

[DeHoog, Ruth H.](#), David Lowery, William E. Lyons. "Citizen Satisfaction With Local Government Services: A Test of Individual, Jurisdictional, and City Specific Explanations," *Journal of Politics* 52 (Aug. 1990): 807-837.

Made available courtesy of Cambridge University Press: <http://www.cambridge.org/>

Citizen Satisfaction with Local Governance: A Test of Individual, Jurisdictional, and City-Specific Explanations

[Ruth Hoogland DeHoog](#)

University of North Carolina at Greensboro

David Lowery

University of North Carolina at Chapel Hill

William E. Lyons

University of Kentucky

What are the sources of citizen satisfaction with local government? Our answers to this question remain fragmentary due to limits in our tools of investigation which have not been well suited for disentangling individual- and jurisdictional-level determinants of citizens' evaluations and distinguishing these from city-specific effects. We employ a comparison group design to jointly assess three theoretical accounts of the source of satisfaction. The results point to a very understandable account of satisfaction with local government. On the individual's side of the relationship, we find an important role for local government efficacy and attachment to the local community. And on the government's, our model points to what officials actually do for citizens: provision of some level and quality of services.

Citizens' satisfaction with public services has long been linked to a broad array of political behaviors (Sharp 1984a, 1984b, 1984d, 1986; Orbell and Uno 1972; Lyons and Lowery 1986, 1989), including: supporting or opposing of proposals to raise taxes or cut services (Beck et al. 1987; Fowler 1974), contacting behaviors (Sharp 1982, 1984c, 1986; Thomas 1982), exiting the jurisdiction (Tiebout 1956; Ostrom et al. 1961), and protesting and rioting (Sears and McConahay 1973). But given the substantial attention devoted to the issue, it is surprising that our knowledge about the sources of citizen satisfaction remains fragmentary. Several explanations have been examined in the literature, including some based on *individuallevel* demographic (e.g.,

An earlier version of this paper was prepared for presentation at the annual meeting of the Midwest Political Science Association, Chicago, April 1989. This research was conducted with the assistance of a grant from the National Science Foundation (SES85-20155).

race and income) and attitudinal (e.g., political efficacy) factors. Others focus on *systemic jurisdiction-level* (e.g., consolidated/fragmented government structure) factors. And there is an older, predominantly case literature on urban politics (Talbot 1969; Ferman 1985; Swanstrom 1985; Yates 1977; Lyons 1977) which often focuses on the *city-specific* role of civic leaders in providing objective conditions in urban governance that would be conducive to citizen satisfaction. But while some support has been found for several hypotheses embedded in these explanations, we have yet to construct an integrated account of the phenomenon.

This failure is due not to a lack of theoretical imagination but to limitations in our tools of investigation. The inferential limits of the city-specific case literature have been recognized for some time. But even the more systematic research designs employed by urban researchers have been less than ideally suited for disentangling the full set of competing/complementary explanations of citizen satisfaction with local government. In this paper, we employ a comparison group design to test a more complete account of the determinants of citizen satisfaction by simultaneously investigating both individual- and jurisdiction-level sources of public evaluations of local government. And we are able to isolate by implication the impact of city- and neighborhood-specific factors as distinct from random fluctuations in public evaluations. The extant accounts of satisfaction are summarized in the first section, followed by a presentation of the design, data, and findings. In the final section, we discuss the implications of these findings for understanding citizen satisfaction.

THREE EXPLANATIONS OF CITIZEN SATISFACTION WITH URBAN SERVICES

Three, sometimes overlapping, explanations of citizen satisfaction are evident in the urban politics literature, respectively focusing on individual-level, jurisdiction-level, and city- or neighborhood-specific determinants.¹

Individual-Level Explanations

Two individual-level approaches can be distinguished, though the best analyses using this approach link both in more complex causal analyses of citizen satisfaction (i.e., Beck et al. 1986). The first focuses on *demographic* variables in accounting for levels of satisfaction. For example, several studies have shown that blacks rate service quality far lower than do whites (Aberbach and Walker 1970; Schuman and Gruenberg 1972; Durand 1976; Brown

1 In a fourth approach, some have found that citizens who contact officials have a more accurate, and generally positive, assessment of services (Fitzgerald and Durand 1980; Parks 1984). But using the Kentucky data, we found that those who contact were more likely to give negative assessments, suggesting that contacting is a response to dissatisfaction (see Lyons and Lowery 1989).

and Coulter 1983), even though systematic social-class or racial biases generally have not been found to matter in research on city service distribution patterns (Lineberry 1977; Jones et. al. 1978; Jones 1980; Mladenka 1981). Other studies have suggested that age, income, gender, and homeownership status may affect some evaluations, but again little consensus can be found in the empirical findings (Brown and Coulter 1983; Hero and Durand 1985; Brudney and England 1982a; Fitzgerald and Durand 1980). While such research has a long tradition, it is often not clear in these analyses just why any observed empirical relationship should exist. All too often, the finding that a particular demographic variable is related to satisfaction remains an unexplained empirical observation. In other analyses, however, the demographic variables are interpreted as proxies for more immediate attitudes and beliefs presumed to be directly related to satisfaction with services—our second individual-level approach.

This second set of individual-level factors focuses directly on *political attitudes* that are presumed to be more closely related to satisfaction. Prominent in this set of factors is the concept of local political efficacy. In recent analyses, most investigators have accepted the position that general political attitudes are government specific phenomena (Balch 1974; Sharp 1986). Accordingly, most urban scholars have attempted to distinguish between general political efficacy as measured by the traditional SRC index and the notion of political efficacy as it relates to particular local governments. Efforts along this line have been subsumed under a variety of labels and indicators. Beck et al. (1986) and Stipak (1977, 1979) deal with this general notion under the heading of community disaffection and found it to be strongly associated with service satisfaction. Similarly, in a study of citizen evaluations of police protection, political efficacy was positively and significantly related to satisfaction with police services (Brown and Coulter 1983). While the role of disaffection and/or local political efficacy in shaping service evaluations has been studied, some ambiguity remains, especially in regard to measurement, an issue we consider more fully below.

Social investment or community attachment on the part of citizens might also influence service evaluations. By community attachment, we mean the degree to which citizens are integrated into the community and psychologically attached to its life. Those who are invested in or attached to the community are hypothesized to be more satisfied with their city governments. Previous research (Lyons and Lowery 1989) has found that social investment is closely related to loyalty behaviors in response to dissatisfaction, or passively but optimistically expecting the government to resolve a source of dissatisfaction. It is a small leap to suggest that this positive orientation might also generalize to positive service evaluations to begin with. And Beck et al. (1986) have found that community attachment is related to service evaluations, albeit indirectly.

Based on this analysis, we can formalize the individual-level model of citizen satisfaction with urban services in the following manner:

$$\text{Satisfaction}_i = a + b_1 \text{Gender}_i + b_2 \text{Race}_i + b_3 \text{Income}_i + b_4 \text{Age}_i + b_5 \text{Own Home}_i + b_6 \text{Local Eff}_i + b_7 \text{Gen'l Eff}_i + b_8 \text{Comm Attach}_i$$

where the first five variables are self-explanatory demographic factors, *Local Eff* is local political efficacy, *Comm Attach* is level of community attachment, and *Gen'l Eff* is general political efficacy.

Jurisdictional-Level Explanations

The second approach to understanding the sources of satisfaction focuses on systemic jurisdiction-level phenomena. But, in some cases, the boundary between this approach and the individual-level models can be fuzzy. For example, a number of aggregate-level analyses and multiple city surveys have suggested that several of the individual-level demographic factors discussed earlier may have jurisdictional-level analogs that influence satisfaction over and above the individual-level impacts of these variables. Most importantly, in a number of multiple city surveys, significant variations in satisfaction have been found across cities on the basis of aggregate differences in the size of the nonwhite population and income (Fowler 1974; Schuman and Gruenberg 1972), but whether this is due to individual- or jurisdiction-level causes remains unclear. Jurisdictional influences over and above individual impacts are plausible. The percent of blacks in the city may affect either black perceptions or white perceptions, or both, if evaluations are based on how responsive residents believe that city is to their needs when they are a minority group. Similarly, whether the population of a city is wealthy or poor on average may be more important in determining satisfaction than the personal wealth of a given citizen. In any case, both the *Race* and *Income* hypotheses must be examined at both levels.

A second and somewhat broader interpretation of this same general orientation emphasizes the larger societal context in which local citizens conduct their daily lives, rather than specific jurisdictional-level demographic characteristics such as race and income. Williams (1971, 1975), for example asserts that individual and household units search for access to a broad range of "life-style maintaining" conditions by locating in specific neighborhoods or communities within a given urban area, thereby segregating themselves into discreet social worlds. This clustering of households into relatively homogeneous socioeconomic neighborhoods and/or communities has been discussed extensively in the literature, and is thought to be associated with differing service expectations and, therefore, differing evaluations of local tax-service packages. Indeed, several studies have reported significant differences in the service expectations of various types of neighborhoods, with upper-class areas displaying strong interest in "amenities" while working-class areas stress

"housekeeping services," and lower-status areas push for "social services" (Sharp 1986, 70-71). To the extent that these variations in service expectations across neighborhoods or communities may be independent of individual-level socioeconomic and life-style considerations, we need to include this kind of general systemic variable in our model in trying to understand differences in satisfaction with local services and the governments that supply them.

A third class of jurisdiction-level factors—governmental structural variables—are more clearly unique to that level of analysis. While a number of variables are noted in the literature (i.e., strong mayor versus manager systems or district versus at-large representation), one of the most important is the distinction between consolidated and fragmented governmental structures. The public choice approach argues that citizens in smaller cities operating under fragmented arrangements experience higher levels of service performance and accessibility, as compared with consolidated systems (Ostrom 1973; Bish and Ostrom 1973). The traditional reform view, in contrast, argues that consolidated urban-county governments provide clearer lines of political accountability and greater application of expertise to the complexities of urban life (Lyons and Lowery 1989). From both views, structural factors are presumed to promote satisfaction.

Not surprisingly, these competing hypotheses on satisfaction have attracted some research attention (Rogers and Lipsey 1974), especially for satisfaction with police services (Ostrom 1976; Parks 1984; Ostrom and Smith 1976). Most of these studies use some form of comparison group design. As we will see, however, the designs used in these studies may not enable researchers to effectively contrast the impact of alternative institutional arrangements. Still, assuming for the moment that they actually do tap into the impact of institutional structure (rather than simply jurisdiction size), these studies tend to provide strong support for the public choice view, with Rogers and Lipsey's (1974) bivariate comparison of general satisfaction in two Nashville metropolitan jurisdictions being the most directly relevant example.

Fourth, satisfaction might be related to actual differences in the level and quality of services; if other things are equal (i.e., taxes), cities with more services and higher quality services may be perceived more favorably by their citizens than those with fewer and poorer services. While this might seem obvious, it is by no means clear that satisfaction is directly related to service levels and quality. Previous research (Stipak 1977, 1979; Parks 1984) has indicated that evaluations of services are not necessarily linked to actual services, nor are these opinions laden with accurate information about government. Citizens who have had contacts with officials appear to have somewhat more accurate views, but these citizens are in the minority. But, putting off for the moment the question of accuracy, we might expect that jurisdictional variations in service levels and quality might influence citizen satisfaction.

This analysis would suggest the following model of the jurisdictional-level determinants of satisfaction:

$$\text{Satisfaction}_i = a + b_1 \text{Race-J}_i + b_2 \text{Income-J}_i + b_3 \text{Social Worlds}_i + b_4 \text{Consolidation}_i + b_5 \text{No. of Services}_i + b_6 \text{Service Quality}_i$$

where *Race-J* indicates the dominant racial composition of a jurisdiction, *Income-J* indicates the average income level, *Social Worlds* indicates the “socioeconomic matrix” of a community, *Consolidation* indicates whether a jurisdiction operates under a consolidated urban-county government or a fragmented system, *No. of Services* is the actual level of service provision in the jurisdiction, and *Service Quality* is the actual quality of service.

City- and Neighborhood-Specific Explanations

After we have accounted for individual- and jurisdiction-level systemic influences on citizen satisfaction, the remaining variance in satisfaction could be due to simple random error. This assumption is frequently built into analyses relying on single surveys of individuals in multiple jurisdictions. Alternatively, unique, but not strictly random, city or neighborhood factors—local history in the language of quasi-experiments—could be accounting for that unexplained variance. While not concerned with citizen satisfaction per se, a rich case literature in urban politics (e.g., Lyons 1977; Yates 1977; Talbot 1969; Ferman 1985; Swanstrom 1985; Kotter and Lawrence 1974) suggests that urban leadership and management can have a considerable impact on satisfaction.

While important, enumerating a complete list of such neighborhood- and city-specific influences would be difficult; it would include everything from the unique history of a given city to its mayor's leadership style and its management practices. The boundaries to this approach, too, are a bit fuzzy. Indeed, some of these factors are less than entirely distinct from some of the jurisdiction-level explanations we have examined; leadership may lead to systemic differences in service levels and/or quality. Still, this approach suggests that each city or neighborhood is so unique that focusing on the impacts of more systemic determinants is pointless. Each city or neighborhood must be studied in its own context and on its own terms to understand satisfaction.

The lack of a discrete set of determinants makes it difficult to imagine how we might go about studying such influences beyond returning to case studies. But because we cannot examine them in detail does not mean that we cannot control for their impact nor separate their influence from general random error. This will be discussed more fully below. But, a simple model for just the city-specific determinants is easy to develop, if not very informative in and of itself. Given exclusive attention to city-specific effects, this explana-

tion suggests that the mean level of satisfaction in any community is unique to that community. Thus, the model would be as follows:

$$\text{Satisfaction}_i = a + b_1 \text{Comm1}_i + b_2 \text{Comm2}_i \dots b_n \text{Comm}_i$$

where the coefficients represent the difference in means of each community relative to the reference community as captured by the constant term.

The Three Sources of Influence and the Limits of Research Design

How do the three types of explanations of satisfaction relate to the research strategies commonly used in the literature? And, more importantly, are these designs adequate to the task of decomposing the determinants of satisfaction? The most common type of analysis is a survey of individuals living in a single city (e.g., Brudney and England 1982a; Hero and Durand 1985; Aberbach and Walker 1970; Coulter 1988). Although this approach can assess directly individual-level determinants of satisfaction, it tells us little about either jurisdiction-level or city-specific determinants of satisfaction; the influence of these variables is lost in the intercept term in analyses where their values are constants. A variant on this approach is found in the use of separate surveys of a limited number of cities (e.g., Beck et al. 1986; Sharp 1986). Yet, most of these studies include so few cities that it remains impossible to account for jurisdiction-level systemic and neighborhood or city-specific influences; there is simply not enough variation in these two sources of influence to sort out their relative importance in governing satisfaction.

A second strategy is found in single surveys of citizens in multiple jurisdictions (Fitzgerald and Durand 1980; Sharp 1984b). While this design is better able to sort out both individual- and jurisdiction-level systemic determinants of satisfaction, so few individuals are typically surveyed in any one city that it is difficult to sort out the impact of neighborhood or city-specific factors. There is simply no assurance that the few respondents from any one city are sufficiently representative of that municipality to justify inferences about city-specific influences on satisfaction, especially if, as is common, actual service delivery patterns vary across neighborhoods in large cities. Thus, variance due to city-specific factors becomes lost in the residual term.

Noting their limitations in no way invalidates all of the findings of the studies employing these designs. If one is interested in making inferences about only individual-level determinants of satisfaction, as Beck and his colleagues were (1987), then use of a city-specific survey is appropriate. But if one is interested in accounting for all three sets of determinants, such an approach is inadequate; there is simply too little variance in jurisdictional-level factors to do much in the way of controlling for their impact. Instead, we need a design that will allow us to disentangle the two systemic influences on evaluation of city services—individual- and jurisdiction-level influences—while controlling for community-specific determinants.

The research that has best approximated these requirements is the comparative jurisdiction work of a number of public choice analysts on general satisfaction (Rogers and Lipsey 1974) and satisfaction with police services (Ostrom 1976; Ostrom and Smith 1976). These studies generally employ multiple surveys of citizens living in a variety of institutional arrangements *within* a metropolitan setting. Unfortunately, the survey sites that were purposively selected in these analyses were not ones designed to provide clear contrasts on some of the key jurisdiction-level variables their authors were purportedly interested in making inferences about. By contrasting large and small jurisdictions *within* a single, metropolitan area, rather than similar neighborhoods or cities across fundamentally different metropolitan institutional arrangements (i.e., a pure consolidated government and a pure Tiebout-like system), these analyses tell us more about the impact of city size on satisfaction within a common institutional setting, than about the intrinsic impact of institutional arrangements per se.

TESTING THE SATISFACTION EXPLANATIONS

The Lexington-Fayette and Louisville-Jefferson County Surveys

To test the three explanations, we need survey data from residents in a variety of urban socioeconomic communities in settings with varying forms of institutional arrangements. We selected five basic types of socioeconomic communities defined in terms of age, income, racial, and familistic characteristics. Surveys of these five types of communities were conducted in two different metropolitan areas, one of which has a fragmented system and the other a consolidated system. Thus, a total of 10 surveys were conducted with the sites selected to provide contrasts on several of the variables noted above.²

The two research sites are Louisville-Jefferson County and Lexington-Fayette County, Kentucky. Louisville-Jefferson County, with a population (1980) of 685,004, contains more than 90 units of general purpose local governments (i.e., incorporated municipalities). It is prototypical of a governmentally fragmented urban environment. On the other hand, the Lexington-Fayette County (1980 population of 204,000) setting with its 14-year-old consolidated city-county government, provides an environment where citizens have little chance of finding the conditions associated with the Tiebout

² Although socioeconomic status is a very relative term, the definitions used in this case were based on conventions related to household income and education. Familism and nonfamilism were determined on the basis of census data indicating the presence or absence of children in a majority of households. (See Lyons and Engstrom 1971 for a discussion of survey versus aggregate measures of familistic versus nonfamilistic life-styles.)

model within the confines of the county itself. The 10 sites across the two settings are identified in table 1.

Aside from its practicality, several other advantages are realized in using these two settings. First, both share the same cultural milieu. Second, the school systems of both counties are consolidated, allowing us to focus squarely on satisfaction with local service packages other than education. Third, both settings are in the same state, thereby allowing us to control for the influence of differing patterns of state/local fiscal centralization, tax reliance, and legal requirements pertaining to service provision. And fourth, all of the sites are of the same approximate size, enabling us to control for this factor, especially in terms of disentangling the effects of governmental structure and jurisdiction size, which tend to be confounded in public choice research.

To assess whether the five sets of socioeconomic communities selected on the basis of 1980 census data had generated comparable pairs of research sites, tests of the differences of means between each consolidated site and its counterpart in the fragmented setting were performed using data from the surveys on a number of demographic variables. For the most part, the differences were small and nonsignificant (Lowery and Lyons 1989; Lyons and Lowery 1989).³

Data and Estimation Procedures

The dependent variable, *Satisfaction*, is based on responses to two questions. First, respondents were asked: "Would you say that you are currently *very satisfied*, *satisfied*, *dissatisfied*, or *very dissatisfied* with the way (name of local government) is doing its job?" Second, respondents were asked: "In general, how good a job do you feel (name of local government) is currently doing in providing services—would you say that it is doing *excellent*, *good*, *fair*, or a *poor* job?" Since the items were moderately correlated ($r = .67$), the responses were combined to form a seven-point index ranging from zero to six. The combined measure taps both a very general impression of the effectiveness of city government as well as a general impression of how well the city is doing its specific job of service provision.

While we use the combined measure because it has been previously shown to be related to a number of measures of political behavior as responses to dissatisfaction (Lyons and Lowery 1989), it might be argued that its separate components are tapping fundamentally different dimensions of

³ As seen in the citations, a few significant differences were observed but seemed to have little substantive import. But this variance has important methodological implications given our suggestion that race may have both individual- and jurisdictional-level impacts. If all of the black respondents resided in one or two of the sites, the individual- and jurisdiction-level race variables would be perfectly collinear. Thus, it is important that there be sufficient variance within sites to disentangle jurisdiction- and individual-level impacts.

satisfaction. Indeed, the .67 correlation noted above is far from perfect. Given this potential, separate analyses of the two components of the *Satisfaction* index identical to those to be presented below for the full index were conducted (using LOGIT given the limited value character of the two measures). Virtually identical results were obtained across all three analyses. The signs of the coefficients were the same across the three measures, and those that were significant in one, were invariably significant in the others. In sum, the two components of the *Satisfaction* index relate to the various independent variables cited in the models in the same manner.⁴ Thus, we are confident that our results are not masking different patterns of relationships for the two dimensions of satisfaction.

⁴When model 5 in table 4, for example, was estimated with each component indicator using OLS or LOGIT, all of the coefficients were again significant and all carried the same sign. The LOGIT results were:

Independent Variable	Dependent Variable		
	Satisfaction	Overall Performance	How Good a Job
Gender	.103 (.140)	.123 (.163)	.138 (.150)
Race	-.255 (.235)	-.418 (.269)	-.078 (.248)
Income	-.023 (.040)	-.025 (.046)	-.007 (.042)
Age	.003 (.005)	.001 (.006)	.004 (.006)
Home	.023 (.241)	-.037 (.288)	-.052 (.259)
Comm. Attach.	.243*** (.039)	.244*** (.044)	.252*** (.042)
Gen'l Eff.	.034 (.066)	.079 (.076)	.021 (.070)
Local Eff.	.499*** (.048)	.505*** (.054)	.488*** (.051)
No. City Serv.	.135** (.067)	.127* (.076)	.135* (.071)
No. Other Serv.	.100 (.098)	.029 (.111)	.138 (.104)
Serv. quality	3.931*** (.474)	3.388*** (.552)	4.144*** (.503)
Quality Bias	-2.043*** (.405)	-2.315*** (.449)	-1.529*** (.424)
-2xLLR	2,069.48	1,182.70	1,469.86
p <	0.00	0.00	0.00

*p < .10

**p < .05

***p < .01

Turning to the independent variables identified under the *individual-level* explanation, *Race* and *Gender* are dichotomous measures with a value of one indicating that the respondent is white and male, respectively. Similarly, a value of one for the dummy variable *Own Home* indicates that the respondent owns his or her own home. The remaining individual-level, demographic variables (*Income* and *Age*) were coded as indicated in notes accompanying table 4.

Three variables were identified by the individual-level model. Four items developed by Campbell, Gurin, and Miller (1954) were used to construct a general *Efficacy* indicator ($\alpha = .54$). Although there is some controversy over the meaning of the traditional four-item measure (see Abramson 1983), an abbreviated scale made up of the first two items shown in appendix A ($\alpha = .68$) generated nearly identical results. Therefore, the four-item scale is employed.

As has been noted, urban scholars have found it important to distinguish between general and local political efficacy, although no standard measurement convention has yet emerged. Many of the measures that have been used to tap this concept confound citizen information and knowledge considerations with feelings of being able to influence government decisions (see Vedlitz and Veblen 1980; Sharp 1982; 1986). Our measure follows the lead first suggested by Balch in 1974, who simply directed attention to a particular measure of government in the traditional efficacy scale. Thus, *Local Efficacy*, as seen in appendix A, consists of four items—belief that local officials don't care about you, not caring what happens in local government and politics, thinking it is not worth paying attention to local issues, and believing that it is useless to complain to local officials ($\alpha = .69$).

Five items were combined to tap the concept of *Community Attachment*: degree of attachment to the community, how sorry the respondent would be to leave the city, the number of friends who live in the city, the number of relatives who live in the city, and length of residence ($\alpha = .53$). Somewhat surprisingly, the rent/own item used here as a demographic variable did not scale well with the five items included in *Community Attachment*, suggesting that attachment to a community is distinct from capital investment.

Of the six jurisdiction-level determinants of satisfaction, three—consolidated/fragmented governmental structure, social context, and racial composition—were developed through manipulations built into the comparison group design. As noted above, five of the research sites operate in the consolidated urban-county government of Lexington-Fayette County, while their sociodemographic mirror images in Jefferson County are independent cities typical of a fragmented system. Thus, *Consolidated* is a dummy variable indicating that the respondent resided in one of the Jefferson County sites.

The 10 research sites also represent five discreet types of socioeconomic communities as outlined in table 1. Accordingly, four dummy variables were

TABLE 1
SUMMARY OF SURVEY SITE HOUSEHOLDS,
TELEPHONES SURVEYED AND RESPONSE RATES

Consolidated (Con)/ Fragmented (Fra) Government Research Sites	Characterization	N of House- holds with Listed Phone #	N of House- holds Contacted	N of Completed Interviews
Con.: Blueberry	Moderate to Low SES, More Fa- milistic, Younger, Mostly White	310 ^u	259	211 (81.5%)
Fra.: Minor Lane Heights		307 ^u	240	157 (65.4%)
Con.: Chinoe	Moderate to Low SES, Elderly, Less Familistic, Mostly White	753 ^s	329	225 (68.4%)
Fra.: Beechwood Village		497 ^s	303	188 (62.0%)
Con.: Stonewall	Moderate to High SES, Middle Age, More Fa- milistic, Mostly White	661 ^s	319	254 (79.6%)
Fra.: Barbourmeade		290 ^u	254	173 (68.1%)
Con.: Crestwood/ Shadeland	Moderate to High SES, Elderly, Less Familistic, Mostly White	858 ^s	316	253 (80.1%)
Fra.: Windy Hills		657 ^s	301	181 (60.1%)
Con.: Green Acres	Moderate to Low SES, Younger, More Familistic, Mostly Black	302 ^u	268	208 (77.6%)
Fra.: Newburg		891 ^s	278	166 (59.7%)

* Percentages indicate the percent of valid telephone numbers called that resulted in completed interviews.

^uIndicates that all households with telephone numbers listed in the municipal directory were defined as a universe to be surveyed.

^sIndicates that a random sample of approximately 300 households was drawn from the list of all households with telephone numbers listed in the municipal directory.

created to tap these social worlds, with *Match 1* through *Match 4* representing, respectively, the first four matched pairs of research sites listed in table 1; the predominantly black, poorer social world defined by the Newburg and Green Acres research sites serve as our reference category.

The third jurisdiction-level variable addressed racial composition. Two of the research sites, as just noted, are predominantly black. Thus, we might use a dummy variable indicator that is the mirror image of the social context variables, with the variable scored one if the respondent resided in either of the black communities. The problem, of course, is that this would introduce perfect collinearity. A better way, therefore, to interpret this variable is to

focus on expectations about our social context dummies just discussed. The social context view suggests that the four *Match* variables should differ not only from the black community referents but among themselves as well. In contrast, the jurisdiction-level race explanation implies that the *Match* coefficients, while indicating that the predominantly white communities are different from the black communities, will fail to show differences in *Satisfaction* among the white communities. While this will comprise our major approach to assessing the jurisdiction-level race explanation, we at times also employ *Race J*, the proportion of the population of a research site that is white, as an alternative indicator that is less than perfectly collinear with the *Match* indicators.

Similarly, *Income -J* is the mean of *Income* for each of the 10 research sites and is designed to assess the jurisdictional-level impact of wealth that might extend beyond its individual-level impacts as captured by *Income*.

The fifth jurisdiction-level variable is *No. of Services*—the actual level of services provided in each neighborhood or its matched city. This indicator is an index made up of dummy variables on the *city* provision of the 11 services outlined in table 2. But, inclusion of just the number of city services provided risks confounding the consolidation/fragmentation status of the jurisdictions with the level of services. As noted in table 2, the Jefferson County respondents receive a number of county and special district services in lieu of city services. To avoid this potential confound, we include *No. Other Services*, which is the number of county and district services that a site receives of the 11 services in table 2 in addition to *No. of Services*.

The final jurisdiction-level variable is *Service quality*. We lack, in contrast to our indicator of the number of services, objective measures of service quality. Instead, we constructed a proxy measure built on the respondents' evaluation of the services identified in table 2. After providing the respondents with a list of services, they were asked to "rate the performance of (name of city government) when it comes to providing each of the following services. Would you say that the service provided is *Excellent*, *Good*, *Fair*, *Poor*, or *Is Not Provided* by (name of city government)?" Those responding with one of the first four categories were coded as having evaluated the service as a city service, and their one [*Poor*] to four [*Excellent*] ranking of the services they thought were provided by the city were combined to develop an individual's observed mean evaluation of service quality. Since we have conceptualized *Service Quality* as a jurisdiction-level variable, the individual mean rankings of the services were combined to form community mean evaluations of service quality.

Obviously, this proxy indicator has a number of potential problems, the most important of which concerns the errors individuals might make in evaluating service quality (Brudney and England 1982b; Percy 1986). Two very different types of errors are possible. First, citizens might incorrectly

TABLE 2

SERVICES IN LEXINGTON/FAYETTE AND JEFFERSON COUNTY SITES¹

Services	Lexington/Fayette Neighborhoods ²					Jefferson County Cities				
	1	2	3	4	5	1	2	3	4	5
Police										
Protection	UCG	UCG	UCG	UCG	UCG	City	City	City	City	County
Trash										
Collection	—	UCG	—	—	UCG	City	City	City	City	—
Street Lighting	UCG	UCG	—	UCG	UCG	City	City	City	City	City
Parks & Recreation	UCG	UCG	UCG	UCG	UCG	—	City	—	—	County
Road										
Maintenance	UCG	UCG	UCG	UCG	UCG	City	City	City	City	City
Public Trans.	UCG	UCG	UCG	UCG	UCG	—	—	—	—	County
Public Health	UCG	UCG	UCG	UCG	UCG	County	County	County	County	County
Sanitary Sewers	UCG	UCG	1/2	UCG	UCG	MSD	MSD	—	—	MSD
Planning & Zoning	UCG	UCG	UCG	UCG	UCG	County	County	County	County	County
Storm Sewers	UCG	UCG	UCG	UCG	UCG	MSD	—	—	—	County
Social Services	UCG	UCG	UCG	UCG	UCG	County	County	County	County	County
Total Ser.	10	11	8.5	10	11	9	9	7	7	10
City Ser.	10	11	8.5	10	11	4	5	4	4	2

¹UCG is the Urban County Government. County is Jefferson County, and MSD is the Metropolitan Sewer District.

²The respective research sites are numbered in the order they appear in table 1.

TABLE 3
DIFFERENCE OF MEANS TESTS FOR QUALITY AND BIAS IN QUALITY
FOR CONSOLIDATED/NONCONSOLIDATED RESEARCH SITES

Matched Sites ¹	Consolidated-Site	Fragmented-Site	Difference	t-value
Variable = Service Quality				
Match 1 [106/81]	2.498 (.105) ²	2.737 (.605)	-.239**	3.040
Match 2 [88/109]	2.746 (.343)	2.769 (.467)	-.023	.682
Match 3 [82/116]	2.498 (.437)	2.235 (.637)	.263**	3.450
Match 4 [72/75]	2.612 (.510)	2.658 (.537)	-.046	.530
Match 5 [121/70]	2.546 (.524)	1.897 (.738)	.649**	6.470
Variable = Bias in Service Quality				
Match 1 [133/86]	-.064 (.105)	.184 (.265)	-.248**	8.300
Match 2 [223/115]	.001 (.007)	-.306 (.308)	.307**	10.670
Match 3 [140/126]	-.013 (.066)	-.043 (.245)	.030	1.330
Match 4 [135/100]	-.018 (.060)	-.181 (.363)	.163**	4.420
Match 5 [206/88]	.001 (.018)	-.386 (.522)	.387**	6.950

*p < .05
 **p < .01

¹The matched pairs of sites are in the order presented in table 1. The number of cases are given in the left column with the first number listed referring to the consolidated government case and the second to the fragmented government case.

²Figures in parentheses are standard deviations.

evaluate the quality of a city-provided service or make an *assessment error*. While we cannot correct the measure for this type of error, there is little reason to believe that it will have a systematic impact given our conception of *Service Quality* as a jurisdiction-level variable. Individual-level random error of this type will wash out when we use community mean evaluations of quality.

More to the point, the mean community rankings correspond well to our impressions of the actual quality of services in the 10 sites as seen in the pattern of community mean scores evident in the table 3. For instance, the lowest ranking of service quality in table 3 (1.897), which is corrected for another type of error to be discussed later, is that of the fragmented site in

Match 5, which is the City of Newburg. Newburg's services can be accurately described as wretched. Also, the mean rankings of service quality across the five consolidated government sites are very similar, which should be the case given that these sites all fall within the boundaries of a single service provider. In contrast, there is greater variation in *Service Quality* across the five fragmented sites, as would be expected given five different service providers. In short, we believe that the *Service Quality* proxy is a valid indicator of actual service quality; it generates markedly different scores where they would be expected and similar scores where they would be expected.

A second, more troubling source of error occurs when evaluations are based on a misunderstanding of what services the government is responsible for. Such *errors in attribution* occur when; (a) the citizens fails to recognize that the city is providing a service; (b) when the citizen holds a city responsible for the performance of a service that is not being provided by any of several local governments that might provide it; (c) when the citizen holds the city responsible for services actually provided by another local government. Lowery, Lyons, and DeHoog (1990) have shown that such errors bias both individual- and community-level mean rankings of service quality and that this error is greater in fragmented than in consolidated communities. Errors due to crediting one's city for a special district or county service are uniquely likely in fragmented governments given a multiplicity of providers. Lowery et al. (1990) have developed a method for decomposing evaluations into their unbiased (with respect to attribution error) and biased elements,⁵

⁵We specify the direction and size of the bias introduced by three sources of error: when citizens fail to evaluate a city service because they do not realize that the city provides it (a *Subset* error); when citizens evaluate a service that they think the city is providing, but is provided by another level of government (a *Misset* error); and when citizens evaluate a service that they think the city provides, but is actually provided by none of their local governments (*Nonset* error). The direction of the bias is indicated by the difference between the mean of the invalid service evaluations and the mean of the valid service evaluations. And the total impact of the bias would be the product of this difference and the proportion of services incorrectly included in the service set upon which the citizens forms his or her overall evaluation and the size of the observed service set upon which that assessment is based. Thus,

$$\text{Subset Bias} = [N_{sub} \times (\bar{X}_{sub} - \bar{X}_{true})] / N_{obs} \quad [1]$$

$$\text{Misset Bias} = [N_{mis} \times (\bar{X}_{mis} - \bar{X}_{true})] / N_{obs} \quad [2]$$

$$\text{Nonset Bias} = [N_{non} \times (\bar{X}_{non} - \bar{X}_{true})] / N_{obs} \quad [3]$$

where N_{sub} , N_{mis} , N_{non} are, respectively, the number of *Subset*, *Misset*, and *Nonset* errors in attribution made by the citizen; \bar{X}_{sub} , \bar{X}_{mis} , \bar{X}_{non} are, respectively, the mean evaluations of *Subset*, *Misset*, and *Nonset* services; \bar{X}_{true} is the citizen's unobserved mean evaluation of the true service set; and N_{obs} is the number of services the citizens believes that the government provides and upon which his or her observed evaluation is based. We can combine these errors with the citizens' initial or *observed evaluation* of governmental performance to determine his or her true evaluation in the following identity:

$$\bar{X}_{true} = \bar{X}_{obs} + \text{Subset Bias} - \text{Misset Bias} - \text{Nonset Bias} \quad [4]$$

which we used to construct unbiased site mean *Service Quality* scores, reported at the top of table 3.

What do we do with the purged, biased component of *Service Quality*? Because Lowery, Lyons, and DeHoog (1990) have found that such attribution error bias is related to the consolidated/fragmented structure of government, we include *Bias in Quality* as an additional jurisdiction-level variable. It should pick up one specific consequence of consolidated or fragmented government that goes beyond the impact of that structural variable as tapped by *Consolidated*. The site *Bias in Quality* scores are reported at the bottom of table 3; negative scores indicate that bias inflates the observed mean evaluations of service quality.

A final problem with the quality indicators concerns their relation to the dependent *variable*—*Satisfaction*. If the specific service evaluations used to construct *Service Quality* reflect a common, underlying, global assessment of government, rather than thoughtful judgments of the quality of local services, and if *Satisfaction* is also a product of this global assessment, then there will be a built-in tautological relationship between these indicators.

We do not believe that this potential tautology holds in this case. First, the correlation between the individual-level *Service Quality* index, from which we construct the community-level proxy, and *Satisfaction* is strong, but less than perfect ($r = .65$), as might be expected if both are reflecting the same underlying general orientation toward government. Second, if the evaluations of specific services reflected a common, global assessment, there would be no variance in service rankings across services within individuals. Yet, substantial variation is evident (Lowery, Lyons, DeHoog 1990). Indeed, the technique of decomposing the mean rankings into their attribution error biased and unbiased components would not work if there were no variance in evaluations. Yet, substantial and systemic bias was found. And third, by purging the individual rankings of attribution error bias and then combining them to form community mean *Quality* scores (because *Quality* is conceptualized as a jurisdiction-level variable), the indicator is at least two steps removed from the global assessment tapped by our dependent variable. The correlation between the bias purged and jurisdiction-level version of *Service Quality* and *Satisfaction* is only .46. While sizable, this is indicative of something less than a tautology.⁶

The final set of indicators—associated with the city- or neighborhood-specific explanations—consist of nine dummy variables, one for each of nine research sites, where one indicates that a respondent resided in that particular site. The reference category is Newburg, the predominantly black, independent city in Jefferson County. The use of Newburg as our reference will facilitate some of the comparisons on the jurisdiction-level impact of race.

Obviously, all three models cannot be tested simultaneously in a direct

⁶The simple correlation between *Quality Bias* and *Satisfaction* was only $-.04$.

manner. Perfect collinearity would be guaranteed due to just the jurisdiction-level *Match* variables and city- and neighborhood-specific dummy variables. And even when the *Match* variables are dropped from the analysis, severe collinearity problems (tolerance levels < .01) were encountered. This was especially true in regard to the site dummies and the several jurisdiction-level explanation variables. This is not surprising since these measures are site specific.

Given this problem, our analysis is conducted in two stages. First, the model is estimated with just the individual-level variables and the city and neighborhood specific explanation site dummies, thereby allowing the site dummies to account for all of the variance associated with site specific phenomenon, including that associated with systemic jurisdiction-level determinants as well as variance associated with the characteristics of the specific cities or neighborhoods. A second stage of analysis is then undertaken via examination of the pattern of the site dummy coefficients in relation to the jurisdiction-level variables of *Income J*, *Race J*, *Service Quality*, *Bias in Service Quality*, *Social Context*, and *Consolidated* to disentangle the two sources—jurisdiction-level and city and neighborhood specific—of non-individual-level variation.

Finally, given the limited range (zero to six) and the finite number of values of *Satisfaction*, OLS regression may be less than an ideal estimation procedure. Accordingly, the models were estimated with both OLS and LOGIT. The LOGIT estimates generated nearly identical results as those produced from OLS estimation. The signs of the coefficients were identical, and the coefficient probability values pointed to the same substantive conclusions.⁷ Given the more general familiarity with OLS, we present the results for the latter.

Findings

The OLS results for the first stage of analysis are presented in the fourth column of table 4. Before examining these, however, it is worth seeing how each of the three models does on its own. Estimates of a model with just the individual-level variables are presented in the first column of the table. Overall, these results are similar to those in previous single-city surveys. Two of the attitudinal variables—*Community Attachment* and *Local Efficacy*—and the *Race* and *Income* demographic measures are significant. The coefficients indicate that white, lower income, highly attached citizens, and those more efficacious with respect to local government tend to have higher levels of *Satisfaction*.

⁷ Comparison of the LOGIT results presented in the first column of the table in note four with the OLS results presented in the fifth column of table 4 illustrates the similarity of the results generated by the two procedures.

TABLE 4
OLS REGRESSION RESULTS OF TESTS OF FIVE MODELS
OF CITIZEN EVALUATION OF LOCAL PUBLIC SERVICES [N = 735]

Independent Variable	Model 1	Model 2	Model 3	Model 4	Model 5
	Individual Level Model	Partial Jurisdiction Model	City/ Neighborhood Specific Model	Partial Combined Model	Final Model
Gender	.163* (.024) ¹	—	—	.046 (.083)	.076 (.083)
Race	.503*** (.127)	—	—	.313 (.231)	-.196 (.138)
Income	-.058** (.025)	—	—	-.018 (.024)	-.008 (.023)
Age	-.001 (.003)	—	—	.000 (.003)	.000 (.003)
Own Home	-.084 (.159)	—	—	-.095 (.145)	-.062 (.147)
Community Attachment	.170*** (.024)	—	—	.146*** (.022)	.143*** (.022)
Gen'l Efficacy	.026 (.042)	—	—	.030 (.038)	.029 (.039)
Local Efficacy	.330*** (.028)	—	—	.281*** (.026)	.291*** (.026)
Consolidated	—	2.450*** (.778)	—	—	—
Income-Juris.	—	.429*** (.078)	—	—	—
Race-Juris.	—	-.013*** (.003)	—	—	—
No. City Services	—	.307*** (.073)	—	—	.065* (.039)
No. Other Services	—	-.311** (.134)	—	—	.019 (.057)
Service Quality	—	1.384* (.721)	—	—	2.241*** (.268)
Quality Bias	—	-2.951*** (.414)	—	—	-1.217*** (.231)
Blueberry Hills	—	—	1.290*** (.208)	.898*** (.269)	—
Stonewall	—	—	1.312*** (.221)	.748** (.300)	—
Crestwood/ Shadeland	—	—	1.592*** (.229)	.951*** (.303)	—
Chinoe	—	—	1.825*** (.223)	1.074*** (.299)	—
Green Acres	—	—	1.320*** (.212)	1.169*** (.190)	—
Barbourmeade	—	—	.009 (.216)	-.363 (.295)	—

Table 4 (continued)

Independent Variable	Model 1 Individual Level Model	Model 2 Partial Jurisdiction Model	Model 3 City/ Neighborhood Specific Model	Model 4 Partial Combined Model	Model 5 Final Model
Windy Hills	—	—	1.938*** (.228)	1.433*** (.304)	—
Minor Lane Heights	—	—	.817*** (.226)	.666** (.295)	—
Beechwood Village	—	—	2.331*** (.208)	1.609*** (.291)	—
Intercept	3.368	-5.718	2.308	2.529	2.231
R^2	.262	.262	.267	.422	.401
\bar{R}^2	.254	.255	.258	.408	.391
SEE	1.212	1.211	1.208	1.079	1.095

* $p < .10$ ** $p < .05$ *** $p < .01$

Note: Demographic Variable Indicators:—Age: number of years since birth; Total Household Income: 0 = \$10,000, 1 = \$10k–\$20k, 2 = \$20k–\$30k, 3 = \$30k–\$40k, 4 = \$40k–\$50k, 5 = \$50k–\$60k, 6 = \$60k–\$70k, 7 = \$70k–\$80k, 8 ≥ \$80k; Race: 1 = white, 0 = black; Home: 0 = rent, 1 = own; Gender: 1 = male, 0 = female.

Two of the findings from this initial analysis might be considered somewhat surprising, however. First, general efficacy appears to be only weakly related to satisfaction with services. And, given a tolerance value of .82, the low t-value for *Gen'l Efficacy* ($t = .61$) cannot be attributed to collinearity. Thus, satisfaction with local government services is more a function of local phenomena than global efficacy levels. Second, three of the demographic variables failed to generate significant coefficients: *Gender*, *Own Home*, and *Age*. However, in more sophisticated causal analyses of satisfaction (Beck et al. 1986), these variables are viewed as only indirectly influencing satisfaction levels through more proximate attitudes about government. Once these are included, the direct impact of the demographic factors might be expected to diminish.

Column two presents results for a truncated version of the jurisdiction-level model. The *Match* dummy variables, used to tap the social context explanation, were excluded because they, not surprisingly, generated severe collinearity (no change in R-square value and no significant coefficients). But even so truncated, the results are quite strong. All of the coefficients are significant at the .10 level or better, and all have the expected sign; *Satisfaction* is somewhat higher for respondents in consolidated governments, high-income jurisdictions, sites with more and higher quality services, predominantly white districts, and sites with high levels of attribution error bias.

Column three presents the results for our model of site uniqueness and includes only the nine site dummies. While these results are not especially interesting in and of themselves, being products of a naive model, it is worth noting that there are sizable differences across the dummy variable coefficients, indicating that *Satisfaction* levels do vary by city and neighborhood.

It appears, then, that each of the models "works" to some degree when considered on its own terms. This is especially the case when we compare the R-square values generated by these three models, which are nearly identical. Interestingly, while nearly identical, that for the city- and neighborhood-specific model is the highest (.267), which suggests that the substantive explanations embedded in the individual-level and jurisdiction-level models do not take us much further in understanding the roots of *Satisfaction* than a simple naive model that states that each site is unique.

The results of the terminal regression for our first stage of analysis is presented in the fourth column of table 4. This model contained the site specific dummies to pick up both the jurisdiction-level and city- and neighborhood-specific impacts as well as the variables associated with the individual-level explanation of satisfaction. Overall, the model performs as expected. The R-square value of .42, in contrast to the comparable values for the first three models, indicates that both individual- and site-level factors contribute to citizens' satisfaction with services. More importantly, eight of the site dummies generated discernible coefficients, indicating that at least these eight have mean satisfaction levels that are different from that of the Newburg reference site. Also, two of the individual-level social psychological variables (*Local Efficacy* and *Comm Attach*) generating significant coefficients in the first model results did so in the combined model as well. The only important difference in comparing the results in columns one and four concerns the coefficients for *Race* and *Income*, which were significant in the individual- level model but are not in the combined analysis. This suggests that the earlier individual-level *Race* and *Income* results might be artifacts of mean differences across the sites, or that they are a function of jurisdictional- rather than individual-level race and income characteristics, a hypothesis that we will examine below.

At this point, we are limited in what we can say about the site-specific dummies. While the t-tests in table 4 indicate that most of the cities or neighborhoods differ from Newburg, the reference site, we cannot say whether this is a function of systematic variation in jurisdiction-level variables or truly city- and neighborhood-specific effects. To distinguish these separate site-level influences, we must turn to the second stage of our analysis where we examine the pattern of the dummy variable site coefficients to see if they coincide with patterns that would be expected if jurisdiction-level racial and income composition, actual levels and quality of service provision, social contexts, and consolidated/fragmented structures actually have the hypothesized impacts on *Satisfaction*. If not, we will be left with the residual

conclusion that the dummies reflect unique factors associated with each research site.

Table 5 reports a set of specialized t-tests (see Gujarati 1988, 228) comparing the differences in the first-stage site dummy coefficients across the matched Fayette and Jefferson County sites. Such comparisons are valid given the two levels of control for extraneous influences built into the design: (a) the sites were purposively matched to control for the influence of demographic variables; and (b) many of those same demographic variables were also included as controls in the combined model which generated the coefficients.

As expected by both traditional civic reformers and public choice proponents, sizable differences in the matched site dummy coefficients are evident in table 5. Contrary to both expectations, however, the direction of these differences do not follow a pattern. For two of the pairs (*Match3* and *Match5*), the consolidated Fayette County site coefficient was greater than its fragmented counterpart. But the reverse was true in two other cases (*Match2* and *Match4*). Thus, it would seem that consolidation/fragmentation has little direct influence on *Satisfaction*. This finding highlights the importance of surveying multiple jurisdictions. Rogers and Lipsey's (1974) finding that satisfaction was higher in a fragmented city than its matched consolidated neighborhood in Nashville was likely an idiosyncratic result of a single comparison.⁸

The results in table 5 can also be used to assess the jurisdictional-level social context explanation, which suggests that there will be differences in the site coefficients across the five types of socioeconomic communities within Fayette County and within Jefferson County. Differences in social context, we suggested, might alter expectations about what the government should do and, thus, citizen satisfaction. Moreover, this explanation would lead us to expect that there will be no discernible differences in the site coefficients across the matched sites; both sites in each pair have nearly identical social makeups, and should, therefore, exhibit similar satisfaction levels. But, significant differences in coefficients are evident for four of the five matched pairs of sites, all but *Match1* (Blueberry Hills and Minor Lane Heights). Indeed, for *Match5*, Green Acres has the highest site coefficient

⁸*Consolidation* may still have some indirect impact on citizen satisfaction. That is, we know, from table 3, that there are very large differences in the number of services provided by the consolidated government and the independent cities, and that more services lead to more positive average service evaluations. Thus, consolidated government does influence evaluations of service provision in a positive manner, but its influence is expressed through differences in the average number of services provided in consolidated and fragmented governments. Similarly, attribution error seems to falsely inflate service perceptions in fragmented governments to a greater extent than in consolidated governments (for more on this point, see Lowery, Lyons, and DeHoog 1990).

TABLE 5
COMPARISON OF OLS REGRESSION ESTIMATES FOR
CONSOLIDATED/NONCONSOLIDATED RESEARCH SITES¹

Matched Sites ²	Consolidated-Site	Fragmented-Site	Difference	t-value
Match 1	.898 (.269) ³	.666 (.295)	.232	.900
Match 2	1.074 (.299)	1.609 (.291)	-.535*	2.240
Match 3	.748 (.300)	-.363 (.295)	1.111**	5.575
Match 4	.951 (.303)	1.433 (.304)	-.482**	5.660
Match 5	1.169 (.190)	.000 —	1.169**	6.138

**p* < .05

***p* < .01

¹*n* = 735

²The matched pairs of sites are in the order presented in table 1.

³Figures in parentheses are standard errors.

for the consolidated sites and Newburg has the second smallest score among the fragmented sites. Thus, these patterns provide little support for the hypothesis that satisfaction is conditioned by the socioeconomic matrices resulting from spatial segregation.

What of jurisdiction-level racial differences? Earlier, we had observed that the individual-level race variable, which was significant in the model including only the individual-level variables, was no longer statistically discernible when the site dummies were included in the model. Is, then, the *Race* finding an artifact of jurisdiction-level racial influences? In other words, does black dissatisfaction arise from their minority/majority status rather than race per se? The findings suggest a mixed answer to this question. Some evidence for a jurisdiction-level race effect is evident in the Jefferson County case. As seen in the fourth column of table 4, the coefficients of three of the predominantly white sites are discernibly higher than that for Newburg, the predominantly black reference category. However, the Fayette case provides little support for the racial composition hypothesis. As seen in the t-tests presented in table 6, all of the differences between the coefficient of the Green Acres site and those of the four predominantly white sites carry the wrong sign and none are significant.

Can these mixed results be taken as evidence of jurisdiction-level racial differences? Any answer is complicated by the fact that Newburg, in contrast to the other cities, is a relatively new entity, having incorporated only two

TABLE 6
COMPARISON OF OLS REGRESSION ESTIMATES FOR BLACK AND WHITE
RESEARCH SITES ON LEXINGTON-FAYETTE¹

Predominantly White Sites Site	Coefficient	Predominantly Black	Difference	t-value
		Green Acres Coefficient		
Blueberry Hills	.898 (.269) ²	1.169 (.190)	-.271	.656
Chinoe	1.074 (.299)	1.169 (.190)	-.095	1.112
Stonewall	.748 (.300)	1.169 (.190)	-.421	.603
Crestwood/Shadeland	.951 (.303)	1.169 (.190)	-.218	.254

* $p < .05$

** $p < .01$

¹ $n = 735$

²Figures in parentheses are standard errors.

years prior to our study. Given the desire to include a predominantly black, independent city in the analysis, we had little choice but to study Newburg; no other predominantly black, independent city exists among the 90 governments in Jefferson County. Still, the growing pains of a new city, and the accompanying dissatisfaction of its citizens, may account for our finding on the jurisdiction-level racial hypothesis. Indeed, the growing pains in this case proved fatal, as Newburg disincorporated after our study ended. Therefore, and in light of the Fayette County results, we are hesitant to conclude that jurisdiction-level racial composition influences satisfaction.

The fourth jurisdiction-level influence is *Income J*. As in the previous case, both individual- and jurisdiction-level income impacts were hypothesized, and the statistically discernible impact of *Income* in the individual-level model results reported in table 4 sharply declined when the site dummies were added. Given that the mean income of a jurisdiction is an interval measure instead of simple dichotomy like those analyzed in tables 5 and 6, use of simple contrasts of the matched coefficients of the type used in those tables to evaluate *Income J* is no longer appropriate. But if the average level of income in a jurisdiction influences satisfaction, we should find that the site coefficients reported in the fourth column of table 4 are associated with mean jurisdiction income. This hypothesis is tested in the first column of table 7, which presents the results of regressing the 10 site coefficients (New-

burg = 0) on average jurisdiction income. As indicated by the R-square value of .003 and the insignificant t-value, the hypothesis receives no support.

The second and third columns of table 7 report some additional regression tests of the jurisdiction-level *Race* and *Consolidation* hypotheses tested earlier. The results in the second column were generated by regressing the site dummy coefficients on the *Consolidated* dummy variable. Again, little support is found for proponents of either consolidated government or the Tiebout model given the miniscule t-value. Column 3 of table 7 reports the results from regressing the site coefficients on *Race -J* (the proportion of white respondents); again, little support is found for the jurisdiction-level race explanation given the small R-square value and the nonsignificant slope.

The last jurisdiction-level explanation addresses the level and quality of services. Because *No. of Services*, *No. of Other Services*, *Service Quality*, and *Quality Bias* are interval measures, we test this explanation in the same

TABLE 7
OLS ANALYSES OF JURISDICTION-LEVEL DETERMINANTS
OF THE PATTERN OF STAGE ONE SITE COEFFICIENTS [N = 10]

Independent Variable	Dependent: Site Dummy Coefficients—Table 3 Model 4			
	Model 6	Model 7	Model 8	Model 9
Income-Jurisdiction	.032 (.227) ¹	—	—	—
Consolidated	—	-.311 (.399)	—	—
Race-Jurisdiction	—	—	.004 (.006)	—
No. City Services	—	—	—	.107* (.044)
No. Other Services	—	—	—	.078 (.064)
Service Quality	—	—	—	1.728*** (.312)
Quality Bias	—	—	—	-2.236*** (.518)
Intercept	.880	.787	1.995	-4.549
R ²	.003	.024	.071	.942
\bar{R}^2	.003	.024	.071	.913
SEE	.692	.685	.632	.199

* $p < .10$

** $p < .05$

*** $p < .01$

¹ Figures in parentheses are standard errors.

manner as we did the jurisdiction-level income hypothesis. And as seen in the fourth column of table 7, strong support is found for the service based explanation. Three of the four service coefficients are significant, all but *No. of Other Services*, which was included as a control for county and special district services in the fragmented Jefferson County sites. The results indicate that citizens are more satisfied when they receive more services, when those services are of higher average quality, and when attribution error bias is low. Importantly, the four service-related variables account for almost all of the variance in the site dummy coefficients ($R\text{-square} = .94$) generated in the model presented in the fourth column of table 4. In other words, *the level and quality of services accounts for almost all of the unique city and neighborhood and jurisdiction-level site related variance in individual Satisfaction scores.*

Based on this second-stage analysis of the site dummy coefficients, a new combined model was estimated, as seen in the last column of table 4, which included only the individual-level variables and the four service level and quality variables. Again, of the individual-level variables, only the *Local Efficacy* and *Community Attachment* coefficients are significant, and both still carry the expected sign. And again, the three service variables found to be significant in table 7 are significant when reintroduced into the respecified combined model. Reestimation with just these variables leaves us with the following simplified model ($R = .40$) of citizen satisfaction with local services:

$$\begin{aligned} \text{Satisfaction}_i = & -2.057 + .276 \text{Local Eff}_i + .149 \text{Comm Attach}_i + \\ & \quad (.024) \quad \quad \quad + (.021) \\ & .059 \text{No. of Services}_i + 2.011 \text{Service Quality}_i - 1.234 \text{Quality Bias}_i \\ & \quad (.016) \quad \quad \quad (.187) \quad \quad \quad (.219) \end{aligned}$$

where all of the coefficients are significant at the .001 level.

CONCLUSION

Extant research has not enabled us to sort out the competing/complementary explanations of citizens' satisfaction with local government. By using a design that allows us to directly contrast individual-level, jurisdiction-level, and city- and neighborhood-specific explanations, we have developed a parsimonious account of satisfaction, an account that emphasizes: (a) individual citizens' efficacy relative to local government and their attachment to their community, and (b) the actual level and quality of services provided by local government.

This does not mean that we have fully explained satisfaction. We were not able to consider the impact of the tax costs of the services citizens receive on satisfaction. Also, we examined only one of a possible number of structural variables; although many of these were controlled for through our selection

of research sites, they could still be very important to a more general understanding of satisfaction. We have relied on proxies for a number of key variables. Aside from the obvious case of *Service Quality*, our indicator of service levels—*No. of Services—did* not account for variations in levels of provision of specific services. While we believe they are valid, there is certainly random error in these measures, and more objective measures should be examined. And we have restricted our attention to the most proximate determinants of satisfaction and have not attempted to develop a more complex causal model to account for the sources of efficacy or service levels and quality, the latter of which might not be easily subject to manipulation by city officials (Peterson 1981; Wong 1988). Still, because we were able to begin to sort out the competing explanations of satisfaction, we believe that our findings represent a contribution.

Finally, our model offers an encouraging view of the relationship between citizens and their local governments. Far from resting on indirect demographic determinants or reference to local history, our results offer a very understandable account of levels of citizen satisfaction with local government. On the individual's side of the relationship, we find an important role for local government efficacy and attachment to the local community. And on the government's side of the relationship, our model points to what officials actually do for citizens: provision of some level and quality of services. On each side, then, we have factors that seem consistent with what democratic theory would suggest should matter in defining how citizens judge their governments.

Manuscript submitted 2 August 1988

Final manuscript received 18 September 1989

APPENDIX A

Measures of Selected Indicators

The indicator for *General Efficacy* is an index combining responses to the following four items. The available responses were agree and disagree, with high values in the final measure indicating high efficacy.

"Voting is the only way that people like me can have any say about how the government runs things."

"Sometimes politics and government seem so complicated that a person like me can't really know what's going on."

"I don't think that public officials in this country care very much about what people like me think."

"People like me don't have any say about what the government does."

The *Local Efficacy* indicator is an index composed of responses to the following four items. Available responses to the items included strongly agree, agree, disagree, and strongly disagree, with high values of the final measure indicating high efficacy.

"The (name of local government) doesn't care about people like me."

"I don't care what happens in (name of local government) government or politics as long as things are OK for me and my family."

"It's not worth paying attention to issues facing the (name of local government) because all the local politicians care about is serving their own interests."

"When there are problems like garbage in the streets or potholes in the road, it is useless to complain to officials of the (name of local government)."

The indicator for *Community Attachment* is an index combining the following four items, with high values of the final indicator indicating high attachment.

"Do you feel a strong, moderate, or weak attachment to living in (name of local government)?"

"Supposing that for some reason you had to move away from the area you now live in, how sorry or pleased would you be to leave—very sorry, somewhat sorry, or not sorry at all?"

"How many of your friends live in your most immediate neighborhood—none, a few, more than half, almost all?"

"How many of your relatives live in your most immediate neighborhood—none, a few, more than half, almost all?"

"How long have you lived in (name of local jurisdiction)? Has it been less than a year, one to five years, six to ten years, or more than ten years?"

REFERENCES

- Abramson, Paul R. 1983. *Political Attitudes in America: Formation and Change*. San Francisco: W. H. Freeman.
- Aberbach, Joel D., and Jack L. Walker. 1970. "The Attitudes of Blacks and Whites toward City Services: Implications for Public Policy." In *Financing the Metropolis*, ed. John P. Crecine. Beverly Hills, CA: Sage.
- Balch, George I. 1974. "Multiple Indicators in Survey Research: The Concept 'Sense of Political Efficacy.'" *Political Methodology* 1 (Spring): 1-43.
- Beck, Paul Allen, Hal G. Rainey, and Carol Traut. 1986. "Public Views of Local Services and Taxes: Divergent Sources of Fiscal Policy Thinking." Paper presented at the annual meeting of the Midwest Political Science Association, Chicago.
- Beck, Paul Allen, Hal G. Rainey, Keith Nicholls, and Carol Traut. 1987. "Citizen Views of Taxes and Services: A Tale of Three Cities." *Social Science Quarterly* 68:223-43.
- Bish, Robert L., and Vincent Ostrom. 1973. *Understanding Urban Government*. Washington, DC: American Enterprise Institute.
- Brown, Karin, and Philip B. Coulter. 1983. "Subjective and Objective Measures of Police

- Brudney, Jeffrey L., and Robert E. England. 1982b. "Urban Policy Making and Subjective Service Evaluations: Are They Compatible?" *Public Administration Review* 42:127-35.
- Campbell, Angus, Gerald Gurin, and Warren E. Miller. 1954. *The Voter Decides*. Evanston, IL: Row, Peterson and Company.
- Coulter, Philip. 1988. *Political Voice*. Tuscaloosa, AL: University of Alabama Press.
- Durand, Roger. 1976. "Some Dynamics of Urban Service Evaluations among Blacks and Whites." *Social Science Quarterly* 56:698-706.
- Ferman, Barbara. 1985. *Governing the Ungovernable City: Political Skills, Leadership and the Modern Mayor*. Philadelphia: Temple University Press.
- Fitzgerald, Michael R., and Robert F. Durand. 1980. "Citizen Evaluations and Urban Management: Service Delivery in an Era of Protest." *Public Administration Review* 40:585-94.
- Fowler, Floyd J., Jr. 1974. *Citizen Attitudes toward Local Government, Services, and Taxes*. Cambridge, MA: Ballinger.
- Gujarati, Damodar N. 1988. *Basic Econometrics*. New York: McGraw-Hill.
- Hero, Rodney E., and Roger Durand. 1985. "Explaining Citizen Evaluations of Urban Services: A Comparison of Some Alternative Models." *Urban Affairs Quarterly* 20:344-54.
- Jones, Byran D., Saadia Greenberg, Clifford Kaufman, and Joseph Drew. 1978. "Service Delivery Rules and the Distribution of Local Government Services: Three Detroit Bureaucracies." *Journal of Politics* 40:332-68.
- Jones, Bryan D. 1980. *Service Delivery in the City: Citizen Demand and Bureaucratic Rules*. New York: Longman.
- Kotter, John, and Paul Lawrence. 1974. *Mayors in Action: Five Approaches to Urban Governance*. New York: Wiley.
- Lineberry, Robert. 1977. *Equality and Urban Policy: The Distribution of Municipal Services*. Beverly Hills, CA: Sage.
- Lowery, David, William E. Lyons, and Ruth Hoogland DeHoog. 1990. "Institutionally Induced Attribution Errors: Their Composition and Impact on Citizen Satisfaction with Local Governmental Services." *American Politics Quarterly* 18(2): 169-96.
- Lowery, David, and William E. Lyons. 1989. "The Impact of Jurisdictional Boundaries: An Individual-Level Test of the Tiebout Model." *Journal of Politics* 51(1):73-97.
- Lyons, William E. 1977. *The Politics of City-County Merger*. Lexington, KY: University of Kentucky Press.
- Lyons, William E., and Richard Engstrom. 1971. "Life-Style and Fringe Attitudes toward the Political Integration of Urban Governments." *Midwest Journal of Political Science* 15 (August) : 475-94.
- Lyons, William E., and David Lowery. 1986: "The Organization of Political Space and Citizen Responses to Dissatisfaction in Urban Communities: An Integrative Model." *Journal of Politics* 48(2):321-46.
- Lyons, William E., and David Lowery. 1989. "Citizens Response to Dissatisfaction in Urban

- Ostrom, Vincent. 1973. *The Intellectual Crisis in American Public Administration*. University, AL: University of Alabama Press.
- Ostrom, Vincent, Charles M. Tiebout, and Robert Warren. 1961. "The Organization of Government in Metropolitan Areas: A Theoretical Inquiry." *American Political Science Review* 55(4): 831-42.
- Ostrom, Vincent, Robert Bish, Elinor Ostrom. 1988. *Local Government in the United States*. San Francisco: Institute for Contemporary Studies.
- Parks, Roger. 1984. "Linking Objective and Subjective Measures of Performance." *Public Administration Review* 44:118-27.
- Percy, Stephen L. 1986. "In Defense of Citizen Evaluations as Performance Measures." *Urban Affairs Quarterly* 22:66-83.
- Peterson, Paul E. 1981. *City Limits*. Chicago: University of Chicago Press.
- Rogers, Bruce D., and C. McMurdy Lipsey, 1974. "Metropolitan Reform: Community Size and the Perception of Public Services." Paper presented at the annual meeting of the Southern Sociological Association, Atlanta.
- Sears, David O., and John B. McConahay. 1973. *The Politics of Violence*. Boston: Houghton Mifflin.
- Schuman, Howard, and Barry Gruenberg. 1972. "Dissatisfaction with City Services: Is Race an Important Factor?" In *People and Politics in Urban Society*, ed. Harlan Hahn. Beverly Hills, CA: Sage.
- Sharp, Elaine B. 1982. "Citizen Initiated Contacting and Social Status: Determining the Relationship and Accounting for It." *American Political Science Review* 76:109-15.
- Sharp, Elaine B. 1984a. "Citizen Demand Making in the Urban Context." *American Journal of Political Science* 38:654-70.
- Sharp, Elaine B. 1984b. "Exit, Voice, and Loyalty in the Context of Local Government Problems." *Western Political Quarterly* 37(1): 67-83.
- Sharp, Elaine B. 1984c. "Need, Awareness, and Contacting Propensity Study of a City with a Central Complaints Unit." *Urban Affairs Quarterly* 20(1):22-30.
- Sharp, Elaine B. 1984d. "Citizen Demand-Making in the Urban Context." *American Journal of Political Science*. 28(4) : 654-70.
- Sharp, Elaine B. 1986. *Citizen Demand-Making in the Urban Context*. University, AL: University of Alabama Press.
- Stipak, Brian. 1977. "Attitudes and Belief Systems Concerning Urban Services." *Public Opinion Quarterly* 41:41-55.
- Stipak, Brian. 1979. "Citizen Satisfaction with Urban Services: Potential Misuse as a Performance Indicator." *Public Administration Review* 39:46-52.
- Swanstrom, Todd. 1985. *The Crisis of Growth Politics; Cleveland, Kucinich, and the Challenge of Urban Populism*. Philadelphia: Temple University Press.
- Talbot, Allan R. 1969. *The Mayor,s Game: Richard Lee of New Haven and the Politics of Change*. New York: Praeger.

Wong, Kenneth K. 1988. "Economic Constraint and Political Choice in Urban Policymaking." *American Journal of Political Science* 32(February):1-18.

Yates, Douglas. 1977. *The Ungovernable City: The Politics of Urban Policymaking*. Cambridge, MA: The MIT Press.

Ruth Hoogland DeHoog is associate professor of political science and Director, Masters in Public Affairs Program, University of North Carolina at Greensboro, Greensboro, NC 27412.

David Lowery is professor of political science, University of North Carolina at Chapel Hill, Chapel Hill, NC 27599.

William E. Lyons is professor of political science, University of Kentucky, Lexington, KY 40506.