

EQUITY AS A DECISION RULE IN DETERMINING THE DISTRIBUTION OF URBAN PUBLIC SERVICES

LLEWELLYN M. TOULMIN

Booz · Allen & Hamilton

The article describes and evaluates the Responsive Public Services system of Savannah, Georgia. This system apparently is unique in its comprehensive measurement of output equality of conditions in all city neighborhoods, in its ongoing targeting of city resources into neighborhoods judged to be the "worst off" in each fundamental area measured (such as crime incidence, fire incidence, inadequate sewer service, flood control, and street conditions), in its lack of controversy, and in its longevity. The system is analyzed in terms of the theoretical literature on equality and the determinants of urban public service delivery, and the success of the system is evaluated in seven functional areas, using a pre-post comparison of output measures.

The study of urban public service delivery has been primarily an examination of "who gets what and why." Most analysts in this field, including Lineberry (1977), Antunes and Mlandenka (1976), Antunes and Plumlee (1977), Jones et al. (1980), Levy et al. (1974) and Mlandenka (1980), argue that nonpolitical "bureaucratic decision rules" are the key determinants of service delivery. Some writers emphasize other factors, such as citizen contacting and neighborhood organization (Coulter, 1985) or racial discrimination and lack of political power (Koehler and Wrightson, 1985).

Although some of these writers disagree about the factors determining service delivery, all would probably agree that it is extremely unlikely that a city would explicitly adopt citywide bureaucratic decision rules in

AUTHOR'S NOTE: An earlier, longer version of this article was presented at the 1985 American Society for Public Administration conference in Indianapolis. I am indebted to Professors Laura Langbein, David Koehler, Myron Levine, and James Garnett, and four anonymous reviewers for suggestions in improving this article.

URBAN AFFAIRS QUARTERLY, Vol. 23 No. 3, March 1988 389-413
© 1988 Sage Publications, Inc.

all functional areas that utilize a "compensatory equality" approach (Lineberry, 1977; Miller, 1977) and thus favor minority, needy neighborhoods over white, middle-class neighborhoods. Yet at least one such city exists—Savannah, Georgia.

In Savannah, starting in 1973, problem measures in various functional areas (crime, fire incidence, and the like) were devised and applied to all city neighborhoods, and city resources were targeted to the worst-off neighborhoods, thus primarily benefiting black, needy residents.

Given that such a unique service delivery system exists, a number of research questions arise, including: How does such a system begin and evolve? How does it define its goals, especially in the complex area of defining "equality"? What theoretical obstacles to achieving equality exist, such as overwhelming social forces working against the city's goals (Ostrom, 1973)? Does such a system receive severe external political criticism? Does such a system succeed only in functional areas where there is little discretion available to "street-level bureaucrats" (Lipsky, 1980), who may dislike the compensatory equality philosophy of the program and its "top-down" implementation? Most important, can such a system succeed in improving the lots of citizens in run-down neighborhoods in need of service delivery?

These questions are addressed by discussing the Savannah program's history, approach to defining equality, potential obstacles to success, operational measures of success, and overall success.

BACKGROUND AND HISTORY

The city of Savannah, Georgia, was founded in 1733 by James Oglethorpe and a party of English settlers on the banks of the Savannah River near Georgia's Atlantic coast. They laid out the city streets and parks in a careful pattern, thus establishing Savannah's claim to being the country's "first planned city" (Fallows, 1971).

During the period of the evaluation discussed in this article (1972 to 1980), the city had a population of about 118,300, which was 63% of the population of surrounding Chatham County. Of the total city population, 53,000 (or 45%) was black; 63,700 (or 34%) of the county population was black (U.S. Bureau of the Census, 1972).

The city has a council-manager form of government, established in 1954 (Brown, 1981). Arthur "Don" Mendonsa, who had earned an

M.C.P. from Georgia Tech and had served as executive director of the Savannah Metro Planning Board, was hired in July 1962, as Savannah's city manager. He served until 1967, when he went to the University of Georgia, and then returned in September 1971, as Savannah's city manager, a post he has held since. Elected officials have shown a similar continuity. Mayor John P. Rousakis was mayor in 1973 when the city's Responsive Public Service program was initiated, and was still mayor in 1980. Of the six aldermen in 1973, three were still serving on the board of aldermen in 1980. By virtue of his long tenure in office, his close relationships with the mayor and board of aldermen, and his national reputation, City Manager Mendonsa was clearly in a powerful position vis-à-vis his department heads during the period of program conception and implementation.

The Savannah Responsive Public Services (RPS) program was conceived by City Manager Mendonsa in 1972. In his 1973 letter transmitting the original pilot program (known initially as the Community Renewal Program) report to the mayor and aldermen, Mendonsa clearly stated the underlying program philosophy:

To the extent feasible, the city government through its service programs should seek to maintain each neighborhood at an acceptable level of livability. To accomplish this goal, the city must first identify the neighborhoods which fall below the desired level of livability and then design service programs that can correct the conditions causing this problem. . . . From the study, it is clear that the level of services being provided in some of the neighborhoods is not effective. This is a significant finding, for it points out that we cannot plan our service programs to provide a uniform level of service throughout the city, as we do now [City of Savannah, 1973].

This statement clearly defines the compensatory equality nature of the program and marks a break from the apparent input equality orientation of previous city service delivery philosophies. In 1974 the program was "refined, expanded and updated" (City of Savannah, 1974) and renamed the Responsive Public Services program. The program divided the city into 21 planning units (PUs), that were used for measurement across all functional areas analyzed. These functional areas included:

- cleanliness of streets, lanes, and yards
- crime

- dog control
- fire incidence
- flood hazard
- housing conditions
- land-use compatibility
- recreation use
- street conditions
- street signing
- water and sewer adequacy

With each functional area, a key measure (or sometimes multiple measures) was devised to obtain a score for each of the PUs. Measures were taken from secondary data (for example, detailed land-use maps were used to calculate a land-use incompatibility index), surveys by trained raters (for example, all city street signs were examined on site by trained raters and placed in four classes ranging from "no recordable faults" to "poor, illegible, or missing"), or by citizen surveys (for example, a sample of 501 households was asked about recreation facility use and accessibility). (More detail on measures used will be provided in the forthcoming analysis section.)

COMPENSATORY EFFORTS MADE BY THE CITY

In each functional area, comparisons were made between PUs, the "worst" PUs were identified as top priorities for related city programs, and a plan of resource targeting was outlined, including budget reallocations and changes in bureaucratic procedures. City and federal community development block grant funds were reallocated.

The "worst" PUs were usually those PUs with scores worse than the mean; in each of the seven functional areas studied below, there were between four and nine such PUs. Of these PUs, 70% were poor, black neighborhoods. "Worst" neighborhoods were familiar to city planners as having experienced these problems for years, although RPS was the first comprehensive neighborhood study.

Resource targeting efforts included the following examples:

Street Cleanliness

Street segments were rated according to the sweeping requirement—intensive, average, and less than average. The existing capability to sweep the streets once a week provided the flexibility to allow the worst

streets to be swept twice a week, some once a week, and some—those that tended to remain relatively clean—once every two weeks.

Crime

In May 1973 a new system of police deployment was initiated, replacing the old citywide deployment system of three standard shifts. The new system had three service districts, with the maximum number of men deployed at the time and in the PUs of highest crime incidence. Two special units were also set up to combat certain types of crime (burglary, robbery, larceny, rape, and traffic accidents) considered preventable by increased public awareness and increased targeted patrolling.

Fire Incidence

Accelerated fire code enforcement was targeted for the four worst (in terms of dwelling fires) PUs.

Flood and Drainage Problems

In 1974 enlarging a drainage opening under an avenue relieved the threat of flooding to 114 homes damaged in a 1971 flood. Another \$2 million in construction was proposed but was not implemented, at least by 1976 when the RPS report was updated.

Housing

The existing housing code enforcement schedule was deemed inadequate, and a plan was promulgated to immediately inspect all PUs with deficiency ratings worse than the city mean, reinspect them at least every three years subsequently, decrease the time between inspections and reinspections, and put PUs better than the city mean under surveillance to assure that housing remained standard.

Street Paving

A five-year plan of street paving was initiated, with 17 miles of new paving and 19 miles of resurfacing to be laid down at a cost of \$4.9 million.

Water Service for Firefighting

The 1973 analysis had indicated that 171 new fire hydrants were needed; by 1974 five had been installed. A five-year plan of hydrant installation, at 33 hydrants per year, was initiated at a total cost of \$82,500.

Sewer Service

The number of improved lots not served by city sewers was identified, and a plan to provide service to these lots was estimated at \$1.7 million.

HISTORY OF THE PROGRAM AFTER 1974

In 1976 an update of the RPS program was conducted, and a report similar to the 1974 report was prepared (City of Savannah, 1976). The only major change was the dropping of the sections on housing and land-use compatibility.

In 1979 another update was done, and a report was published in 1980 (City of Savannah, 1980). This update reinstated the housing survey but dropped the recreation and street sign analyses.

The RPS program, despite its apparent redistributive goals, has generated virtually no opposition. The program received some favorable publicity during its inception, currently receives little press notice, has no organized opponents, and generates only an occasional phone call from an irate citizen.

The program usually requires several months of effort every few years by a midlevel planner in the planning department to update the RPS report, urge the relevant line departments to collect the data (using city employees), and collate and analyze the data (Mendonsa, 1981).

For the future, City Manager Mendonsa plans "to update the RPS program every few years. The program has been partly funded by HUD monies. But even if it wasn't, we would continue to do updates, since the program generates data that we use in managing all our programs and allocating the City's resources" (Mendonsa, 1981).

DEFINING EQUALITY IN SAVANNAH

Savannah's avowed RPS goal was to implement a program of compensatory equality. But equality has been defined as "a word so

wide and vague as to be by itself almost non-meaning" (Lakoff, 1964). Hence some of the dimensions of equality need to be explored, and Savannah's notions of equality placed on these dimensions, before meaningful discussion can proceed. Defining "equality" involves at least three aspects: input versus output equality, the unit of analysis, and nonconflicting goals. A brief review of these follows.

INPUT VERSUS OUTPUT EQUALITY

Achieving input equality involves equalizing the amount of city resources devoted to a particular topic area (such as education or police protection) across particular units of analysis (for example, neighborhood schools or police precincts). In this sense, input equality is akin to equal opportunity, which "requires the agency to spend the same amount to resurface streets in every neighborhood of equivalent population" (Levy et al., 1974).

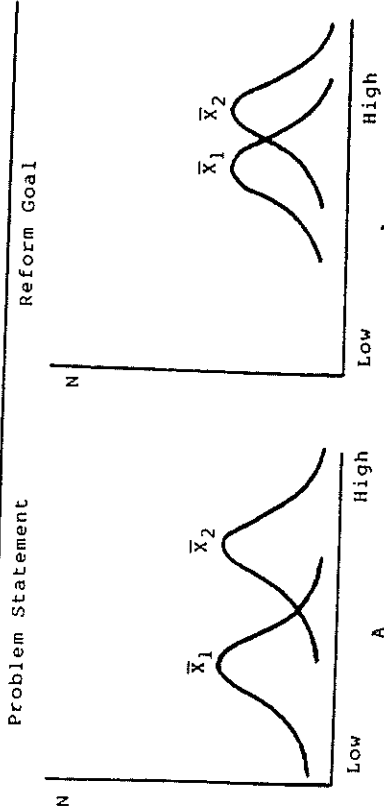
By contrast, output equality requires "equality of condition after receipt of a service" (Lineberry, 1977). This type of equality-based (or equity-based) service delivery is compensatory in nature, in that it identifies existing deficiencies and needs and actively moves to correct and fill them.

This notion of output equality is what Miller (1977) calls "equality III: more equal outcomes for advantaged and disadvantaged groups." This type of equality is shown graphically in Figure 1.

Clearly, Savannah has chosen "equality-III" output equality as the RPS goal and not input equality, as shown in the original program goals statement and in the key measures used, all of which are output measures. In fact, so much emphasis on output-equality measures is somewhat unfortunate, because it is not always entirely clear exactly how many resources were devoted on the input side. The board of aldermen does not budget by geographic area nor explicitly use the RPS program in its budgeting decisions, so input changes at that level are impossible to trace.

THE UNIT OF ANALYSIS

If the unit of analysis is not carefully considered, the analyst may commit the "ecological fallacy," which involves confusion over which unit is to be equalized. Aggregated data from levels higher or lower than the unit of interest may lead to erroneous conclusions. "Proponents of



NOTE: A = achievement, attainment, or income; N = number of individuals; \bar{X} = mean of a group; 1 = Group 1 (disadvantaged); 2 = Group 2 (advantaged)

Figure 1: Equality (II): More Equal Outcomes for Advantaged and Disadvantaged Groups

urban service equalization recognize that services cannot literally be provided equally to every citizen. One who insists on equal educational programs would not demand that all pupils have identical books, teachers, curricula, and laboratories. Rather, the argument favors a rough equivalence of schools in various neighborhoods, and the school becomes a unit of analysis" (Lineberry, 1980). To use the terms proposed by Rae (1981), the goal here is "bloc-regarding equality," rather than "simple individual-regarding equality."

In the RPS program, the unit of analysis is clearly the PU. Planning unit boundaries were drawn based on a combination of natural boundaries (for example, canals and railroad tracks), demographic groups, income, generally recognized neighborhood boundaries, and arterial roads. (PUs thus vary widely in population and geographic size.) No explicit calculations were used in weighing these factors; rather, a common sense, informed-judgment approach was used. Such an approach can sometimes be suspect, but here the racial and income homogeneity of PUs according to census data indicate that the planner's goal of creating fairly homogeneous groups or "bloccs" was achieved, and there is no evidence that the ecological fallacy has been committed.

NONCONFLICTING GOALS

Public programs frequently have multiple goals, and these may easily conflict. In the worst case, "the multiple goals and criteria by which

citizens judge public programs can also be mutually incompatible or inconsistent, so that successful attainment of one goal *precludes* attainment of another" (Langbein, 1980). For example, rigorous enforcement of housing codes that achieves the goal of 100% compliance with the codes may lead to abandonment of houses by landlords and the failure to achieve the goal of having a large supply of low-income housing.

Within each functional area in the RPS program, one goal is used (or sometimes several related but nonconflicting goals are used); that simplifies analysis but leaves unaddressed the question of possible conflicting goals existing implicitly in reality.

OBSTACLES TO ACHIEVING EQUALITY IN SAVANNAH

A program like Savannah's must overcome several obstacles before it can achieve its goal of compensatory equality (as defined above). First is the problem of "partial control"—that societal forces can be stronger than program forces. Other potential problems include racism, lack of political power, external political problems, and internal political problems. A discussion of these problems follows.

THE PARTIAL CONTROL PROBLEM

The partial control problem results from the fact that "the activities of a given service agency seldom, if ever, solely determine the degree to which the environmental state which is the agency's objective (a secure community, an educated citizenry, etc.) prevails" (Lineberry, 1977). Thus, although the activities of a police department "contribute to the security of a community, it is never the sole contributor to this state of affairs" (Ostrom, 1973).

Given the lack of research showing production functions for public services (Lehan, 1980), a jurisdiction simply may choose to assume that increased public services will have an impact on public problems. This may be true, untrue, or vary from problem area to problem area. A reasonable and interesting hypothesis would be that in problem areas over which the jurisdiction has a great deal of control (such as installing fire plugs), output equality will be readily achieved, but in problem areas in which social forces are strong and the jurisdiction has a good deal less

control (such as crime rates), output equality will be difficult to achieve. Our examination of Savannah's system tests this major hypothesis.

RACISM

That racism can be a determinant of urban service delivery is beyond question. Lineberry (1980) quotes a 1927 consultant's report recommending that city services in Austin, Texas, be tailored to create a single black district out of the several existing black neighborhoods. In *Hawkins v. Town of Shaw*, gross inequities clearly related to race were found (such as the fact that 97% of the homes lacking sanitary sewers housed black people) and were struck down as unconstitutional by a U.S. Circuit Court (Harrigan, 1981).

But it is questionable that racism is the *primary* determinant of urban services delivery in most cities. As mentioned earlier, most analysts argue that "bureaucratic decision rules" (rules derived from professional training, ethics, or bureaucratic convenience) are key. (An example of a typical bureaucratic decision rule would be: "newly purchased books should be distributed to branch libraries based on their current circulation.")

Certainly in Savannah the ongoing targeting of resources primarily to black PUs makes it appear unlikely that racism is a major obstacle to achieving compensatory equality.

LACK OF POLITICAL POWER

Lack of political power as an obstacle to achieving equality or urban public service delivery would seem a plausible hypothesis, consistent with the idea of old-style political machines rewarding the people who voted them in, consistent with Hunter's (1953) community power structure theory, consistent with the theory that lack of strong neighborhood leadership and organization leads to low levels of service (Coulter, 1985), and consistent with the theory that low-income persons have a high need for service but low awareness that government is responsible for supplying it (Coulter, 1985). Related to lack of political power could be other variables, such as lack of economic power, lack of social status, minority status, and other factors that could make this theory even more powerful.

However, as stated previously, most analysts have concluded that bureaucratic decision rules, not political power, are the prime movers in

urban public service delivery. In any case, political power apparently is not the prime mover in Savannah, since services are primarily targeted to poorer, less powerful PUs. (Note that on-site verification that services were really targeted as planned was not possible within the evaluation budget constraints. The examples of targeting cited earlier and the statements of city officials and reports that targeting does take place are the evidence here. Nor was it possible to gather data on the political power of neighborhood leaders, patterns of citizen-initiated versus bureaucracy-initiated calls for service, or awareness by citizens of the role of government in service delivery. Nevertheless, this topic is discussed briefly in the concluding section of this article.)

EXTERNAL POLITICAL PROBLEMS

"External" problems are problems outside of the RPS administrative system—problems with local pressure groups, political parties, city councilmen, the press, and the public.

The pluralist literature, the power structure literature, and what might be called the developing "ungovernable" literature (Yates, 1978; Sayre and Kaufman, 1965) point to potential external political problems that might be encountered by a system geared to compensatory equality. Sayre and Kaufman (1965: 72) point out the "de facto vetoes built into the system . . . [that] enable every group to obstruct governmental decisions that fail to take its interests into account."

Yates' theory of "street-fighting pluralism" (1978) seems to point out the impossibility of maintaining a continuous, rational, ongoing policy of compensatory equality. Rather, it appears more likely that administrators would "suffer from a political and administrative overload at the center—an overload that [would lead] to frantic activity and crisis management" (Yates, 1978: 155).

Clearly, the power structure literature suggests that it is unlikely that a proposal to implement serious compensatory equality service delivery schemes would get very far. And one hardly can envision that artful balancer, Mayor Richard Lee of New Haven (Dahl, 1960), consciously designing programs to benefit the powerless continually at the expense of the powerful. Thus a reasonable research hypothesis would be that an urban public service delivery system based on compensatory equality will quickly run into external political trouble and would be unlikely to last in a stable form for very long.

In fact, as we have seen in Savannah, external political problems were not encountered. The significance of this fact will be examined further.

INTERNAL POLITICAL PROBLEMS

Internal political problems are those of implementation and street-level impacts explored by Pressman and Wildavsky (1973) and Lipsky (1980). In other words, just because the top level city administrators make compensatory equality the goal of city programs, it is not necessarily true that all city bureaucrats and service providers down the hierarchy, particularly those with a great deal of street-level discretion in dealing with the public, will adopt a similar policy. Here a reasonable hypothesis would appear to be that those problem areas least subject to discretion on the part of program implementers will be most successful in achieving compensatory equality.

This hypothesis will be tested by examining the actual results of the RPS program (recalling that verifying service delivery patterns and targeting on-site was not possible).

MEASURING COMPENSATORY EQUALITY IN SAVANNAH

Savannah has never undertaken a longitudinal measurement of the success of its RPS program, according to city officials. In this section a method is described for measuring success. This method allows a further "unpacking" of the concept of compensatory equality and allows us to see yet another obstacle to achieving it.

Comparable, interval-level data are available or calculable for several functional areas for the RPS program for 1973, the year the program started, and for 1980, after seven years of RPS resource targeting. Hence it is possible to do a pretest/posttest comparison to measure program success.

Taking Miller's concept of output "equality III," as described earlier, seven different measures of RPS program success can be discerned: change from pretest to posttest in the overall mean; change in the overall variance; change in the mean for PUs that started out as "advantaged"; change in the variance for "advantaged" PUs; change in the mean for "disadvantaged" PUs; change in the variance for "disadvantaged" PUs; and, change in the disparity between the mean of "advantaged" and "disadvantaged" PUs.

"Advantaged" PUs are defined as PUs with scores better than the

overall mean for that measure in 1973. These same PUs are then examined in 1980 to see if their mean score (and variance) has changed. "Disadvantaged" PUs are defined and measured similarly.

Since each of the seven measures described above can have three values (get better, get worse, or stay the same), the total number of potential combinations of outcomes is 3^7 , or 2,187. (The first measure has three possibilities. For each of these three possibilities, the second measure has three possibilities, thus making 3^2 , or 9, possible combinations. Tracing this process through 7 steps creates 3^7 possible combinations of outcomes.) Of these combinations of outcomes *only* 32 are desirable to the policymaker bent on compensatory equality, because the policymaker will desire (1) that the overall mean stays the same or gets better, (2) that overall variance stays the same or gets smaller ("better"), (3) that the mean for advantaged PUs gets better or stays the same (*truly* redistributive policies, where the poor get richer and the rich get poorer, will probably be criticized by the rich), (4) that the advantaged variance stays the same or gets smaller, (5) that the disadvantaged mean gets better, (6) that the disadvantaged variance gets smaller or stays the same, and (7) that the disparity between advantaged and disadvantaged means grows smaller. The twelve positive outcomes listed in this sentence are presented algebraically in Table 1. (Policymakers will probably value results where the *means* improve more than where the *variances* improve, since such results are more obviously successful to citizens; means are emphasized in the conclusions section.) Thus the 2,187 figure can be multiplied by $2/3$, $2/3$, $2/3$, $2/3$, $1/3$, $2/3$, and $1/3$ respectively to arrive at 32 desirable combinations of outcomes. (If two out of three possible outcomes are favorable, we multiply by $2/3$; if one out of three is favorable, we use $1/3$.) The 32 desirable combinations are only 1.5% of the 2,187 total potential combinations of outcomes. If only chance is operating, it is thus extremely unlikely that a desirable combination of outcomes will result. This is an interesting and surprising fact that has hitherto not been pointed out in the literature.¹

For each functional area it may also be somewhat useful to examine the fate of the worst few PUs, in terms of ranks. Here the theory would be that intensive RPS program targeting should reduce, for example, the rank of the worst five PUs to ranks below five. This is a cruder measure that is not entirely independent of the other measures used, but may be useful on occasion.

TABLE 1
Descriptions of Desirable Outcome Measures

1.	$\bar{x}_1 = \bar{x}_2$	The citywide mean stays the same
2.	$\bar{x}_1 > \bar{x}_2$	The citywide mean gets better*
3.	$S_1 = S_2$	The citywide variance stays the same
4.	$S_1 > S_2$	The citywide variance gets better
5.	$\bar{x}_{A1} = \bar{x}_{A2}$	The "rich" stay the same
6.	$\bar{x}_{A1} > \bar{x}_{A2}$	The "rich" get "richer"
7.	$S_{A1} = S_{A2}$	The "rich" variance stays the same
8.	$S_{A1} > S_{A2}$	The "rich" variance gets better
9.	$\bar{x}_{D1} > \bar{x}_{D2}$	The "poor" get "richer"
10.	$S_{D1} = S_{D2}$	The "poor" variance stays the same
11.	$S_{D1} > S_{D2}$	The "poor" variance gets better
12.	$(\bar{x}_{A1} - \bar{x}_{D1}) > (\bar{x}_{A2} - \bar{x}_{D2})$	The "poor" (partly) catch up with the "rich"

Key: \bar{x} = Mean
 S = Variance
 A = Advantaged
 D = Disadvantaged
 1 = Pretest
 2 = Posttest

*Since most measures are of problems such as crime, having less of the measured quality is better.

MEASURING RPS PROGRAM SUCCESS

RPS program success is measured for seven functional areas where comparable 1973 and 1980 interval level data are available. Only one

measure per area is used, because of lack of space or because only one measure is available.²

The findings for each functional area will be discussed briefly. Table 2 summarizes the findings.

In reported serious crime rates, the overall mean went up by about 6.9% from 1973 to 1980, from 28.5 crimes per 1,000 population to 30.45 (see Table 2). The "advantaged" crime rate went up about 7.2% (from 18.22 to 19.54), and the "disadvantaged" crime rate went up by 6.6% (from 49.05 to 52.27). Citywide, advantaged, and disadvantaged variances all went up. The disparity between advantaged and disadvantaged also increased somewhat. (See the bottom two rows in Table 2; 32.73 is greater than 30.83.) Examining the relative rankings, three of the worst five 1973 PUs were still in the worst five in 1980.

From a compensatory equality viewpoint, all these results are undesirable. On the other hand, crime did not go up much, and it went up about equally in advantaged and disadvantaged areas. Thus this result might be termed moderately unsuccessful.

In fire incidence (measured in terms of preventable structural fires), the citywide mean improved slightly, as did the disadvantaged mean (see Table 2). The advantaged mean worsened slightly. All three variances worsened. The gap between advantaged and disadvantaged narrowed significantly. In terms of rank order, four out of five 1973 PUs were still in the worst five in 1980.

Thus measures in this functional area are mixed, with some indications of a redistributive compensatory equality outcome, but with some problems, also.

In water service for fire fighting, comparable measures were available in the form of minimum fire hose reach distance. Here the number of lots in each PU that were beyond standard distances to the nearest fire hydrant, as set by the American Insurance Association, provided a measure of water service for fire fighting adequacy. (Unserviced lots were not divided by population or the total number of lots in each PU, since the city did not target in this manner but, rather, by total unserviced lots.)

In this functional area, the citywide mean worsened, and the advantaged mean worsened dramatically. The disadvantaged mean improved substantially, however. Examining the raw data to see what happened, it is clear that redistribution was not really going on here. Rather, the targeting was working in the disadvantaged areas, but in the advantaged areas, the city allowed new, unserviced lots to have houses

built upon them, thus making the problem worsen.

As a reflection of this same activity, the overall and advantaged variance went up, the disadvantaged variance declined, and the gap between advantaged and disadvantaged narrowed markedly. Two of the worst five PUs were still among the worst five in 1980 PUs. Hence it appears that targeting was working in disadvantaged areas, but that other, non-RPS forces were creating problems in the advantaged areas.

In sewer service, comparable measures for 1973 and 1980 were available in the form of the number of improved lots in each PU that were more than 300 feet from a city sewer line. The raw data show that less than half of PUs in 1973 had any problem at all in this regard, and that by 1980 all PUs except PU 2 had eliminated this problem. In PU 2, however, new construction had evidently raised the number of unsewered lots from 24 to 127.

In this situation, summary statistics are hardly needed, but it may be of some interest to note that all measures except the change in disadvantaged variance show marked improvement. This latter measure shows a worsening due to the large value of the only outlying figure, 127 lots in PU 2.

Thus this functional area has achieved an almost across-the-board success. Note, interestingly, that the usual definition of compensatory equality, where the "poor" catch up but not all the way, has been exceeded here.

In housing adequacy, in 1973 the RPS program updated a 1970 "windshield survey" of all dwelling units in the city. Dwelling units were classified as "sound," "minor repair," or "major repair." A similar study in 1980 was undertaken, making it possible to calculate comparable figures for the number and percentage of dwelling units in the worst categories in each year for each PU. The data reveal that the total number of problematic dwellings dropped dramatically from 1973 to 1980. Consistent with this, Table 2 shows that the overall mean improved substantially. The advantaged mean improved somewhat, whereas the disadvantaged mean improved substantially. All variances improved, as did the disparity between advantaged and disadvantaged. Hence this appears to be the policymakers' Pareto optimal dream—everyone gets better, and the "poor" catch up partway with the "rich."

In street quality, comparable measures were available for 1973 and 1980 in the form of the number and percentage of unpaved street miles in each PU. The raw data show that the absolute number of unpaved miles declined markedly from 1973 to 1980. Table 2 shows that the overall

NOTE: X = mean of a group; S = variance; a = advantaged PUs; D = disadvantaged PUs; 73 = measurements in 1973; 80 = measurements in 1980.

*1972, not 1973, values used for pretest
**Omitting PUs 2, 4, 14 and 16

	X ₇₃	X ₈₀	S ₇₃	S ₈₀	S _{A73}	S _{A80}	S _{D73}	S _{D80}	(X _{D73} - X _{A73})	(X _{D80} - X _{A80})
Curing rate per 1000 pop.	28.50	4.68	117.48	17.43	4.80	32.09	32.09	57.65	108.23	13.80
Preventable structural fire rate per 1000 pop.	30.45	4.60	139.67	6.05	2.10	10.90	10.90	108.23	13.80	13.80
Number of improved lots surveyed by city	18.22	3.24	51.14	1.82	0.82	16.30	16.30	99.80	99.80	99.80
Number of inadequate fire water supply for 1000 pop.	19.54	3.35	158.57	0	0.72	9.63	9.63	99.80	99.80	99.80
Percent of housing units needing major repair	49.05	7.57	250.14	83.75	11.29	53.16	120.29	120.29	120.29	120.29
Percent of improved lots not surveyed by city	52.27	7.10	101.86	31.75	3.96	12.61	120.29	120.29	120.29	120.29
Percent of road miles unpaved	316.19	6.66	15930.54	1506.15	37.97	514.42	3295.99	3295.99	3295.99	3295.99
Number of structures within 100 year PZ	426.92	8.72	34800.32	731.47	11.98	81.44	7638.30	7638.30	7638.30	7638.30
Number of improved lots surveyed by city	28.52	0.46	1400.55	13.32	0.91	132.55	452.96	452.96	452.96	452.96
Number of inadequate fire water supply for 1000 pop.	92.94	1.68	49054.39	0	0.74	44.67	12331.16	12331.16	12331.16	12331.16
Number of improved lots surveyed by city	257.70	6.54	18589.84	2417.19	30.31	247.41	687.35	687.35	687.35	687.35
Number of structures within 100 year PZ	410.39	13.42	4147.04	3024.19	20.98	125.38	687.35	687.35	687.35	687.35
Number of structures within 100 year PZ	30.83	4.33	199.00	81.91	10.47	38.86	106.49	106.49	106.49	106.49
Number of structures within 100 year PZ	32.73	3.75	56.71	31.75	3.24	2.98	20.49	20.49	20.49	20.49

TABLE 2
Pre/Post Measures by Functional Area

mean (measured in percentage of miles unpaved) improved dramatically, that the advantaged mean improved substantially, and that the disadvantaged mean improved dramatically. All variances improved, and the gap between advantaged and disadvantaged almost disappeared. This appears to be a very successful functional area. In terms of rank order, the worst five 1973 PUs are no longer concentrated in the worst five in 1980, with the exception of PU 15. Thus all indicators are positive for this functional area.

In flood drainage, comparable measures for 1973 and 1980 were available on the number of housing units located within U.S. Army Corps of Engineers' 100-year Flood Plain Zone (FPZ). (Flood drainage was of concern because Savannah was built on low, flat ground, creating serious storm and flood drainage problems.)

No information was available in 1973 for PUs 2, 6, 14, and 16, so these PUs were omitted from Table 2 calculations. This is unfortunate, because these PUs were among the worst in 1980. Table 2 shows that the overall mean got worse in 1980 (in other words, more units on average were exposed), that the advantaged mean grew much worse, but that the disadvantaged mean remained exactly the same. Overall and advantaged variances increased (got worse) but the disadvantaged variance remained identical. The gap between advantaged and disadvantaged means closed, but this was only the result of the advantaged PUs getting worse.

Reexamining the raw data to find an explanation for these results, we see that the disadvantaged PUs had exactly the same number of exposed units in 1973 and 1980. Clearly, the RPS program targeting accomplished nothing here. Many of the advantaged PUs had the same scores in both years also, but PUs 12, 1, 7 and 19 showed a tremendous increase in exposed units. This is probably the result of extensive new construction in the FPZs of these PUs.

In terms of rank order, two of the worst five PUs in 1973 are the worst in 1980 (ignoring the four omitted PUs). Any improvement that this shows is only due to worsening of advantaged PUs, however.

Thus all indicators here point to failure. Disadvantaged PUs remained the same, whereas advantaged PUs got much worse or stayed the same.

SUCCESS, STATUS, AND PROBLEMS OF THE RESPONSIVE PUBLIC SERVICES SYSTEM

Conclusions from these data can be drawn in three areas:

- overall success
- citizen-contacting and socioeconomic status
- internal and external political problems

OVERALL SUCCESS

If the simple question is asked, "Is the RPS program a success?" a reasonable answer would be, "It depends on the functional area." Figure 2 shows the seven measured areas on a continuum of low to high success with each area's raw scores and respective percentage changes in the overall mean, advantaged mean, and disadvantaged mean, and gap between advantaged and disadvantaged means.

The functional areas are spread across the whole spectrum of success from flood drainage at the low end to sewer service and street paving at the high end. Thus, for example, flood drainage problems increased by 87.7% overall, whereas sewer service problems declined 65.3% overall. Interestingly, although the overall, advantaged, and disadvantaged means showed great disparities in success, the gap between advantaged and disadvantaged narrowed by 60-90% in all areas except crime and fire incidence. Perhaps this is the true measure of the success of RPS.

The next obvious question is "Why is there so much variation in overall, advantaged, and disadvantaged means?" One partial answer may be the strength of societal forces working against the goals of RPS. Crime and fire incidence come readily to mind here, because city resources, even if intensely targeted, may do little good. But how do we explain the apparent failure in the flood drainage area, and in the area of water service for fire fighting? It will be recalled that when hypothesizing about this, installing fireplugs was used as an area in which the city should have substantial control when compared to societal forces. Apparently this was wrong. What was wrong was not taking into account the development process, which is affecting at least three of the measures. The city quite evidently has not controlled the development process to prevent construction of new homes in the Flood Plain Zone—this is a major cause of the substantial failure here.

Furthermore, it appears that starting new housing in semisuburban locations far from the nearest hydrant is a major cause of the partial failure in the water service for fire fighting area. Recall, too, that the only problem marring the near total success of the sewer service functional area was the construction of more than 100 new homes in PU 2 beyond the reach of sewer service.

Thus social forces beyond the city's willingness or ability to control appear to have a substantial influence on ultimate compensatory equality outcomes.³

CONTACT BY CITIZENS AND SOCIOECONOMIC STATUS

As mentioned earlier, no data were collected on contacts or complaints by citizens and how that might relate to the success rates shown in Figure 2. However, if one assumes that crime is a high-complaint topic area and sewer service is a low-complaint area, then clearly high contacting is not leading to high success in solving the problem, and vice versa.

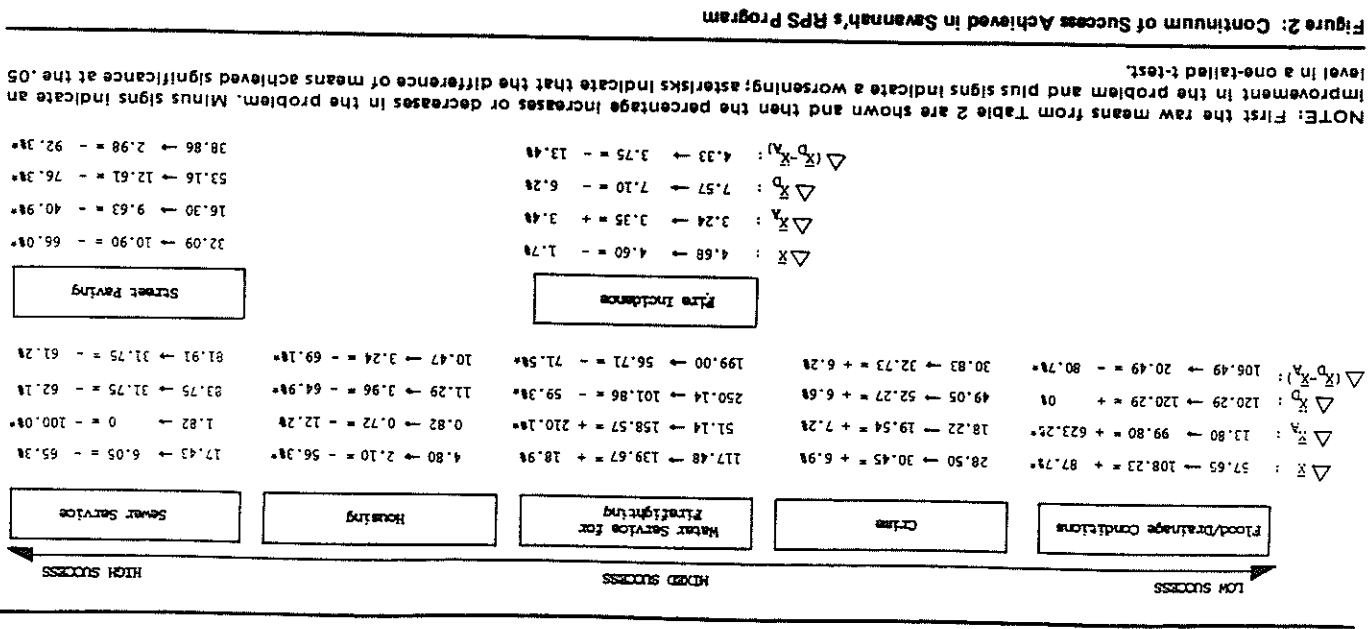
Furthermore, recalling that the "disadvantaged" PUs were poor in 1973 and 1980, the socioeconomic-status theorists would predict that the "advantaged" PUs should have a greater percentage gain over time than the disadvantaged. In fact, the reverse happens in all topic areas except one (sewer service).

INTERNAL AND EXTERNAL POLITICAL PROBLEMS

The point made in the previous section was that in difficult areas such as fire incidence and crime, societal forces simply overwhelmed city resources. However, internal political problems, not lack of resources, were possibly the problem. In other words, in difficult areas the street-level bureaucrats may not be carrying out the equality-based bureaucratic decision rules.

Examining the results of the detailed analysis in terms of our research hypothesis, one functional area with a high degree of street-level bureaucratic discretion, crime, apparently had less RPS success than the other functional areas, in which street-level bureaucratic discretion is less. However, the housing area, which is normally considered to have high street-level discretion, did quite well under RPS. Hence this reasoning appears to have little explanatory value.

Unfortunately, without a detailed on-site analysis of Savannah's RPS inputs and operations, it is impossible to tell if internal political problems or relative lack of city resources versus societal forces, or a combination of the two, caused the RPS program's lack of success in crime, fire incidence, and flood drainage.



That Savannah appears to have had no external political problems in implementing the RPS program is most interesting, and runs contrary to what one would expect from the literature and from intuition. The continuity of the program can be explained partially by the continued tenure of City Manager Mendonsa, Mayor John Rousakis, and three of the aldermen during the period 1973 to 1980. But this continuity does not explain the lack of controversy generated by a program that, after all, devotes itself primarily to upgrading poorer black areas in a city with a wealthier white majority. As mentioned earlier, Mendonsa reported that the RPS program got some favorable publicity during its inception and has since had no organized opposition.

There are two final points we can make from this evaluation. First, public relations are important. An equality-based bureaucratic decision-rule program introduced as a "program to raise problem neighborhoods to an acceptable standard of livability" will be successful; an effort that is labeled "a program to take white middle-class tax dollars and spend them in poor black neighborhoods" might well fail.

Second, bureaucratic decision rules are apparently buried far enough in the bureaucracy that the public is not aware of them. (Lineberry [1977] notes that citizens generally are not aware of geographic service differences and usually think that their neighborhood does all right in terms of service delivery.) The implication is that if bureaucratic rules are made more public (for example, by having the board of aldermen regularly make budget decisions in public debate on the basis of planning units) then more controversy will be generated. This evaluation thus implies that equality-based bureaucratic decision rules can be successfully introduced into cities around the country with relatively little controversy, if the will exists to do it, and if the proper "PR" is used.

NOTES

1. If this concept is confusing, consider the following analogy. A flowering bush has seven initial branches emerging from its trunk. Each of these branches splits into three smaller branches, each of these three smaller branches splits into three even smaller branches, and so on until finally there are 2187 tips of tiny branches at the exterior of the bush. Unfortunately, at the first branching a disease has infected one-third of the

branches, thus preventing any flowering at the tips, leaving two-thirds uninfected. At the second, third, fourth and sixth branchings two-thirds of the branches are uninfected, while at the fifth and seventh branchings one-third of the branches are uninfected. The end result will be only 32 flowers on the 2187 tips (see Kemeny et al., 1974: 22-26, 59-64 and 81-150).

2. For reasons of space, it is impractical to show all the raw data in each functional area, or to discuss all the calculations undertaken to make all data comparable. This information is available from the author upon request.

3. It can be argued that "regression to the mean"—the tendency of extreme scores chosen for remedial programs to move closer to the population mean on a posttest—is causing some of RPS's successes. In fact, subtracting "disadvantaged" from overall means, and comparing the 1973 and 1980 results, reveals that in fires, sewer, service, housing, road paving, and flood control, there is regression of the disadvantaged mean toward the overall mean. However, we should recall four points: First, time series data on PUs prior to the pretest unfortunately are unavailable except in fire incidence and housing, for which two years of data are available. Here the worst PUs were consistent in both years. Second, RPS achieves high success in two areas, sewer service and road paving. These two areas have very few measurement problems, yet imperfect measurement constitutes a major source of "regression to the mean" problems (Caporaso and Roos, 1973: 328). Third, the improvements in disadvantaged means in the successful areas of sewer service, street paving, and housing are very substantial (62-72% improvements) and are thus unlikely to be solely artifacts. Fourth, RPS problem neighborhoods were chosen based on statistical evidence and on administrators' knowledge that these areas had "chronic problems of a persistent . . . extremity" (Caporaso and Roos, 1973: 197). Thus their extreme scores were not temporary statistical aberrations.

REFERENCES

- ANTUNES, G. E. and K. MLANDENKA (1976) "The politics of local services and service distribution," pp. 147-167 in L. H. Massotti and R. Lineberry (eds.) *The New Urban Politics*. Cambridge, MA: Ballinger.
- ANTUNES, G. E. and J. P. PLUMLEE (1977) "The distribution of an urban public service." *Urban Affairs Q.* 12: 313-332.
- BROWN, B. (1981) Personal communication (December 7).
- CAPORASO, J. A. and L. L. ROOS, Jr. (1973) *Quasi-Experimental Approaches*. Evanston, IL: Northwestern Univ. Press.
- City of Savannah (1973) *Community Renewal Program*.
- City of Savannah (1974) *City of Savannah Responsive Public Services Program*. Washington, DC: International City Management Association.
- City of Savannah (1976) *Responsive Public Service Program*, Savannah.
- City of Savannah (1980) *Responsive Public Service Program*.
- COULTER, P. (1985) "Models of citizen contacting and bureaucratic response." Presented at the 1985 American Society for Public Administration Conference, Indianapolis, March 27.
- DAHL, R. (1960) *Who Governs?* New Haven, CT: Yale Univ. Press.

- FALLOWS, J. M. (1971) *The Water Lords*. New York: Grossman.
- HARRIGAN, J. J. (1981) *Political Change in the Metropolis*. Boston: Little, Brown.
- HUNTER, F. (1953) *Community Power Structure*. Chapel Hill: Univ. of North Carolina Press.
- JONES, B., S. R. GREENBERG, C. KAUFMAN, and J. DREW (1980) "Service delivery rules and the distribution of local government services," pp. 225-249 in H. Hahn and C. Levine (eds.) *Urban Politics*. New York: Longman.
- KEMENY, J. G., J. L. SNELL, and G. L. THOMPSON (1974) *Introduction to Finite Mathematics*. Englewood Cliffs, NJ: Prentice-Hall.
- KOEHLER, D. H. and M. WRIGHTSON (1985) "Inequality in the delivery of urban services: a reconsideration of the Chicago parks." Presented at the American Society for Public Administration Conference, Indianapolis, March 27.
- LAKOFF, S. (1964) *Equality in Political Philosophy*. Cambridge, MA: Harvard Univ. Press.
- LANGBEIN, L. I. (1980) *Discovering Whether Programs Work: A Guide to Statistical Methods for Program Evaluation*. Santa Monica, CA: Goodyear.
- LEHAN, E. A. (1980) "Integrating budgeting, accounting, auditing and performance measures," pp. 90-106 in L. Toulmin (ed.) *Local Financial Management in the '80s: Techniques for Responding to the New Fiscal Realities*. Washington, DC: U.S. Department of Housing and Urban Development.
- LEVY, F., A. MELTSNER, and A. WILDAVSKY (1974) *Urban Outcomes*. Berkeley: Univ. of California Press.
- LINEBERRY, R. L. (1977) *Equality and Urban Policy*. Beverly Hills, CA: Sage.
- LINEBERRY, R. L. (1980) "Mandating urban equality," pp. 173-200 in H. Hahn and C. Levine (eds.) *Urban Politics*. New York: Longman.
- LIPSKY, M. (1980) *Street-Level Bureaucracy*. New York: Russell Sage.
- MENDONSA, A. A. (1981) *Personal communication* (November 23).
- MILLER, T. C. (1977) "Conceptualizing Inequality," *Evaluation Studies Review Annual*: 335-343.
- MLANDENKA, K. R. (1980) "The urban bureaucracy and the Chicago political machine." *Amer. Pol. Sci. Rev.* 74: 991-998.
- OSTROM, E. (1973) "On the meaning and measurement of output and efficiency in the production of urban police services." *J. of Criminal Justice* 1: 93-111.
- PRESSMAN, J. L. and A. WILDAVSKY (1973) *Implementation*. Berkeley: Univ. of California Press.
- RAE, D. (1981) *Equalities*. Cambridge, MA: Harvard Univ. Press.
- SAYRE, W. and H. KAUFMAN (1965) *Governing New York City: Politics in the Metropolis*. New York: Norton.
- U.S. Bureau of the Census (1972) *1970 Census of Population and Housing: Census Tracts: Savannah, Georgia*. Washington, DC: Government Printing Office.
- YATES, D. (1978) *The Ungovernable City*. Cambridge: MIT Press.

Llewellyn M. Toulmin is an Associate with Booz · Allen & Hamilton in Bethesda, Maryland. He previously served as an Assistant Professor in American University's School of Government and Public Administration. He received an M.P.A. from the Maxwell School of Syracuse University and a Ph.D. in public administration

from American University. He has worked for Metro Dade County, Florida, Arlington County, Virginia, and AFSCME's Research and Collective Bargaining Department, and has served as a consultant to numerous federal and local agencies in the areas of state and local finance, economic development, management analysis, and survey research.