

## Do Rural and Suburban Principals Approach Planning Differently? A Two-State Comparison

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*Rural school principals find themselves completing school improvement plans mandated by state education agencies, largely on the model of technical rationality. Technical rationality, however, is just one among several approaches to planning. Because of their reputedly close connections to community and the small size of many rural schools and districts, rural principals may be more likely than other principals to adopt less formal or more incremental approaches to planning. Systems of schooling are also organized according to historical, political, and economic conditions in the various states. Differences in state context may, therefore, influence the way rural principals approach planning. Using a research instrument grounded in theories about planning, we surveyed a stratified random sample of principals (n = 651). Results indicate significant differences by locale and by state, which are partially explained by two covarying characteristics.*

### Introduction

Rural schools—no less than schools elsewhere—are confronting changes in the environments surrounding them. Depending upon the particular locale, these changes might result from out-migration of younger, well-educated residents or in-migration of well-educated telecommuters (Long & Nucci, 1998; Nord, 1995). They may entail economic decline or shifts in the community's fundamental character (Knapp, 1995; Lewis, 1995). Changes may relate to the ethnic makeup of the community or the average age of its residents (Bull, 1993; Castle, 1995).

With many substantial changes taking place, rural schools may need to anticipate a diminished tax base or respond to pressure to provide new facilities, or, in some unfortunate communities, do both at once. And in some states, rural communities face unwanted school closures or the consolidations of small, local schools into much larger, centrally located ones. Moreover, rural schools face a barrage of new requirements promulgated by state legislatures and state education agencies bent on shaping school practices through the enactment of accountability laws and regulations (e.g., North Carolina State Department of Public Instruction, 1994; South Carolina Department of Education, 1986).

In the main, principals and teachers encounter dramatic and often confusing changes (Fullan, 1991; Kowalski &

Reitzug, 1993). The changing environments surrounding schools and the uncertain consequences of such changes make it difficult for educators and community members to identify clear aims for schools and strategies to advance those aims. Under such conditions, school leaders are exhorted to be proactive (Loader, 1997)—to anticipate, manage, and even lead change (Hoyle, English, & Steffy, 1998).

Planning—formal or informal, systematic or improvisational—constitutes an important response to the unpredictable futures that schools face. Particularly in unstable environments, planning supposedly reduces surprises, helping the school community adjust to change and remain focused on its most important aims (Kimbrough & Burkett, 1990; Sybouts, 1992). Failing to plan is purported to jeopardize the potential and the future of the school (Kaufman, 1972).

Under classical management theory, planning has been interpreted as an executive function, reserved primarily for those upper-level managers with the most complete view of the organization (e.g., Lauenstein, 1986; Roney, 1977). In school districts, planning has conventionally been consigned to the domain of the superintendent and the board of education (e.g., Herman & Kaufman, 1983; Lilly, 1985). Recent attention to school-based management has, however, shifted the burden for planning—especially the planning of school-wide instructional improvements—to the principal (Kowalski, 1999).

The responsibility for planning may, however, put the principal in a precarious position. As Louis and Rosenblum (1977) suggest, planning may be complicated, even for rural principals, by the need to mediate between the interests of the school community—teachers and parents—and the interests of more remote, but often more powerful, sources

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of influence (e.g., the legislature and the state department of education). Moreover, these authors argue that as rural schools grow in size and complexity, principals will need to devote greater time and attention to executive functions such as planning.

Contemporary literature on the principalship indeed reflects this trend, with a number of authors assigning responsibility for long-range and strategic planning to the principal (Herman, 1989, 1994; Kaufman & Herman, 1991; Loader, 1997; Seyfarth, 1999; Snyder, Acker-Hocevar, & Snyder, 1994; Ubben & Hughes, 1997). Moreover, accountability measures in many states now require that principals work with their staffs, parents, and community leaders to develop school-wide improvement plans (e.g., Johnson, 1998; North Carolina State Department of Public Instruction, 1994; South Carolina Department of Education, 1986).

Despite the apparent need for principals to be responsible for planning, very few studies to date have examined principals' actual approaches to planning, and none has examined possible contextual influences on rural principals' planning. In this study, therefore, we explored the different approaches to planning that principals take and examined the personal and contextual variables that seem most likely to influence principals' approaches to planning. In this article, we report findings related to contextual influences, focusing particular attention on differences by locale (rural or suburban) and state (West Virginia or Ohio).

### *The Relevance of Locale*

Supporters of pedagogy of place (e.g., Rural Challenge Policy Program, 1998; Sher, 1995; Theobald, 1997) might wish to know how rural as opposed to other principals are actually planning, so that planning might, eventually, better accommodate such a pedagogy. This sort of planning is imagined as entailing more consensual forms (Rural Challenge Policy Program, 1998), according greater respect to tradition, and exhibiting a more complex appreciation of the relationship between means and ends (i.e., less technical rationality).

More to the point in the present case, rural purposes and life-ways comprise no part of the mainstream professional conversations about school improvement in these states or others (see e.g., Coe & Howley, 1989; Meckley & Hazi, 1998; Purdy, 1994; Rural Challenge, 1995). In fact, rural life-ways and communities in these states are more likely than not to be seen as impediments to educational improvement, though few officials feel sufficiently comfortable to voice such concerns publicly (Education Writers Association, 1988; Seal & Harmon, 1995). Nonetheless, rural places are commonly considered deficient, inferior, and in need of fixes, particularly including educational fixes (Herzog & Pittman, 1995; Seal & Harmon, 1995).

Furthermore, efforts to close small rural schools greatly complicate the planning that principals might undertake. Policies of school closure and consolidation almost force principals to plan at a distance from—almost in opposition to—parents and community members (cf. Weldy, 1981). This reactive and defensive type of planning (what we come to call reactive planning) is not clearly documented in either the literature on rural education or the literature on the principalship. Instead, a prescriptive literature exhorts principals to work with communities to accomplish school closure with minimal upheaval by involving community representatives and deploying a variety of public relations strategies (e.g., Arizona State Department of Education, 1978; Sieradski, 1975).

The available literature on rural principals (e.g., Brown, Carr, Perry, & McIntire, 1996; Louis & Rosenblum, 1977; Reisert, 1992; Schmuck & Schmuck, 1992; Stern, 1994), moreover, does not address approaches to planning at all. The description of the rural principal's role offered in this literature closely resembles generic descriptions of the role. We learn from these studies that flexibility and compromise are important (Reisert, 1992), as is tolerance for ambiguity (Brown et al., 1996; Schmuck & Schmuck, 1992) and the capacity to pursue multiple tasks simultaneously (Stern, 1994).

In general, however, rural societies are portrayed as comparatively more informal, less modern, and more respectful of tradition than urbanized societies. One might expect, therefore, that planning in rural schools would be less technical and more consensual than planning in schools elsewhere. The extent to which the rural circumstance in the U.S. might constitute a "rural society" has not, however, been well articulated. In fact, rural schooling has been criticized by many observers as substantially dominated by cosmopolitan norms and purposes (e.g., DeYoung, 1995). Indeed, some observers doubt that rural schools, in general, are any closer to their communities than schools anywhere else (e.g., Howley, Bickel, & McDonough, 1996; Schmuck & Schmuck, 1992). The literature on rural education, therefore, offers contradictory suggestions about the approaches to planning that might typify rural schools.

Broadening the literature base to include sociological literature on economic and social planning in rural places in the United States, we find evidence indicating that rational planning tends to accompany externally imposed innovations, which are often rejected or subverted by rural residents (see e.g., Daley & Poole, 1985; Rogers, 1995). Furthermore, external agencies tend to construe traditional approaches to planning as less effective than rational approaches (Rogers, 1995). In fact, what we call "traditional approaches to planning" may not be construed by outside reformers as legitimate forms of planning at all. Some studies do show, however, that traditional and consensual ap-

proaches to planning can lead to productive outcomes in rural communities (e.g., Salamon, Farnsworth, & Rendziak, 1998).

### *The Relevance of State Regulatory Context*

Given the fact that the federal constitution did not establish education as a fundamental right, the state is the ultimate educational authority in the U.S. In most states, the policies with the strongest influence on district and school-level planning originate at the state level, but the nature of such policies and the extent to which compliance is expected vary substantially among the states (e.g., Wirt & Kirst, 1989). The state contexts that influence schooling, however, are not limited to differences in education policies, but also reflect economic, social, and political differences (e.g., Spring, 1998).

This study used two states to represent substantially different contexts for education, broadly speaking. The economy of Ohio, overall, is much more diverse and more affluent than the West Virginia economy. West Virginia was developed as an internal U.S. colony, principally in the latter half of the 19th century (DeYoung, 1995; Salstrom, 1991). As a consequence, it developed a narrow economic base and a legacy of poverty and dependence. Moreover, elites—with direct involvement in the schooling enterprise—emerged to reinforce these legacies. And to increase control over schools during the Great Depression, the legislature mandated massive consolidation of local into county districts (432 became 55 with this one Act of the legislature). By contrast, schooling in Ohio is organized into 611 local and independent school districts, resulting from consolidations in the early and mid-1900s that moved school district governance from the community to the township level. Townships persist everywhere in Ohio as political units, but in West Virginia the county identity dominates the full range of social and civic projects from schooling to roads to libraries to “welfare.” In Ohio, towns and townships maintain comparatively vigorous identities and institutional capacities based on a lengthy history of localism (e.g., Guitteau, 1949). In addition, there are still 49 local districts (exempted village districts) in Ohio that remain independent of township-level governance.

Another difference between the states is that teachers in Ohio have greater influence over their salaries and working conditions than teachers in West Virginia. Even without comprehensive legislation permitting collective bargaining, teachers in some Ohio districts engaged in collective negotiations as early as the late 1960s (Green, 1973), and in 1983, the Ohio General Assembly passed legislation permitting collective bargaining. By 1993 approximately half of all districts in Ohio were bargaining with their teachers (Ashyk, 1995). West Virginia prohibits work actions by teachers, and there are no provisions enabling

West Virginia’s public employees to engage in collective bargaining.

Despite notable differences, there are commonalities in the educational plight of the two states. Education funding is troubled in both states, and rural interests have, in both states, successfully pursued litigation that has overturned the legality of the prevailing state systems of school finance (with little ultimate effect on educational funding in each case). In each state, as well, the respective legislatures have enacted serious accountability and testing measures, and each state’s “reform” package requires principals to draw up school improvement plans. These two states’ accountability schemes may, in fact, constitute the only enduring outcome of rural equity challenges.

Considering their different histories, Ohio and West Virginia seem like they might support different models of planning. Our hunch was that planning in rural Ohio schools would be more traditional and consensual than planning in West Virginia schools.

### Method

#### *Sample*

The sampling frame for this study was the Common Core of Data (CCD), maintained by the National Center for Education Statistics (NCES). The CCD contains basic information about every school in the nation, and is available in downloadable data sets, partitioned by state, from the NCES web site (<http://www.ed.gov/NCES/ccd/index.html>). The sampling frame for this study included all regular public schools in Ohio ( $n = 3,788$ ) and West Virginia ( $n = 817$ ) listed in the 1996-97 CCD public school universe.

School records in the CCD include a type-of-locale code with the unique property of coding rural locales within metropolitan areas (Johnson, 1989). This feature avoids the underestimation of “rural” inherent in other measures. The Johnson codes, moreover, are the only locale codes specifically devised for use with schools as the unit of analysis. There are seven values: rural, small town, large town, urban fringe of midsize city, urban fringe of large city, midsize city, and large city. For this study, we defined “suburban” as the two urban-fringe locales.

Two considerations guided our decision to contrast rural with suburban (rather than midsize or large-city) locales. First, we believed that cosmopolitan standards of schooling (e.g., so-called world-class curriculum and instruction, preparation for mobility and elite jobs, and so forth) would be most evident in suburban locales. These “standards” are universally promoted by state education agencies (SEAs) and the federal government, in other words, and we believed they would be best represented in suburban schools. Second, and more practically, West Vir-

ginia has no large-city schools; its largest cities (Charleston and Huntington) with populations about 50,000 are considerably smaller than Ohio's large cities (Cincinnati, Cleveland, and Columbus).

From the CCD data sets we extracted schools located in suburban (Johnson codes 3 and 4) and rural (Johnson code 7) locales. The universe of such schools for Ohio comprised 900 suburban and 945 rural schools, and for West Virginia, 143 suburban and 538 rural schools. The total school universe for this study, then, included 1,043 suburban and 1,483 rural schools, or 2,526 total.

We set 95% as the confidence level and 4% as the confidence interval for the sample draw (for the cells created by crossing state and locale). Using the 1996-97 data sets (the latest then available) for Ohio and West Virginia, we extracted records randomly, stratified by suburban and rural locale, except that we included all records coded as suburban in the West Virginia frame in the sample drawn, in effect a 23% oversample. Even with the oversampling, however, the returned set of questionnaires from West Virginia principals included twice as many rural as suburban schools. The sample drawn included 293 rural schools and 143 suburban schools in West Virginia ( $N = 436$ ), and 367 rural schools and 360 suburban schools in Ohio ( $N = 727$ ), for a total  $N$  of 1163.

We received 651 questionnaires from respondents, for an overall return rate of 56%.<sup>1</sup> Returns provided 207 cases for West Virginia (157 rural, 45 suburban, and 5 with missing data on locale) and 441 cases for Ohio (219 rural, 207 suburban, and 15 with missing data on locale); 3 cases had missing data on "state." In all analyses, West Virginia suburban cases were weighted to yield a 1.67 ratio of suburban to rural locales. Stevens (1996, p. 238) considers a 1.5 ratio a useful rule of thumb for the minimum proportions needed to ensure homogeneity of variance. Under the conditions that we imposed, homogeneity of variance was nonetheless confirmed for all analyses.

### *Instrumentation*

We evaluated principals' approaches to planning using an instrument constructed for that purpose. Because we considered the construct "planning" to be markedly different from the construct "decision making," we made the determination that an instrument such as the Decision Making Inventory (Calabrese, 1995) or the Problem-Solving Decision-Making Style Inventory (Hersey & Natemeyer, 1982) would not adequately meet our needs.

*Theoretical grounding.* We searched the literature on planning and decision making in order to elaborate a typology incorporating conceptually distinct approaches to planning. Our analysis of the literature suggested that we would be justified in dividing approaches to planning into five types, but the literature also provided evidence that

distinctions among the prototypical approaches to planning are not so clear-cut as we might have wished. For example, rather than constituting an approach unto itself, "bounded rationality" might be construed as a variation of rational planning, or it might function to bridge—or perhaps to support a productive merger between—rational and naturalistic approaches. Similarly, organized anarchy might be seen as a variation of the political approach to planning or as a type of planning distinct from it.

Expanding upon a functional typology proposed by Adams (1991), we identified five types of planning. Adams's typology distinguished three types of planning—technicist, political, and consensual—on a continuum from rational to interactive (or naturalistic). Like Adams, we took political and consensual planning to represent gradations along the interactive side of the continuum; but unlike Adams, we thought it would be important to identify gradations on the rational side as well. Moreover, we concurred with some authors (e.g., Krabuanrat & Phelps, 1998; Quinn, 1978) who suggested that there is a distinct form of bounded rational planning—falling somewhere between rational and interactive approaches—that constitutes an incremental, heuristic, and goal-free method of planning. Altogether our expanded continuum included two technicist approaches—the reactive approach and the technicist approach, one approach—the incremental approach—presumed to bridge the rational and interactive sides of the continuum, and two interactive approaches—the political and the consensual.

In our typology, we construed reactive planning as the most thoroughly rational.<sup>2</sup> This approach is commonly adopted by educators in response to external mandates and incentives. Reactive planning cannot properly be seen as interactive because it denies planners opportunities to shape the aims that the plan ultimately must address. Moreover, mandates provide only limited opportunities for planners to decide upon the means that they will use to address specified aims or outcomes.

<sup>1</sup>Subsample response rates were as follows: 53.5% (WV, rural); 31.4% (WV, suburban); 59.7% (OH, rural); and 57.5% (OH, suburban); 57.1% (rural); 50.3% (suburban); 47.5% (WV); and 60.7% (OH). With a 95% confidence level, obtained samples exhibited the following confidence intervals (conservatively estimated): 6.59 (WV, rural); 12.14 (WV, suburban); 5.81 (OH, rural); 5.98 (OH, suburban); 5.69 (WV); 4.07 (OH); 4.36 (rural), and 5.36 (suburban). The total sample ( $N = 651$ ) exhibited a confidence interval of 3.31.

<sup>2</sup>When we use the term "rational," we are referring to "technical rationality," which construes rationality as premeditated action to obtain the greatest gain with the least risk. Under this definition, actions that demonstrate compliance with imposed mandates appear highly rational. In theory, compliance assures that risks will be minimized and gains maximized because mandates imply certainty with regard to means-ends relationships.

From Weber forward through scientific management and systems theory, *technicist* approaches to planning have assumed that the goals of an organization are best met through the systematic analysis of relevant information and the selection of an optimizing course of action in light of that information. Recent approaches to strategic planning (e.g., Cook, 1990) elaborate procedures for systematizing rational planning processes. Strategic plans are advocated to link appropriately sequenced activities within an organization to that organization's properly warranted goals.

Bridging the rational and interactive sides of the continuum, *incremental* planning relies upon general strategies (heuristics) to address tentative and loosely specified aims, and it is substantially less ambitious than strategic planning. Incremental planning makes use of bounded rational judgments as well as heuristics derived from past experience. Heuristics incorporate both intuitions and empirically based judgments about usual associations between means and ends. Despite reliance on intuition and induction, incremental planning seeks to identify courses of action that will be effective in a technical sense. For this reason, incremental planning is more rational than either political or consensual approaches to planning. Unlike the technicist approach, the incremental approach enables planners to take tentative actions and to reassess and revamp plans in response to feedback.

*Political* approaches to planning differ considerably from *consensual* approaches. Both, however, rely on personal or group interests rather than technical considerations to warrant choices about ends and means. Because political approaches respond to prevailing (and shifting) relations of power, they tend to be incremental and (at best) to represent a compromise between conflicting interests regarding ends or means, or both ends and means. Consensual approaches depend upon agreement about ends and means, but, as noted above, such agreement *need not* be based on empirical or logical evidence. Furthermore, although power is often deployed as part of consensus building, such power tends to be construed by participants as both legitimate and normative.

*Instrument development.* We developed items that we believed would be sensitive to the five types of planning discussed in the literature. In addition, we included items that related to the independent variables identified as possible predictors of principals' approaches to planning. We pilot-tested the preliminary draft of the instrument with a group of 20 principals, whose names we then excluded from the universe sampled in the larger study. We asked the principals to identify items that they thought were ambiguous or poorly worded, and we revised the instrument based on their comments. In addition, each of the principals in the pilot group completed the instrument. We were unable, however, to base judgments about the technical adequacy of the instrument on data from such a small sample. Our

determinations of the factors measured by the instrument and the reliability of scales derived from those factors were based on analysis of the data from the actual survey.

Using the 604 cases with complete data, we performed an exploratory factor analysis to identify empirically and conceptually discrete scales. We chose to use exploratory rather than confirmatory factor analysis because, even though theoretical support existed for our constructs, we found no prior empirical basis on which to make assumptions about the plausible associations among items or factors.

Using principal components analysis with varimax rotation, we extracted five factors, together accounting for 47.2% of the total variance on the instrument. The first factor accounted for 20.1% of the variance and included items corresponding to our conceptual definition of *technicist* planning. Because the items that loaded heavily on this factor reflected recent as well as conventional conceptions of strategic planning (i.e., they attended to the idea of shared vision as well as to the aim of identifying the optimum course of action), we chose the term *new technicist* as the most apt descriptor of the factor. The factor included four items with loadings  $> .60$ , suggesting that it was likely to be reliable irrespective of sample size (Stevens, 1996). To interpret the factor, we examined all items with factor loadings above  $.40$  (Stevens, 1996). These items and their respective factor loadings are presented in Table 1.

The four additional factors—each accounting for a smaller proportion of the overall variance—paralleled our theoretical typology fairly well. The second factor, *traditional-consensual* planning, accounted for 9.5% of the variance and included items that referred to the process of developing plans on the basis of existing agreements and community expectations. With fewer than four factors loadings  $> .60$ , however, the reliability of the factor was not assured, although the large sample size did increase the likelihood of its reliability (Stevens, 1996). Four items had factor loadings  $> .40$ , and we used these to interpret the factor (see Table 1).

Although we identified a factor relating to consensual planning, we did not find a factor that explicitly conceptualized planning as a political process, grounded in conflict and negotiation rather than in collaboration and agreement. Our third factor corresponded best to Cohen, March, and Olsen's (1972) description of *organized anarchy*, which characterizes decision making in some organizations. Decision makers who "organize anarchy" tend to deploy solutions without analyzing problems. In effect, they satisfy the organization's need for solutions by linking available decision choices to presenting problems. Whereas organized anarchy responds to ambiguity in the organization, it also helps to perpetuate it. In our analyses, the organized anarchy factor accounted for 7.1% of the overall variance on the instrument. As with factor two, reliability of this factor was compromised by the fact that fewer than four items

Table 1  
*Items Included in the Five Scales with Factor Loadings for Each Item New Technician Scale*

Items	Factor Loadings
<b>New Technician Scale</b>	
Systematically identifying strengths and weaknesses of the school.	.710
Taking steps to assure that all constituents have a common vision for the school.	.705
Setting explicit goals.	.657
Making budgeting decisions based on school goals and objectives.	.612
Responding to opportunities made available from sources outside the school.	.565
Using step-by-step procedures to determine appropriate actions.	.541
Mediating among constituencies with different views about the school's mission and goals.	.536
Involving stakeholders in brainstorming sessions to solve pressing problems.	.504
Identifying the commonalities between current problems and past problems.	.435
<b>Traditional-Consensual Scale</b>	
Identifying solutions that fit in well with community expectations.	.736
Applying solutions that worked well in the past.	.705
Using step-by-step procedures to determine appropriate actions.	.507
Solving most problems as they arise.	.468
<b>Organized Anarchy Scale</b>	
Deciding on a course of action based on partial information.	.796
Taking action in spite of ambiguity about the school or district missions and goals.	.730
Trying to second-guess the district or state.	.618
Trusting informal sources of information considerably more than formal sources.	.468
<b>Incremental Scale</b>	
Acting upon innovative ideas that arise spontaneously among staff or other stakeholders.	.680
Revising plans based on initial experiences with the implementation of a course of action.	.581
Making simple changes to improve the effectiveness of existing school programs.	.534
Identifying solutions that fit in well with the existing school culture.	.450
<b>Reactive Scale</b>	
Responding to increases or decreases in funding.	.738
Responding to external mandates.	.633

had loadings > .60, but its reliability was supported by the large sample size. The four items with loadings > .40, presented in Table 1, were used to interpret the factor.

The last two factors, *incremental and reactive* planning, corresponded to types of planning that we included in the theoretical typology, and they accounted for 5.6 and 4.9% of the variance, respectively. Neither of these factors presented a strong case for assuming reliability despite the large sample size. In both cases factor scores above .40 were used in interpreting the underlying constructs (see

Table 1). Four items had factor loadings > .40 on the incremental planning factor, but only two items had loadings > .40 on the reactive factor.

*Demographic and contextual variables.* In addition to the items related to the various approaches to planning, the instrument included questions about principals and their schools. These questions were incorporated as a way to identify variables that might function as predictors of principals' planning. Principals were asked to supply the following demographic information about themselves: gender,

years of experience as an educator, and years of experience as an administrator. They also supplied information about their context including: their state, district-level student enrollment, school-level student enrollment, locale (rural or suburban), the schools' free- and reduced-price lunch rate, and the schools' lowest and highest grade levels.

### Procedures

We mailed a questionnaire to each of the principals in our sample. The questionnaire asked respondents to provide information about their backgrounds and to answer questions about the planning procedures they thought were most important. To improve the return rate, we included a self-addressed, stamped envelope; and 10 days after the original mailing, we sent a follow-up postcard as a reminder.

### Findings

We report findings relevant to an examination of variation in approaches to planning associated with contextual variables (rather than personal variables such as gender). These include free and reduced lunch rate (socioeconomic status), district size (DS, logged to approximate normality), school size (SS, logged to approximate normality), and career ratio. The latter constitutes the interaction between experience as an educator and experience as an administrator. Conceptually, this interaction makes more sense as a ratio than as a product: It represents the percentage of the career spent in administration. We presume that systematic differences in career ratio associated with locale or state result from some feature of school context (e.g., labor market conditions governing the likelihood that an early career educator would be hired as an administrator).

Missing data reduced the number of cases (via listwise deletion of cases, for instance) available for analysis. In addition, to compensate for the low return rate from suburban principals in West Virginia, we used weighted data in all inferential analyses. The descriptive statistics, however, report all available unweighted data.

### Descriptive Analyses

This section reports descriptive statistics for (a) contextual variables and (b) principals' ratings of our measures of approaches to planning. Descriptive statistics are reported by locale (rural vs. suburban) within state (West Virginia vs. Ohio).

*Contextual variables.* Table 2 reports univariate statistics (same size, means, standard deviations, and standard errors of estimate) for contextual variables.

Data patterns in Table 2 suggest the existence of a number of meaningful contextual differences. They represent well-established rural and nonrural differences. As one

would expect, socioeconomic status (SES) in the sample is substantially lower in rural as compared to suburban locales (40% vs. 24% free-and-reduced-price-meals rate), and both rural schools and the districts of which they are a part are smaller (by 40% for schools and 60% for districts).

The state differences that appear in Table 2 are more obscure to anyone without first-hand knowledge of both states. First, the experience of principals in the sample differs markedly by state (58% vs. 49% of careers spent as administrators,  $p < .024$ , unweighted comparison,<sup>3</sup> in West Virginia and Ohio, respectively). The difference is, in fact, somewhat more marked in between-state comparison by locale, with Mountaineer suburban principals in the sample even more comparatively-experienced-in-role than their Buckeye counterparts (62% vs. 48%). The rural between-state difference is less dramatic (57% vs. 48%).

State differences also exist on SES and the two measures of size. Not surprisingly, SES is much lower in West Virginia than in Ohio, with free-and-reduced-price-meal rates more than twice as high in the West Virginia as compared to the Ohio sample. West Virginia schools are about 70% the size of Ohio schools (with suburban West Virginia schools closer in size to Ohio schools than rural West Virginia schools are), but with the Ohio districts *much smaller* than the West Virginia districts—Ohio districts in which the suburban schools of this sample are located are 46% the size of their WV counterparts, and the Ohio districts in which the rural schools of this sample are located are just 25% the size of their WV counterparts.

*Dependent variables.* Table 2 reports means and standard deviations for the three dependent variables analyzed in this report. These include aggregate factor scores representing the "new technician," "traditional-consensual," and "organized anarchy" approaches to planning.<sup>4</sup> The statistics are reported by locale (rural vs. suburban) by state (West Virginia vs. Ohio).

The observed values reported in Table 3 suggest that statistically significant differences by state and locale may well exist. Recall that factor scores for a full sample are z-scores (i.e.,  $M = 0$ ,  $SD = 1$ ). The grand means in Table 3 correspond closely to this ideal, but aggregate factor score differences by cells in the state cross locale matrix differ by as much as 0.4 standard deviation (i.e., rural OH vs. suburban WV on new technician). The pattern of observed aggregate factor scores suggests that main effects and interaction effects may exist at statistically significant levels.

To determine the possible existence of statistically significant differences among aggregate factor scores by state

<sup>3</sup>For weighted data,  $p < .005$ .

<sup>4</sup>We conducted analyses using these three factors because (a) they explained the most variance and (b) they were the most likely to demonstrate adequate reliability.

Table 2  
*Univariate Statistics<sup>a</sup> (Contextual Variables<sup>b</sup>)*

Locale	State		SES	SS	DS	Career Ratio
Suburban	WV	<i>n</i>	45	45	42	44
		<i>M</i>	39.62	508.89	13793.12	.6223
		<i>SD</i>	19.87	378.43	10009.93	.2011
		<i>SE</i>	2.96	56.41	1544.57	.0303
	OH	<i>n</i>	199	207	205	205
		<i>M</i>	19.87	654.99	6142.76	.4983
		<i>SD</i>	19.48	410.75	7502.43	.2268
		<i>SE</i>	1.38	28.55	523.99	.0158
	Total	<i>n</i>	244	252	247	249
		<i>M</i>	23.51	628.90	7443.63	.5202
		<i>SD</i>	20.96	408.31	8465.80	.2271
		<i>SE</i>	1.34	25.72	538.67	.0144
Rural	WV	<i>n</i>	155	156	148	151
		<i>M</i>	61.16	309.33	6946.79	.5668
		<i>SD</i>	18.18	200.79	7608.34	.2453
		<i>SE</i>	1.46	16.08	625.40	.0199
	OH	<i>n</i>	212	218	216	217
		<i>M</i>	25.13	424.34	1764.13	.4837
		<i>SD</i>	18.72	198.79	1186.56	.7179
		<i>SE</i>	1.29	13.46	80.73	.0487
	Total	<i>n</i>	367	374	364	368
		<i>M</i>	40.35	376.37	3871.37	.5178
		<i>SD</i>	25.66	207.29	5547.44	.5741
		<i>SE</i>	1.34	10.72	290.77	.0299
Total	WV	<i>n</i>	200	201	190	195
		<i>M</i>	56.32	354.01	8460.19	.5793
		<i>SD</i>	20.60	264.02	8652.91	.2367
		<i>SE</i>	1.46	18.62	627.75	.0169
	OH	<i>n</i>	411	425	421	422
		<i>M</i>	22.59	536.68	3896.24	.4908
		<i>SD</i>	19.25	339.88	5732.46	.5379
		<i>SE</i>	.95	13.13	286.91	.0187
	Total	<i>n</i>	611	626	611	617
		<i>M</i>	33.63	478.03	5315.47	.5188
		<i>SD</i>	25.27	328.57	7091.85	.4659
		<i>SE</i>	1.02	13.13	286.91	.0188

<sup>a</sup>Unweighted data.

<sup>b</sup>All variables represent principal self-reports; SES = free-and-reduced-price-meals rates; SS = school enrollment; DS = district enrollment; Career Ratio = career ratio.

Table 3  
*Univariate Statistics<sup>a</sup> (Dependent Variables: Aggregate Factor Scores)*

Locale	State		Factors		
			New technician	Traditional-consensual	Organized anarchy
Suburban	WV	<i>M</i>	.201	.123	-.060
		<i>SD</i>	1.064	.944	1.034
	OH	<i>M</i>	.092	-.202	-.072
		<i>SD</i>	.942	1.051	.926
	Total	<i>M</i>	.112	-.142	-.070
		<i>SD</i>	.964	1.0382	.944
Rural	WV	<i>M</i>	.087	.064	.217
		<i>SD</i>	.992	.997	1.0234
	OH	<i>M</i>	-.242	.079	-.098
		<i>SD</i>	.989	.973	.999
	Total	<i>M</i>	-.103	.073	.036
		<i>SD</i>	1.002	.982	1.020
Total	WV	<i>M</i>	.112	.077	.155
		<i>SD</i>	1.007	.983	1.030
	OH	<i>M</i>	-.080	-.057	-.085
		<i>SD</i>	.980	1.020	.963
	Total	<i>M</i>	-.017	-.013	-.066
		<i>SD</i>	.992	1.010	.991

<sup>a</sup>Unweighted cases; aggregate factor scores computed from weighted data

and locale we performed two-way analyses of variance (locale by state) for each factor. The results confirm statistically significant differences for (a) new technician (model significant at  $p < .0005$ ) for locale ( $p = .007$ ) and state ( $p = .009$ ); (b) traditional-consensual (model significant at  $p = .012$ ) for the interaction of locale and state ( $p = .044$ ); and for organized anarchy (model significant at  $p = .015$ ) for state ( $p = .050$ ).<sup>5</sup> In the case of organized anarchy, inspection shows that the source of the between-state difference is attributable almost completely to the more marked preference of WV rural principals as compared to all others. The interaction of state by locale approaches but does not attain statistical significance ( $p = .070$ ) for organized anarchy.

To determine which of our contextual variables might account for these differences we repeated the two-way

ANOVA, this time with logically selected covariates. We report the results of this analysis next.

#### *Analysis of Covariance*

We identified two contextual variables as exerting possible significant influence on principals' factor scores.

<sup>5</sup>For organized anarchy, the WV mean was +.079, the OH mean was -.085, and the rural WV mean was +.217. Though certainly modest, the related effect sizes of about 1/4 to 1/3 standard deviation confirm generalizable differences. The practical import of such differences, however, is difficult to judge since this study represents a first effort to examine the approaches taken to planning by rural principals. In other words, the meaning and extent of differences in approach is a matter for interpretation at least as much as it is a matter of statistical analysis.

Table 4 presents the results of the two-way multivariate ANCOVA (locale by state, with career ratio and logged district size as covariates).

*Effects of locale and state on principals' approaches to planning.* The results in Table 4 show that the influence of career ratio and district size is sufficient to explain the observed locale and state differences in principals' preferences for the new technician approach to planning.<sup>6</sup> Table 4 also shows that the covariates do not exert significant influence on principals' preference for the traditional-consensual approach, but introduce a spurious main effect of state. Finally, career ratio, but not logged district enrollment, exerts a significant influence on principals' preferences for the organized anarchy approach.

To examine this latter influence further, we ran a second two-way ANCOVA for organized anarchy, with career ratio as the sole covariate. This analysis confirms that career ratio alone is sufficient to explain the between-state difference confirmed by the ANOVA (see previous discussion). None of the contextual variables, however, explains as much as 10% of the variance in principals' preferences for planning, as indicated by the  $R^2$  values in Table 3.

#### *Least Preferred Approach*

One result of this study that has not yet been articulated entails principals' preferences for organized anarchy. In the process of instrumentation for this study, we did not discover the continuum we had anticipated we might find. Instead, the patterns of the data suggest that (a) the various approaches to planning are not mutually exclusive and (b) principals deploy them eclectically. Such contextual characteristics as career ratio (proportion of career spent in administration), district size, locale, and state manifest influences on these preferences in varied ways.

One question that remains is whether or not, given the overall patterns, principals rate any approaches more highly than others. One technique for developing an answer to this question with our data is to use indexes constructed from the items loading heavily (.55) on each factor, with each respondent's raw index score multiplied by the constant needed to yield a maximum score equivalent to the maximum score possible (25) on the five-item "new technician" index (i.e., a constant of 2.5 for the two-item indexes and 1.667 for the 3-item index). With the constructed indexes thus computed, four approaches each exhibit medians of about 20, whereas organized anarchy exhibits a median of about 12. This technique provides some evidence to suggest that "organized anarchy" is the approach least popular among respondents.

#### *Summary*

We found evidence in this study that (a) rural vs. suburban differences among principals' approaches to planning exist (new technician) and (b) state differences also exist (new technician and organized anarchy). We also found that an interaction of state and locale characterizes differences in principals' reported use of the "organized anarchy" approach. Results from the ANCOVA suggest that observed locale and state differences related to the reported use of the new technician approach are accounted for by career ratio and district size, and that career ratio alone accounts for the observed state differences with respect to organized anarchy. The source of influence that yields the interaction of state and locale with respect to preference for the traditional-consensual approach is not, however, evident in our data. Finally, principals seem, on the basis of these data, to approach planning eclectically, though evidence suggests that "organized anarchy" appeals to them less than any of the other approaches.

#### Conclusions, Discussion, and Recommendations

We did not substantiate a continuum of planning approaches, as the literature suggested we might, but rather an amalgam. Principals in our sample reported an eclectic use of planning approaches, with organized anarchy, in general, the approach least favored by them. Some differences, nonetheless, were apparent by locale and by state.

#### *Conclusions*

Suburban principals favored the new technician approach more strongly than rural principals (effect size [ES] of about .22). Moreover, West Virginia principals favored the new technician approach more strongly than Ohio principals ( $ES \approx .19$ ).

We found that the interaction of locale and state was significant for the traditional-consensual approach, with the aggregate factor scores increasing from rural to suburban in West Virginia, but decreasing from rural to suburban in Ohio. The suburban Ohio principals rated the traditional-consensual approach significantly lower ( $ES \approx .28$ ) than rural Ohio principals.

We also found that aggregate factor scores on organized anarchy differed significantly by state, with West Virginia principals exhibiting significantly higher ratings on this factor ( $ES \approx .24$ ). In fact, rural West Virginia prin-

<sup>6</sup>By locale, equivalent to 1/4 standard deviation, with rural showing less preference than suburban for this approach and, by state, equivalent to about 1/5 standard deviation, with Ohio principals showing less preference for the new technician approach.

Table 4  
ANCOVA<sup>a</sup>: Planning Factors (Locale by State)

Source	Factor	df	F	Sig.
Corrected Model	New Technicist <sup>b</sup>	5	8.972	.000
	Traditional-Consensual <sup>c</sup>	5	3.219	.007
	Organized Anarchy <sup>d</sup>	5	2.931	.013
Career ratio	New Technicist	1	12.208	.001
	Traditional-Consensual	1	2.218	.137
	Organized Anarchy	1	4.538	.034
Enrollment <sup>e</sup>	New Technicist	1	16.456	.000
	Traditional-Consensual	1	3.793	.052
	Organized Anarchy	1	1.325	.250
Locale	New Technicist	1	.072	.788
	Traditional-Consensual	1	.001	.970
	Organized Anarchy	1	3.859	.050
State	New Technicist	1	.042	.837
	Traditional-Consensual	1	6.116	.014
	Organized Anarchy	1	.294	.588
Locale by state	New Technicist	1	.770	.380
	Traditional-Consensual	1	3.578	.059
	Organized Anarchy	1	3.240	.072

<sup>a</sup>Weighted  $n = 598$ ;  $WV_s = 78$ ,  $WV_r = 135$ ,  $OH_s = 187$ ,  $OH_r = 198$ .

<sup>b</sup> $R^2 = .070$  (Adjusted  $R^2 = .063$ ).

<sup>c</sup> $R^2 = .026$  (Adjusted  $R^2 = .018$ ).

<sup>d</sup> $R^2 = .024$  (Adjusted  $R^2 = .016$ ).

<sup>e</sup>Natural log of district enrollment.

cipals exhibit a mean of .217,<sup>7</sup> whereas the other three groups (WV suburban, OH suburban, and OH rural) exhibit means that approximate the grand mean for this factor (i.e., 0). Effect sizes of rural West Virginia principals in comparison to the other three groups range from about .18 to about .31.

These differences are partially accounted for by influences that covary with locale and state, namely: (a) the proportion of their careers that principals have spent in administration and (b) the size of the district in which the principals' schools are located. In the case of the new

technicist approach, both covariate influences are significant and account fully for the observed differences in aggregate factor scores by locale and state. By contrast, with respect to our findings about preferences for the traditional-consensual approach, neither the career variable nor the size variable reaches a statistically significant level of influence on the interaction of state and locale as it affects aggregate factor scores. In the case of organized anarchy, however, including the career variable is sufficient to explain the observed state effect; the influence of district size was not statistically significant after introduction of the covariate (but cf. footnote 7).

The proportion of variance explained by contextual characteristics is not large, however. Other sources of variance might include complex interactions among these variables, as well as the influence of other circumstances, such as various features of state policy context, within-district power dynamics, or the ideologies held by principals themselves or purveyed by the leadership of districts in which

<sup>7</sup>We performed an ANCOVA to confirm the significance of this ancillary finding. With WV rural compared to all other principals, and with career ratio the covariate, the significance of this difference is  $p = .003$ . That is, career ratio does not explain the comparatively higher aggregate factor loadings on organized anarchy among WV rural principals in comparison to all other principals.

these schools are located. Another possibility, however, concerns the assumption that "planning" is a stable or coherent phenomenon. The nature of planning might, instead, be expected to vary according to objects—curriculum development, budgeting, scheduling, so on. Planning might hypothetically be described as encompassing different domains, as well: planning for the big picture, for tactical or strategic positioning, and for crisis management. Different objects or different domains of planning could hypothetically elicit one planning approach more strongly than another. Nonetheless, the variables used here would probably remain salient, so far as can be judged from their usefulness in this and other studies.

### *Discussion*

The professional literature characterizes planning as a comparatively new role for principals. The truth of this interpretation is difficult to gauge, since studies of planning have generally focused attention on the planning of districts (as analogous to the central administration of business concerns, with planning a function of top-ranking executives). Principals are, in one sense, middle managers within districts. From another perspective—that which considers the school to be the primary unit in the system of schooling—principals are nonetheless the executives with the most influence over the work of educators, and hence, arguably the most important executives. The influence of central office staff would, from this perspective, be considered more distant and substantially more indirect. From this perspective, we might prefer to believe that principals are not such newcomers to planning. In fact, their seeming fluency across varied types of planning would suggest long habituation to the mentalities of planning.

The conditions under which principals devise and execute plans, however, vary. Our findings suggest that these conditions are indeed capable of deflecting the planning of principals somewhat from the well-worn path of technical rationality as typified in this study by the "new technicist" factor. For instance, the observed statistics in Table 2 suggest that among all four locale-by-state categories, suburban Ohio principals show less interest in traditional-consensual approaches to planning, whereas rural Ohio principals show less interest in the new technicist approaches. In West Virginia, other observed results are suggestive: Among all four locale-by-state categories, the suburban West Virginia principals stand out as favoring the new technicist approach, whereas the rural West Virginia principals show a comparative preference for the organized anarchy approach. Construed as comparisons among four separate groups (rather than as differences along two dimensions) these observed differences do exhibit statistical significance, even though the emergent patterns are muted in the overall ANOVA and ANCOVA results.

Overall our findings suggest that the particulars of locale (state and locale as they encompass and differentiate prevailing conditions) rather than locale per se (or uniquely) account for differences in principals' approaches to planning. West Virginia principals tend to find themselves in larger districts and, thus, they fashion their planning efforts to fit in with the requirements of the larger, more distinctly bureaucratic systems that prevail in that state (cf. Howley, 1996). If new technicist approaches are best suited to implementing systemic reform, as they are purported to be (e.g., Kaufman & Herman, 1991; Lilly, 1995), then West Virginia's move to tighter coupling via a reduced span of control (55 instead of 611 districts) may improve the chances that its education bureaucracy can successfully impose top-down reform measures.

This interpretation, moreover, sheds some light on the rather startling finding that, of all principal groups, only the rural West Virginia principals show somewhat strong support for organized anarchy. This approach more than any of the others takes account of chaotic conditions in the environment surrounding the organization and permits the organization to take action in face of uncertainty and even duress. In other words, principals who intend that their planning organize anarchy are "making the best out of a bad situation."

More than many groups of principals, those in rural West Virginia schools face a bad situation. Rather systematically over the past decade, the legislature and the State Board of Education have advanced policies targeting rural schools for closure, consolidation, and State Department sanction (DeYoung & Howley, 1992; Purdy, 1997). Even when they are meeting conventional standards of effectiveness (e.g., high scores on standardized tests), rural schools in West Virginia are beleaguered by demands to implement curricula (e.g., integrated science) and practices (e.g., computer assisted learning programs) promulgated by state-level bureaucrats and responsive to cosmopolitan business interests rather than to local needs and concerns (Howley, 1996). Facing pressures such as these, but cognizant also of community values and expectations, principals in rural West Virginia schools may often find themselves forging a somewhat precarious truce between state-level requirements and locally responsive practices (Seal & Harmon, 1995).

Interestingly, rural principals in West Virginia were less likely than their suburban counterparts—and also less likely than rural principals in Ohio—to favor traditional-consensual approaches to planning. This finding fits well with an interpretation focusing on the contradictory, even chaotic, conditions that rural West Virginia principals face as a result of school consolidations and intrusive accountability mandates. These principals may find that traditional approaches are no better than technical ones in helping them chart a workable course for their schools. Organized anarchy may offer a pragmatic and flexible way to mediate be-

tween technical-rational and traditional interests. Or it may constitute an effort to do something in face of almost insurmountable odds.

What can explain such patterns? First, one might speculate that the strength of the new technicist factor derives from 100 years of educational practice derivative of classical management theory and “the cult of efficiency” (cf. Callahan, 1962). Certainly the school improvement planning processes mandated by Columbus and Charleston do not principally rest on the precepts of any of the other planning approaches (organized anarchy least of all!).

Second, the appearance of district size as an influential covariate suggests the importance of the divergent histories of education in the two states, with district reorganization completely altering the West Virginia administrative scene almost overnight, during the Depression. The larger the district, the more valorized the new technicist approach, and West Virginia maintains rural districts considered huge by the norms of experience in the Midwest and West. The influence of district size, moreover, suggests that if urban systems are the largest and most bureaucratic and rural the smallest and least bureaucratic then the contrasts between approaches to planning might well prove most robust in the comparisons of rural and urban principals. Future studies might consider incorporating such comparisons.

Third, if modernist attitudes and values are most fully represented in the new technicist approach (as it seems they are), a possible theoretical explanation exists for the observed pattern: Principals in suburban districts are more likely to deploy a modernist approach to planning, whereas principals in rural districts are more likely to deploy a traditional-consensual approach. Further study along these lines seems warranted.

### *Recommendations*

We are often reluctant to make recommendations. Some research projects fail to yield results that are usefully interpretable for practice. Others do not even yield much in the way of methodological insight. This project actually began with the interests of students in a planning course; they moved on but we stayed with the project because it put us in the way of some insights about the organization and ideology of U.S. schooling, the influence of locale, and the nature of locale. We share two such insights here.

This discussion raises an important methodological issue. Might differences between locales within state be stronger than differences between states within locales? This question should concern scholars of rural education because it addresses the question of research strategy: Would one

study the rural context more profitably within a state or across states? We think the evidence from this study would recommend the former rather than the latter course. West Virginia principals are evidently more “planful” across the board than Ohio principals, as the observed means in panel 3 of Table 3 (“Total”) suggest. The dramatic difference in the SES statistics between the two states also points to the importance of state context (i.e., despite the fact that SES does not exert a measurable direct or indirect influence on the dependent variables used in this study). This observation is hardly intended to suggest that state contexts are superordinate, or more salient than locale, but rather that historically diverging state policies, histories, and economies serve to differentiate rural meanings and practices in important ways from state to state. Failure to take stock of such differences could bias results toward confirmation of the null hypothesis when possible rural differences are the object of study. Only as these differences are better understood will it be possible to develop better interpretations of the rural experience generally. The results reported here, in fact, tend to confirm such an inference because the full impact is clearest if “locale” is conceived more complexly (i.e., as the interaction of state and locale).<sup>8</sup>

Our practical recommendation concerns the need for principals to develop and maintain skepticism toward the purposes of state education agencies. Principals often lead school change, sometimes by tradition, but increasingly by the imprecation of a higher administrative body (local education agencies, state education agencies, the U.S. Department of Education). The modalities of school planning inevitably reflect the agendas of the sponsoring authorities, and principals themselves are little aware of this ideological condition of their work lives. We advocate place-based rural schooling, together with a number of colleagues across the nation, and our call for skepticism here proceeds more from that commitment than from the “study findings” presented in this article.

Rural school change that is responsive to local circumstance—that is, change that consciously intends to nurture local community over individual greed or the remote prerogatives of national priorities—is not likely to follow the same plan as rural school change directed toward support of globalization and greed (Pittman, McGinty, & Gerstl-Peppin, 1999). Too often, we believe, that is the agenda commonly reflected by state and federal agencies (e.g., Howley, Howley, & Pendarvis, 1995). The findings reported here offer some context for our own hope that such agendas can be resisted. This study suggests that principals do approach planning in different, multiple ways, and that rural principals *could well alter* their approaches to planning to emphasize more inclusive and responsive approaches directed at helping rural communities (for instance) to sustain themselves, while downplaying the top-down tendencies of technical rationality.

<sup>8</sup>The idea that rural would manifest itself differently by state is familiar in the literature on rural economies (e.g., Cook & Mizer, 1994).

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