

DIVISION OF THE HUMANITIES AND SOCIAL SCIENCES
CALIFORNIA INSTITUTE OF TECHNOLOGY

PASADENA, CALIFORNIA 91125

INSTITUTIONALIZED INEQUALITY: THE MIXED BLESSINGS OF
FRAGMENTATION IN METROPOLITAN LOS ANGELES

Gary J. Miller



SOCIAL SCIENCE WORKING PAPER 192

November 1977
Revised March 1978

CALIFORNIA INSTITUTE OF TECHNOLOGY
Division of the Humanities and Social Sciences
Pasadena, California 91125

INSTITUTIONALIZED INEQUALITY:
THE MIXED BLESSINGS OF FRAGMENTATION IN METROPOLITAN LOS ANGELES

Gary J. Miller

Social Science Working Paper
Number 192
November 1977
Revised March 1978

INSTITUTIONALIZED INEQUALITY:
THE MIXED BLESSINGS OF FRAGMENTATION IN METROPOLITAN LOS ANGELES

Gary J Miller

Danielson has observed (1976:1) that "Nowhere in urban America is the heterogeneity encompassed by a metropolis reproduced in its local jurisdictions and neighborhoods." Charles Tiebout offered an influential explanation for this phenomenon when he argued that citizens can "vote with their feet" for the kind of local government and governmental policies they prefer (1956). Thus, when presented with a choice of local governments in a metropolitan area, the population will tend to sort itself out into homogeneous sub-groups based on their demands for local public goods.

Tiebout made a normative as well as a positive argument regarding fragmentation. "Voting with your feet" can act as a way of matching each individual with the local public goods mix that is best for him or her. The creation of new municipalities means that some individuals will be able to move to a local government that better matches their preferences, while those individuals who are unable to do so will certainly be no worse off. Thus, fragmented governmental structures "yield a solution for the level of expenditures for local public goods which reflects the preferences

of the population more adequately than they can be reflected at the national [or consolidated metropolitan] level." (Tiebout, 1956: 416.)

Los Angeles offers an opportunity to examine both the positive and normative arguments. During the period from 1950 to 1970, the number of municipalities in Los Angeles County increased from 45 to 77. Most of the new cities were Lakewood Plan cities, which were able to offer minimal services through contracts with the county agencies, at little or no property tax cost due to reliance on sales tax revenue, grants, and other sources of revenue. Those individuals in the Los Angeles area who preferred this type of government, for whatever reason, suddenly had the opportunity to signal their preferences by residential relocation.

This paper offers evidence that during this period, there has been a clearly observable Tiebout-like sorting out of individuals into income and racial groups. This has been due to both the marked class and racial homogeneity of the new Lakewood Plan cities, and to the sorting out of individuals among the older cities.

At the same time, this increased homogeneity within municipalities has been accompanied by an increasing inequality in the distribution of a primary municipal resource - taxable property. In fact, in some of the increasingly low-income cities, the growth in taxable property per capita failed to keep pace with cost of living increases. The years 1950 to 1970 saw Los Angeles county become an example of a

spatially differentiated metropolis in which blacks are separated from whites, the poor from the more affluent, the disadvantaged from economic and educational opportunity, and local jurisdictions with the greatest public needs from communities which possess the greatest share of the public resources. (Danielson, 1976: 1.)

Segregation of Income Classes by Municipality

To what extent have the various income classes become increasingly sorted out and segregated by municipal boundaries? In order to answer this question, it is first necessary to develop a measure of homogeneity for income class that can be applied to the county's municipalities at different points in time.

The county's population will be divided into three income classes, as equal in size as is possible given census categories for family income. In 1950, for instance, 35.5 percent of all the county's families had income less than \$3000, 33.9 percent had incomes greater than \$4,500, leaving 30.6 percent between the two figures. These income figures will serve to divide the three income classes for that year.

If a city has a representative mix of income classes, then roughly one-third of its population will be in each income class. The probability that any two of its citizens will be in the same income class will be approximately one-third, the same as for the

county as a whole. But as a city becomes more homogeneously composed of one income class or another, the probability that any two of its citizens will be from the same income class will approach the limit of one. This probability can be calculated as the sum of the squared proportions of each city's families in each income class.¹

As Table 2 reveals, 25 of the 42 cities for which we have data were in 1950 virtually indistinguishable from the completely heterogeneous polar case, with a measure of homogeneity less than .340. By 1970, these same cities had shifted markedly away from this extreme, with only nine cities left in this category, and more cities in every category of increasing homogeneity. Furthermore, only one of the 30 cities created in the intervening period was in the extremely heterogeneous category. The pattern of changing homogeneity is shown in Table 3.²

As one might imagine from the increased homogeneity within and diversity among municipalities, the distribution of poverty became increasingly concentrated. In 1950, those families and unrelated individuals with incomes of less than \$500 constituted 9.4 percent of the county's population. This poorest "tenth" of the population was relatively equally distributed. San Marino had the smallest percentage in this income class with 3.8 percent. El Segundo had 4.8 percent, and every other city had more than 5 percent of this income class.

By 1970, many more cities had successfully waged their own wars on poverty. The proportion of the county's population classified

Table 1

Examples of Increasing Homogeneity: 1950 to 1970

City	Year	% Lower-Class	% Middle-Class	% Upper-Class	Homogeneity
Huntington Park	1950	32.6	31.0	36.4	.3349
	1970	47.1	32.0	20.9	.3679
Maywood	1950	31.2	34.3	34.5	.3343
	1970	46.0	34.6	19.4	.3691
Manhattan Beach	1950	24.7	32.8	42.5	.3496
	1970	15.3	30.0	54.7	.4122
Torrance	1950	27.8	42.4	29.1	.3417
	1970	16.3	32.9	50.8	.3926

Table 2
Frequency Distribution of Homogeneity Scores

	.333-.339	.340-.349	.350-.369	.370-.379	.400+	Total
1950	25	5	5	3	4	42
1970 (old cities)	9	13	11	4	5	42
1970 (cities with missing data in 1950)	2	-	-	-	1	3
1970 (new cities)	1	9	12	1	7	30
1970 (all cities)	12	22	23	5	13	75

Table 3
Income Class Homogeneity in
Los Angeles Cities: 1950 and 1970

		Heterogeneous (Homogeneity less than .350)	1970 Lower Income	Middle Income	Upper Income
1950	Heterogeneous	Alhambra Burbank El Monte Glendale Hawthorne Hermosa Beach Inglewood Long Beach Los Angeles	Lynwood Monrovia Monterey Park Pasadena Pomona Redondo Beach Santa Monica South Gate	Bell Compton Huntington Park Maywood San Fernando Signal Hill	Covina Culver City Glendora Manhattan Beach Sierra Madre Torrance Whittier
	Lower Income	Gardena La Verne			
	Middle Income	Azusa			
	Upper Income	Montebello San Gabriel			Arcadia Beverly Hills El Segundo San Marino South Pasadena
	No Data in 1950	Avalon Vernon			Palos Verdes Estates
	New Cities Since 1950	Artesia Bellflower Carson Duarte Lawndale Lomita Palmdale Pico Rivera Rosemead Temple City	Baldwin Park Bell Gardens Commerce Cudahy Hawaiian Gardens	Irwindale Norwalk La Puente Paramount San Dimas Santa Fe Springs South El Monte	Bradbury Cerritos Downey Lakewood La Mirada Rolling Hills Rolling Hills Estates Walnut

Source: Income data is from 1950 and 1970 censuses.

as having incomes below the poverty level was 10.7 percent. But nine of the older cities now had 5 percent less in this class with Beverly Hills having only 1.4 percent. In addition, seven of the newer cities had 5 percent or less poor populations. Of the combined 16 cities with very few poor, seven were homogeneous high income cities, six were homogeneous middle-income cities, and three were heterogeneous cities, by the previous definition.

While some of the cities had come very close to eliminating poverty within their midst, other cities had very high concentrations of poverty - 13 percent or more. These cities were low-income, middle-income and heterogeneous cities along Los Angeles' southeastern boundary, and Los Angeles.

Racial Segregation by Municipal Boundaries

While income class segregation by municipal boundaries is a relatively new thing, municipal boundaries have served to separate the races in Los Angeles County since at least 1950. In that year, there were 183,000 blacks in the metropolitan area's 45 cities. This represented 5.5 percent of the total population in those cities. Sixteen of the 45 cities were less than one-tenth of one percent black, and thirty-eight were less than one percent black. These thirty-eight cities represented almost one quarter of the area's urban population, but together they contained less than one percent of the 183,000 urban blacks. Long Beach, Beverly Hills, Santa Monica

Table 4

Cities with Highest and Lowest Proportions of Poor in 1970

	% Individuals in Poverty	Largest Income Class If Homogeneity > .350
Beverly Hills	1.4	high-income
Palos Verdes Estates	1.7	high-income
Rolling Hills Estates	2.2	high-income
San Marino	2.9	high-income
Cerritos	3.4	middle-income
Rolling Hills	3.5	high-income
La Mirada	3.6	middle-income
Santa Fe Springs	3.8	middle-income
Torrance	4.1	middle-income
Manhattan Beach	4.2	high-income
Arcadia	4.4	high-income
West Covina	4.5	middle-income
Temple City	4.7	(heterogeneous)
Lakewood	4.9	middle-income
Maywood	13.05	low-income
Los Angeles	13.3	(heterogeneous)
El Monte	13.4	middle-income
Bell	13.6	middle-income
Huntington Park	14.0	low-income
South El Monte	14.6	middle-income
San Fernando	14.7	(heterogeneous)
Compton	19.1	low-income
Cudahy	20.0	low-income
Vernon	29.5	low-income

and Compton had between one and five percent black populations, while Monrovia (6.5 percent), Los Angeles (8.2 percent) and Pasadena (8.4 percent) were the only cities with more than five percent black populations. Almost 88 percent of the area's blacks lived in the city of Los Angeles, although this city contained only 60 percent of the county's urban population.

Blacks contributed greatly to the population boom in Los Angeles County between 1950 and 1970. By 1970, the total population in Los Angeles cities had increased by 83 percent. The black population had increased by almost 350 percent to 640,000. The proportion of blacks rose from 5.5 percent to 10.7 percent.

While 32 new cities were created during this period, only two (Duarte and Carson) had more than 5 percent blacks, and only two more (La Puente and Palmdale) had more than one percent black populations. Thus, the Lakewood Plan and most of the cities that were created under it, were essentially white political movements.

Overall, the black population was at least as concentrated in 1970 as in 1950. Compton had become the first majority black city with 71 percent black, and together Los Angeles and Compton represented almost the identical proportion of the area's blacks (87 percent) that Los Angeles had contained in 1950 (88 percent).

More than this, however, fewer blacks, and more of the total population, lived in relatively segregated communities in 1970 than they had twenty years previously. In 1950, 34.6 percent of the total urban population lived in cities with less than 5 percent blacks.

By 1970, despite the fact that the proportion of blacks in the county had almost doubled, 39 percent of the population lived in cities with less than 5 percent blacks. The proportion of blacks who lived in integrated (5 percent) cities had dropped from 6.39 percent to 2.23 percent.

By ranking each city by its proportion of blacks, and aggregating the black population along this ranking, the Lorenz curve for the distribution of blacks can be obtained for 1950 and 1970. The Lorenz curves further demonstrate that the metropolitan area was more racially segregated by municipal boundaries in 1970 than in 1950.

A similar story can be told for the area's nonwhites. Once again, the nonwhites in general, like the blacks in particular, became less dispersed among the municipalities. In 1960, Los Angeles had 50.3 percent of the county's urban whites, and 61.7 percent of the area's nonwhites. In 1970, the city had 42.4 percent of the urban whites and 72.6 percent of the urban nonwhites.

Municipal Inequality

In a recent article, Hill (1974: 155) investigated municipal corporate boundaries as a form of institutionalized "social arrangements that generate and perpetuate intergenerational inequality in the distribution of scarce economic, political and

social resources." Hill's primary means of pursuing research was multiple regression analysis of 127 metropolitan areas in 1960. Because indicators of fiscal resources and fiscal capacity have various meanings in different states and metropolitan areas, he chose as his indicator of fiscal capacity the median family income of a municipality. He defended his choice by pointing out that all municipal resources must come ultimately from personal income.

While this is perhaps a useful first approximation of fiscal capacity, it is imperfect. While all taxes must ultimately be paid out of someone's income, it is not necessary for a municipality's revenue to come from the income of that municipality's own population. In many Los Angeles cities, there is no property tax and no direct taxation link between the municipality's revenue and the local population's income. These cities may rely on the sales tax, which taxes the income of anyone who purchases items in the municipality, and of course there is no guarantee that the shopping population will be the same as the municipality's population. Indeed, much municipal rivalry is generated as neighboring municipalities attempt to become the regional trade centers.

Another increasingly important source of revenue for municipalities is inter-governmental grants from county, state, and federal agencies. These grants, even more than sales tax revenue, are not drawn from local pocketbooks.

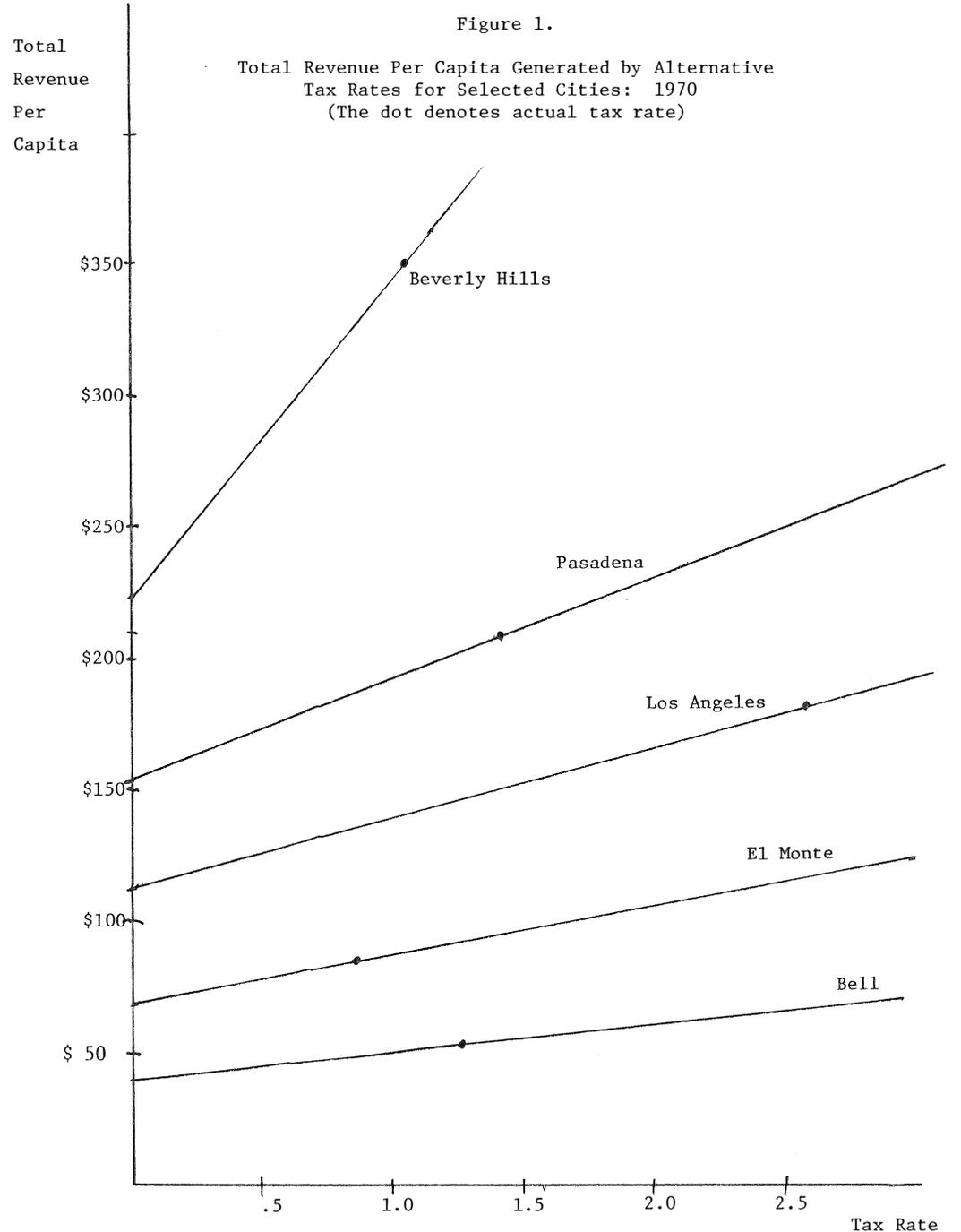
For the purposes of this study, an even more serious problem with the use of median family income as indicator of fiscal capacity is that it assumes the very relationship that is of central research interest. If for instance, low-income families happen to cluster together in commercial areas with a high public resource base, then much of the reason for normative concern about municipal inequality is obviated: poor families living in resource rich cities makes for a favorable pattern of redistribution. However, if this is not the general tendency, then the pattern of poor families living in resource poor cities raises serious questions about the efficacy of our current policies and institutions dealing with urban decay and social welfare.

For these reasons, a more direct measure of fiscal capacity, separated from family income, will be used. In 1970, the most discretionary source of income for municipal governments, and the only form of taxation that applied only to the inhabitants of the municipality directly, was the property tax. If all the taxable property in the 77 cities were divided up evenly among the more than 6 million inhabitants, there would have been almost \$2680 worth of property per capita. However, as the following table shows, this property was not distributed evenly. In fact, it ranged from less than \$1000 per person in some cities to almost \$1 million per person in the small city of Vernon. In fact, Vernon, the smallest city in the county, had more taxable property than 63 of the larger cities in the county.

Those individuals in the property-poorest sixteen cities make up about 10 percent of the population. Yet they have only about 4.9 percent of the taxable property. The individuals in the 19 richest cities make up about 10 percent of the population, yet these cities have about 16 percent of the property.

It is possible to make a Lorenz curve for the distribution of taxable property by ranking the cities from poorest to richest, then graphing the property sum against the population sum. A perfectly straight diagonal line would mean that each city had an equal share of the taxable property by population. However, each successive Lorenz curve is farther from the diagonal. The distribution of taxable property has become progressively more unequal through time.

Part of the reason for increased inequality in distribution of taxable property between 1950 and 1970 is the creation of new cities. In a 1970 rank ordering of cities by property per capita, the 32 newer cities tend to be clustered at the top and bottom of the ranking. Most (60 percent) of the pre-war cities had 1970 properties per capita between \$2000 and \$4000. However, most (over 80 percent) of the post-war cities had 1970 property-rich categories. The property rich new cities were those cities that were either very commercial (Industry, Irwindale, Santa Fe Springs, Cerritos, Palmdale) or very rich residential suburbs (Rolling Hills, Rolling Hills Estates, Hidden Hills). The very poor new cities were those that were neither very commercial nor inhabited by the very rich.



There are, of course, other sources of revenue, including most importantly, sales tax revenue and grants from state and federal agencies. These sources of revenue tend to be correlated with property per capita, however, and with each other. The result of this intercorrelation is that all other sources of revenue besides property tax also tend to be highly unequally distributed. For instance, Hidden Hills, a small residential suburb with no commercial enterprises, obtained in 1970-1971 only \$18 per capita, while Los Angeles ranked 59th from the bottom with \$118 per capita, and Vernon had the most again with over \$20,000 worth of other revenue per capita. There would have been approximately \$110 per capita if all the sources of non-property tax revenue were distributed equally among the area's inhabitants.

Now, what governmental inequality fundamentally means is that certain cities have to tax their citizens harder to achieve the same revenue. The following graphs illustrate this idea. Revenue per capita is shown on the y axis, and the tax rate on the left. Each line represents feasible combinations of tax rate and revenue per capita for each city, given that city's property valuation, other sources of revenue, and population. The y-intercept reveals the city's other revenue per capita, and the slope of each graph is interpretable as the municipality's property per capita. This form of presentation strikingly depicts the most important fact about governmental inequality. Many cities simply cannot achieve the revenue per capita of, for instance, Los Angeles, at a politically

feasible tax rate. Or alternatively, a uniform tax effort would result in very different levels of revenue for different cities, as a result of both of the differences in property valuations and other forms of revenue.

Residential Segregation and the Distribution of Municipal Resources

It is clear that municipal segregation based on income and race increased during the period from 1950 to 1970. It is also clear that there has been an increasing degree of inequality in the distribution of taxable property. However, I have not yet shown that there is any relationship between the two trends -- that poor, or blacks, or rich, or whites tend to live in those municipalities with the highest levels of taxable property per capita.

A first examination of this problem can be made by looking at those cities that were identified earlier as being most homogeneously rich, middle-class, or poor. As the following table demonstrates, there does seem to be a definite relationship between property per capita and predominant income class for homogeneous cities, with almost all high-income and almost all low-income cities being rich and poor, respectively, in taxable property. The major exceptions are Signal Hill and Commerce, low-income cities with very high levels of commercial activity.

[Table 5 goes about here.]

Table 5
 Taxable Property Per Capita for Homogeneous Cities: 1970
 (Homogeneity Score Greater Than .35)

		Taxable Property Per Capita		
		Less Than \$1500	\$1500 - \$2500	\$2500+
Homogeneous Low-Income		Baldwin Park Bell Bell Gardens Compton Cudahy Hawaiian Gardens Maywood	Huntington Park San Fernando	Commerce Signal Hill
		Norwalk La Puente	Paramount San Dimas	Irwindale Santa Fe Springs South El Monte
Homogeneous Middle-Income			Claremont Glendora Lakewood La Mirada Sierra Madre West Covina Whittier	Arcadia Beverly Hills Bradbury Cerritos Covina Culver City Downey El Segundo Manhattan Beach Palos Verdes Estates Rolling Hills Rolling Hills Estates San Marino South Pasadena Torrance Walnut
Homogeneous Upper-Income				

Thus, while it has been argued that the poor may tend to live in property-rich commercial and industrial areas, creating a favorable implicit pattern of redistribution, this is not the pattern that emerges. Most of the low-income communities are not significantly blessed with commercial property. Furthermore, while over half of taxable property tends to be non-residential, there are enough commercial activities that are compatible with (if not drawn to) high-income residential areas, that more of the high-income cities than low-income cities have large amounts of commercial activity. For instance, Beverly Hills, El Segundo, Culver City and Covina all have significant amounts of retail activity, resulting in over \$40 of sales tax revenue per capita, while only Commerce and Signal Hill in the low-income cities achieve such high levels of sales tax revenue.

Furthermore, while residential property is a relatively small proportion of total property, it is sufficient in the case of Bradbury, Walnut, Palos Verdes Estates, Rolling Hills and Rolling Hills Estates to maintain a minimum level of services without the support of any commercial activity. While Baldwin Park and Cudahy, residential low-income cities, would get only \$10 per capita in property tax revenue from a tax rate of \$1.00 per hundred, Rolling Hills would get \$66 per capita from an equal property tax rate, and with an equally tiny level of commercial activity. Thus, lack of a commercial property revenue base means different things in low-income and high-income residential cities.

Since the more homogeneous low-income and high-income cities tend to be property poor and property rich, respectively, what can a rich or poor individual expect to get out of the municipality he lives in? On the average, what amounts of taxable property **are** available to rich and poor individuals. An answer to this question can be found by calculating the expected value of property per capita for different groups of individuals, based on the municipal dispersion of those groups. This is done with the following formula:

$$EV_i = \sum_j (p_{ij} V_j)$$

where p_{ij} is the probability of being in jurisdiction j if you are a member of income class i , V_j is the value of some resource such as taxable property per capita, and EV_i is thus the expected value, or weighted mean, of taxable property available to a person of a certain income class.

[Table 6 goes about here.]

Table 6

Expected Values for Property Per Capita
For Different Population Groups: 1970

White	\$2770
Black	2540
Lower Income Third	2710
Middle Income Third	2710
Upper Income Third	2840
Families with Incomes Greater than \$50,000	3470

Table 6 reveals the differences in expected value of property per capita for four different income groups and whites and blacks. As can be seen, the distributions of the lower and middle income groups are such that they can expect to live in municipalities with virtually identical levels of property per capita. The upper income group, however, can expect more than a \$100 of taxable revenue more per capita. The very highest income sub-group can expect even much more taxable property per capita on the basis of its distribution among Los Angeles cities, averaging over \$700 per capita more than the lower two thirds of the population.

The difference between whites and blacks is equally notable. While whites can expect a level of taxable property per capita somewhere between the upper and middle income thirds, blacks can expect to receive a level of taxable property per capita that is over \$150 lower than that received by the lower income third.

The Mixed Benefits of Metropolitan Fragmentation

During the period 1950 to 1970, municipal boundaries increasingly served to separate races and income classes in the Los Angeles area. The city of Los Angeles and some of its larger, older suburbs remained heterogeneous, but with increasingly large concentrations of poor and blacks. The smaller and newer suburbs were overwhelmingly white, and tended to be identifiably homogeneous for some income class level.

At the same time, taxable municipal property became more unequally distributed. This trend, combined with segregation of income and racial groups, created a situation in which the poor, blacks, and middle class could expect to get less return for a given property tax rate. On the other hand, a large number of middle and upper class whites escaped the property tax burden altogether in the new homogeneous cities of the Lakewood Plan. In 1970, 22 cities representing over \$1.6 billion worth of taxable property had no municipal property tax. At the modest tax rate of \$1.00, this represented \$16 million in potential municipal revenue.

What does this brief historical overview tell us about the benefits of metropolitan fragmentation in Los Angeles County? It would seem to be unambiguously the case that the improved municipal choice set in Los Angeles County benefitted certain segments of the population. Those 875,000 people who lived in the newly created cities under the Lakewood Plan (only 1.4% of whom were white) were able by and large to live in low crime areas, with few dilapidated neighborhoods, with little or no property tax, but with the opportunity to provide themselves with a pattern of expenditures that fit their particular brand of needs, and with the power to zone to exclude the kind of people who wouldn't fit in.

Thus, for instance, we read of Bradbury, a city of 873 people, with the third highest income per capita, little crime, one family of blacks, no low-income housing, no apartments, and no unemployment. Zoning practices include a minimum lot size

of 20,000 square feet. There is one area of middle-class housing, with smaller lawns, that were worth only \$50,000 (in 1977).

The founding fathers were forced to include these in order to have enough residents to qualify for cityhood back in 1957.

Even after all these years, one Bradbury founder, Wilbur Cathrup Pierce, dismisses this appendage as "awful" .

(Los Angeles Times, 1977:II-1.)

One councilman in Bradbury said, "We all want Bradbury to stay just the way it is . . . A person that came and said they wanted to make a big change would be called a heretic and run out of town."

Bish notes that the incorporation of the Lakewood Plan cities "served to prevent the imposition of political externalities by neighboring municipalities that wanted to acquire their relatively high tax bases for financing of public goods and services for their own citizens." (Bish, 1971: 89.) But some of the older cities as well as the Lakewood Plan cities benefitted from the general sorting out of individuals that occurred during the period from 1950 to 1970. The City of Arcadia, for instance, reduced its proportions of poor and black populations, achieved one of the lowest violent and property crime rates in the County, at the same time decreasing its property tax rate. Yet in real dollar terms, the decreased property tax rate is yielding more property tax revenue per capita than in 1950, due to increased values of property per capita.

[Table 7 goes about here.]

Table 7

Profile of the City of Arcadia: 1950 - 1970

	<u>1950</u>	<u>1970</u>
Population	23,066	45,138
% High-income families	50.8 %	50.1 %
% Middle-income families	23.6 %	32.1 %
% Low-income families	25.6 %	17.8 %
% Poor	8.1 %	4.4 %
% Black	.21%	.07%
Income Homogeneity	.380	.385
Robbery and aggravated assault/100,000 pop.	MI	160
Property crime/100,000 pop.	MI	2867
Taxable property per capita (based upon 1970 \$)	\$2657	\$3296
Property tax rate	\$ 1.18	\$ 1.00
Property tax revenue/per capita (based upon 1970 \$)	\$ 31.26	\$ 31.48
Total revenue/per capita	\$ 98.54	\$ 116.50

But while the Lakewood Plan cities were protecting their municipal resources, and while other cities were following Arcadia's pattern of increased homogeneity, decreased tax rates, and increased property tax yield, other cities were getting increasing concentrations of poor and discriminated minorities. The city of Los Angeles, for instance, had markedly increased populations of low-income citizens and blacks. The numbers of robbery and aggravated assault arrests jumped from 250 to 1,037 per hundred thousand from 1950 to 1970. Yet, the resources to deal with the problems of urban poverty and crime were not accelerating at an equal rate. Between the 1967 and 1972 Censuses of Manufacturing, the number of employees in the city's manufacturing firms actually decreased in the areas of food and paper products, printing, and machinery manufacturing. Over-all the number of manufacturing employees decreased from 309,600 to 281,200. In constant 1967 dollars, the value-added by manufacturing establishments in the City of Los Angeles decreased from \$4,260 million to \$3843 million, a decrease of almost 10%.

This erosion of the city's resource base shows up in the city's budget. The property tax rate increased from 1.85 to 2.52 per hundred, but the total revenue per capita decreased from \$226 (in real 1970 dollars) to \$181.5. There was \$242 of debt in 1950 (1970 dollars) for every individual in the city of Los Angeles. By 1970, this figure had almost doubled to \$490.

[Table 8 goes about here.]

Table 8
Profile of the City of Los Angeles: 1950 - 1970

	<u>1950</u>	<u>1970</u>
Population	1,970,358	2,811,801
% High-income families	33.7 %	34.9 %
% Middle-income families	28.5 %	29.8 %
% Low-income families	37.7 %	35.3 %
% Poor	10.7 %	13.3 %
% Black	8.2 %	17.9 %
Income homogeneity	.3373	.3354
Robbery and aggravated assault/100,000 pop.	250	1037
Property crime/100,000 pop.	1388	5154
Taxable property per capita (based upon 1970 \$)	\$2039	\$2500
Property tax rate	\$ 1.85	\$ 2.52
Property tax revenue/ per capita (based upon 1970 \$)	\$ 36.39	\$ 63.24
Total revenue/per capita (based upon 1970 \$)	\$ 226.16	\$ 181.50

Compton and Huntington Park have become predominantly low-income cities in the period since 1950. Compton has become a majority black city, while Huntington Park has maintained its primarily white make-up. Crime rates have reach higher proportions in Compton than in any other city in the county, and property per capita has barely kept rate with inflation. In Huntington Park, property per capita has actually failed to keep pace with inflation. The municipal property tax rates have been increased in both cities, but in Huntington Park, the return in property revenue per capita has decreased in constant dollar terms.

[Tables 9 and 10 go about here.]

For these low-income cities, the factors that must be included in any analysis of the benefits of fragmentation is the distribution of resources. While fragmentation may promote multiple, responsive, small-scale demand-revealing mechanisms for homogeneous neighborhoods, it may also result in increased income and racial segregation. And if income and racial segregation is empirically associated with either the concentration of resources, or the concentration of resource-draining problems like crime, then fragmentation may actually decrease the welfare of the individuals in the low-income and minority jurisdictions, contrary to the original Tiebout expectation.

Conclusion

Several authors have picked up on Tiebout's theme that everyone can be better off in a fragmented institutional framework. Wallace Oates, for instance, says that dividing the population of a

Table 9
Profile of the City of Compton: 1950 - 1970

	<u>1950</u>	<u>1970</u>
Population	47,991	78,547
% High-income families	33.0 %	20.0 %
% Middle-income families	38.0 %	36.3 %
% Low-income families	29.0 %	43.7 %
% Poor	5.7 %	19.1 %
% Black	19.1 %	71.0 %
Income homogeneity	.338	.363
Robbery and aggravated assault/100,000 pop.	92	2405
Property crime/100,000 pop.	1167	10,710
Taxable property per capita (based upon 1970 \$)	\$1322	\$1428
Property tax rate	\$ 1.44	\$ 1.59
Property tax revenue per capita (based upon 1970 \$)	\$ 18.93	\$ 22.04
Total revenue per capita (based upon 1970 \$)	\$ 63.37	\$ 108.93

Table 10

Profile of the City of Huntington Park: 1950 - 1970

	<u>1950</u>	<u>1970</u>
Population	47,991	78,547
% High-income families	36.4 %	14.7 %
% Middle-income families	31.0 %	37.2 %
% Low-income families	32.6 %	47.1 %
% Poor	6.6 %	14.0 %
% Black	.03 %	.19 %
Income homogeneity	.335	.368
Robbery and aggravated assault/100,000 pop.	95	1019
Property crime/100,000 pop.	1320	4961
Taxable property per capita (based upon 1970 \$)	2543	2113
Property tax rate	\$.96	\$ 1.05
Property tax revenue/per capita (based upon 1970 \$)	\$25.00	\$ 22.00
Total revenue/per capita (based upon 1970 \$)	\$98.53	\$121.38

metropolitan area into local groups, and providing the Pareto efficient level of public good consumption in each unit, clearly cannot hurt anyone. But it can make some individuals better off by reducing the discrepancy between their preferred levels of public goods consumption and that which they actually receive. Thus,

we can clearly make at least one person better off, without reducing the welfare of anyone else, by moving to separate groups. Therefore, in the absence of cost-savings from increasing the size of the group of consumers, it is always preferable to provide Pareto-efficient levels of consumption for subsets of a group than for the group as a whole. (1972:58).

In Los Angeles County from 1950 to 1970, the metropolitan area became less consolidated and more fragmented. It simultaneously became an area in which municipalities were more homogeneous. Oates is right in saying that this kind of situation is one in which fewer and fewer people had to bear large "conformity costs" associated with living in a jurisdiction whose actions were far from their own preferences. Yet surely any complete analysis would look, not only at the effects of fragmentation on the responsiveness of the jurisdictions' to individual preferences, but the capacity of the jurisdictional governments to respond. It wouldn't help identical low-income individuals to congregate in a jurisdiction where conformity costs were zero, but where the crime rates were high and the resources of the government to deal with those problems were non-existent.

The increasing homogeneity in Los Angeles County resulted in a decreased basis for redistribution within each municipality. It is not clear whether the motivation for increased fragmentation and homogeneity was to escape "conformity costs" or to escape the redistributive burden of living in a municipality with a broad mix of income classes. It is also not clear that everyone is better off because of the reduced conformity costs. In another paper (Miller, 1977) I show that the low-income individual may be worse off with no conformity costs in a homogeneous, but bankrupt jurisdiction.

This being the case, the Los Angeles experience suggests several caveats for Tiebout's normative argument. Because the sorting out of individuals into different municipalities is largely on the basis of income and race, and because concentrations of poor and minorities seem to be associated with such negative externalities as higher crime rates and declining public resource bases, a structure of jurisdictional fragmentation and choice is not advantageous for everyone. Indeed, some of the increasingly homogeneous low-income communities of Los Angeles became relatively and absolutely more disadvantaged during the period of racial and income differentiation.

It appears that the problem of metropolitan organization is incorrectly posed in the literature as a question of economic efficiency. If the benefits of fragmentation fall primarily on

homogeneous white middle and upper-class suburbs, then the question of economic efficiency must be replaced by the essentially political questions of distribution of benefits and mobilization of bias. Who shall (and should) be helped, and who harmed by the structure of local government in a metropolitan area? Who should get more and who less?

FOOTNOTES

1. This measure of homogeneity was suggested by Rae's fractionalization measure. See Rae, 1971:56.

2. In defining class homogeneity for Los Angeles County municipalities, family income was used for 1970 and for 1950 cities larger than 10,000. This data was not available for smaller 1950 cities, so homogeneity was calculated using families and unrelated individuals. The three income class definitions and their respective proportions in the county as a whole were as follows:

	<u>Lower Income</u>	<u>Middle Income</u>	<u>Upper Income</u>	<u>County Homogeneity</u>
1970 (75 cities)	less than \$8,000 (31.6%)	\$8000 to \$13,750 (32.4%)	more than \$13,750 (36.0%)	.334
1950 (33 cities with pop. greater than 10,000)	less than \$3,000 (35.5%)	\$3,000 \$4,500 (33.9%)	more than \$4,500 (30.6%)	.335
1950 (9 cities with pop. between 2,500 and 10,000)	less than \$2,000 (31.7%)	\$2,000 to \$4,000 (34.7%)	more than \$4,000 (33.6%)	.334

REFERENCES

Bish, Robert L. The Public Economy of Metropolitan Areas.

Chicago: Rand McNally/Markham, 1971.

_____ and Vincent Ostrom. Understanding Urban Government: Metropolitan Reform Reconsidered. Washington: Enterprise Institute for Public Policy Research, 1973.

Bergstrom, Theodore C. and Robert P. Goodman. "Private Demands for Public Goods." American Economic Review 63 (1973): 280-296.

Committee for Economic Development. Modernizing Local Government. New York: CED, 1966.

_____. Reducing Crime and Assuring Justice. New York: CED, 1972.

Ellickson, Bryan. "Jurisdictional Fragmentation and Residential Choice." American Economic Review 61 (1971): 334-339.

Greer, Scott. Metropolitics: A study of Political Culture New York: John Wiley & Sons, 1963.

Haar, Charles M., ed. The End of Innocence: A Suburban Reader. Glenview: Scott, Foresman & Co., 1972.

Hobbes, Thomas. Leviathan: On the Matter, Form and Power of a Commonwealth Ecclesiastical and Civil. Edited by Michael Oakshott. New York: Macmillan Publishing co., 1962.

Lineberry, Robert L. "Reforming Metropolitan Governance: Requiem or Reality." The Georgetown Law Journal 58 (1970): 676-678.

Markusen, Anne R. "The Economics of Social Class and Metropolitan Local Government: A Summary." National Tax Association: Papers and Proceedings (1974).

Miller, Gary J. "Is the Invisible Hand Biased? Metropolitan Fragmentation and Choice." California Institute of Technology, Social Science Working Paper Number 192.

Miller, Stephen M. and William K. Tabb. "A New Look at a Pure Theory of Local Expenditures," National Tax Journal, 25:2 (1973), 161-176.

Oates, Wallace. Fiscal Federalism. New York: Harcourt Press, 1972.

Olson, Mancur. "The Principle of Fiscal Equivalence: The Division of Responsibility Among Different Levels of Government." American Economic Review 59 (1969): 479-487.

Ostrom, Elinor and Roger B. Parks. "Suburban Police Departments: Too Many and Too Small?" Edited by L. H. Masotti and J.K. Hadden, The Urbanization of the Suburbs, Volume 7, Urban Affairs Annual Review. Beverly Hills: Sage Publications, 1973.

Ostrom, Vincent. "Operational Federalism: Organization for the Provision of Public Services in the American Federal System." Public Choice 6 (1969): 1-17.

Ostrom, Vincent, Charles Tiebout and Robert Warren. "The Organization of Government in Metropolitan Areas: A Theoretical Inquiry." American Political Science Review 55 (1961): 831-842.

Rae, Douglas. The Political Consequences of Electoral Laws. New Haven: Yale University Press, 1971.

Schattschneider, E.E. The Semi-Sovereign People: A Realist's View of Democracy in America. New York: Holt, Rinehart & Winston, 1960.

Tiebout, Charles. "A Pure Theory of Local Expenditures." Journal of Political Economy 64 (1956): 416-424.

Williams, Alan. "Optimal Provision of Public Goods in a System of Local Government." Journal of Political Economy 74 (1966): 18-33.

Wolff, Robert Alan. In Defense of Anarchism. New York: Harper & Row, 1970.