ. Fin. 226, 236 (1990); see also discussion infra part VI.A.

goals. Economy of scale numbers have a 1.5 weight, so plans which meet the required school sizes get “extra credit.” Factors presumed to accompany larger school size, such as improved curriculum, also have a 1.5 weighting. Student transportation time, which suffers with larger school size, has only a 1.0 weighting. SBA funding is a highly competitive race for tens of millions of dollars. These weighted goals ensure that larger schools will get higher rankings to secure funding, which means that only larger schools will be built or have major maintenance, whether or not they are more economical.

This Article concludes that the so-called “economy of scale” numbers are actually arbitrary and uneconomical requirements for large-sized schools, requirements which are neither mandated nor supported by the law, and West Virginia should scrap them. To reach that conclusion, the Article examines educational finance research on true economies and diseconomies of scale. The Article reviews research on the detrimental educational effects of large schools on poor children and on children who suffer long travel times (in rural areas these are often the same children). It considers the constitutional mandate that West Virginia’s school system be thorough and efficient and finds that SBA large school requirements, disguised as purported economy of scale numbers, comport with neither of those directives.

II. CONTEXT IN WHICH THE SBA WAS CREATED

A. Pauley v. Kelly, the Recht Decision, the Master Plan

The West Virginia Constitution requires that “the legislature shall provide,
by general law, for a thorough and efficient system of free schools.\textsuperscript{23} In 1975, the parents of five Lincoln County schoolchildren filed a declaratory judgment action alleging that the method of financing public schools denied them a thorough and efficient education and equal protection of the law.\textsuperscript{24} The Kanawha County Circuit Court dismissed the action and plaintiffs appealed.\textsuperscript{25} In a far-reaching decision, the Supreme Court of Appeals of West Virginia examined “thorough and efficient” clauses in state constitutions throughout the country and arrived at its own definition. “[A] thorough and efficient system of schools . . . develops, as best the state of education expertise allows, the minds, bodies and social morality of its charges to prepare them for useful and happy occupations, recreation and citizenship, and does so economically.”\textsuperscript{26}

The court is thus clear that the first constitutional requirement is a high quality education system. Economy, while not exactly an afterthought, is still secondary or subordinate to thoroughness.

Because the state constitution requires a thorough and efficient system of schools, education is a fundamental constitutional right in West Virginia.\textsuperscript{27} As a constitutionally derived right, a strict scrutiny equal protection standard is thrust upon the State for education.\textsuperscript{28} No discriminatory classification found in the educational financing system can stand unless the State can demonstrate some compelling State interest to justify the unequal classification.\textsuperscript{29}

Although the court was clear about these constitutional principles, when the court turned to the constitutionality of the State funding formula, it found that that issue could not be resolved or even addressed on the record from the \textit{Pauley} court because the thorough and efficient clause requires the development of high

\textsuperscript{23} Id.


\textsuperscript{25} Id.

\textsuperscript{26} Id. at 877.

\textsuperscript{27} Id. at 878.

\textsuperscript{28} Id.

quality educational standards. Without such standards the court could not determine whether the existing system had failed, much less "whether this failure [is] a result of inefficiency and failure to follow existing school statutes." The court remanded the case to the Kanawha County Circuit Court and appointed the Honorable Arthur Recht to consider these questions. Forty days of testimony produced the Opinion, Findings of Fact and Conclusions of Law, and Order which came to be known as the "Recht Decision." This decision set detailed standards for every area of education. Numerous aspects of the state education support plan were found to be unconstitutional per se and discriminatory. The Recht Decision concluded by appointing a commissioner

30 Kelly, 255 S.E.2d at 878.
31 Id.
32 Recht Decision I.
33 The court heard testimony from numerous educational experts presented by plaintiffs regarding high quality education standards. "No real attempt was made by the State defendants to offer any direct testimony to refute these standards. Therefore, this court had no other choice than to consider and adopt the standards set forth in this opinion and findings, as being based on the only credible, clear and convincing proof offered during the trial." Recht Decision II, slip op. at 5-6.
34 Recht Decision I, slip op. at 222-23.

The state education financing issues remain unresolved. In 1985, Judge Cook, who had replaced Judge Recht, ordered that if the Legislature had not provided adequate revenues to replace or equalize excess levy revenues by July 1, 1987, the Court would act to redistribute available county excess levy revenues among all counties. Pauley v. Gainer, No. 75-1268 (13th Cir. W. Va. Dec. 5, 1985) (order). Judge Cook's proposed remedy was renewed in a June 29, 1987 order, but the Court agreed to wait to see the results of a statewide excess levy election scheduled for March 5, 1988. Pauley v. Gainer, No. 75-1268 (13th Cir. W. Va. June 29, 1987) (order). After the statewide levy failed, Judge Cook's order was appealed. (Judge Cook had been replaced by Judge Chafin.) The Supreme Court found that article 10, section 10 of the West Virginia Constitution expressly authorizes county excess levies. State ex rel. Bds. of Educ. v. Chafin, 376 S.E.2d 113 (W. Va. 1988). Since a broad constitutional precept is to be tempered by a more specific one and since excess levies operate evenly on all property, excess levies did not violate equal protection principles. Id. The Court found the true focus of Pauley to require examination of the school financing formula without consideration of excess levy revenues. Id.

The Pauley case has been re-opened with new plaintiffs as Tomblin v. Gainer. Before the Kanawha County Circuit Court, Judge Robinson now sitting, plaintiffs call for a timetable for implementation of the Master Plan, particularly the school financing system, and appointment of a special master or commissioner to oversee that implementation. Am. Mot. for Enforcement of J., Tomblin v. Gainer, No. 75-1268 (13th Cir. W. Va. Feb. 23, 1996). Exhibits to the motion detail the Legislature's failure to alter most elements of the funding formula found unconstitutional by Judge Recht in 1983. Id.
to oversee development of a master plan to implement the Decision.35

The Recht Decision and the Master Plan are both extremely detailed documents (down to requiring maracas in music rooms36 and setting the square footage of a library browsing area).37 Both are also very input-oriented38 and require many things: teachers, programs, buildings, books, musical instruments, and playing fields. The SBA’s first defense of its large school building and consolidation program is always that it is carrying out these directives.39

The educational standards of the Recht Decision are not, however, "necessarily those which should be included in the master plan to be developed pursuant to this opinion."40 Judge Recht said:

[This Court cannot and does not have the power -- authority -- or jurisdiction to DEMAND that the West Virginia Legislature adopt this particular plan or for that matter, any single piece of legislation -- to do so would violate the traditional concepts of the separation of power -- specific legislation is exclusively a

35 The commissioner’s name was left blank in the Recht Decision. On September 1, 1982, the Court ordered that, since the State Superintendent of Schools and the State Board of Education had abandoned any appeal of the Recht Decision, they be allowed to form a responsible committee to develop the Master Plan. Recht Decision III, slip op. at 2. Many have alleged that thus was the fox put back in charge of the henhouse. However, the Court did retain jurisdiction to oversee implementation of the Master Plan. Recht Decision IV, slip op. at 7.


37 Recht Decision I, slip op. at 49.


39 The first evidence entered by the SBA in defending consolidation of two Pendleton County high schools was a 4-inch stack of documents consisting of Pauley v. Kelly, the Recht Decision and the Master Plan. Pendleton Citizens v. Marockie, No. 96-C-507 (13th Cir. W. Va. hearing Apr. 12, 1996).

40 Recht Decision II, slip op. at 8.
legislature function.41

Similarly, when the ninety-nine-member committee finished its 356-page Master Plan in 1983, Judge Recht noted that it was only “an aid to the Legislature . . . [and] not intended to intrude upon any legislative prerogative.”42

What authority, if any, the specific educational requirements of the Master Plan retain is unclear. The Plan was based on recommendations which were the “best the state of education expertise allow[ed]” — in 1983.43 The Plan was to be updated every four years.44 However, the Plan has never been updated, nor is a time frame in place for implementation45 although the court’s final order required that “a thorough and efficient system of free public schools [be] available at the earliest practicable time.”46

The Recht Decision’s conclusions of law clearly retain their validity; none has been overturned, or even questioned. “Equal protection,” the court found, “requires equality in substantive educational offerings and results.”47 But Recht is clear that the state’s legal duty to provide equal educational opportunities does not mean providing identical resources or one-size-fits-all plans. Equal does not mean identical. Resources must be allocated according to needs and costs, and all factors contributing to differences in needs and costs “must be incorporated into the financing structure.”48 In particular, Judge Recht recognizes that there are unequal costs and greater need due to isolation, population sparsity, terrain, road conditions, and resulting small school size.49

41 Id. at 9.

42 Recht Decision IV, slip op. at 2.


44 WEST VIRGINIA BD. OF EDUC., supra note 36, at 10.


46 Recht Decision IV, slip op. at 5.

47 Recht Decision I, slip op. at 219 (citing Pauley v. Kelly, 255 S.E.2d 859, 865 n.7 (W. Va. 1979)).

48 Recht Decision I, slip op. at 217-18.

49 Id. at 218-19.
B. Rural West Virginia: Poverty, Sparsity, and Difficult Geography

The conditions Judge Recht recognized still affect a majority of West Virginia counties and county school systems in 1996. West Virginia is a rural state, the second most sparsely populated state in the east. The majority of its children, seventy percent, are enrolled in rural and small town schools. Of its fifty-five counties, twenty-seven have less than ten students per square mile. The remaining twenty-eight counties, by comparison, have an average of twenty-five students per square mile.

The sparsely populated counties are poorer. Sixty percent of their students are eligible for free and reduced lunch, compared to forty-five percent of students in more densely populated counties. A landmark study by the West Virginia Department of Education in 1989 found that sparsely populated counties had substantially higher unemployment, lower per capita income, larger numbers of special education students, fewer gifted students, and fewer adults with a high school education. These disparities have not changed, but in 1989 only twenty-five counties were sparsely populated; now twenty-seven are.

The sparsely populated counties have a harder time supporting their schools. In the past five years, some counties have ended the year with budget deficits; eighty-one percent of those counties were rural. For fiscal year 1995,
fifteen of the sixteen counties without an excess levy were sparsely populated. As a further conclusion of law, Judge Recht found that "[t]he present system allocates funds according to factors such as the amount of a county's property wealth and its ability to pass excess and bond levies. These factors bear no relation to educational needs and costs of substantive educational offerings and results." To meet constitutional standards, Recht required eliminating county excess levies and using needs-based rather than per-pupil funding. Neither crucial change has been adopted.

Ironically, the most important item of the Recht Decision which has been adopted, the state-supported facilities funding program or SBA, through application of its economy of scale numbers, requires rural counties to build schools which are inappropriately sized for their population sparsity, terrain, and road conditions. Additionally, the poverty of the rural counties creates special educational needs which are best met in smaller schools. The one-large-size-fits-all school size requirement ignores these special needs and special costs which, according to the Recht Decision, it is the state's legal duty to consider.

III. THE SBA AND THE TEN-YEAR SCHOOL BUILDING PLAN

In 1989, by request of the executive, the Legislature created the School Building Authority (SBA) to "provide state funds for the construction and maintenance of school facilities so as to meet the educational needs of the people of this state in an efficient and economical manner." The funds available to the

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59 MARGOLIN, supra note 52, at 14.
60 Recht Decision I, slip op. at 220.
61 Recht found the arbitrary per pupil funding limits of the education funding formula unconstitutional per se. Recht Decision I, slip op. at 222-23. See W. Va. CODE §§ 18-9A-4, 5 (1994). Not only are they still in place, but funding per pupil has been reduced. See infra note 84.
63 See discussion infra part VI.A.
64 Recht Decision I, slip op. at 217.
authority were to be used:

Three percent for statewide projects,

Fifty percent of the remaining funds to each county based on net enrollment,

Fifty percent of the remaining funds allocated on the basis of "need and efficient use of resources, the basis to be determined by the authority in accordance with the provisions of section sixteen of this article." 67

Section sixteen sets out the criteria by which facility plans and need-based eligibility are to be judged. The legislature originally set seven goals which county facility plans were to address:

(1) Student health and safety;
(2) Economies of scale, including compatibility with similar schools that have achieved the most economical organization, facility utilization and pupil-teacher ratios;
(3) Reasonable travel time and practical means of addressing other demographic considerations;
(4) Multicounty and regional planning to achieve the most effective and efficient instructional delivery system;
(5) Curricular improvement and diversification, including computerization and technology and advanced senior courses in science, mathematics, language arts and social studies;
(6) Innovations in education such as year-round schools and community-based programs; and
(7) Adequate space for projected student enrollments. 68

67 Id. The "needs" projects are the major building projects, usually new buildings. Because the SBA has required counties to apply their available "net enrollment" money to these projects also, the needs projects (73 schools) have commandeered 79% of the $505,838,965 the SBA has made available, leaving only 18% of the money for the remaining 90% of the state schools. SCHOOL BUILDING AUTHORITY, REPORT TO THE LEGISLATURE OF THE STATE OF WEST VIRGINIA 3 (1996).

In 1994, the "net" program was replaced by the major improvement plan program, which allowed the SBA to apply the "economy of scale" numbers to non-need projects. W. VA. CODE § 18-9D-16.

68 W. VA. CODE § 18-9D-16(d).

In 1994, an eighth goal was added: "(8) To the extent constitutionally permissible, each facilities plan shall address the history of efforts taken by the county board to propose or adopt local school bond issues or special levies." Id.

The SBA lobbied for this additional goal. Language of the initial legislation, which remains in the statute today, provides that "[n]o local matching funds may be required under the provisions of this section." W. VA. CODE § 18-9D-15(g) (Supp. 1996). Some counties had plans funded by the SBA, but failed to pass "matching" bonds, and their funding was snatched. Goal number eight, although after the fact, allows the SBA to take such failure to adopt local bond issues
Creation of the SBA caused excitement, even jubilation, among school administrators and school board members who, in too many cases, had old buildings, on-going maintenance needs, and no local building funds at all. The potential availability of tens of millions of dollars incited a flurry of planning, and this planning was based on the initial substantive act of the SBA: creation of the "economy of scale" minimum required school sizes.

Creation of the SBA was the first step in the state’s ten-year school building plan, according to a speech Governor Caperton gave at the National Conference on Educational Facilities. The ten-year plan was to close 245 schools by the year 2000. It would cost $1.2 billion, save $307 million through repair and renovation and save $47 million a year in maintenance and personnel.

That the governor’s school building plan involved closing 245 schools into account despite the otherwise specific language of the statute.

West Virginia schools rely for funding on a seven step funding formula. W. VA. CODE §§ 18-9A-4 to -10 (1994 & Supp. 1996). There is no step for building or maintenance. See id. Counties with excess levies may use these funds for construction and maintenance, or counties may pass bonds specifically for school construction. In poorer counties passing bonds or levies is politically difficult. Excess levies also raise relatively less money in poor counties because county property is worth less.


Actually the SBA program closed 258 schools, that is more than 25% of the state schools, by 1994, six years ahead of schedule. Howley, Sizing Up Schooling, supra note 38, at 202.

Caperton, supra note 70. The $1.2 billion in school construction funds over 10 years was to come from the sale of bonds. $347 million of this “easy money” was pledged before the question was brought to the Supreme Court of Appeals whether the funding plan unconstitutionally committed the State to long-term debt without a vote of the people. The court found this was exactly what had happened. See Winkler v. State Sch. Bldg. Auth., 434 S.E.2d 420 (W. Va. 1993). The legislature has now committed lottery revenues to pay the next 10 years’ debt-service for SBA bond sales to date. Long-range funding of any state school facilities plan has thus been jeopardized by political haste. Politicians had a good idea what public reaction would be to such long-term debt. There is little question that a conscious decision was made to fund the SBA without asking for a constitutional amendment.

Caperton, supra note 70. The savings figures were the sum of those projected by each county in their facilities plan. Counties vied to project the greatest savings to make their projects more competitive, but the numbers had no objective basis. By 1995 the SBA was projecting total annual savings from construction projects funded of $20,898,049. SCHOOL BUILDING AUTHORITY, REPORT BEFORE THE SENATE COMMITTEE ON FINANCE 6 (1995).
was a clue to the policy direction the SBA would take. The immediate issuance of economy of scale numbers cemented the deal. When the economy of scale numbers were issued in 1989 only thirty-four percent of existing schools in West Virginia were eligible for SBA funding based on these size requirements. For counties to build schools that would be large enough to be eligible for SBA funds, other schools, smaller schools, would have to close. There was no need, therefore, for the governor or any policymakers to urge "consolidation" because the only way to reach the economy of scale required enrollment numbers would be for some schools to close and merge. In fact, predominately smaller and largely rural schools closed and their students merged into existing student bodies. Through application of the one-page economy of scale regulation, a school building program automatically became a school closing and consolidation program.

IV. ECONOMIES OF SCALE

A. Bigger Isn’t Necessarily Cheaper

In the SBA statute one of eight facility planning goals is “(2) Economies of scale, including compatibility with similar schools that have achieved the most economical organization, facility utilization and pupil-teacher ratios.” Use of

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74 Another clue was the governor’s choice for state superintendent of schools, Dr. Henry “Hank” Marockie, who had successfully closed small schools in Ohio County when he was county school superintendent. MARY F. HUGHES, APPALACHIA EDUC. LAB., THE SOCIAL, ECONOMIC, AND POLITICAL CONTEXT IN WHICH CONSOLIDATION OF PUBLIC ELEMENTARY AND SECONDARY SCHOOLS AND/OR DISTRICTS TOOK PLACE IN WEST VIRGINIA 44 (1991). Ohio County is the most densely populated county in the state with 58.20 students per square mile. MARGOLIN, supra note 52, at T-21.

75 F & A STATISTICS DIV., supra note 13.

76 Howley, Sizing Up Schooling, supra note 38, at 210.

77 One political plus of building large schools was job creation. The 1993 SBA 11-page presentation to the West Virginia legislature, for example, contained seven pages of charts and graphs showing Full-time Jobs, Projected Job Years Created by Educational Construction Expenditures, 1991-1995, SBA Impact on West Virginia’s Economy during 1991 ($88,900,000), Projected 5 year Economic Impact of the SBA on West Virginia’s Economy, 1991-1995 ($628.2 million), Increased Tax Revenue, and more. SCHOOL BUILDING AUTHORITY, LEGISLATIVE PRESENTATION 3-8, 11 (1993).

78 W. VA. CODE § 18-9D-16(d)(2).
the term "economies of scale" in the statute incorporates an assumption that larger
schools will be cheaper schools. The notion that a larger factory will produce
dercher widgets is commonsensical, perhaps, but the analogy between a widget
factory and a school as "producers" is weak. For services, such as education,
the input/output relationship is difficult to define and output measures should
consider not just the number of students "processed," but also if and how well
they are educated.

Nevertheless, in the 1960s and 1970s, researchers, ignoring educational
outcomes and costs outside of the school building, sought the "most economical
school size." A review of thirty such studies finds the answers range from one
hundred to one thousand eight hundred students. Where optimum school sizes
were smaller, the analysis was based on rural schools. The same studies
consistently found diseconomies in schools both larger and smaller than their
optimum.

"Economies of scale" is thus a more complex notion than just bigger is
cheaper. Such size-economies research typically presumes that external costs do
not change with school size, but, in fact, school consolidation enlarges the
geographic area from which students are drawn, increasing transportation
expenses or travel times, or both, particularly for more sparsely populated areas.
Capital costs are an additional factor in economy equations when new buildings
are constructed, and may offset any potential operating cost savings. Other
potential diseconomies of larger consolidated schools include: diminished school
bond or levy support, increased salaries for more specialized staff to offer

79 Fox, supra note 16, at 2.
80 Id. at 11.
81 Id. at 2.
82 Id. at 7-10.
83 Id. at 18.
84 Fox, supra note 16, at 17.
85 Id. at 19.
86 Id.
87 Id. at 20.
promised improved curricula, higher rates of vandalism, higher insurance costs, and larger physical plants to maintain.

No magic number is the school size for the most economical organization. Further, as the research reviewed above suggests, population sparsity is a crucial factor in determining what size school will be most efficient in a particular geographic and demographic setting. The well-written statutory language invites such a contingent analysis. “Compatibility with similar schools that have achieved the most economical organization, facility utilization and pupil-teacher ratios” is a very open-ended criterion. Weighed equally with the other six goals it should help balance effectiveness with economy.

B. West Virginia Economy of Scale Numbers

The SBA economy of scale numbers take none of this complexity into account. They are simply based on current statutory class-size requirements. Clacy Williams, Executive Director of the SBA, testified that the West Virginia Code requires “construction of school facilities using efficiencies, [and] [w]e have identified that efficiency as being primarily in relationship to the size of the school.” Williams says, “There’s a statute that requires that elementary grades one through six not exceed 25 students per classroom, so we figured if that’s good enough for elementary school, that probably we should carry that forward.” However, minimum school-size requirements do not just “carry that forward,” but instead require 150 students per grade in middle school and 200 students per grade in high school. The SBA has never offered any explanation of the middle and high school “economy of scale” minimum school-size

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90 W. VA. CODE § 18-9D-16(d)(2).

91 Tr. at 10, Pendleton Citizens v. Marockie, No. 96-C-507 (13th Cir. W. Va. hearing Apr. 12, 1996).

92 Id. at 107-08.

93 SCHOOL BUILDING AUTHORITY, supra note 9, at 68.
requirements. Had the authority looked at available research they would have found that "[s]chool closures in most cases mean only slight savings because 75-85% of a school budget is for personnel costs, which are usually only slightly affected, if at all, by closures." Teachers are expensive, so the fewer required, the cheaper the school. Improved student learning with lower pupil-teacher ratios suggests this is not always a wise economy, but the state per-pupil funding formula has made it necessary. However, the twenty-five pupil limit on class sizes already guarantees this economy. Teachers may have up to three additional students (up to twenty-eight) for which they are paid "per head." Then an additional teacher must be hired. Having two classes of twenty-five per grade instead of one actually gives the administration only three "extra" students to shuffle around before another teacher is required. So if economy of scale numbers are based on pupil-teacher ratios, the numbers might as well have required schools with one twenty-five-student class per grade with very little loss of efficiency, or three classes per grade with very little gain.

In response to a FOIA request for any research which supports the SBA economy of scale numbers, Clacy Williams, Executive Director, provided only a copy of chapter 18, article 5, section 18a of the West Virginia Code, which gives the maximum teacher-pupil ratio for grades one through six. Letter from Clacy Williams, Executive Director, School Building Authority, to Deirdre Purdy, staff, West Virginia Law Review (Sept. 11, 1996) (on file with author) [hereinafter Williams letter].

Although West Virginia has closed more than 25% of its schools since 1990, in 1990 there were 13.45 students for each professional educator and in 1995 there were 13.54. See MARGOLIN, supra note 52, at T-2. That is, no appreciable savings have been realized in professional personnel by these closures.


In 1990 the legislature reduced the number of professional educators funded by the state from 55 per thousand to 53.5 per thousand commencing for the school year 1991-1992 and thereafter. 1990 W. Va. Acts 1567. This reduction in the number of state-funded professional educators freed funds for salary increases for the teachers who remained. Howley, Sizing Up Schools, supra note 38, at 228. State lawmakers used this change in the state school aid formula as additional pressure to force schools to consolidate. HUGHES, supra note 74, at 40.

W. VA. CODE § 18-5-18a (1994).

Id.

Id. For grades one through three, additional pupils above 25 per class have been phased out so that, as of 1996, no additional pupils are allowable in these classrooms. Id.
An arbitrary rule is one selected at random rather than based on reason. The two class per grade school-size requirement, having no demonstrable relation to economy or savings, is arbitrary. The requirements for 150 students per grade for grades five through nine and 200 students per grade for grades ten through twelve, having no proffered reasonable bases at all, are similarly arbitrary. To enact an arbitrary rule is to act capriciously, without reason, at random. The SBA has acted arbitrarily and capriciously in creating and imposing the economy of scale required school sizes.

C. Economies of Scale and the Seven Other Goals

The SBA treats economy of scale as the most important goal, although it systematically denies that it does so. When asked by the Judge Kaufman during a hearing in the Pendleton County consolidation case whether the size of the school bears on the funding, Clacy Williams, SBA Executive Director replied, under oath, “It’s a very small issue.”101 Judge Kaufman spends the next eight transcript pages trying to understand why, in that case, the SBA would not just let Pendleton County spend the same amount of money to be used on the one consolidated high school to upgrade both existing high schools. Williams gives what has become the classic response to citizens who oppose SBA-funded consolidation plans: that would not be the same competitive plan that won SBA funding.102

What makes a school building plan competitive? The SBA review team ranking is the basis for funding. After each plan is evaluated by a statewide RESA committee,103 a review team composed of three SBA staff members and


102 Id. at 108, 119. Williams also offers now-classic reason two: we don’t “second-guess” the county Board of Education. Id. at 119. Suffice it to say that if facility funding is based on criteria which give higher ratings to larger schools, local boards will enter plans in a funding competition which meet those large school standards.

This article does not address the extremely important issue of state/local education authority and control over school closings and consolidations, particularly in a state with a “thorough and efficient” education clause in its constitution. In West Virginia, this issue has been clearly resolved in favor of the state. See Board of Educ. v. West Virginia Bd. of Educ., 399 S.E.2d 31 (W. Va. 1990); see also Pell v. Board of Educ., 426 S.E.2d 510 (W. Va. 1992) (discussing how introduction of the SBA has altered the state/local power relationship).

103 A RESA is a Regional Educational Service Agency, a multi-county educational service organization, created by statute. See W. VA. CODE § 18-2-26 (Supp. 1996). A statewide RESA team is composed of school board members and superintendents, representing each of the 8 state
the Director then re-evaluates the plans using the SBA "Plan Review Team Project Summary Form." The SBA team evaluates each project on a scale from one to nine on seven criteria which generally match the goals in chapter 18, article 9D, section 16 of the West Virginia Code. Then the SBA multiplies each rank by the "SBA Index": 1.5 for economies of scale, curricular improvement, educational innovations, and existing health or safety conditions; 1.0 for multi-county projects, existing severity of need for space to house projected student enrollment, impact on student travel, and an SBA-added "goal": SBA review team overall rating.

The law nowhere authorizes such indexing nor suggests these seven criteria are of unequal importance. The SBA simply invented this weighting in 1989, deciding "by consensus" that four of the criteria were the "most significant in the evaluation of projects." Ranking economy of scale at 1.5, especially when that criterion no longer truly refers to economy, but refers instead to the SBA-invented school size numbers, totally skews the rankings to schools of SBA-favored size. Improved curriculum is assumed to follow large school size, so larger schools automatically get higher rankings for curriculum improvement.

Downgrading the severity of need for space to 1.0 ignores the fact that

RESAs. Id.

104 SCHOOL BUILDING AUTHORITY, supra note 9, at 84.

105 Nor does the law say that up to 10% of a project's rating (9 of 90 possible points) may be "added" by the SBA review team solely on the basis of the review team's "overall rating," which is already based on SBA-weighted criteria. This piles subjectivity on subjectivity to produce an ostensibly objective number from 1 to 90 on which tens of millions of dollars are riding. "This is a very subjective process," said SBA member Jim McCallum. Linda Blackford, Schools Panel Drops Fight, Awards Funds, CHARLESTON GAZETTE, June 8, 1995, at 1C.

106 Williams Letter, supra note 94. Williams also testified that the SBA considered this to be "fleshing out" the code. Tr. at 106, Pendleton Citizens v. Marockie, No. 96-C-507 (13th Cir. W. Va. hearing Apr. 12, 1996).

107 As with the "economy of scale" numbers, no research supports this conclusion. Curriculum improvement makes no difference in elementary schools, and studies show that high schools graduating one hundred students a year have curricula essentially equivalent to that available at larger schools. See supra note 28.

This high ranking for improved curriculum comes "automatically" with large school size because counties are not required to justify these promises. Plans say things like, "A consolidated program would allow more school-based instruction, increasing time on task and reinforcement of regular education curriculum." CALHOUN COUNTY BD. OF EDUC., COMPREHENSIVE EDUCATION FACILITIES PLAN 7 (1990).
a few West Virginia counties' schools are experiencing booming growth and need larger facilities. The legislature thought this was as important as the other goals; the SBA does not. The State Board of Education emphasizes the importance of multi-county projects and talks about abolishing county school boards, if need be, to accomplish them. The SBA rates multi-county projects at 1.0, discouraging counties from proposing them.

Although numerical rankings give the process the appearance of objectivity, there are no objective criteria (except the economy of scale numbers) by which these rankings are assigned. Transportation is a good example of the underlying subjectivity of the SBA review process. Transportation becomes more expensive and much harder on rural children and their families after consolidation. The SBA decided those considerations were worth only a 1.0! Not only the weighted index, however, but also the raw number is subjective.

When the review team looked, for example, at transportation in Pendleton County (where a mountain separates the school to be closed from the new one to be built with SBA funds), the SBA review team gave transportation a score of 3. In the consolidation hearing the judge asked Williams, “If you had two schools,

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109 SCHOOL BUILDING AUTHORITY, supra note 9, at 84.

110 CRISIS, supra note 42, at 18-19; see also Alexander, supra note 15, at 235-38. Additional school bus transportation also has a substantial personnel cost for rural counties. Service personnel are allotted on a per pupil basis. The more bus drivers needed, therefore, the fewer classroom aides, secretaries, janitors, or maintenance positions are available for school and students’ needs. See infra Table I.

111 Michael Fox, School Transportation as a Daily Constraint in Students’ Lives, 17 RURAL EDUCATOR 22 (1996).

112 SCHOOL BUILDING AUTHORITY, supra note 9, at 84.

113 Because consolidation creates larger school zones, travel times will seldom be improved by building larger schools. Williams testified that if transportation were unchanged, a five would be assigned. Tr. at 125, Pendleton Citizens v. Marockie, No. 96-C-507 (13th Cir. W. Va. hearing Apr. 12, 1996). Thus, the SBA is really using only part of the one-to-nine scale so that transportation, again, has less of an impact on the SBA’s overall comparative plan rating. SBA travel time ratings confirm this: of the 38 plans evaluated for 1996, no plans received a seven, eight, or nine for travel; only one received a six, 28 received fives, six received fours, two received threes, and one received a two. SCHOOL BUILDING AUTHORITY, 1996 SBA STAFF REVIEW RATINGS (RAW SCORES) (1995).
you would have fives for both of those, right?” Williams responded:

Conceptually I understand what you’re saying and that’s probably correct. The way it would work in reality is that if now we’re talking about a consolidated school that has every kid in the county in it, when you look at that relationship, there’s only about one percent of the kids total that would have major variations in travel time, so consequently it doesn’t have a lot of impact.

The court points out that previous testimony has been that twice as many kids (ten percent) will be on the bus more than forty-five minutes. Williams replies, “[W]hen you look at the total number of kids in the county . . . that’s a very, very small percentage.” The lesson is, with its minimum school size numbers, the SBA cares very much about precise and objective standards. With regard to transportation, ten percent of a county’s schoolchildren are the SBA’s “very, very small percentage,” and the ostensibly objective evaluation is skewed to reflect that.

D. Have the SBA Economy of Scale Numbers Saved Money?

A full-scale economic analysis is beyond the scope of this article, but some simple figures are instructive. SBA “economy of scale” numbers are based on pupil-teacher ratios. Although a quarter of West Virginia’s schools have been closed since 1990, there were 13.45 professional educators per pupil then and in 1995 there were 13.54. Thus, closing a quarter of the schools has made a negligible difference in the targeted “economy” factor. Similarly, in 1990 there were 22.04 students for each service worker (bus drivers, secretaries, janitors, aides), while in 1995 there were 22.02. Major school consolidation has

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114 Tr. at 125, Pendleton Citizens v. Marockie, No. 96-C-507 (13th Cir. W. Va. hearing Apr. 12, 1996).

115 Id. at 125-26 (emphasis added).

116 Id.


118 See MARGOLIN, supra note 52, at T-2, tbl. 1.

119 Id.
produced no savings in the most expensive budget factor, personnel.

From projects funded to date, the SBA has promised $20,898,049 in annual cost savings, that is monies counties will save each year as a result of SBA construction grants. Projected savings compared to school budget deficits for all counties with deficits for fiscal year 1995 shows:

<table>
<thead>
<tr>
<th>County</th>
<th>Projected Annual Savings</th>
<th>Actual Deficit FY90</th>
<th>Actual Deficit FY95</th>
</tr>
</thead>
<tbody>
<tr>
<td>Braxton†</td>
<td>$150,000</td>
<td>$0</td>
<td>$431,974</td>
</tr>
<tr>
<td>Clay†</td>
<td>$362,000</td>
<td>$45,559</td>
<td>214,171</td>
</tr>
<tr>
<td>Grant†</td>
<td>No SBA funding</td>
<td>$0</td>
<td>119,799</td>
</tr>
<tr>
<td>Harrison</td>
<td>$1,955,598</td>
<td>$0</td>
<td>757,689</td>
</tr>
<tr>
<td>Lincoln†</td>
<td>No SBA funding</td>
<td>$0</td>
<td>200,933</td>
</tr>
<tr>
<td>Mingo</td>
<td>$1,241,200</td>
<td>$0</td>
<td>3,910,836</td>
</tr>
<tr>
<td>Monroe*†</td>
<td>$250,000</td>
<td>$0</td>
<td>362,573</td>
</tr>
<tr>
<td>Nicholas†</td>
<td>$200,000</td>
<td>$0</td>
<td>314,728</td>
</tr>
<tr>
<td>Pendleton†</td>
<td>No SBA funding</td>
<td>$0</td>
<td>167,135</td>
</tr>
<tr>
<td>Randolph†</td>
<td>$281,800</td>
<td>$0</td>
<td>526,905</td>
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<tr>
<td>Ritchie†</td>
<td>$190,000</td>
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<td>Summers†</td>
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<td>$0</td>
<td>281,951</td>
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<tr>
<td>Tucker†</td>
<td>$0</td>
<td>$0</td>
<td>96,759</td>
</tr>
<tr>
<td>Webster†</td>
<td>No SBA funding</td>
<td>$0</td>
<td>273,826</td>
</tr>
</tbody>
</table>

† Sparsely populated county * Building not finished

Of these counties, Braxton, Harrison, Mingo, Nicholas, Randolph, Ritchie, Roane, Summers and Tucker Counties had no budget deficits before they undertook their consolidation programs. This is not conclusive, but it is suggestive. Not only have the promised savings not materialized, but these counties are, for the first time, running deficits. Part of Randolph and Clay Counties’ fiscal problems result from loss of levies defeated following forced

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120 School Building Authority, supra note 73, at 6.

121 School Building Authority, Report Before the Senate Committee on Finance 6 (1995) (projected annual savings from consolidation); Margolin, supra note 52, T-2, T-4 (actual deficits); id. at T-21 (sparsely populated counties).

122 See id.
consolidation, an additional financial hazard.\footnote{Telephone interview with Craig Howley, Director ERIC Clearinghouse on Rural Education and Small Schools, Appalachia Educational Laboratory (Oct. 8, 1996).}

Had the SBA looked at any research on the massive national wave of school consolidation in the 1960s and 1970s, this lack of savings would have been no surprise. In one study of forty-nine districts, thirty-five promised savings from closing schools, but only twelve bothered to calculate them and, of those, eight concluded the closures produced no savings or additional costs.\footnote{\textit{School Building Authority, Report to the Legislature of the State of West Virginia} 3 (1996). Three percent of the money is set aside for statewide projects.} A study of consolidations in all fifty states from 1980 to 1984 found that for “Administration, Instruction, Transportation, Operations and Maintenance, Total Costs, and Capital Projects . . . only Administration . . . indicated a significant . . . savings as a result of consolidation.”\footnote{See id.}

Because SBA “minimum size” schools are large, they have been very expensive. The SBA has funded $509 million in school construction since 1990.\footnote{Administrative costs went up only 10% compared to 33% in unconsolidated schools. Streifel, \textit{supra} note 88, at 15.} Seventy-nine percent of that money was spent on seventy-three schools (less than ten percent of the schools in the state) leaving eighteen percent of the money for the remaining ninety percent of the schools. The total $509 million state allocations to SBA projects, though not “counted” in the state education budget, represent capital costs only, not interest.\footnote{\textit{Valencia, supra} note 89, at 6.} To restate, half a billion dollars has been spent building large schools based on “economy of scale” numbers, and produced no demonstrable savings.

V. LARGE SCHOOLS: NOT ECONOMICAL, BUT PERHAPS MORE COMPREHENSIVE?

Although these projects may not have saved money, additional curriculum is promised to make these building projects well worth the capital costs (and the deficits).\footnote{For elementary students, additional curriculum is no benefit. Since there is no evidence of economies intrinsic to larger school size, and no benefit of additional curriculum for elementary students, there are no reasons to insist on enlarging elementary schools, as the SBA is doing. State} Larger schools do offer more courses than smaller ones.\footnote{Administrative costs went up only 10% compared to 33% in unconsolidated schools. Streifel, \textit{supra} note 88, at 15.} However,
research shows that offering more courses is not equivalent to offering a more comprehensive program. A "comprehensive" program includes a base or introductory course, advanced courses for which the base course is a prerequisite, and alternate courses which serve students who are not interested or lack the special talent the subject requires. In an extensive and widely cited study, David Monk examined New York high schools ranging from less than one hundred students to larger than three thousand. He found that below four hundred students, additional students translated into improved student access to courses, but above the four hundred-student level increases in enrollment made little difference. In terms of curriculum comprehensiveness:

the case for maintaining secondary enrollment levels at the 400 pupil level is convincing; the case for maintaining secondary enrollment levels beyond 400 is more problematic. In light of this, blanket policies requiring or encouraging school reorganizations that lead to increases in school size regardless of the starting point are ill advised.

Following up on Monk's insight, researchers used the High School and Beyond survey data, representative of all public and private high schools in the United States in 1980, to extend the study of curriculum comprehensiveness. Examining science, math and foreign languages and using a more refined notion of comprehensiveness, they found again that "schools that graduate 100 students

education law allows ungraded K-2 classes, so that even the SBA's 25 student/teacher rationale for school sizes is totally irrelevant. W. VA. CODE § 18-5-18(c).


130 DAVID H. MONK, NEW YORK STATE LEGISLATURE, SECONDARY SCHOOL ENROLLMENT AND CURRICULAR COMPREHENSIVENESS 23 (1986).

131 Haller, supra note 129, at 5-6.

132 Id. at 15.

133 Id. at 24-25.

134 Id. at 25.

135 Haller et al., supra note 129, at 5-6.
are probably the equal of much larger institutions."136 They also found that in larger schools, additional classes "tend to be used to serve the curricular needs of academically talented or college-going students rather than the needs of the less talented or those bound for the workplace."137

The SBA arbitrarily insists that high schools must have 800 students, twice the size necessary for a comprehensive curriculum.138 To achieve that school size, students who attend smaller high schools, students who are generally poorer and more rural, must lose their schools and be bused long distances to the larger school so that affluent children can have a few academic advantages.139

VI. LARGE SCHOOLS: NOT MORE ECONOMICAL OR COMPREHENSIVE, BUT PERHAPS MORE THOROUGH?

A. Developing Minds and Bodies

[A] thorough and efficient system of schools ... develops, as best the state of education expertise allows, the minds, bodies and social morality of its charges to prepare them for useful and happy occupations, recreation and citizenship, and does so economically.140

Thoroughness reflects educational outcomes: development of mind, body and social morality. The "state of education expertise" has, perhaps, changed most radically regarding school size and educational outcomes since the Supreme

136 Id. at 16.

137 Id. at 14. Smaller schools would not need to give up such advantages, however, if West Virginia relied more on satellite delivery of advanced classes, but hundreds of millions of dollars are available for large buildings, and no state funding for such technological innovation, which would be far cheaper. BRUCE O. BARKER, APPALACHIA EDUC. LAB., INTERACTIVE DISTANCE LEARNING TECHNOLOGIES FOR RURAL AND SMALL SCHOOLS: A RESOURCE GUIDE, (1987); DAVID MONK, APPALACHIA EDUC. LAB., USING TECHNOLOGY TO IMPROVE THE CURRICULUM OF SMALL RURAL SCHOOLS (1989).

138 See Monk, supra note 130; Haller, supra note 129.

139 See supra note 137.

Court of Appeals formulated this standard.\textsuperscript{141} In 1964, a study of small Kansas high schools concluded that small high schools offered students greater opportunities to participate in extracurricular activities and to exercise leadership roles.\textsuperscript{142} Researchers began to consider other effects of school size on student achievement while taking into account socioeconomic status (SES).\textsuperscript{143} Controlling for SES is important because SES is the most influential and consistent factor related to schooling outcomes -- low SES directly relates to poor educational outcomes.\textsuperscript{144} Rural areas are generally poor areas and this is especially true in West Virginia, but poverty is not confined to rural areas. In 1995, forty-six percent of all state school students were receiving free and reduced lunch.\textsuperscript{145} Mounting evidence shows that students in low SES communities perform much better in small schools.\textsuperscript{146}

A 1996 West Virginia study supports the positive relation, found in many other places, between small schools and improved learning for poor children.\textsuperscript{147} Craig Howley looked at school size, achievement (measured by standardized test scores), and SES (measured by school free and reduced lunch recipients) for all


\textsuperscript{142} R. Barker \& P. Gump, \textit{Big School, Small School} (1964).

\textsuperscript{143} Craig B. Howley, \textit{Appalachia Educ. Lab., What Is the Effect of Small-Scale schooling on Student Achievement} 1 (1989).


\textsuperscript{145} West Virginia Dep't of Educ., \textit{supra} note 54. \textit{See infra} Table I.


\textsuperscript{147} Howley, \textit{Sizing Up Schools}, \textit{supra} note 38.
schools in West Virginia.148 Small school size benefitted the achievement of impoverished West Virginia students, while large school size harmed it.149 This effect was greatest for high school students, suggesting that larger schools systematically widen the gap between the achievement of impoverished students and the achievement of affluent students.150 Howley proposes:

that large schools are not just dysfunctional for impoverished students, but that they dramatically compound the educational disadvantages that inevitably threaten impoverished students. They seem actually to harm students who already confront more than their share of threats. Doing no harm, of course, is the key tenet of competent professional practice (citation omitted).151

Although consolidation opponents are often characterized as stubborn hayseeds fighting a foolish battle against progress and modernism, the mechanisms that make small schools better for poor students are just those cited by rural residents as they struggle to save their community schools. "Increased school size has negative effects upon student participation, satisfaction, and attendance, and adversely affects the school climate and a student’s ability to identify with the school and its activities. . . . In addition, small schools may be friendlier institutions, capable of involving staff and students psychologically in their educational purposes."152 These same factors affect dropout rates: higher dropout rates are associated with larger school enrollments.153

The absolute bottom line for rural parents, though, is increased transportation to consolidated schools.154 Urban administrators tend to shrug and

148 Id. at 109-12.

149 Id. at 151.

150 Id.

151 Id. at 154-55.

152 Fowler & Walberg, supra note 144, at 200.

153 Fetler, supra note 146, at 113.

154 Gwendolyn R. Jones, The Perceptions of Small Rural School Advocates in West Virginia Regarding the Importance of Their Schools, and Their Level of Influence on County and State Boards of Education (1993) (unpublished Ed.D. dissertation, West Virginia University) at 121, 133-35, 175, 262; see also infra Table 1.
minimize the issue. Dr. Marockie claims it gives kids a chance to socialize that they might not get if they stayed in the rural community.\textsuperscript{155} Students, on the other hand, consider time devoted to riding the bus a great waste of physical and intellectual time.\textsuperscript{156} Long travel times lower life quality for students and families; they prevent kids' participation in after-school activities, but most important is their negative impact on student achievement.\textsuperscript{157} Although students who spend more time on buses tend to come from low-income rural areas, even when SES is held constant, longer bus rides correlate with lower academic achievement.\textsuperscript{158} Students suggest that time devoted to travel causes fatigue, so that they are not as willing to put the required time and effort into homework assignments.\textsuperscript{159}

Thus, the SBA, by forcing larger schools on West Virginia counties whether they want them or not, adds to the educational distress of poor and rural children, depresses academic achievement, and fails to thoroughly develop these students' minds. Long daily bus rides are exhausting and unhealthy, prevent participation in sports, and so fail to thoroughly develop their bodies. These effects could be undone at one stroke: by keeping and improving small schools which are already in place.

B. Developing Social Morality

The one-large-size-fits-all school that the SBA funds proves neither economical, nor thorough, nor efficient, but there are other costs, social costs, that appear on no balance sheets and are calculated only in poorer lives for citizens who lose their local schools.

All too often school closing proposals are unveiled at the last moment, and although the requisite public hearings are held, the decision has already been made.\textsuperscript{160} These hearings give lip-service (or ear-service) to a notion of public

\begin{footnotes}
155 HUGHES, supra note 74, at 44.

156 Fox, supra note 111, at 25.

157 Yao-Chi Lu & Luther Tweeten, The Impact of Busing on Student Achievement, 4 Growth & Change 44-46 (1973).

158 Id.

159 Fox, supra note 111, at 25-26.

160 Howley, Sizing up Schooling, supra note 38, at 188.
\end{footnotes}
input. The local board listens, but it knows what must be done to bring millions of dollars into the county schools: to meet economy of scale numbers, board members must vote to close small schools and build or add on to larger ones. A cynicism has been bred in citizens about their local boards as pawns of the state, about the individual's lack of power over even their local board members, and about the relative unimportance of schoolchildren's education and communities' lives when put in the balance against state money and SBA power.

In counties across West Virginia, school closing fights have pitted rural communities against their county seats (where larger schools are usually built) and provided a focus for anti-tax groups to organize against bond or levy support for these unpopular proposals. Residual sentiment against school financial support and lingering anger over bitter political battles have left too many rural counties, virtually powerless before, now sullen and divided.

To urban administrators, moving a school ten or fifteen miles down the road may seem a minor adjustment on the state map, but local schools are the only town hall, gym, polling place, theater, dance hall and recreation center. Poor parents with worn-out cars, welfare mothers with more kids at home, grandparents, and proud neighbors can get to the community school for the talent show or kindergarten graduation, but they cannot get ten or fifteen miles down winding two-lane roads or over mountains. Parental and community


162 See Jones, supra note 154, at 141-42, 150, 164-68, 196-97, 213, 231-33.


164 Jones, supra note 154, at 114, 116-17, 135-36, 188-89, 264-65.

165 Id. at 200-02.

166 Id. at 44, 154-57, 182-85.

167 Nebo School, a 3-room school in a desperately poor area, still raised $7000 per year from fund raisers and had 100% parent participation at PTO. As part of the Clay County consolidation plan, the school was closed and students moved 8 miles down Route 16 to Ivydale. Two parents from Nebo have finally been cajoled, after 4 years, to come regularly to the Ivydale PTO. Telephone
involvement in the schools drops precipitously.\textsuperscript{168} No balance sheet is kept of such immeasurables, but these systematic blows to education, community, and citizenship cannot be good for social morality of students or the state.

VI. A PROPOSAL

The SBA statute, chapter 18, article 9D, section 16, lists eight equal goals to be considered in SBA school funding decisions. These goals have been interpreted arbitrarily and applied inequitably to force large school building, close smaller schools, and make facility funds unavailable for smaller schools. Three simple changes in SBA project evaluations would change these outcomes.

1. Discard SBA economy of scale minimum school size requirements, and replace them with sparsity-sensitive economy of scale guidelines for county facility plans.

2. Discard SBA weighting of the statutory goals so that all eight legislative goals are considered equally in allocating funding.

3. Discard the SBA invention, “overall SBA rating,” so that only statutory goals, not SBA goals, are used.

These straightforward changes would align SBA funding with the relevant law and discontinue the SBA’s imposition of its political, cultural, and educational goals in place of the statute: The economy of scale numbers have already reshaped West Virginia’s school system: by directing seventy-nine percent of a half billion dollars to seventy-three school projects, the SBA has set its values in bricks and mortar, while failing to give equal attention to the remaining ninety percent of schools not privileged to be chosen.

Beyond discarding the economy of scale minimum school size numbers, West Virginia needs to re-evaluate school facility financing in light of geographic reality and the Recht Decision. Relatively little money will be available for school facilities for the next thirty years while the SBA-incurred debts are repaid. Will small schools inevitably have to close because they have not been maintained under SBA large-school standards, and no more money is forthcoming? Or will West Virginia recognize that its community schools, already scattered throughout its rural areas, can provide the best education along

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\textsuperscript{168} \textit{Id.}

Interview with Nancy Updegrave, Principal, Ivydale School (Sept. 16, 1996).
with community and social stability and provide them in an economical, thorough and efficient manner?

*Deirdre Purdy*

*The author was a member of the Calhoun County Board of Education, 1988-94; the Rural Caucus of the West Virginia School Boards Association, President, 1992-94; and the West Virginians for Community Schools, President, 1991-93.*
<table>
<thead>
<tr>
<th>County</th>
<th>Students per Square Mile</th>
<th>% Free &amp; Reduced Lunch</th>
<th>1995 Deficits</th>
<th>% Service Personnel as Bus Operators</th>
<th>% K-4 on bus more than 30 min. one-way</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barbour</td>
<td>8.13</td>
<td>67.64</td>
<td>28</td>
<td></td>
<td></td>
</tr>
<tr>
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* Sparsely populated † Counties without excess levy

** MARGOLIN, supra note 52, at T-18, id. at T-21 (sparsely populated counties and students per square mile); id. at T-22 (counties without excess levy); id. at T-29 (1995 deficits); WEST VIRGINIA DEPT OF EDUC., supra note 54 (percent free and reduced lunch); see WEST VIRGINIA DEPT OF EDUC., W. VA. SCHOOL BUSES AND OPERATORS - 1994-95 (percent service personnel as bus operators); WEST VIRGINIA DEPT OF EDUC., EXECUTIVE SUMMARY, TRANSPORTATION TIME SURVEY, GRADES K THROUGH 12, at 2 (percent K-4 on bus more than 30 min. one-way).