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ABSTRACT

This is a revised and expanded version of a previous report on urban indicators which introduces new indicators for 4 of the 14 quality of life categories covered in the previous report. It updates indicators for 9 of the 14 categories and employs the indicators to develop charts and tables which use the Washington, D.C. area as a illustrative example. Central cities and suburbs of the 18 metropolitan areas are examined with respect to five of the quality of life categories. There is a tabulation and summary of these five indicators as they reflect conditions for the central cities and suburbs, ratios between city and suburban areas, and rates of change in these factors. Summary charts presenting city and suburban conditions in Washington, D.C. are used as examples. The paper provides sources and limitations of all indicators used, tabulations of all data presented in the initial report, and rationales for the revision, addition, or deletion of the various indicators. (Author/AM)

A STUDY IN COMPARATIVE URBAN INDICATORS: Conditions in 18 Large Metropolitan Areas

Michael J. Flax

1206-4 April 1972

An expanded revision of
"The Quality of Life in Metropolitan Washington, (D.C.): Some Statistical Benchmarks," 136-7, March 1970

THE URBAN INSTITUTE
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ABSTRACT

This is a revised and expanded version of the initial Urban Institute research report on urban indicators. The original report,[a] which used data available at that time, presented indicators of 14 "quality of life" categories for 18 large metropolitan areas. This revision introduces new indicators for four of these "quality of life" categories covered in the initial report, and updates indicators for nine of the fourteen categories. The indicators are then employed to develop charts and summary tables which use the Washington, D.C., metropolitan area as an illustrative example. These sample charts show Washington's (a) current status in each quality category, (b) its recent and latest rankings, and (c) its recent rates of change as compared with similar data from the 17 other large metropolitan areas. Central cities and suburbs of the 18 metropolitan areas are examined with respect to five of the "quality of life" categories. There is a tabulation and summary of the five indicators as they reflect conditions for the central cities and suburbs, ratios between city and suburban areas, and rates of change in these factors. In addition, as an example, summary charts are presented which describe the city/suburban conditions in Washington, D.C. This paper provides sources and limitations of all indicators used, tabulations of all data presented in the initial report, and rationales for the revision, addition, or deletion of the various indicators.

a. "The Quality of Life in Metropolitan Washington (D.C.): Some Statistical Benchmarks," Urban Institute Report 136-1. March 1970.

PREFACE

This report is a product of an ongoing indicators program at The Urban Institute. The main objective of this program is to develop sets of indicators on a wide variety of issues of social concern that are of maximum utility to different subsets of public and private decision makers, as well as to the general public.

In pursuit of this objective we have developed initial models of (1) the attainment of welfare via the production and consumption of goods and services, (2) the information requirements of bureaucratic and political decision makers, and (3) the interactions of public and private interests within a metropolitan context. We are examining possibilities for verifying and utilizing these models to (a) identify alternative "Quality of Life" options, (b) describe various levels and models of consumption technology, and (c) synthesize these concepts and explore their interrelationships in a metropolitan area context. One of the eventual goals of this applied research is the identification of variables and inference structures that will permit more valid and relevant comparative metropolitan analysis. This should permit the development of sophisticated but understandable comparative indicators.

Some of our more recent work is described in the publications listed below.*

Harvey A. Garn, Indicator Project Leader, and Gail Finsterbusch, of the Indicators staff, provided valuable guidance and assistance in the preparation of this paper. Also, we received help and

* "Social and Urban Indicators," Search: A report from The Urban Institute, Volume 4, Numbers 3-4, May-August 1974.

"Models for Indicator Development: Tools for Applied Social Research," Harvey A. Garn, Michael J. Flax, Michael Springer, and Jeremy B. Taylor, Urban Institute Paper #URI 89000, 1974.

"Social Indicators and Society: Some Key Dimensions," Michael J. Flax, Michael Springer, and Jeremy B. Taylor, July 1974. This paper is forthcoming in The Social Economy of Cities, edited by Gappert and Rose, Sage Publications, Inc.

"Formulating Urban Growth Policies: Dynamic Interactions Among People, Places, and Clubs," Harvey A. Garn and Michael Springer, to be published in a Special Issue of Publius on "Problems of Policy Choice in Intergovernmental Relations," 1974.

comments from many others. (A partial listing is provided in Appendix D.) Jill Bury performed the mathematical computations, the graphics, and the typing of this report. Jacqueline Swingle aided in the final preparation.

Reader's comments, criticisms, and suggestions regarding this report or our indicator work are invited.

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I

INTRODUCTION

In this revision, as before, we are concerned with developing a methodology for quantitatively describing urban conditions and also in providing some benchmarks concerning the quality of life in the communities studied. We intend to continue using "feedback" from our work to improve both our selection of indicators and our methods of presentation.

In accordance with our policy of incremental improvement, we have revised our earlier report in the following ways:

1. For nine of the 14 functional categories in the initial report we have updated the comparative data on the 18 large metropolitan areas. The data actually used in that initial report are tabulated in Appendix A.

2. In four of the remaining five categories we have substituted new measurement series. (However no updating or substitution was necessary in the case of the percent voting in presidential elections, which is used as an indicator of citizen participation.) The rationale for the substitution of each of these indicators is discussed in Section III of this report.[a]

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a. Gail Finsterbusch is expanding this discussion in her paper on Conceptual and Methodological issues (op. cit. footnote b, page v).

a) We have introduced newly available yearly estimates of median school years attained by adults as a measure of educational attainment of the population. In the initial report we used the percentage of those failing the selective service exam as an indicator of the education imparted to youth.

b) We have substituted an indicator of one aspect of transportation for an indicator of traffic safety by using estimates of the costs of transportation in place of data on traffic deaths.

c) We have used and explained new Bureau of Narcotics and Dangerous Drugs (BNDD) estimates of the number of addicts per 10,000 population in seven large cities. (Data were not available for the remaining 11 central cities).

d) We have related the average yearly concentrations of three air pollutants to the appropriate EPA standards, and discussed the possible use of a proposed summary air pollution index. We have also presented data on the changes in one air pollutant (suspended particulates) over the past five years.

3. In the five quality categories where data were available on a metropolitan and central city basis, we have calculated and compared levels and rates of change for central cities, suburbs, and the city/suburban ratio, for 18 large metropolitan areas, and as an example, we have drawn up summary exhibits for Washington.

4. In our exhibits and tables for each indicator, we have presented annual average rates of change over several years in place of the rate of change over the most recent year. (These one year figures are also available in Appendix A.)

In this revision as in the initial paper, we have demonstrated three different ways of measuring the quality of life in Washington as an example of what can be done with these data.[a]

a. Using the data presented throughout this report, it is possible to take similar comparisons for each of the seventeen other large metropolitan areas.

1. We have compared Washington with its past: Are conditions in the Washington metropolitan area better or worse than they used to be relative to thirteen measures?[a]

2. We have compared the level of conditions in Washington with those in other large metropolitan areas: Using data for the latest available year, how do conditions in the Washington area compare with those in the seventeen other largest metropolitan areas for the fourteen selected measurements?

3. We have compared Washington's rate of change with those of other large metropolitan areas: Using data for two time periods for thirteen quality considerations, are conditions in the Washington area improving or deteriorating at a faster rate than the average of the seventeen other metropolitan areas?

In the five quality categories where city and suburban comparisons were made, a similar example was presented: the same three questions were asked regarding metropolitan Washington, Washington, D.C., and its suburbs.

a. Adequate data for measuring recent changes for narcotics addiction were not available.

II
USES OF THIS REPORT

In this paper we are trying to reach many potential users of urban indicators, such as government administrators, planners, businessmen, labor leaders, journalists, community action groups, and concerned citizens in general. We believe that these groups have a real need for a simple set of urban quality measures that will help reduce the role of hearsay, intuition, and isolated bits of personal experience as the major criteria for citizen decision making. To illustrate what can be done, we have attempted here to collect diverse data from widely scattered sources, to screen them, to integrate them, and to present them in a form that few in the potential non-technical user groups are themselves likely to do.

We recognize that this report deals with complex subject matter and that non-professional readers may misinterpret and misuse the data we present. We have, therefore, documented the deficiencies of the data we used. The primary function of the simplified indicators presented here is to offer a method of better communicating the state of urban conditions to a wide audience. In any of these functional areas more detailed information than is provided by these simple indicators is desirable for evaluation or design of governmental programs. The possibility of an indefinite continuation of the present lack of understandable indicators relative to many urban issues is an even more intolerable prospect than is the possible misinterpretation of the limited imperfect data now available.

One way, we feel, to get better data is to spotlight, rather than to

conceal, the highly imperfect data now available. Our earlier report, for example, led to numerous suggestions for changes and improvements in our indicator set, some of which we have been able to incorporate into this revision. We hope that this report will also encourage other researchers and administrators to suggest and develop conceptually better and statistically more accurate indicators to replace some of the crude quality measures we have used in this report. An important consideration is that in many cases the basic raw statistics are already available from which to develop better indicators. In other words, with minimum additional cost many improved indicators could be developed if there is the will or public pressure to do so. It is intolerable, for instance, that in a field as important as public education, (and one in which so many statistics are collected at the individual student and individual school level), that there are not better data consolidations which would permit more meaningful intercity comparisons of student achievement.

The city/suburban tabulations developed in this report are presented not only for their substantive content. They are also meant to furnish an illustration of how simple manipulation and innovative comparative presentation of existing data can sometimes facilitate improved comprehension and insight.

This report has been limited principally to data series available on a yearly basis so that recent changes could be measured. A large amount of detailed Census data will be available shortly. We suggest that innovative and comparative presentation techniques similar to those demonstrated in this report could aid those analyzing Census data in effectively presenting their results to a large audience.

Specific Suggestions for Using this Report

The indicators presented here are an approximate attempt to quantify some aspects of a wide variety of concerns. Some suggestions as to how they might be used are listed below:

1. Exhibits similar to those shown for metropolitan Washington, can be prepared for any of the other 17 metropolitan areas, e.g., exhibits could be prepared for Pittsburgh or Buffalo.

2. Metropolitan areas or cities not included in this report could compare their levels or rates of change for specific indicators with the values provided, e.g., infant mortality or reported robbery data for Atlanta could be compared with other large metropolitan areas or cities.

3. The indicators can be used as a basis for comparison with other available data.

   a) additional data in specific functional categories could be used to supplement that presented here (as was done in Unemployment and Housing in this paper). If presented in a comparable format, additional data on these 18 metropolitan areas could provide a broader picture, e.g., burglary and violent crime rates could be added to the data on public order.

   b) additional data on different functional categories could be displayed in this format for these 18 metropolitan areas, e.g., tax effort, population growth, etc.

4. The metropolitan area data could serve as a comparative reference for all sorts of further breakdowns (the city/suburban technique used in this paper is one example). The same could be done for population groups, e.g., by race or income level, or geographical areas, e.g., census tracts.

5. Surprising variations in the data might be detected by inspection or simple correlation. Further study might explain some of these variations, and in some cases might suggest corrective action.

III

QUALITY CATEGORIES AND SELECTED INDICATORS

Five general ground-rules governed our selection of quality categories and indicator measures included in this study:

1. We wanted to include a wide cross-section of urban quality considerations, some relatively objective and some more subjective in nature. For example, we used income and unemployment as well as community concern and citizen participation.

2. We wanted to include quality considerations for which there is a general consensus relative to their importance and desirable direction of change. For instance, there is widespread concern and interest regarding the amount of criminal behavior; the severity of air pollution and the state of the health of our population. Furthermore, few would favor rising levels of reported crime, air pollution or infant deaths.

3. Initially, to keep this study as simple as possible, we selected only one indicator for each quality category. In some cases we could have obtained many measures; for instance, in health as many as 60 indicators. In this revision we generally continued this policy, since the addition of many multiple measures would have greatly complicated the presentation of findings. However, wherever a new measure was adopted, the data on the measure previously used are presented and in two cases we presented other data in Appendix A (participation rates relating to unemployment data, and recent Census data related to housing) to supplement our yearly series.

4. In most cases the availability of data influenced our selection. For instance, we could obtain no recent data for leisure opportunities or criminal justice.
As a ground-rule, we initially required data for two recent years to obtain some measure of comparative rates of change, but for this revision the data available concerning narcotics addiction did not permit measurement of changes in this category.

5. Wherever possible we sought "output" oriented measures of urban quality, i.e., to measure what urban conditions actually are rather than how much money communities are spending or in what activities they are engaging to improve quality.

Table I lists the quality categories and specific indicators used in the initial and revised version of this report, as well as the latest year for which the data are available.

In the course of revising this report the specific indicators used were changed in four quality categories. The rationale behind these changes is briefly discussed below.[a]

1. EDUCATIONAL ATTAINMENT OF THE ADULT POPULATION - Within the past year, the Census Bureau began issuing yearly data[b] on the educational attainment of adults in large metropolitan areas. At the same time decreasing draft quotas and change in the administration of the draft introduced uncertainties which made the use of yearly selective service test score data more questionable. It should be emphasized that in this case switching indicators involves a conceptual change in our education indicator. Previously, we were measuring (in a crude fashion) the education imparted to a certain segment of a metropolitan area's youth. In this report we are measuring the formal educational attainment of the adult population which was not necessarily attained in the metropolitan area of current residence.

2. TRANSPORTATION - We were unable to obtain data for a transportation indicator in our initial report. Data availability led us to attempt to estimate a related quality--traffic safety, by measuring the ratio of traffic deaths to population in each metropolitan area. Further thought and discussion suggested that higher traffic deaths may in fact be associated with higher speed vehicular traffic, and therefore may indicate less traffic congestion and more convenient transportation. This ambiguity led us to discard traffic deaths as an unsuitable indicator.

   Further search for a transportation indicator revealed that the Bureau of Labor Statistics publishes biennial family budgets designed to compare the costs of similar standards of living in the 39 largest U.S. metropolitan areas. The transportation component of these budgets is a measure of what it costs families with similar life styles to provide the transportation they need. Thus this is a measure of only one aspect of transportation--its money cost--not the cost in time, or inconvenience, for example.

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a. Gail Finsterbusch has expanded this discussion in her paper on Conceptual and Methodological issues (op. cit. footnote b, page v).

b. These data are obtained from the Current Population Survey, a monthly 50,000 sample nationwide household survey, conducted by the Census Bureau. Further details on the data used for each of the indicators in this report can be found in Appendix A.

TABLE 1

QUALITY CATEGORIES AND SELECTED INDICATORS

QUALITY CATEGORIES	Latest Year Data	INDICATORS USED
Unemployment	1970	% of labor force unemployed[a]
Poverty	1970	% of households with incomes less than $3,000 per year
Income	1969	*Per capita money income adjusted for cost of living differences
Housing	1969	Cost of housing a moderate income family of four
Health	1969	Infant (under 1 year) deaths per 1,000 live births[a]
Mental Health	1969	Reported suicides per 100,000 pop.[a]
Public Order	1970	Reported robberies per 100,000 pop.[a]
Racial Equality	1970	Ratio between nonwhite and white unemployment rates
Community Concern	1970	*Per capita contributions to United Fund appeals
Citizen Participation[b]	1968	*% of voting age population that voted in recent presidential elections
REVISED INDICATORS[c]		
Educational Attainment[d]	1969	*Median school years completed by adults
Transportation[e]	1969	Cost of transportation for a moderate income family of four
Air Quality[f]	1969	Average yearly concentrations of three air pollution components, and change in the concentration of suspended particulates
Social Disintegration[g]	1969	Estimates of number of narcotica addicts per 10,000 population

*An increase in the absolute value of these indicators is assumed to represent an improvement in the quality of life. The reverse is true of all the others.

a/Data is also provided on central city, suburban, and city/suburban ratio levels and their rates of change. b/This indicator did not require revision. c/Data on previous indicator used are presented in Appendix A. d/Selective Service Mental Test rejection rate was used previously. e/Deaths from auto accidents per 100,000 population (an indicator of traffic safety) was used previously. f/A composite index of pollutants was used previously. g/A new method of estimating addiction rates is used.

Also, it is not a measure of the quality, speed, comfort or convenience of transportation in these areas. As a matter of fact, a low total cost for transportation in a given city may be caused by the inconvenience and high costs of specific transportation services. Despite these conceptual difficulties, it remains the only comparable data available and it does measure one component of the transportation picture. As such we have used it as an indicator of transportation.

3. AIR QUALITY - The Environmental Protection Agency (EPA) no longer computes the composite index used in the initial report. However, data on three air pollution components are available for the central cities of the metropolitan areas considered here (the best available estimate of metropolitan area conditions), and the EPA has issued air quality standards. We investigated a proposed weighted pollution index (referred to in Appendix A) and decided not to use it at this time due to data acquisition, conceptual, and presentation difficulties. Instead we ranked the central cities of the metropolitan areas with respect to their average yearly concentrations of the three pollutants and referenced each to the applicable EPA standard. We also calculated changes in the concentrations of suspended particulates during recent years as an indicator of changing air quality conditions.

4. SOCIAL DISINTEGRATION - Here the problem was that our previous data source, the narcotics addict register in each city, was seen not to be a consistent measure of the actual number of addicts. Investigation revealed that the Bureau of Narcotics and Dangerous Drugs was beginning to use a more sophisticated method of estimating the actual addict population from the available data in each city. A description and caveats concerning this technique are supplied in Appendix A. At this time, data are available for only seven cities for a single year (1969).

IV

MAJOR CAVEATS

1. We believe that urban indicators have the potential of becoming a useful tool that can aid urban planning and administrative decision-making by providing a more quantitative picture of many complex functional areas. However, in this, as in our earlier paper, our objective is more limited. We aim only to describe certain recent urban conditions and provide some quantitative estimate of how they have been changing. We make no attempt in this report to explain why these conditions exist, to suggest how these conditions might be improved, or to assess the merits of particular action programs in major cities.

2. We caution the reader about reading into our measure of urban conditions more than we have specified. At best, we have measured representative qualities of urban life. In each of the fourteen quality categories we have studied, we have given "an" indicator of urban life. In no case do we contend that our measure is a surrogate of the total quality in the category cited. We recognize that conceptual as well as data limitations have resulted in our measuring some aspects of the "standard of living," i.e., citizen income, crime, etc., rather than the "quality of life," which would require at least some measurements of numerous "amenities" and of how people perceive the conditions under which they live.

3. The experts we consulted in the course of obtaining our data were unanimous in cautioning us from reading too much into the

crude data available. Although we state caveats applicable to each data series in Appendix A; and we rounded off the data for each measure to a number of decimal places consistent with their accuracy and the range of values displayed, we feel obliged to reemphasize the crudeness of the available data.

4. Because we have attempted to make our report comprehensible to a broader class of readers than most papers on social indicators, we have expended considerable time and effort toward intelligent simplification of the data in order to communicate effectively. In all cases we explicitly documented the weaknesses of the data we used. It is also true, that more information than is contained in these simple indicators is desirable for the evaluation and design of governmental programs.

5. There is disagreement as to the proper "scale" on which urban indicators should be developed. We have chosen the "metropolitan area" as the primary basis of analysis, partly because more data were available to us on that basis. One shortcoming of this basis is that it may conceal some great disparities between the central city and suburbs and other intra-metropolitan divisions. Where data were available (for 5 of our indicators) we computed and presented figures highlighting central city/suburban differences. Further disaggregation of these data (for different areas within cities) seems desirable, and we intend to continue our work in this area.

6. An increase in the numerical value of most of the measures used represents an unfavorable trend. We attempted to use familiar

measures in deriving our indicators, and the most applicable data series measure unfavorable conditions, e.g., crime, pollution, etc. For the four measures (and the categories for which they are employed as an indicator) listed below, however, an increase in numerical value is considered favorable.

* per capita income (income)
* per capita United Fund contributions (community concern)
* percent population voting (citizen participation)
* median school years completed (educational attainment)

7. We have used the technique of ranking cities as one of our methods of presentation. This technique is useful in many ways but ranks are only an approximate measure of the degree of differences among cities. To mitigate this difficulty we have presented data along with the rankings wherever possible. Conditions considered more favorable were assigned lower numerical rankings, (e.g., the metropolitan area with the lowest reported robbery rate was ranked #1) and the tables were footnoted to make this assignment explicit in each case.

8. We have used annual percentage changes as a measure of changing conditions. This form of measurement tends to make the same absolute change appear larger in areas that have the lowest measured levels (e.g., a given increase in the unemployment rate produces a larger rate of change in areas with lower unemployment rate levels). In order to obtain a more balanced appraisal of changing conditions one should examine the absolute numerical size of the change in what is being measured (e.g., the numerical change in the unemployment figures) and the numerical change in the rate itself (e.g., the amount by which the unemployment rate changes),

as well as the percentage change data presented in this report.

9. The one-year time span used to study the rate of change in the initial version of this paper was usually too short a period to detect significant trends. In this revision we have widened this time span to include five-year annual average rates of change (wherever the data were available), while continuing to present one-year change data in Appendix A. Data adequate for measuring change in the rate of narcotics addiction (social disintegration) were not available.

10. Although we have used some form of objectively verifiable data for all the measures in this report, we recognize that the manner in which people perceive the conditions around them is also a legitimate aspect of the "quality of life". We hope to investigate means of combining measures of citizens' perceptions with measures of existing conditions in order to provide a more comprehensive and valid description of conditions in numerous functional categories for different geographical areas.

11. In the future, the basic technique demonstrated here (e.g., comparing the conditions and rates of change of cities with one another and displaying the results in a simple manner) could be combined with available computer software to allow the user a choice of much more sophisticated yet readily describable statistical treatment of the data (such as simple correlation) together with a wide variety of output formats (both tabular and map-like presentations). This combination could enable a decision-maker to specify and conveniently obtain, in a form which he could understand, some of the information which would assist him in his tasks.

V

FINDINGS: EXAMPLES OF THE USE OF THESE DATA

SECTION A: SUMMARY EXHIBITS FOR THE WASHINGTON (D.C.) METROPOLITAN AREA

In Section A we present a sample set of summary exhibits for metropolitan Washington. The exhibits in Section B and the data in Appendix A permit similar summary exhibits to be readily prepared for each of the other 17 metropolitan areas covered in this report. Tables summarizing these data can be found in Appendix C, page 137.

In this section conditions in Washington are examined in three different ways:

1. How do recent conditions compare with those in the past? (EXHIBIT 1)

2. How do recent conditions in Washington compare with those in 17 other large metropolitan areas? (EXHIBIT 2)

3. How do Washington's recent rates of change for these conditions compare with changes in 17 other metropolitan areas? (EXHIBIT 3).

In this section, as an example, Washington is compared with the following large metropolitan areas:[a]

Metropolitan Area	Population (1970)	% Central City Population[b]	(Rank)
New York	11,528,649	68.3%	(1)
Los Angeles/Long Beach	7,032,075	40.1	(8)
Chicago	6,978,947	48.2	(5)
Philadelphia	4,817,914	40.5	(7)
Detroit	4,199,931	36.0	(10)
San Francisco/Oakland	3,109,519	34.6	(11)
WASHINGTON	2,861,120	26.4	(14)
Boston	2,753,700	23.3	(17)
Pittsburgh	2,401,245	21.7	(18)
St. Louis	2,363,017	26.3	(15)
Baltimore	2,070,670	43.7	(6)
Cleveland	2,064,194	36.4	(9)
Houston	1,985,031	62.1	(2)
Minneapolis/St. Paul	1,813,647	24.0	(16)
Dallas	1,555,950	54.3	(3)
Milwaukee	1,403,887	51.1	(4)
Cincinnati	1,384,911	32.7	(13)
Buffalo	1,349,211	34.3	(12)

a. Standard Metropolitan Statistical Areas (SMSA's) consist of a central city with a population of at least 50,000 (or two cities with a total population of at least 50,000) and adjacent counties that are found to be metropolitan in character and economically and socially integrated with the central city. The geographical limits of each SMSA (exactly which counties are included) are periodically redefined by the Office of Management and Budget (OMB) to account for changing area characteristics. Currently there are 261 SMSA's, 14 of which were defined in 1970 as a result of the latest Census returns.

These 18 metropolitan areas were initially selected in 1969 because of the availability of comparative yearly data (e.g., the Consumer Price Index [CPI], the Current Population Survey [CPS], etc.) While they no longer constitute the 18 largest U.S. SMSA's, (as shown in the 1970 Census) we continue to use them in order to insure consistency with our earlier work.

b. The "% Central City Population" column gives the percentage of the total metropolitan area population living in the central city (or cities). The lower rankings are assigned to the highest % central city population.

Source: 1970 Census Data, U.S. Department of Commerce, Statistical Abstract of the U.S., 1971.

EXHIBIT 1

HAVE CONDITIONS IN THE WASHINGTON METROPOLITAN AREA BEEN IMPROVING OR DETERIORATING?[a]

In Which Direction Have The Indicators For Washington Been Moving During The Last Five (5) Years?

DIRECTION OF CHANGE	QUALITY CATEGORY[b]	INDICATOR (Years Compared)[c]	
Apparent Improvement	Poverty	% Low Income Households	(64-70)
	Income	Adjusted Per Capita Income	(67-69)
	Health	Infant Mortality Rate	(62-68)
	Mental Health	Reported Suicide Rate	(62-68)
	Community Concern	Per Capita United Fund Contributions	(65-70)
	Educational Attainment	Median School Years Completed	(67-69)
Little or No Change[d]	Citizen Participation	Presidential Voting Rate	(64-68)
	Air Quality	Suspended Particulate Concentrations	(64-69)
Apparent Deterioration	Unemployment	Percent Unemployed	(67-70)
	Housing	Cost of Housing	(67-69)
	Public Order	Reported Robbery Rate	(64-70)
	Racial Equality	Nonwhite/white Unemployment Ratio	(67-70)
	Transportation	Cost of Transportation	(67-69)

a/Washington is not being compared with other areas in this exhibit. The improvement or deterioration reported in the initial version of this report or for the latest year's data can be determined from Appendix A.

b/Adequate data for assessing changes in social disintegration (narcotics addiction rate) were not available.

c/A Five-year annual average rate of change was sought. The availability of later data resulted in the measuring of change over a six-year period for four areas. In some cases shorter periods were used due to the unavailability of data.

d/Conditions are defined as "unchanged" if the rate of change for Washington's performance varied from zero by less than ±10% of the range of the rates of change for all 18 metropolitan areas.

EXHIBIT 2

BASED ON LATEST AVAILABLE DATA . . . WHERE DOES WASHINGTON RANK?

Washington's Rank Relative to 18 Major Metropolitan Areas

QUALITY CATEGORY	INDICATOR	WASHINGTON'S RECENT RANK[a] (Year Reported)
Unemployment	% Unemployed	1st (1970)
Educational Attainment[f]	*Median School Years Completed	1st (1969)
Poverty	% Low Income Households	2nd (1970)
Health	Infant Mortality Rate	5th (1968)
Mental Health	Reported Suicide Rate	7th (1968)
Racial Equality	Nonwhite/White Unemployment Ratio	7th[b] (1970)
Air Quality[f]	Concentrations of three Pollutants	3-8[c] (1969)
Income Level	*Adjusted Per Capita Income	8th (1969)
Transportation[f]	Cost of Transportation	10th (1969)
Housing	Cost of Housing	11th (1969)
Public Order	Reported Robbery Rate	15th (1970)
Community Concern	*Per Capita United Fund Contributions	16th (1970)
Social Disintegration[f]	Narcotics Addiction Rate	6th[d] (1969)
Citizen Participation	*Presidential Voting Rate	18th[e] (1968)

* An increase in the numerical value of these indicators is considered favorable. For all others an increase is considered unfavorable.

a/ The lower rankings represent more favorable conditions. The year is the latest for which data are available.
b/ Data available for only 12 metropolitan areas.
c/ Washington's rank for three pollutants varies from 3rd to 8th.
d/ Data available for only 7 central cities.
e/ There was no need to update this data.
f/ For these indicators new data series are being used in this revision--therefore comparisons with data from the initial paper are invalid. Rankings of Washington In Initial Paper (year reported) are presented here for the remaining indicators.

Unemployment	4th (1968)	Racial Equality	4th (1968)
Poverty	2nd (1968)	Income Level	10th (1967)
Health	7th (1967)	Housing	11th (1968)
Mental Health	5th (1967)	Public Order	16th (1968)
		Community Concern	15th (1968)

EXHIBIT 3

COMPARATIVE RATES OF CHANGE IN THE WASHINGTON METROPOLITAN AREA

Washington's Rate of Change Relative to the Average (Mean) Rate of Change of the Eighteen Large Metropolitan Areas Over The Past Five (5) Years

RATES OF CHANGE	QUALITY CATEGORY	INDICATOR (Years Compared)
WASHINGTON Improving faster* than the average of the 18 areas. *(or deteriorating slower)	Poverty	% Low Income H'hlds. (64-70)
	Health	Infant Mortality Rate (62-68)
	Mental Health	Reported Suicide Rate (62-68)
	Citizen Participation	Presidential Voting Rate (64-68)
	Transportation	Cost of Transportation (67-70)
WASHINGTON Changing at about the average rate*	Unemployment	% Unemployed (67-70)
	Income Level	Adjusted Per Capita Income (67-69)
	Housing	Cost of Housing (67-69)
	Educational Attainment	Median School Years Completed (67-69)
WASHINGTON Deteriorating* faster than the average of the 18 areas *(or improving slower)	Public Order	Reported Robbery Rate (64-70)
	Racial Equality	Nonwhite/white Unemployment Ratio (67-70)
	Community Concern	Per Capita United Fund Contributions (65-70)
	Air Quality	Suspended Particulates Concentration (64-69)

* The rate of change for a particular indicator is defined as "average" if it varied from the average rate of change of all 18 metropolitan areas by less than ±10% of the range of the values of the rates of change for these areas.

EXHIBIT 4

RECAP OF VARIOUS QUALITY MEASURES: WHERE WASHINGTON STANDS

QUALITY CATEGORY	INDICATOR	DIRECTION OF CHANGE	LATEST RANK	RATE OF CHANGE
Health	Infant Mortality Rate	+	+	+
Mental Health	Reported Suicide Rate	+	+	+
Poverty	% Low Income Households	+	+	+
Income Level	Adjusted Per Capita Income	+	+	0
Educational Attainment	Median School Years Completed	+	+	0
Community Concern	Per Capita United Fund Contributions	+	-	-
Unemployment	Unemployment Rate	-	+	0
Air Quality	Concentrations of Three Pollutants; Changes in Suspended Particulates Concentration	0	+	-
Transportation	Cost of Transportation	-	-	+
Racial Equality	Nonwhite/White Unemployment Rate	-	+	-
Citizen Participation	Presidential Voting Rate	0	-	+
Housing	Cost of Housing	-	-	0
Social Disintegration	Estimated Narcotics Addiction Rate	a	-	a
Public Order	Reported Robbery Rate	-	-	-

CODE

Direction of Change: (+) Conditions Improved; (-) Conditions Worsened; (0) Conditions Unchanged* — See Exhibit 1

Latest Rank: (+) Ranks in Better Half; (-) Ranks in Worse Half — See Exhibit 2

Rate of Change: (Compared to the Average change of 18 Areas) (+) Rate-of-Change Favorable; (-) Rate-of-Change Unfavorable; (0) Rate-of-Change Average* — See Exhibit 3

* Conditions are defined as "unchanged" (column 3) or "average" (column 5) if Washington's performance varied by less than ± 10 percent of the range of the values of all 18 metropolitan areas.

[a] Data on rates of change not available.

V

FINDINGS (Continued)

SECTION B: EXHIBITS FOR EACH QUALITY CATEGORY

These updated indicator and new indicator exhibits have been prepared highlighting the recent ranking and performance of metropolitan Washington. Similar exhibits can be created for any of the other 17 metropolitan areas using the data contained in this report. Tables summarizing these data can be found in Appendix C, page 137.

The exhibits are arranged by quality category. The data for the most recent year and for recent rates of change are displayed in descending order of quality, i.e., metropolitan areas having the most favorable latest year conditions and recent rates of change are listed first.

For five quality categories, data on recent conditions for the central city, its suburbs, and the city/suburban ratio are presented, again in descending order of quality. For convenience, the city/suburban ratios suggesting smaller differences between a city and its suburbs (the ratios close to 1.0)[a] are listed first.

In all cases the data were first ranked and then rounded off to a number of decimal places consistent with their accuracy and range of values.

SECTION B-1: UPDATED INDICATORS FROM INITIAL REPORT

Unemployment Rates[b]
% Low Income Households[b]
Adjusted Per Capita Income
Cost of Housing
Infant Mortality Rates[b]
Reported Suicide Rates[b]
Reported Robbery Rates[b]
Nonwhite/White Unemployment Ratios
Per Capita Contributions to United Funds
% Voting in Presidential Elections

---

a/For the data used in this paper, lower ratios (close to 1.0) usually represent smaller city/suburban differences. Since we have assumed such lower ratios indicate more favorable conditions, we have listed them first.

b/Data are also provided on metropolitan area, central city, suburban rings, and city/suburban ratios.

UNEMPLOYMENT RATES* (An Unemployment Indicator)

I. LATEST AVAILABLE METROPOLITAN UNEMPLOYMENT RATE DATA (1970) - NOTES

An inspection of Exhibit 5 below and Tables A-1 & A-2 (pp. 55-56) reveals the following:

Washington's Rank		Washington's Annual Average Rate of Change Compared with Average of all 18 Areas		
Initial Report	Latest	Initial Report	Latest	
1968	1970	1967-68	1967-70	1969-70
3rd[a]	1st[a]	higher (worse) than average[a]	about average	lower (better) than average

Table A-3, page 57, also shows that Washington's labor participation rates were higher than most other cities. These data permit analyses similar to the above to be performed for any of the 17 other metropolitan areas.

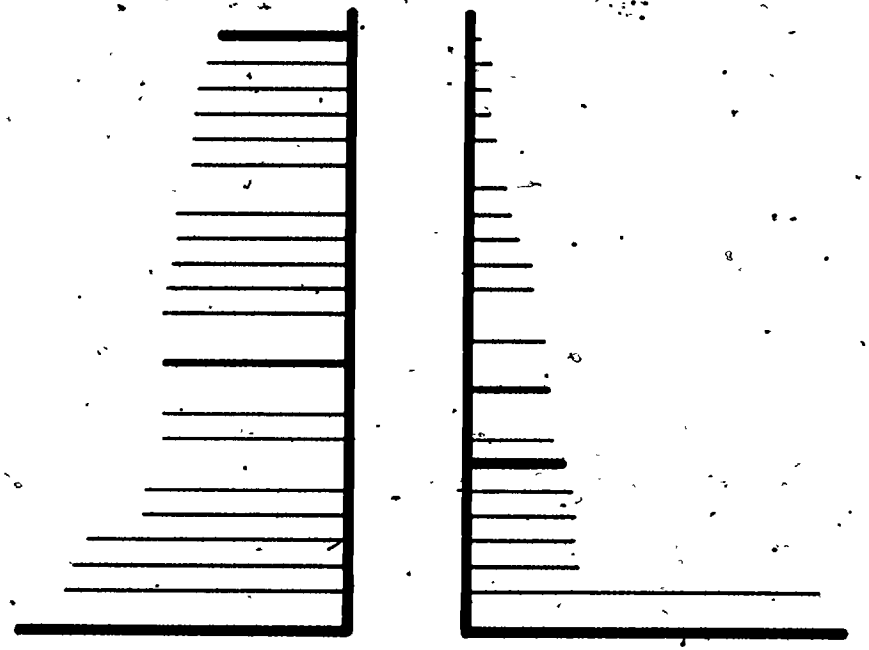
* Percent of labor force unemployed (does not include those not seeking work during the past month).

a/ The lower rankings represent more favorable conditions (lower unemployment rates).

b/ Washington's annual average rate of change varied from the average (of all the rates of change) less than ±10% of the range of the rates of change of all 18 metropolitan areas.

EXHIBIT 5
METROPOLITAN UNEMPLOYMENT RATES (1970)*
(An Unemployment Indicator)

(Rank)	UNEMPLOYMENT RATE 1970[a]	
1	WASHINGTON	(3.2%)
2	Chicago	(3.6)
3	Dallas	(3.8)
4	Boston	(3.9)
5-6	Baltimore	(4.0)
5-6	Houston	(4.0)
7-8	Cincinnati	(4.3)
7-8	Philadelphia	(4.3)
9	New York	(4.4)
10	St. Louis	(4.6)
11	Milwaukee	(4.7)
	18 AREA AVERAGE	(4.7%)
12-13	Cleveland	(4.7)
12-13	Buffalo	(4.7)
14-15	Pittsburgh	(5.2)
14-15	Minn./St. Paul	(5.2)
16	S.F./Oakland	(6.7)
17	Detroit	(7.0)
18	L.A./Long Beach	(7.2)



1970 Rate (%)

Annual Avg. % Increase 1967-70

ANNUAL AVERAGE % INCREASE 1967-70		(Rank)
(+ 2%)	St. Louis	1
(3)	Baltimore	2
(3)	Pittsburgh	3
(3)	Chicago	4
(4)	Buffalo	5
(5)	Philadelphia	6
(6)	New York	7
(7)	Houston	8
(8)	Cleveland	9
(8)	S.F./Oakland	10
(10)	L.A./Long Beach	11
(11%)	18 AREA AVERAGE	
(12)	Boston	12
(13)	WASHINGTON	13
(17)	Dallas	14
(18)	Milwaukee	15
(18)	Cincinnati	16
(19)	Detroit	17
(45)	Minn./St. Paul	18

Washington's Unemployment Rate

1970	3.2%
1967	2.3%

* Percent of Labor Force Unemployed (does not include those not seeking work during the past month). See Appendix A, page 54, for sources, methods, caveats, and additional back-up data.
a/These 1970 data became available after the city/suburban analysis of 1969 data (Exhibit 6) was completed.

UNEMPLOYMENT RATES* (An Unemployment Indicator) Continued.

II. METROPOLITAN, CITY, SUBURBAN, AND CITY/SUBURBAN-RATIO DATA (1969) - NOTES

An examination of Exhibit 6 and the data below reveals that the Washington metropolitan area ranked 4th (out of 14 areas)[a], the central city ranked 5th, and its suburbs 4th in unemployment rates. Washington's ratio between the values for its central city and suburbs was about average.[b] Tables giving recent annual average rates of change for these data can be found in Appendix B, page 125.

1969 Metropolitan Area Unemployment Rates[c]					
Minn./St. Paul	2.2%	(1)	Houston	3.2%	(8)
Dallas	2.2	(2)	New York	3.2	(9)
Milwaukee	2.3	(3)	Baltimore	3.5	(10)
WASHINGTON	2.6	(4)	St. Louis	3.5	(11)
Philadelphia	2.9	(5)	Detroit	4.1	(12)
Chicago	3.0	(6)	S.F./Oakland	4.5	(13)
Cleveland	3.1	(7)	L.A./Long Beach	4.8	(14)
14 AREA AVERAGE 3.2%					

* Percent of labor force unemployed (does not include those not seeking work during the past month).

a/Because of sampling problems relating to a relatively small labor force, the Bureau of Labor Statistics provided metropolitan area and central city unemployment rates for only 14 of these metropolitan areas. Data for Boston, Pittsburgh, Cincinnati, and Buffalo were not provided.

b/Washington's ratio varied from the average ratio by less than ±10% of the range of values for all 14 areas.

c/This analysis was completed with 1969 data before the 1970 data (Exhibit 5) became available. This indicator is particularly responsive to the business cycle. Furthermore, these data indicate that the response to the business cycle varies considerably among metropolitan areas.

EXHIBIT 6
1969 CITY/SUBURBAN UNEMPLOYMENT RATES*
(An Unemployment Indicator)

CENTRAL CITY 1969 Unemployment Rate[a]		
Milwaukee	2.2%	(1)
Dallas	2.3	(2)
Minn./St. Paul	2.4	(3)
Houston	2.9	(4)
WASHINGTON	3.0	(5)
Chicago	3.3	(6)
New York	3.6	(7)
Philadelphia	3.6	(8)
14 CITY AVERAGE	3.8%	
S.F./Oakland	4.5	(9)
Baltimore	4.6	(10)
St. Louis	4.9	(11)
Cleveland	4.9	(12)
L.A./Long Beach	5.1	(13)
Detroit	5.4	(14)

SUBURBAN 1969 Unemployment Rate[a]		
Minn./St. Paul	2.0%	(1)
Dallas	2.1	(2)
Cleveland	2.3	(3)
WASHINGTON	2.4	(4)
Philadelphia	2.4	(5)
Milwaukee	2.5	(6)
New York	2.5	(7)
Baltimore	2.5	(8)
Chicago	2.7	(9)
14 AREA AVERAGE	2.9%	
St. Louis	3.0	(10)
Detroit	3.1	(11)
Houston	4.3	(12)
L.A./Long Beach	4.5	(13-14)
S.F./Oakland	4.5	(13-14)

CITY/SUBURBAN RATIO 1969[a]		
Houston	0.68	(1)
Milwaukee	0.88	(2)
S.F./Oakland	1.00	(3)
Dallas	1.10	(4)
L.A./Long Beach	1.12	(5)
Minn./St. Paul	1.19	(6)
WASHINGTON	1.24	(7)
Chicago	1.26	(8)
14 AREA AVERAGE	1.34	
New York	1.45	(9)
Philadelphia	1.50	(10)
St. Louis	1.60	(11)
Detroit	1.73	(12)
Baltimore	1.85	(13)
Cleveland	2.19	(14)

* Percent of Labor Force Unemployed. (Does not include those not seeking work during the past month.)
See Appendix B, page 125, for sources, methods, caveats, and annual average rates of change for these data.
a/This analysis was completed with 1969 data before the 1970 data (Exhibit 5) became available.

% Unemployed

% LOW INCOME HOUSEHOLDS* (A Poverty Indicator)

I. LATEST AVAILABLE METROPOLITAN AREA DATA (1970) - NOTES

An inspection of Exhibit 7 below and Tables A-4 and A-5, pages 59-61, reveals the following:

Washington's Rank		Washington's Annual Average Rate of Change Compared with Average of all 18 Areas		
Initial Report	Latest	Initial Report	Latest	
1968	1970	1967-68	1964-70	1969-70
2nd	2nd	About average[a]	More negative (better) than average	About average

* Percent of all Households with Cash Incomes under $3,000 per year. (Includes all governmental transfer payments.)

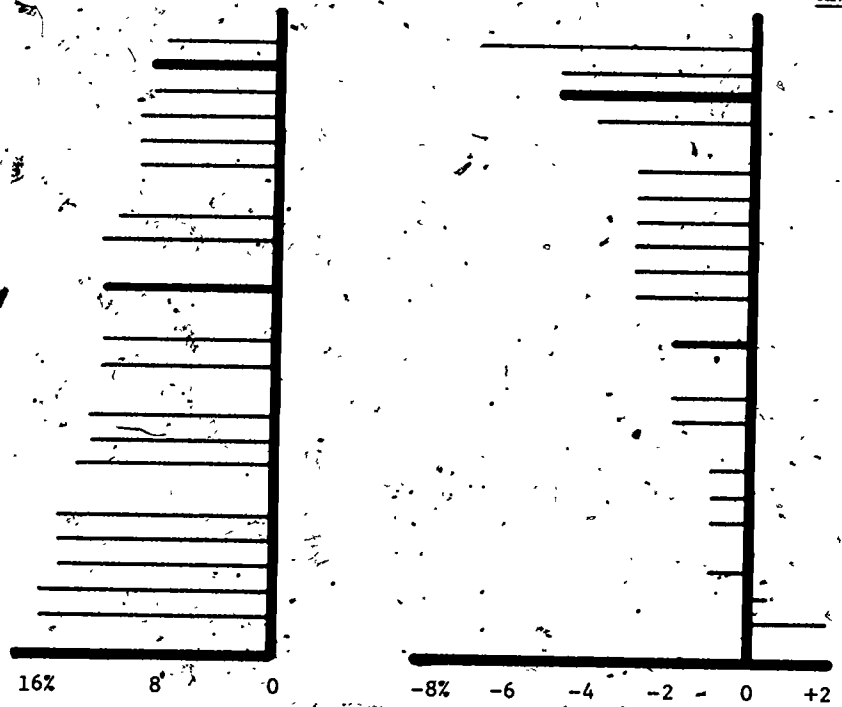
a/See footnote, page 22, for explanation.

EXHIBIT 7

METROPOLITAN LOW INCOME HOUSEHOLD RATES (1970)*

(A Poverty Indicator)

(Rank)	% LOW INCOME HOUSEHOLDS - 1970[a]	
1	Boston	(8%)
2	WASHINGTON	(9)
3	Detroit	(9)
4	Minn./St. Paul	(10)
5	Milwaukee	(10)
6	Chicago	(10)
7	Cleveland	(11)
8	Buffalo	(12)
	18 AREA AVERAGE	(12%)
9	New York	(12)
10	Philadelphia	(12)
11	Baltimore	(13)
12	Pittsburgh	(13)
13	St. Louis	(14)
14	Cincinnati	(15)
15	L.A./Long Beach	(15)
16	Dallas	(15)
17	Houston	(16)
18	S.F./Oakland	(16)



ANNUAL AVERAGE % CHANGE 1964-70		(Rank)
(- 7.0%)	Boston	1
(- 5.0)	Detroit	2
(- 5.0)	WASHINGTON	3
(- 4.0)	New York	4
(- 3.0)	Pittsburgh	5
(- 3.0)	Cleveland	6
(- 3.0)	Dallas	7
(- 3.0)	Houston	8
(- 3.0)	Philadelphia	9
(- 3.0)	Cincinnati	10
(- 2.0%)	18 AREA AVERAGE	
(- 2.0)	Buffalo	11
(- 2.0)	Chicago	12
(- 1.0)	Minn./St. Paul	13
(- 1.0)	Milwaukee	14
(- 1.0)	St. Louis	15
(- 1.0)	L.A./Long Beach	16
(+ 0.4)	Baltimore	17
(+ 2.0)	S.F./Oakland	18

Washington's % Low Income Households

1970	8.6%
1964	12.2%

* Percent of all households with cash incomes under $3,000 per year. (Includes all governmental transfer payments.) See Appendix A, page 58, for sources, methods, caveats, and additional data.

a/These data are copyrighted. 1964-70 Sales Management's "Survey of Buying Power." Further reproduction is prohibited. These 1970 data became available after the city/suburban analysis of the 1969 data (Exhibit 8) was completed.

% LOW INCOME HOUSEHOLDS* (A Poverty Indicator) Continued.

II. METROPOLITAN, CITY, SUBURBAN AND CITY/SUBURBAN-RATIO DATA (1969) - NOTES

An examination of Exhibit 8, and the data below reveals that the Washington metropolitan area ranked 2nd, the central city tied for 1st and its suburbs ranked 6th in % Low Income Households. Washington's ratio between the value for its central city and suburbs was about average.[a] Tables giving recent annual average rates of change for these data can be found in Appendix B, page 128.

1969 Metropolitan Area Low Income Household Rates[b]					
Boston	8.6%	(1)	Philadelphia	13.2%	(10)
WASHINGTON	9.1	(2)	New York	13.7	(11)
Detroit	9.5	(3)	Pittsburgh	14.1	(12)
Minn./St. Paul	10.9	(4)	St. Louis	15.0	(13)
Chicago	11.2	(5-6)	Cincinnati	15.5	(14)
Milwaukee	11.2	(5-6)	Dallas	15.7	(15)
Cleveland	11.6	(7)	L.A./Long Beach	15.8	(16)
Baltimore	12.4	(8)	Houston	16.5	(17)
Buffalo	13.1	(9)	S.F./Oakland	16.7	(18)
18 AREA AVERAGE 13.0%					

* Percent of all Households with Cash Incomes under $3,000 per year. (Includes all governmental transfer payments.)

a/Washington's rates varied from the average rate by less than ±10% of the range of values for all 18 areas.

b/This analysis was completed with 1969 data before the 1970 data (Exhibit 7) became available.

EXHIBIT 8
1969 CITY/SUBURBAN LOW INCOME HOUSEHOLD RATES*
(A Poverty Indicator)

CENTRAL CITY 1969 Poverty Rate[a]		
Detroit	13.7%	(1-3)
WASHINGTON	13.7	(1-3)
Milwaukee	13.7	(1-3)
Chicago	15.0	(4)
Minn./St. Paul	15.4	(5)
Dallas	15.6	(6)
New York	15.7	(7)
Houston	16.6	(8)
18 CITY AVERAGE	17.5%	
Cleveland	17.6	(9)
Philadelphia	17.7	(10)
Buffalo	18.8	(11)
L.A./Long Beach	18.9	(12)
Baltimore	19.4	(13)
S.F./Oakland	19.6	(14)
Pittsburgh	20.0	(15)
Boston	20.2	(16)
Cincinnati	21.4	(17)
St. Louis	22.8	(18)

SUBURBAN 1969 Poverty Rate[a]		
Boston	5.7%	(1)
Minn./St. Paul	5.9	(2)
Baltimore	6.2	(3)
Detroit	6.6	(4)
Chicago	6.7	(5)
WASHINGTON	6.9	(6)
Cleveland	7.6	(7)
Milwaukee	7.9	(8)
New York	8.3	(9)
Buffalo	9.5	(10)
Philadelphia	9.6	(11)
18 AREA AVERAGE	9.8%	
St. Louis	11.4	(12)
Cincinnati	11.8	(13)
Pittsburgh	12.2	(14)
L.A./Long Beach	12.8	(15)
S.F./Oakland	14.7	(16)
Dallas	15.9	(17)
Houston	16.3	(18)

CITY/SUBURBAN RATIO 1969[a]		
Dallas	0.98	(1)
Houston	1.02	(2)
S.F./Oakland	1.33	(3)
L.A./Long Beach	1.48	(4)
Pittsburgh	1.64	(5)
Milwaukee	1.74	(6)
Cincinnati	1.82	(7)
Philadelphia	1.84	(8)
New York	1.90	(9)
18 AREA AVERAGE	1.98	
Buffalo	1.97	(10)
WASHINGTON	1.99	(11-12)
St. Louis	1.99	(11-12)
Detroit	2.08	(13)
Chicago	2.26	(14)
Cleveland	2.30	(15)
Minn./St. Paul	2.61	(16)
Baltimore	3.12	(17)
Boston	3.54	(18)

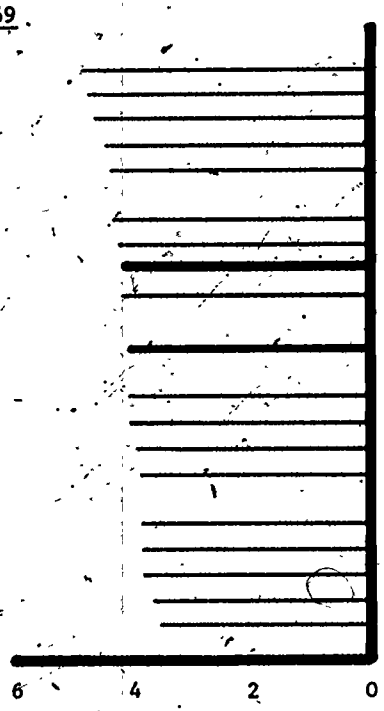
*Percent of all households with cash incomes under $3,000 per year. (Includes all governmental transfer payments.) See Appendix B, (p.128) for sources, methods, caveats and annual average rates of change for these data. These data copyrighted June 1970, Sales Management's "Surveys of Buying Power." Further reproduction is prohibited.

a/These data were rounded to one decimal place (in contrast to being rounded to the nearest integer as in Exhibit 7) because more detailed back-up data are not provided in the Appendices (as is the case for Exhibit 7). This analysis was completed with 1969 data before the 1970 data (Exhibit 7) were available.

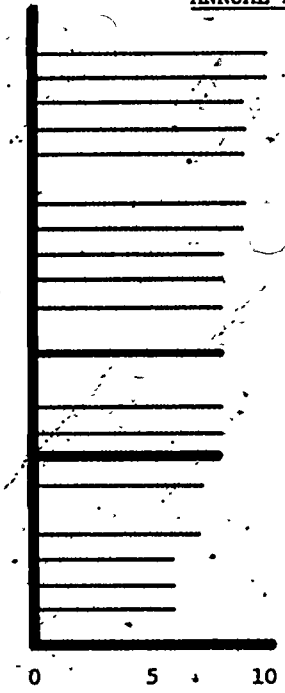
EXHIBIT 9
ADJUSTED PER CAPITA INCOME* (1969)
(An Income Level Indicator)

In 1969 Washington ranked 8th, a slight drop from its 7th ranking in 1967 (see Table A-6, page 63). Its 1967-69 average annual change was about average[a] for all 18 areas. (A different method of estimating changes (see caveats, page 62), was used in the initial version of this report.)

(Rank)	ADJUSTED PER CAPITA INCOME 1969	
1	Detroit	$(4,724)
2	S.F./Oakland	(4,639)
3	L.A./Long Beach	(4,635)
4	New York	(4,513)
5	Chicago	(4,498)
6	Minn./St. Paul	(4,375)
7	Dallas	(4,357)
8	WASHINGTON	(4,232)
9	Cleveland	(4,224)
	18 AREA AVERAGE	$(4,195)
10	Cincinnati	(4,046)
11	Houston	(4,037)
12	St. Louis	(3,993)
13	Pittsburgh	(3,966)
14	Philadelphia	(3,949)
15	Milwaukee	(3,939)
16	Baltimore	(3,935)
17	Boston	(3,822)
18	Buffalo	(3,628)



ANNUAL AVERAGE % INCREASE 1967-69		(Rank)
(10%)	Detroit	1
(10)	Minn./St. Paul	2
(9)	L.A./Long Beach	3
(9)	Cincinnati	4
(9)	Buffalo	5
(9)	S.F./Oakland	6
(9)	Dallas	7
(8)	Pittsburgh	8
(8)	Houston	9
(8)	Cleveland	10
(8%)	18 AREA AVERAGE	
(8)	Boston	11
(8)	Baltimore	12
(8)	WASHINGTON	13
(7)	New York	14
(7)	Chicago	15
(6)	St. Louis	16
(6)	Philadelphia	17
(6)	Milwaukee	18



Washington's Adjusted Per Capita Income

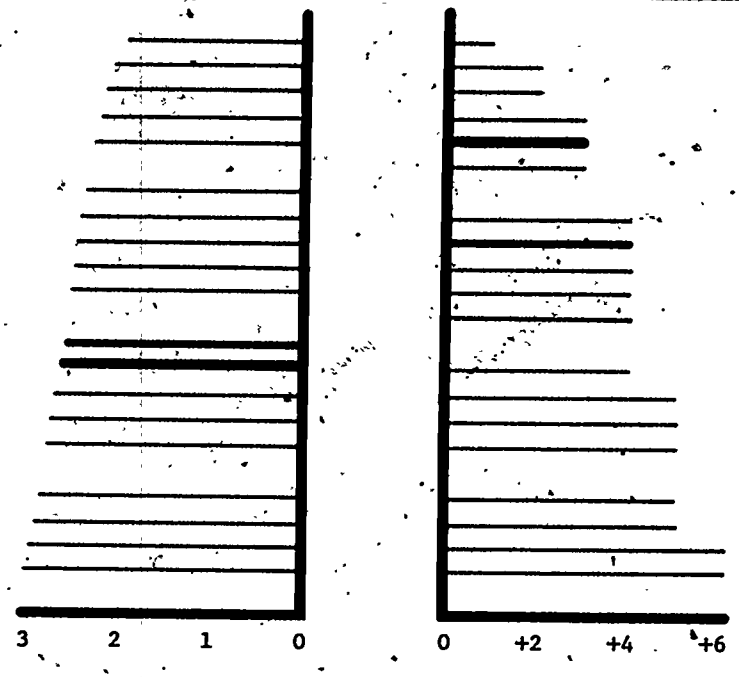
1969	$4,232
1967	$3,682

* Per capita personal income where received, adjusted for metropolitan area cost of living differences. See Appendix A, page 62, for sources, methods, caveats, additional data, and back-up data for the 1969 calculations.
a/See footnote, page 22, for explanation.

EXHIBIT 10
COST OF HOUSING* (1969)
(A Housing Indicator)

Washington's cost of housing ranked 11th in 1969, as it did in 1967. Its rate of change was about the same as the average[a] of all 18 areas during the year 1967-69 as it was in 1967-68.

(Rank)	HOUSING COST 1969	
1	Houston	$(1,980)
2	Dallas	(2,076)
3	Pittsburgh	(2,144)
4	Baltimore	(2,163)
5	Detroit	(2,258)
6	Minn./St. Paul	(2,326)
7	Cincinnati	(2,327)
8	St. Louis	(2,344)
9	Philadelphia	(2,351)
10	L.A./Long Beach	(2,419)
	18 AREA AVERAGE	$(2,455)
11	WASHINGTON	(2,463)
12	Buffalo	(2,591)
13	Chicago	(2,680)
14	S.F./Oakland	(2,696)
15	Cleveland	(2,742)
16	Milwaukee	(2,757)
17	New York	(2,888)
18	Boston	(2,976)



ANNUAL AVERAGE % INCREASE 1967-69		(Rank)
(+ 1%)	Minn./St. Paul	1
(2)	St. Louis	2
(2)	Chicago	3
(3)	Cincinnati	4
(3)	WASHINGTON	5
(3)	Detroit	6
(4)	Houston	7
(4%)	18 AREA AVERAGE	
(4)	Dallas	8
(4)	Baltimore	9
(4)	Cleveland	10
(4)	Buffalo	11
(5)	Boston	12
(5)	Pittsburgh	13
(5)	New York	14
(5)	Phildadelphia	15
(5)	L.A./Long Beach	16
(6)	Milwaukee	17
(6)	S.F./Oakland	18

Washington's Housing Cost

1969	$2,463
1967	$2,316

* Cost of Housing for a moderate income family of four. See Appendix A, page 66, for sources, methods, caveats, and additional data.
a/See footnote, page 22, for explanation.

INFANT MORTALITY RATES* (A Health Indicator)

I. LATEST AVAILABLE METROPOLITAN AREA INFANT MORTALITY RATE DATA (1968) - NOTES

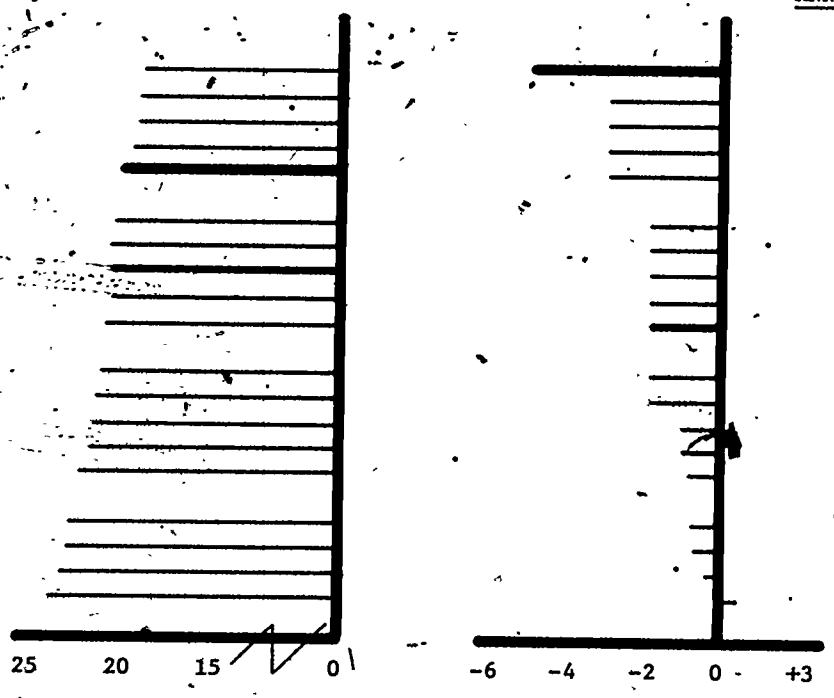
An inspection of Exhibit 11 below and Tables A-12 and A-13 (pages 71-73) reveals the following:

Washington's Rank		Washington's Annual Average Rate of Change Compared with Average of all 18 Areas		
Initial Report	Latest	Initial Report	Latest	
1967	1968	1966-67	1962-68	1967-68
7th	5th	More negative (better) than average[a]	Better than average	More negative (better) than average

* Infant deaths (under one year) per 1,000 live births.
a/See footnote, page 22, for explanation.

EXHIBIT 11
METROPOLITAN INFANT MORTALITY RATES (1968)*
(A Health Indicator)

(Rank)	1968 RATE		ANNUAL AVERAGE % CHANGE 1962-68		(Rank)
1	Minn./St. Paul	(18.6)	(- 5.0%)	WASHINGTON	1
2	L.A./Long Beach	(18.9)	(- 3.0)	L.A./Long Beach	2
3	S.F./Oakland	(18.9)	(- 3.0)	New York	3
4	Milwaukee	(19.2)	(- 3.0)	Baltimore	4
5	WASHINGTON	(19.8)	(- 3.0)	S.F./Oakland	5
6	Boston	(20.2)	(- 2.0)	Cleveland	6
7	Cincinnati	(20.3)	(- 2.0)	St. Louis	7
	18 AREA AVERAGE	(21.3)	(- 2.0)	Philadelphia	8
8	Cleveland	(21.3)	(- 2.0)	Houston	9
9	New York	(21.6)	(- 2.0%)	18 AREA AVERAGE	
10	St. Louis	(21.8)	(- 2.0)	Milwaukee	10
11	Pittsburgh	(22.1)	(- 2.0)	Minn./St. Paul	11
12	Detroit	(22.2)	(- 1.0)	Boston	12
13	Buffalo	(22.3)	(- 1.0)	Detroit	13
14	Dallas	(22.8)	(- 0.9)	Pittsburgh	14
15	Baltimore	(23.0)	(- 0.7)	Dallas	15
16	Houston	(23.1)	(- 0.6)	Cincinnati	16
17	Philadelphia	(23,4)	(- 0.2)	Chicago	17
18	Chicago	(24.4)	(+ 0.3)	Buffalo	18



Washington's Infant Mortality Rate

1968	19.8
1962	28.3

* Infant Deaths (under one year) per 1,000 live births. (See Appendix A, page 70, for sources, methods, caveats, and additional data for previous years.

a/These 1968 data became available after the city/suburban analysis of 1967 data (Exhibit 12) was completed.

INFANT MORTALITY RATES* (A Health Indicator) Continued.

II. METROPOLITAN, CITY, SUBURBAN, AND CITY/SUBURBAN-RATIO DATA (1967) -- NOTES

An examination of these exhibits reveals that while Washington's metropolitan area ranked 7th, the city ranked 13th and the suburbs 4th. Washington's ratio between the values for its central city and suburbs is higher than average.[a] Tables giving recent annual average rates of change for these data can be found in Appendix B, page 130.

1967 Metropolitan Area Infant Mortality Rates[b]

S.F.Oakland	19.3	(1)	Houston	21.8	(10)
Boston	19.4	(2)	Buffalo	22.3	(11)
Minn./St. Paul	19.6	(3)	New York	22.7	(12-13)
L.A./Long Beach	19.9	(4)	Detroit	22.7	(12-13)
Milwaukee	20.1	(5)	Baltimore	23.1	(14)
Cincinnati	20.5	(6)	Dallas	23.2	(15)
WASHINGTON	20.7	(7)	St. Louis	24.0	(16)
Cleveland	21.0	(8)	Chicago	24.4	(17)
Pittsburgh	21.4	(9)	Philadelphia	24.8	(18)

18 AREA AVERAGE 21.7

* Infant deaths (under one year) per 1,000 live births.
a/See footnote page 28 for explanation.
b/This analysis was completed with 1967 data before the 1968 data (Exhibit 11) became available.

EXHIBIT 12
1967 CITY/SUBURBAN INFANT MORTALITY RATES*
(A Health Indicator)

CENTRAL CITY 1967 Infant Mortality Rate[a]		
Cincinnati	19.9	(1)
S.F./Oakland	21.4	(2)
L.A./Long Beach	22.0	(3)
Minn./St. Paul	22.5	(4)
Houston	22.7	(5)
New York	23.8	(6)
Dallas	24.0	(7)
Milwaukee	24.3	(8)
Boston	24.9	(9)
Cleveland	25.0	(10)
18 CITY AVERAGE	25.3	
Buffalo	25.7	(11)
Baltimore	26.6	(12)
WASHINGTON	27.3	(13)
Detroit	27.5	(14)
Chicago	28.1	(15)
Pittsburgh	28.8	(16)
St. Louis	29.5	(17)
Philadelphia	30.6	(18)

SUBURBAN 1967 Infant Mortality Rate[a]		
Milwaukee	14.2	(1)
Minn./St. Paul	17.4	(2)
Cleveland	17.6	(3)
WASHINGTON	17.8	(4)
Boston	17.9	(5)
S.F./Oakland	18.3	(6)
Detroit	18.4	(7)
L.A./Long Beach	18.8	(8)
18 AREA AVERAGE	19.1	
Pittsburgh	19.2	(9)
Houston	19.2	(10)
Baltimore	19.4	(11)
New York	19.9	(12)
Chicago	20.1	(13)
Buffalo	20.3	(14)
Philadelphia	20.4	(15)
Cincinnati	21.1	(16)
St. Louis	21.2	(17)
Dallas	22.1	(18)

CITY/SUBURBAN RATIO 1967[a]		
Cincinnati	0.94	(1)
Dallas	1.00	(2)
L.A./Long Beach	1.17	(3-4)
S.F./Oakland	1.17	(3-4)
Houston	1.18	(5)
New York	1.20	(6)
Buffalo	1.27	(7)
Minn./St. Paul	1.29	(8)
18 AREA AVERAGE	1.33	
Baltimore	1.37	(9)
St. Louis	1.39	(10-11)
Boston	1.39	(10-11)
Chicago	1.40	(12)
Cleveland	1.42	(13)
Philadelphia	1.50	(14-16)
Detroit	1.50	(14-16)
Pittsburgh	1.50	(14-16)
WASHINGTON	1.53	(17)
Milwaukee	1.71	(18)

*Infant deaths (under one year) per 1,000 live births. See Appendix B, (page 130) for sources, methods, caveats and annual average rates of change for these data.

a/This analysis was completed with 1967 data before the 1968 data (Exhibit 11) became available.

REPORTED SUICIDE RATES* (A Mental Health Indicator)

I. LATEST AVAILABLE METROPOLITAN REPORTED SUICIDE RATE DATA (1968) - NOTES

An inspectic of Exhibit 13 below and Tables A-14 and A-15 (pp. 75-77) reveals the following:

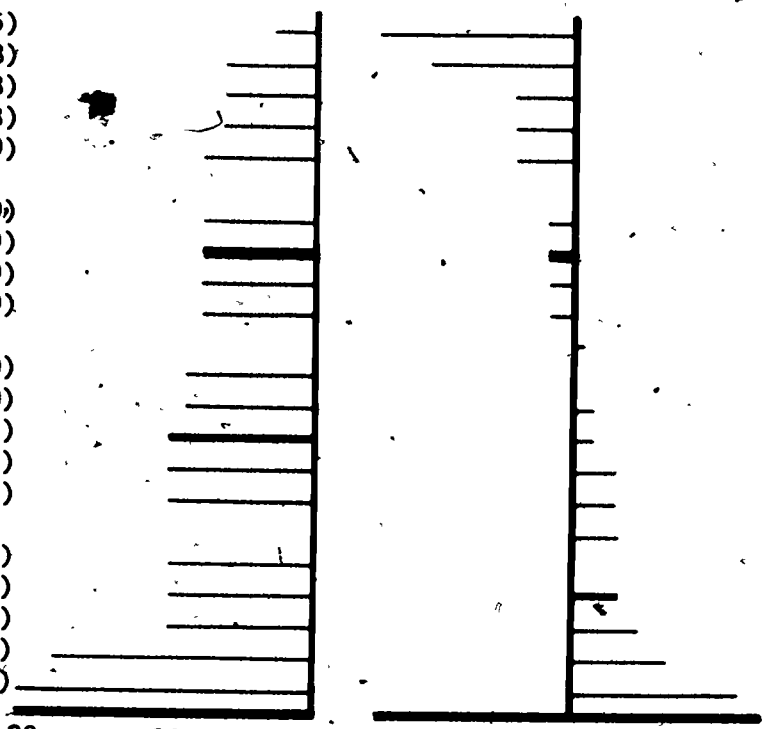
Washington's Rank		Washington's Annual Average Rate of Change Compared with Average of all 18 Areas		
		Initial Report	Latest	
Initial Report	Latest	1967-68	1962-68	1967-68
1967	1968	decreasing more (better) than average[a]	decreasing more (better) than average	about average
5th	7th			

* Reported suicides per 100,000 population.

a/See footnote p. 22 for explanation.

EXHIBIT 13
METROPOLITAN REPORTED SUICIDE RATES (1968)*
(A Mental Health Indicator)

(Rank)	1968 REPORTED SUICIDE RATE[a]		ANNUAL AVERAGE % CHANGE 1962-68	(Rank)
1	New York	(5)	(-6%) New York	1
2	Buffalo	(8)	(-4) St. Louis	2
3	Chicago	(8)	(-2) Minn./St. Paul	3
4	St. Louis	(8)	(-2) Milwaukee	4
5	Minn./St. Paul	(9)	(-2) Dallas	5
6	Dallas	(9)	(-1) Chicago	6
7	WASHINGTON	(9)	(-1) WASHINGTON	7
8	Milwaukee	(9)	(-1) Cincinnati	8
9	Cincinnati	(9)	(-1) L.A./Lg. Beach	9
10	Boston	(10)	(+.3) Buffalo	10
11	Pittsburgh	(10)	(+1) S.F./Oakland	11
	18 AREA AVERAGE	(11)	(+1) Cleveland	12
12	Houston	(11)	(+2) Pittsburgh	13
13	Philadelphia	(11)	(+2) Philadelphia	14
14	Baltimore	(11)	(+2) Baltimore	15
15	Detroit	(11)	(+2%) 18 AREA AVERAGE	
16	Cleveland	(11)	(+3) Detroit	16
17	L.A./Long Beach	(20)	(+4) Boston	17
18	S.F./Oakland	(22)	(+7) Houston	18



Washington's Suicide Rate

1968	9.0
1962	9.7

*Reported Suicides per 100,000 population. See Appendix A, (page 74) for sources, methods, caveats and additional data.

a/These 1968 data became available after the city/suburban analysis of 1967 data (Exhibit 14) was completed.

REPORTED SUICIDE RATES* (A Mental Health Indicator) Continued

II. METROPOLITAN, CITY, SUBURBAN AND CITY/SUBURBAN RATIO DATA (1967) - NOTES

An examination of Exhibit 14 and the data below reveals that the Washington metropolitan area ranked 5th, the central city ranked 5th and its suburbs ranked 9th in reported suicide rates. Washington's ratio between the values for its central city and suburbs was less than average.[a] Tables giving recent annual average rates of change for the data can be found in Appendix B (page 132).

1967 Metropolitan Area Reported Suicide Rates[b]

Buffalo	6.1	(1)	Dallas	9.8	(10)
New York	7.3	(2)	Milwaukee	9.8	(11)
Baltimore	8.1	(3)	Cincinnati	10.2	(12)
Chicago	8.2	(4)	St. Louis	10.4	(13)
WASHINGTON	8.3	(5)	Detroit	10.5	(14)
Pittsburgh	8.5	(6)	Cleveland	10.6	(15)
Boston	8.5	(7)	Houston	11.1	(16)
Philadelphia	9.4	(8)	L.A./Long Beach	22.8	(17)
Minn./St. Paul	9.5	(9)	S.F./Oakland	23.7	(18)
18 AREA AVERAGE 10.7					

* Reported suicides per 100,000 population.

a/See footnote, page 28, for explanation.

b/This analysis was completed with 1967 data before the 1968 data (Exhibit 13) became available.

EXHBIT 14
1967 CITY/SUBURBAN REPORTED SUICIDE RATES*
(A Mental Health Indicator)

CENTRAL CITY 1967 Suicide Rate[a]		
New York	7.7	(1)
Buffalo	7.9	(2)
Boston	8.3	(3)
Chicago	8.9	(4)
WASHINGTON	9.3	(5)
Pittsburgh	9.7	(6)
Philadelphia	9.8	(7)
Baltimore	10.2	(8)
Detroit	11.8	(9)
Milwaukee	11.9	(10)
Dallas	12.2	(11)
Cleveland	12.2	(12)
Minn./St. Paul	12.5	(13)
18 CITY AVERAGE	12.7	
St. Louis	13.0	(14)
Cincinnati	13.1	(15)
Houston	14.1	(16)
L.A./Long Beach	26.0	(17)
S.F./Oakland	29.3	(18)

SUBURBAN 1967 Suicide Rate[a]		
Buffalo	5.1	(1)
Houston	5.8	(2)
Baltimore	6.3	(3)
New York	6.5	(4)
Dallas	6.7	(5)
Minn./St. Paul	7.2	(6)
Milwaukee	7.4	(7)
Chicago	7.5	(8)
WASHINGTON	7.9	(9)
Pittsburgh	8.2	(10)
Boston	8.6	(11)
Cincinnati	8.7	(12)
18 AREA AVERAGE	9.1	
Philadelphia	9.1	(13)
St. Louis	9.3	(14)
Cleveland	9.5	(15)
Detroit	9.6	(16)
L.A./Long Beach	20.1	(17)
S.F./Oakland	20.5	(18)

CITY/SUBURBAN RATIO 1967[a]		
Boston	0.96	(1)
Philadelphia	1.08	(2)
WASHINGTON	1.17	(3)
New York	1.19	(4-6)
Chicago	1.19	(4-6)
Pittsburgh	1.19	(4-6)
Detroit	1.23	(7)
Cleveland	1.29	(8)
L.A./Long Beach	1.30	(9)
St. Louis	1.40	(10)
S.F./Oakland	1.43	(11)
18 AREA AVERAGE	1.43	
Cincinnati	1.50	(12)
Buffalo	1.56	(13)
Milwaukee	1.60	(14)
Baltimore	1.64	(15)
Minn./St. Paul	1.73	(16)
Dallas	1.83	(17)
Houston	2.43	(18)

* Reported Suicides per 100,000 population. See Appendix B, page 132, for sources, methods, caveats, and annual average rates of change for these data.

a/These data were rounded to one decimal place (in contrast to being rounded to the nearest integer as in Exhibit 12) because more detailed back-up data is not provided in the appendices (as is the case for Exhibit 13). This analysis was completed with 1967 data before the 1968 data (Exhibit 13) became available.

REPORTED ROBBERY RATES*/ (A Public Order Indicator)

I. LATEST AVAILABLE METROPOLITAN AREA REPORTED ROBBERY RATES (1970) - NOTES

An inspection of Exhibit 15 below and Tables A-16 and A-17 (pp. 79-81) reveals the following:

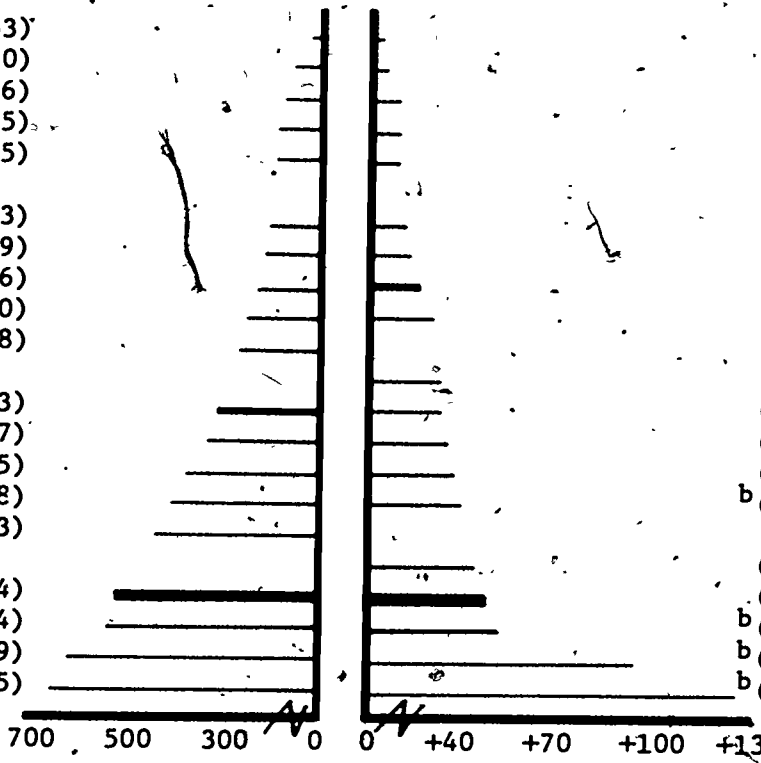
Washington's Rank		Washington's Annual Average Rate of Change Compared with Average of all 18 Areas		
			Latest	
Initial Report	Latest	Initial Report		
1968	1970	1967-68	1964-70	1969-70
16th	15th	higher (worse) than average a	higher (worse) than average	lower (better) than average

* Reported Robberies per 100,000 population.

a/ See footnote p. 22 for explanation.

EXHIBIT 15
METROPOLITAN REPORTED ROBBERY RATES (1970)*
(A Public Order Indicator)

(Rank)	1970 REPORTED ROBBERY RATE[a]	
1	Milwaukee	(53)
2	Cincinnati	(120)
3	Boston	(136)
4	Buffalo	(145)
5	Pittsburgh	(145)
6	Philadelphia	(173)
7	Minn./St. Paul	(179)
8	Dallas	(206)
9	St. Louis	(280)
10	Cleveland	(288)
	18 AREA AVERAGE	(303)
11	L.A./Long Beach	(307)
12	Houston	(335)
13	S.F./Oakland	(348)
14	Chicago	(363)
15	WASHINGTON	(504)
16	Baltimore	(564)
17	Detroit	(649)
18	New York	(665)



ANNUAL AVERAGE % INCREASE 1964-70		(Rank)
(+ 5%)	Chicago	1
(+ 13)	L.A./Lg.Beach	2
(+ 22)	Minn./St.Paul	3
(+ 22)	St. Louis	4
(+ 22)	Philadelphia	5
(+ 24)	Pittsburgh	6
(+ 25)	Milwaukee	7
(+ 28%)	14 AREA AVERAGE[b]	8
(+ 30)	Cincinnati	8
(+ 33)	S.F./Oakland	9
(+ 33)	Houston	10
(+ 35)	Cleveland	11
(+ 39)	Boston	12
[b](+ 40)	Dallas	13
(+ 45)	Buffalo	14
(+ 48)	WASHINGTON	15
[b](+ 54)	Detroit	16
[b](+ 95)	Baltimore	17
[b](+129)	New York	18

Washington's Reported Robbery Rate

1970	503.5
1964	129.0

* Reported robberies per 100,000 population. See Appendix A, (page 78) for sources, methods, caveats and additional data.

a/These 1970 data became available after the city/suburban analysis of 1969 data (Exhibit 16) was completed.

b/A change in reporting systems occurred during the years 1964-70. Only 14 areas were used in calculating this average. (New York, Baltimore, Detroit and Dallas were omitted). See footnote, page 79.

REPORTED ROBBERY RATES* (A Public Order Indicator) Continued:

IT. METROPOLITAN, CITY, SUBURBAN, AND CITY/SUBURBAN RATIO DATA (1969) - NOTES

An examination of Exhibit 16 and the data below reveals that the Washington metropolitan area and central city ranked 18th[a] while the suburban areas ranked 16th in reported robbery rates. Washington's ratio between the values for its central city and suburbs was about average.[b] Tables giving recent annual average rates of change for these data can be found in Appendix B, page 134.

1969 Metropolitan Area Reported Robbery Rates[c]

Milwaukee	52	(1)	L.A./Long Beach	285	(10)
Cincinnati	84	(2)	Houston	286	(11)
Buffalo	108	(3)	Cleveland	295	(12)
Philadelphia	131	(4)	Chicago	340	(13)
Pittsburgh	138	(5)	S.F./Oakland	382	(14)
Boston	143	(6)	Baltimore	461	(15)
Minn./St. Paul	160	(7)	Detroit	484	(16)
Dallas	181	(8)	WASHINGTON	527	(17)
St. Louis	260	(9)	New York	533	(18)

18 AREA AVERAGE 267

*. Reported robberies per 100,000 population.

a/The data here differ slightly from that in Table A-16, page 79. The population figures used for these calculations and those on the next page were corrected by extrapolating from 1970 Census figures. All the data for Table A-16 were taken from the Uniform Crime Reports, using older population estimates.

b/See footnote, page 28, for explanation.

c/This analysis was completed with 1969 data before the 1970 data (Exhibit 15) became available.

EXHIBIT 16
1969 CITY/SUBURBAN REPORTED ROBBERY RATES*
(A Public Order Indicator)

CENTRAL CITY 1969 Reported Robbery Rate[a]		
Milwaukee	89	(1)
Cincinnati	188	(2)
Buffalo	225	(3)
Philadelphia	249	(4)
Dallas	306	(5)
Minn./St. Paul	349	(6)
L.A./Long Beach	410	(7)
Houston	451	(8)
Boston	466	(9)
Pittsburgh	540	(10)
18 CITY AVERAGE	600	
Chicago	636	(11)
Cleveland	743	(12)
New York	752	(13)
St. Louis	790	(14)
S.F./Oakland	843	(15)
Baltimore	994	(16)
Detroit	1,143	(17)
WASHINGTON	1,639	(18)

SUBURBAN 1969 Reported Robbery Rate[a]		
Milwaukee	12	(1)
Houston	14	(2)
Minn./St. Paul	23	(3)
Pittsburgh	25	(4)
Dallas	31	(5)
Cincinnati	32	(6)
Cleveland	32	(7)
Boston	44	(8)
Buffalo	46	(9)
Baltimore	47	(10)
Philadelphia	50	(11)
Chicago	55	(12)
New York	57	(13)
18 AREA AVERAGE	59	
St. Louis	65	(14)
Detroit	103	(15)
WASHINGTON	113	(16)
S.F./Oakland	131	(17)
L.A./Long Beach	183	(18)

CITY/SUBURBAN 1969 Ratio[a]		
L.A./Long Beach	2.2	(1)
Buffalo	4.9	(2)
Philadelphia	5.0	(3)
Cincinnati	5.8	(4)
S.F./Oakland	6.5	(5)
Milwaukee	7.2	(6)
Dallas	10.0	(7)
Boston	10.5	(8)
Detroit	11.1	(9)
Chicago	11.6	(10)
St. Louis	12.2	(11)
18 AREA AVERAGE	12.7	
New York	13.2	(12)
WASHINGTON	14.4	(13)
Minn./St. Paul	15.3	(14)
Baltimore	21.3	(15)
Pittsburgh	21.6	(16)
Cleveland	23.4	(17)
Houston	32.1	(18)

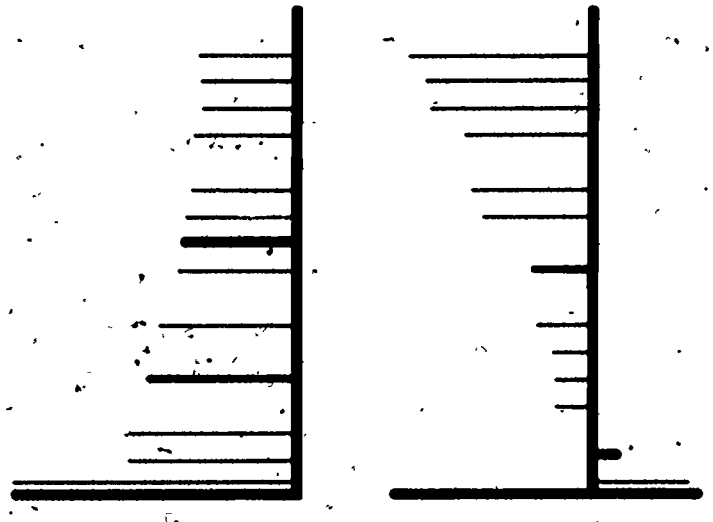
* Reported Robberies per 100,000 population. See Appendix B, page 134, for sources, methods, caveats, and annual average rates of change for these data.

a/This analysis was completed with 1969 data before the 1970 data (Exhibit 15) became available.

EXHIBIT 17
NONWHITE/WHITE UNEMPLOYMENT RATIOS (1970)*
(A Racial Equality Indicator)
(12 Metropolitan Areas)

Washington's nonwhite/white unemployment ratio ranked 7th in 1970, compared with being tied for 4th in 1968. Its rate of change was less negative (worse) than the average[a] change for all 12 areas during the years 1967-70 as it was also in 1967-68.

(Rank)	1970 UNEMPLOYMENT RATIO	
1	New York	(1.2)
2	S.F./Oakland	(1.2)
3	L.A./Long Beach	(1.3)
4	Baltimore	(1.4)
5	Pittsburgh	(1.4)
6	Chicago	(1.6)
7	WASHINGTON	(1.8)
8	Detroit	(1.9)
9	Philadelphia	(2.0)
	12 AREA AVERAGE	(2.1)
10	Houston	(2.3)
11	St. Louis	(2.4)
12	Cleveland	(4.0)



ANNUAL AVERAGE % CHANGE 1967-60		(Rank)
(-20%)	Baltimore	1
(-18)	Pittsburgh	2
(-18)	Chicago	3
(-15)	Detroit	4
(-14)	St. Louis	5
(-13)	S.F./Oakland	6
(- 9%)	18 AREA AVERAGE	
(- 7)	Philadelphia	7
(- 5)	New York	8
(- 4)	L.A./Long Beach	9
(- 4)	Houston	10
(+ 4)	WASHINGTON	11
(+10)	Cleveland	12

Washington Ratio

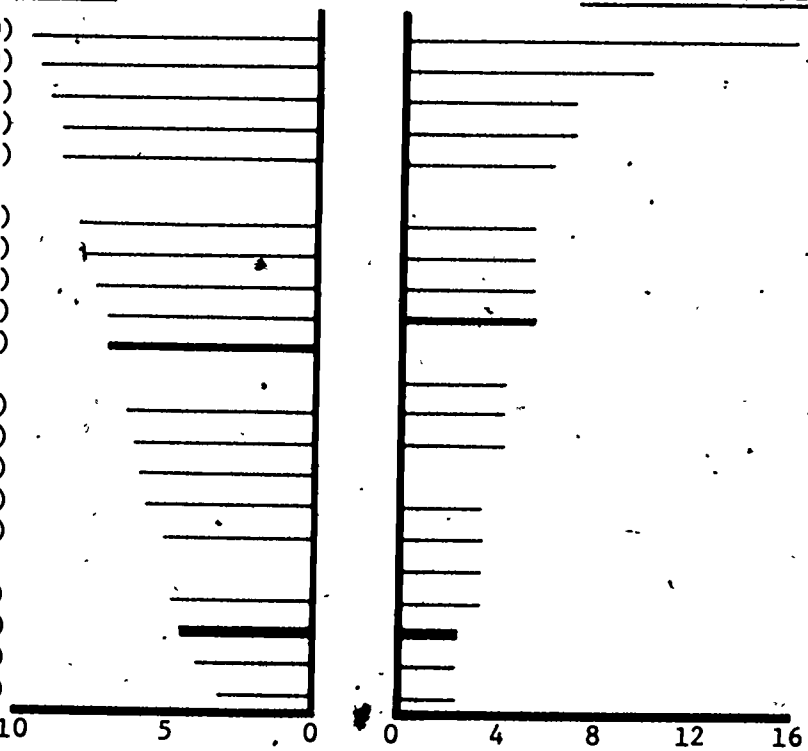
1970	1.8
1967	1.6

* Ratio between white and nonwhite unemployment rates. See Appendix A, page 82, for sources, methods, caveats, and additional data.
a/See footnote, page 22, for explanation.

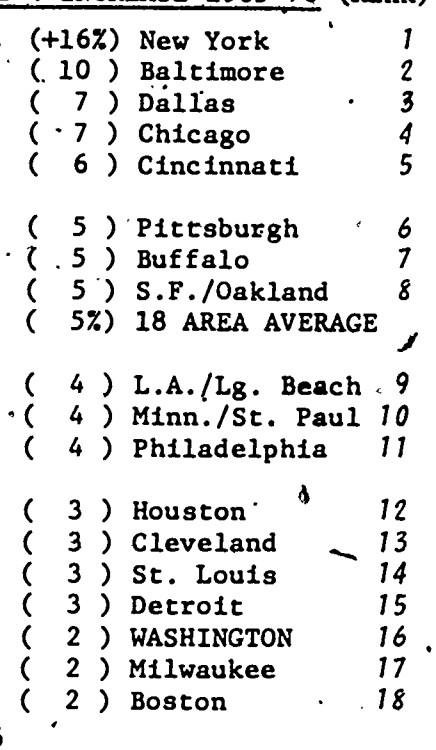
EXHIBIT 18
PER CAPITA CONTRIBUTIONS TO UNITED FUNDS (1970)*
(A Community Concern Indicator)

Washington's per capita contribution ranked 16th in 1970 compared with 15th in 1968. Its rate of change was less than (worse than) average[a] of all 18 areas during the years 1965-70. Its change for 1967-68 and from 1969-70 was about average.

(Rank)	1970 PER CAPITA CONTRIBUTIONS	
1	Cleveland	$(9.20)
2	Pittsburgh	(9.10)
3	Cincinnati	(8.10)
4	Buffalo	(8.00)
5	Minn./St. Paul	(8.00)
6	St. Louis	(7.80)
7	Detroit	(7.70)
8	Milwaukee	(7.30)
9	Dallas	(6.40)
	18 AREA AVERAGE	$(6.40)
10	Philadelphia	(6.20)
11	Houston	(5.80)
12	Boston	(5.70)
13	S.F./Oakland	(5.50)
14	Baltimore	(5.00)
15	Chicago	(4.90)
16	WASHINGTON	(4.80)
17	L.A./Long Beach	(3.60)
18	New York	(2.20)



ANNUAL AVERAGE % INCREASE 1965-70		(Rank)
(+16%)	New York	1
(10)	Baltimore	2
(7)	Dallas	3
(7)	Chicago	4
(6)	Cincinnati	5
(5)	Pittsburgh	6
(5)	Buffalo	7
(5)	S.F./Oakland	8
(5%)	18 AREA AVERAGE	
(4)	L.A./Lg. Beach	9
(4)	Minn./St. Paul	10
(4)	Philadelphia	11
(3)	Houston	12
(3)	Cleveland	13
(3)	St. Louis	14
(3)	Detroit	15
(2)	WASHINGTON	16
(2)	Milwaukee	17
(2)	Boston	18



Washington's Per Capita Contributions

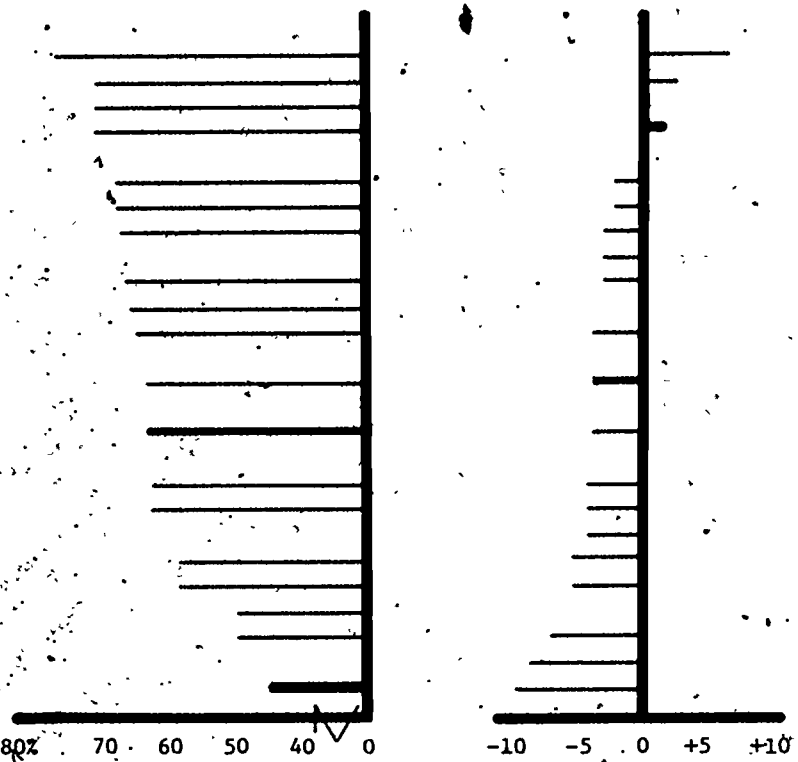
1970	$4.80
1965	$4.30

*Per capita contributions to the United Fund Appeal in each area. See Appendix A, page 86, for sources, methods, caveats and additional data. a/See footnote, page 22, for explanation.

EXHIBIT 19
% VOTING IN PRESIDENTIAL ELECTIONS (1968)*
(A Citizen Participation Indicator)[a]

Washington's voting rate ranked 18th in 1968 as it did in 1964. Its percent change from 1964-68 was higher[b] (more favorable) than the average of all 18 areas.

(Rank)	1968 VOTING RATE	
1	Minneapolis	(76%)
2	Boston	(70)
3	Chicago	(70)
4	Pittsburgh	(70)
5	Milwaukee	(68)
6	Detroit	(68)
7	San Francisco	(67)
8	Philadelphia	(66)
9	Cleveland	(65)
10	Buffalo	(64)
11	Cincinnati	(63)
	18 AREA AVERAGE	(63)
12	Los Angeles	(63)
13	St. Louis	(63)
14	Baltimore	(57)
15	New York	(57)
16	Dallas	(50)
17	Houston	(50)
18	WASHINGTON	(46)



% Change 1964-68[c]		(Rank)
(+ 7%)	Houston	1
(+ 3)	Dallas	2
(+ 1)	WASHINGTON	3
(- 2)	Minneapplis	4
(- 2)	Pittsburgh	5
(- 3)	Cincinnati	6
(- 3)	Detroit	7
(- 3)	Boston	8
(- 4)	Baltimore	9
(- 4)	18 AREA AVERAGE	
(- 4)	Philadelphia	10
(- 5)	San Francisco	11
(- 5)	St. Louis	12
(- 5)	Chicago	13
(- 6)	Buffalo	14
(- 6)	Cleveland	15
(- 7)	Los Angeles	16
(- 9)	New York	17
(-10)	Milwaukee	18

Washington Voting Participation

1968	45.6%
1964	45.1%

* Percent of voting age population that voted in presidential elections. See Appendix A, page 90, for sources, methods, caveats, and additional data.

a/This indicator has been reproduced from the initial report, since no presidential elections have occurred since 1970.

b/See footnote, page 22, for explanation.

c/This is the total percentage change, and not the annual average rate of change, which is used elsewhere in this report.

FINDINGS (Continued)

SECTION B-2: NEW INDICATORS

The four following exhibits represent new data series introduced in this revision. The same format is followed here as that described in the introduction to Section V-B, page 21. Further discussion of the rationale for the new series can be found on page 8; caveats and further data are provided in Appendix A, page 93.

INDICATOR

Median School years completed by persons 25 years and older (Replaces Selective Service Mental Test Rejection Rate).

Cost of Transportation for a Moderate Income Family of Four (Replaces Traffic Death Rate).

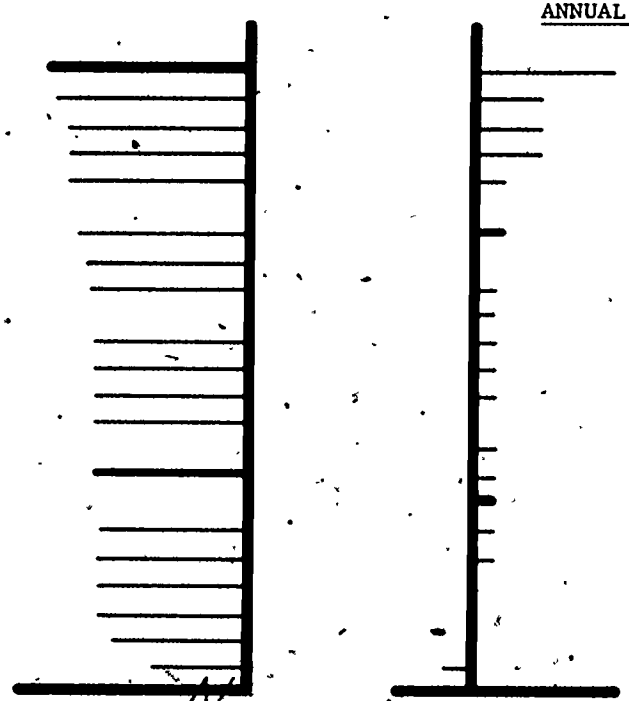
Concentration of Three Air Pollutants; Changes in Suspended Particulate Concentrations (Replaces An Air Pollution Index).

Estimated Narcotics Addiction Rates (Replaces Narcotics Addiction Rate).

EXHIBIT 20
MEDIAN SCHOOL YEARS COMPLETED (1969)*
(An Educational Attainment Indicator)

Washington's median school years completed ranked first in 1969 as it did in 1968. Its annual average rate of change during 1967-69 was about the same[a] as the average of all 18 areas.

(Rank)	MEDIAN SCHOOL YEARS 1969	
1	WASHINGTON	(12.7)
2	S.F./Oakland	(12.6)
3-5	Minn./St. Paul	(12.5)
3-5	Dallas	(12.5)
3-5	L.A./Long Beach	(12.5)
6	Boston	(12.4)
7-8	Milwaukee	(12.3)
7-8	Chicago	(12.3)
9-12	New York	(12.2)
9-12	Cleveland	(12.2)
9-12	Houston	(12.2)
9-12	Buffalo	(12.2)
	18 AREA AVERAGE	(12.2)
13-16	Philadelphia	(12.1)
13-16	Detroit	(12.1)
13-16	Pittsburgh	(12.1)
13-16	Cincinnati	(12.1)
17	St. Louis	(11.8)
18	Baltimore	(11.3)



ANNUAL AVERAGE % CHANGE 1967-69		(Rank)
(+ 2%)	Buffalo	1
(+ 1)	Cincinnati	2
(+ 1)	St. Louis	3
(+ 1)	Milwaukee	4
(+ .5)	Baltimore	5
(+ .5%)	18 AREA AVAERAGE	
(+ .4)	Detroit	6-7
(+ .4)	Pittsburgh	6-7
(+ .4)	New York	8-10
(+ .4)	Chicago	8-10
(+ .4)	Cleveland	8-10
(+ .4)	L.A./Long Beach	11-15
(+ .4)	S.F./Oakland	11-15
(+ .4)	WASHINGTON	11-15
(+ .4)	Minn./St. Paul	11-15
(+ .4)	Dallas	11-15
(0)	Boston	16-17
(0)	Philadelphia	16-17
(- .4)	Houston	18

Washington's Years Completed

1969	12.7
1967	12.6

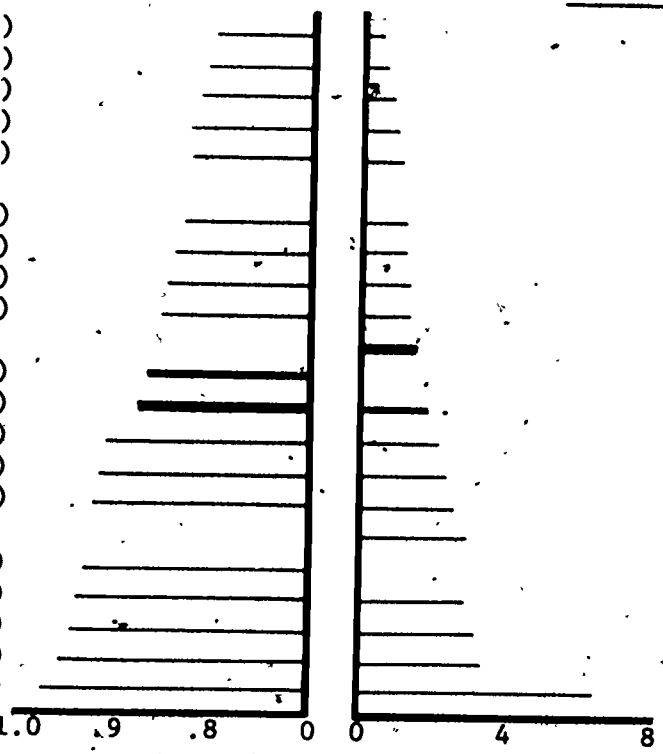
* Median school years completed by persons 25 years and older. See Appendix A, page 94, for sources, methods, caveats, and additional data. Data and discussion of previous indicator used are also provided in Appendix A, page 98.

a/See footnote, page 22, for explanation.

EXHIBIT 21
COST OF TRANSPORTATION (1969)*
(A Transportation Indicator)

Washington's cost of transportation ranked 10th in 1969 and 12th in 1967. Its rate of change from 1967-69 was about the same[a] as the average of all 18 areas.

(Rank)	1969 COST OF TRANSPORTATION	
1.	New York	$(806)
2	Philadelphia	(834)
3	Pittsburgh	(864)
4-5	Dallas	(878)
4-5	Milwaukee	(878)
6	Cleveland	(882)
7	L.A./Long Beach	(884)
8	Detroit	(889)
9	Baltimore	(892)
	18 AREA AVERAGE	$(894)
10	WASHINGTON	(898)
11	Minn./St. Paul	(903)
12	Cincinnati	(906)
13	Chicago	(919)
14	St. Louis	(922)
15	Boston	(924)
16	S.F./Oakland	(925)
17	Houston	(928)
18	Buffalo	(968)



ANNUAL AVERAGE % CHANGE 1967-69		(Rank)
(+0.1%)	S.F./Oakland	1
(0.2)	L.A./Long Beach	2
(0.4)	Milwaukee	3
(0.8)	Houston	4
(1.0)	Minn./St. Paul	5
(1.1)	Pittsburgh	6
(1.1)	Dallas	7
(1.3)	St. Louis	8
(1.3)	Cleveland	9
(1.6)	WASHINGTON	10
(+1.9%)	18 AREA AVERAGE	
(2.0)	Detroit	11
(2.1)	Buffalo	12
(2.3)	New York	13
(2.7)	Baltimore	14
(2.7)	Cincinnati	15
(2.9)	Philadelphia	16
(3.2)	Boston	17
(6.6)	Chicago	18

*The Cost of Transportation for a moderate income family of four. See Appendix A, page 100, for sources, methods, caveats and additional data. Data and discussion of previous indicator used are also provided in Appendix A, page 102. a/See footnote, page 22, for explanation.

EXHIBIT 22
CONCENTRATIONS OF THREE AIR POLLUTANTS, 1969*
(Indicators of Air Quality)[a]
(Central City Data)

SUSPENDED PARTICULATES

Rank	City	% EPA Std.	Value ug/m^3
1	San Francisco	72%	(54)
2	Minneapolis	94	(70)
→	EPA YEARLY STANDARD	100	(75)
3-4	Dallas	102	(76)
3-4	WASHINGTON	102	(76)
5-7	Boston	114	(85)
5-7	Buffalo	114	(85)
5-7	Houston	114	(85)
8	Los Angeles	124	(93)
→	18 CITY AVERAGE	138	(104)
9	Cincinnati	138	(104)
10	New York	140	(105)
11-12	Baltimore	146	(110)
11-12	Milwaukee	146	(110)
13	Cleveland	150	(112)
14	Detroit	154	(116)
15	Philadelphia	170	(127)
16	Chicago	180	(135)
17	Pittsburgh	192	(144)
18	St. Louis	248	(186)

SULFUR DIOXIDE (SO_2)

Rank	City	% EPA Std.	Value ppm
1	Dallas	10%	(.003)
2-3	Buffalo	13	(.004)
2-3	Houston	13	(.004)
4	San Francisco	17	(.005)
5	Milwaukee	20	(.006)
6	Cincinnati	30	(.009)
7-8	Minneapolis	33	(.010)
7-8	WASHINGTON	33	(.010)
9	Detroit	63	(.019)
10	Los Angeles	67	(.020)
11	Baltimore	70	(.021)
→	18 CITY AVERAGE	70	(.021)
12	Cleveland	80	(.024)
13	Philadelphia	83	(.025)
14-15	Boston	87	(.026)
14-15	St. Louis	87	(.026)
16	Pittsburgh	90	(.027)
→	EPA YEARLY STANDARD	100	(.030)
17	Chicago	213	(.064)
18	New York	266	(.080)

NITROGEN DIOXIDE (NO_2)

Rank	City	% EPA Std.	Value ppm
1	Philadelphia	44%	(.022)
2	Buffalo	50	(.025)
3	WASHINGTON	74	(.037)
4	Boston	94	(.047)
5	Chicago	100	(.050)
→	EPA YEARLY STANDARD	100	(.050)
6	Dallas	136	(.068)
7	Minneapolis	138	(.069)
8	New York	144	(.072)
→	18 CITY AVERAGE	160	(.080)
9	Milwaukee	164	(.082)
10	San Francisco	176	(.088)
11-12	Baltimore	182	(.091)
11-12	Cincinnati	182	(.091)
13	Cleveland	188	(.094)
14	Houston	192	(.096)
15	Pittsburgh	206	(.103)
16	Detroit	220	(.110)
17	St. Louis	240	(.120)
18	Los Angeles	340	(.170)

* Average yearly values for three (Particulates, Sulfur Dioxide and Nitrogen Dioxide) of the six principal air contaminants. (Comparable Carbon Monoxide, Hydrocarbon and Oxidant data are not available).

a/ This is a new indicator. See page 8 and Appendix A (p.104) for discussion of selection of this indicator, sources, methods of calculation, caveats and additional data. Data on previous indicators used are also provided in Appendix A (p.112)

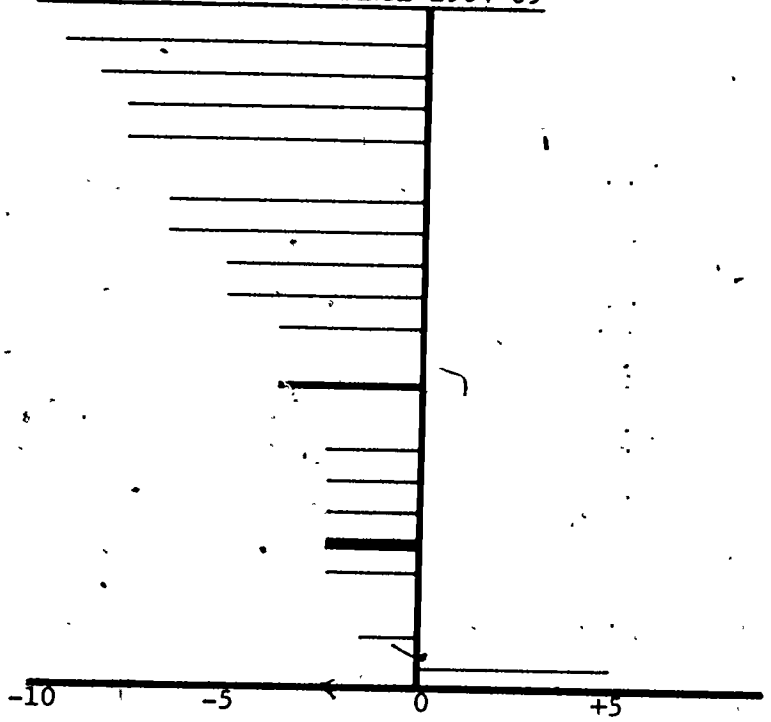
EXHIBIT 23

CHANGES IN SUSPENDED PARTICULATE CONCENTRATIONS*

(An Indicator of the Changes in Air Quality)a

(16 Central Cities)b

ANNUAL AVERAGE % CHANGE 1964-69c



		Rank
New York	- 9%	(1)
Boston	- 8	(2)
Detroit	- 7	(3)
Cincinnati	- 7	(4)
Baltimore	- 6	(5)
Philadelphia	- 6	(6)
Milwaukee	- 5	(7)
Chicago	- 5	(8)
Dallas	- 4	(9)
16 CITY AVERAGE	- 4%	
Pittsburgh	- 3	(10)
Minneapolis	- 3	(11)
San Francisco	- 3	(12)
WASHINGTON	- 3	(13)
Cleveland	- 3	(14)
Houston	- 2	(15)
St. Louis	+ 5	(16)

Washington Concentrations

1969	73	(ug/m^3)
1964	84	

* Suspended particulate matter per cubic meter (micrograms/cubic meter, particles range from 1-100 microns).

a/This is a new indicator. See page 9 and Appendix A (p.108) for discussion of selection of this indicator, sources, methods of calculation, caveats and additional data. Data on previous indicator used are also provided in Appendix A (p.112). b/Data for Los Angeles and Buffalo were not available.

c/There are considerable variations from year to year in the annual rates of change for many of these cities. The use of a five-year average tends to obscure these large variations.

EXHIBIT 24
ESTIMATED NARCOTICS ADDICTION RATES (1969)*
(A Social Disintegration Indicator)a
(Data Available for 7 Central Cities Only)

(Rank)	City	Estimated Number of Addicts 1969	Estimated Addicts/ 10,000 Population 1969
1	Chicago	10,500	31
2	St. Louis	2,000	32
3	Los Angeles	9,800	35
4	Boston	2,800	44
5	San Francisco	4,200	59
6	WASHINGTON	4,600	61
7	New York	150,000	191

* Estimated Heroin addicts/10,000 population. This is an emerging problem which is believed to impact on health, mental health and crime. Narcotics Addicts consist primarily of those addicted to Heroin (at least 91%).

a/This is a new indicator replacing different estimates used in the initial report (see discussion, page 9). For sources, methods, caveats and additional data see Appendix A, page 114. Data and discussion of the previous indicator used are provided in Appendix A, page 118.

APPENDIX A

METROPOLITAN AREA DATA SOURCES, METHODS, CAVEATS AND DATA FOR RECENT YEARS

PART 1: UPDATED INDICATORS FROM INITIAL REPORT

The exhibits in Section V-B were prepared from the latest data and annual average rates of change presented here. The sources, methods of calculation, and caveats relevant to each indicator are provided in this appendix, as are available data for recent previous years. Tables summarizing these data can be found in Appendix C, page 137.

The rankings in the tables are in descending order of quality (unless otherwise noted). Metropolitan areas having the most favorable conditions and rates of change have the lowest numerical ranking, (i.e., #1 is the best and #18 the worst.)

The average level or the annual average rate of change (for the 18 areas) were obtained by summing the individual values and dividing by the number of metropolitan areas.

The annual average rates of change are tabulated for the years used in the city/suburban and the metropolitan area exhibits (where more recent data were often used) as well as recent one-year rates of change.

In all cases the data were first ranked and then rounded off to a number of decimal places consistent with their accuracy and range of values.

Although the emphasis in this paper is on Washington, D.C., the information included allows the examination of conditions in any of the 18 metropolitan areas.

METROPOLITAN UNEMPLOYMENT RATES - EXPLANATORY NOTES

Data Sources

U. S. Department of Labor, Washington, D.C. "Unemployment Declines in 20 Largest Urban Areas in 1968," March 6, 1969, Table 3, (for 1967 and 1968 data).

_____. "Geographic Aspects of Unemployment in 1969," April 6, 1970, Table 5, (for 1969 data).

_____. "Characteristics of Workers in Large States and SMSA's-1970," Report 388, Table 2, (1970 data).

Method of Calculation

Unemployment rates were taken directly from the sources cited. The rates of change were calculated as follows:

$$\text{Annual Average Rate of Change} = \frac{\text{Unemployment Rate (latest)} - \text{Unemployment Rate (earlier)}}{\text{Unemployment Rate (earlier)}} \div \text{Number of Years between latest and earlier data}$$

Caveats

1. These unemployment data were based on the Bureau of the Census' Current Population Survey (CPS), a monthly sample survey of 50,000 households for the Bureau of Labor Statistics. Although this CPS survey is the best source of current unemployment estimates, its approximately 1,000 to one national sample was designed primarily to produce national data and has certain deficiencies which are magnified when it is used to generate metropolitan area data. For example, it underestimates the transient and ghetto unemployment, and does not report on "sub-employment"(those working part-time or full-time at subsistence wages), nor the "discouraged jobless" (those not seeking work during the past month). The CPS area data also make no differentiation for length of unemployment nor the seriousness of the unemployment (family head vs. teenager, male vs. female, etc.) The accuracy of the CPS is seriously degraded when used to produce area data. Errors of approximately ±15% are possible.
2. A good description of the CPS methodology is contained in BLS Report 313 (June 1967) "Concepts and Methods used in Manpower Statistics from the Current Population Survey." A clear discussion of the shortcomings of the CPS was contained in a Wall Street Journal article, February 6, 1970, p. 1.
3. Since unemployment tends to follow the cyclic trends of the business cycle in the national economy, and so influence all the areas, the variations in comparative performances of the different areas that are presented are of the greatest interest.
4. Data on participation rates for various population groups are presented in Table A-3 (p.57). Unemployment and employment data for other sub-groups (e.g., married men, teenagers, etc.), average time of unemployment, etc., are also available from the Bureau of Labor Statistics.

TABLE A-1
METROPOLITAN UNEMPLOYMENT RATES* (RECENT LEVELS)
(An Unemployment Indicator)

Metropolitan Area	1967[a]	(Rank)[b]	1968[a]	(Rank)	1969	(Rank)	1970	(Rank)	Metropolitan Area
New York	3.7%	(9-11)	3.0%	(7-8)	3.2%	(10-11)	4.4%	(9)	New York
L.A./Long Beach	5.6	(18)	4.7	(17)	4.8	(18)	7.2	(18)	L.A./Long Beach
Chicago	3.3	(7-8)	3.0	(7-8)	3.0	(8)	3.6	(2)	Chicago
Philadelphia	3.7	(9-11)	3.2	(10)	2.9	(7)	4.3	(7-8)	Philadelphia
Detroit	4.5	(15)	3.8	(14)	4.1	(15-16)	7.0	(17)	Detroit
Boston	2.9	(5)	2.5	(3)	2.8	(6)	3.9	(4)	Boston
S.F./Oakland	5.4	(17)	4.8	(18)	4.5	(17)	6.7	(16)	S.F./Oakland
WASHINGTON	2.3	(2)	2.7	(4)	2.6	(4)	3.2	(1)	WASHINGTON
Pittsburgh	4.8	(16)	4.4	(16)	4.1	(15-16)	5.2	(14-15)	Pittsburgh
St. Louis	4.4	(14)	3.1	(9)	3.5	(12-13)	4.6	(10-11)	St. Louis
Cleveland	3.8	(12)	3.5	(13)	3.1	(9)	4.7	(12-13)	Cleveland
Baltimore	3.7	(9-11)	3.4	(12)	3.5	(12-13)	4.0	(5-6)	Baltimore
Houston	3.3	(7-8)	3.3	(11)	3.2	(10-11)	4.0	(5-6)	Houston
Minn./St. Paul	2.2	(1)	2.4	(2)	2.3	(2-3)	5.2	(14-15)	Minn./St. Paul
Dallas	2.5	(3)	2.3	(1)	2.2	(1)	3.8	(3)	Dallas
Cincinnati	2.8	(4)	2.9	(5-6)	2.7	(5)	4.3	(7-8)	Cincinnati
Milwaukee	3.0	(6)	2.9	(5-6)	2.3	(2-3)	4.6	(10-11)	Milwaukee
Buffalo	4.2	(13)	4.0	(15)	3.7	(14)	4.7	(12-13)	Buffalo
AVERAGE	3.7%		3.3%		3.2%		4.7%		AVERAGE
U. S. AVERAGE	3.8%		3.6%		3.5%		4.9%		U. S. AVERAGE

* Percent of Labor Force Unemployed. (Does not include those not seeking work during the past month).
See Explanatory Notes, page 54.
a/These data appeared in the initial version of this report.
b/The lowest rankings are assigned to the lower unemployment rates.

TABLE A-2

METROPOLITAN UNEMPLOYMENT RATES* (RECENT ANNUAL AVERAGE CHANGES)

(An Unemployment Indicator)

Metropolitan Area	1967-69	(Rank)[b]	1967-70	(Rank)	1967-68[a]	(Rank)	1968-69	(Rank)	1969-70	(Rank)	Metropolitan Area
New York	- 6.8%	(8)	+ 6.3%	(7)	-18.9%	(2)	+ 6.7%	(15)	+37.5%	(8)	New York
L.A./Long Beach	- 7.1	(7)	+ 9.5	(11)	-16.1	(3)	+ 2.1	(13)	+ 50.0	(12)	L.A./Long Beach
Chicago	- 4.5	(11)	+ 3.0	(4)	- 9.1	(8)	0.0	(12)	+ 20.0	(2)	Chicago
Philadelphia	-10.8	(2)	+ 5.4	(6)	-13.5	(6)	- 9.4	(3)	+ 48.3	(10)	Philadelphia
Detroit	- 4.4	(12)	+18.5	(17)	-15.6	(4)	+ 7.9	(16)	+ 70.7	(15)	Detroit
Boston	- 1.7	(15)	+11.5	(12)	-13.8	(5)	+12.0	(17)	+ 39.3	(9)	Boston
S.F./Oakland	- 8.3	(5)	+ 8.0	(10)	-11.1	(7)	- 6.3	(7)	+ 48.9	(11)	S.F./Oakland
WASHINGTON	+ 6.5	(18)	+13.0	(13)	+17.4	(18)	- 3.7	(10)	+ 23.1	(3)	WASHINGTON
Pittsburgh	- 7.3	(6)	+ 2.8	(3)	- 8.3	(9)	- 6.8	(6)	+ 26.8	(5)	Pittsburgh
St. Louis	-10.2	(3)	+ 1.5	(1)	-29.5	(1)	+12.9	(18)	+ 31.4	(7)	St. Louis
Cleveland	- 9.2	(4)	+ 7.9	(9)	- 7.9	(12)	-11.4	(2)	+ 51.6	(13)	Cleveland
Baltimore	- 2.7	(13)	+ 2.7	(2)	- 8.1	(10)	+ 2.9	(14)	+ 14.3	(1)	Baltimore
Houston	- 1.5	(16)	+ 7.1	(8)	0.0	(14)	- 3.0	(11)	+ 25.0	(4)	Houston
Minn./St. Paul	+ 2.3	(17)	+45.5	(18)	+ 9.1	(17)	- 4.2	(9)	+126.1	(18)	Minn./St. Paul
Dallas	- 6.0	(9-10)	+17.3	(14)	- 8.0	(11)	- 4.3	(8)	+ 72.7	(16)	Dallas
Cincinnati	- 1.8	(14)	+17.9	(16)	+ 3.6	(16)	- 6.9	(5)	+ 59.3	(14)	Cincinnati
Milwaukee	-11.7	(1)	+17.8	(15)	- 3.3	(14)	-20.7	(1)	+100.0	(17)	Milwaukee
Buffalo	- 6.0	(9-10)	+ 4.0	(5)	- 4.8	(13)	- 7.5	(4)	+ 27.0	(6)	Buffalo
AVERAGE	- 5.6%		+11.1%		- 7.6%		- 2.2%		+ 48.4%		AVERAGE

* Percent of Labor Force Unemployed. (does not include those not seeking work during the past month). See Explanatory Notes, page 54.

a/These data appeared in the initial version of this report.

b/The lower rankings are assigned to the higher negative rates of change.

TABLE A-3

1970 METROPOLITAN AREA LABOR PARTICIPATION RATES[1]

Metropolitan Area	TOTAL		TOTAL				MEN 20 YEARS AND OVER				WOMEN 20 YEARS AND OVER				BOTH SEXES 16-19 YEARS			Metro. Area
	Entire SMSA	(Rank)[b]	All White	(Rank)	ALL Negro[c]	(Rank)	White	(Rank)	Negro[c]	(Rank)	White	(Rank)	Negro[c]	(Rank)	White	(Rank)	Negro[c]	
New York	57.1	(17)	56.4%	(17)	61.3%	(10)	79.7%	(18)	84.8%	(2)	39.0%	(17)	50.4%	(8)	39.0%	(14)	a	N.Y.
L.A./Long Beach	61.6	(9)	61.3	(9)	64.3	(5)	84.5	(7)	81.9	(11)	42.5	(9)*	55.7	(4)	51.6	(9)	a	L.A./L.
Chicago	62.5	(8)	63.0	(7)	59.9	(11)	85.4	(6)	84.1	(3)	44.5	(7)	49.4	(9)	56.4	(6)	a	Chicago
Philadelphia	59.6	(14)	59.1	(14)	62.2	(7)	82.8	(14)	82.7	(8)	39.3	(15)	51.4	(6)	53.6	(8)	a	Phila.
Detroit	60.0	(12)	59.2	(13)	64.2	(6)	82.1	(15)	83.9	(4)	39.1	(16)	50.7	(7)	56.5	(5)	a	Detroit
Boston	63.0	(6)*	63.4	(5)	a		84.8	(8)*	a		46.5	(5)	a		61.6	(2)	a	Boston
S.F./Oakland	63.5	(5)	63.1	(6)	65.4	(4)	83.4	(11)	83.6	(6)	47.9	(3)	56.0	(3)	50.8	(10)	a	S.F./O.
WASHINGTON	65.4	(4)	63.6	(4)	71.0	(2)	88.6	(3)	83.2	(7)	46.3	(6)	67.0	(1)	48.6	(12)	a	D.C.
Pittsburgh	54.3	(18)	54.2	(18)	55.3	(13)	81.0	(17)	a		33.0	(18)	a		45.9	(13)	a	Pitts.
St. Louis	59.7	(13)	59.9	(12)	58.7	(12)	84.1	(10)	82.4	(9)	40.5	(12)	48.8	(10)	55.9	(7)	a	St. L.
Cleveland	60.6	(11)	60.4	(11)	62.1	(8)	84.8	(8)*	85.7	(1)	41.0	(11)	a		50.5	(11)	a	Cleve.
Baltimore	60.9	(10)	60.6	(10)	61.6	(9)	82.9	(13)	82.1	(10)	42.5	(9)*	52.3	(5)	a		a	Balti.
Houston	67.8	(2)	67.4	(2)	69.3	(3)	90.5	(2)	83.9	(5)	47.6	(4)	60.4	(2)	59.0	(3)	a	Houston
Minn./St. Paul	66.2	(3)	66.5	(3)	a		86.3	(4)	a		48.3	(2)	a		67.2	(1)	a	Minn./S.
Dallas	70.5	(1)	69.3	(1)	81.3	(1)	91.0	(1)	a		51.5	(1)	a		58.1	(4)	a	Dallas
Cincinnati	58.7	(15)	58.8	(15)	a		83.0	(12)	a		40.3	(13)	a		a		a	Cinci.
Milwaukee	63.0	(6)*	62.2	(8)	a		85.2	(5)	a		42.7	(8)	a		a		a	Milwk.
Buffalo	57.8	(16)	58.3	(16)	a		82.0	(16)	a		40.1	(14)	a		a		a	Buffalo
AREA AVERAGE	61.8%		61.5%		64.4%		84.6%		83.5%		42.9%		54.2%		53.9%		a	AREA A.
U.S. AVERAGE	64.4%		60.2%		61.8%		82.8%		81.4%		42.2%		51.8%		51.4%		40.5%	U.S. A.

1/Participation rate is defined as the number in the labor force (employed + those looking for work) divided by the total population.
Source: Same as 1970 unemployment rates. See Explanatory Notes, page 54.
a/Data not available.
b/The lower rankings are assigned to the higher participation rates.
c/Refers to Negro and other Races--includes all races other than white (does not include Puerto Ricans or Chicanos.)
* Indicates tie ranking.

% LOW INCOME HOUSEHOLDS - EXPLANATORY NOTES

Data Sources

"Metropolitan Area Data," Sales Management-The Marketing Magazine, Sales Management, Inc., New York, New York, June 1965, 1968, 1969, 1970 and 1971 (for 1964, 1967, 1968, 1969 and 1970 data). These data are copyrighted. Further reproduction is prohibited.

Method of Calculation

The percent low income household data were taken from the sources cited. The percent change was calculated as follows:

$$\text{Annual Average Rate of Change} = \frac{\text{Low Income Data (latest)} - \text{Low Income Data (earlier)}}{\text{Low Income Data (earlier)}} \div \text{Number of Years between latest and earlier data}$$

Caveats

1. The techniques used in obtaining these estimates are not revealed by the publishers.

2. This measure (percent families under $3,000) was used only because no other recent measure, or surrogate measure, for poverty in metropolitan areas is available on a yearly basis. (More accurate 1970 Census data will soon be available).

3. Portions of a recent U.S. Department of Labor poverty income definition (1969) are summarized below:

Family Size	Income----Non-Farm	Farm
1	$ 1,840	$1,569
2	2,383	2,012
3	2,924	2,480
4	3,743	3,195
5	4,415	3,769

Adequate recent data for computing this measure during non-Census years are not available for individual metropolitan areas.

4. None of these measures adjusted for cost of living differentials, or variation in the size or character of households among different metropolitan areas.

5. These income data include payments from government agencies (welfare, social security, etc.)

TABLE A-4

METROPOLITAN LOW INCOME HOUSEHOLDS RATES* (RECENT LEVELS)

(A Poverty Indicator)

Metropolitan Area	1964	(Rank)[b]	1968[a]	(Rank)	1969	(Rank)	1970	(Rank)	Metropolitan Area
New York	15.5%	(14)	14.3%	(5)	13.7%	(11)	12.2%	(9-10)	New York
L.A./Long Beach	15.2	(13)	16.5	(14)	15.8	(16)	14.7	(15)	L.A./Long Beach
Chicago	11.4	(3)	11.4	(6)	11.2	(5-6)	10.4	(5-6)	Chicago
Philadelphia	14.8	(12)	13.9	(11)	13.2	(10)	12.2	(9-10)	Philadelphia
Detroit	13.5	(8)	9.8	(3)	9.5	(3)	9.2	(3)	Detroit
Boston	13.6	(9)	9.3	(1)	8.6	(1)	8.0	(1)	Boston
S.F./Oakland	14.1	(10)	17.5	(17)	16.7	(18)	15.8	(17-18)	S.F./Oakland
WASHINGTON	12.2	(4)	9.4	(2)	9.1	(2)	8.6	(2)	WASHINGTON
Pittsburgh	16.5	(15)	14.8	(12)	14.1	(12)	13.3	(12)	Pittsburgh
St. Louis	14.6	(11)	15.6	(13)	15.0	(13)	14.1	(13)	St. Louis
Cleveland	13.4	(6-7)	12.4	(8)	11.6	(7)	10.9	(7)	Cleveland
Baltimore	12.9	(5)	13.5	(9-10)	12.4	(8)	13.2	(11)	Baltimore
Houston	19.2	(18)	17.8	(18)	16.5	(17)	15.8	(17-18)	Houston
Minn./St. Paul	11.0	(2)	11.9	(7)	10.9	(4)	10.2	(4)	Minn./St. Paul
Dallas	18.0	(17)	17.1	(16)	15.7	(15)	14.8	(16)	Dallas
Cincinnati	17.0	(16)	16.8	(15)	15.5	(14)	14.5	(14)	Cincinnati
Milwaukee	10.9	(1)	11.0	(4)	11.2	(5-6)	10.4	(5-6)	Milwaukee
Buffalo	13.4	(6-7)	13.5	(9-10)	13.1	(9)	12.0	(8)	Buffalo
AVERAGE	14.3%		13.7%		13.0%		12.2%		AVERAGE

* Percent of all households with cash incomes under $3,000 per year. (Includes all governmental transfer payments.) See Explanatory Notes, page 58.

a/These data appeared in the initial version of this report.

b/The lower rankings are assigned to the lower percentages of low income households.

TABLE A-5

METROPOLITAN LOW INCOME HOUSEHOLD RATES* (RECENT ANNUAL AVERAGE CHANGES)

(A Poverty Indicator)

Metropolitan Area	64-70	(Rank)[b]	67-68[a]	(Rank)	68-69	(Rank)	69-70	(Rank)	Metropolitan Area
New York	- 3.5%	(4)	- 9%	(11)	- 4.2%	(12)	- 10.9%	(1)	New York
L.A./Long Beach	- 0.5	(16)	- 5	(14)	- 4.2	(11)	- 7.0	(7)	L.A./Long Beach
Chicago	- 1.5	(12)	- 10	(5)	- 1.8	(17)	- 7.1	(4-5)	Chicago
Philadelphia	- 2.9	(9)	- 7	(10)	- 5.0	(8)	- 7.6	(3)	Philadelphia
Detroit	- 5.3	(2)	- 7	(3)	- 3.1	(15)	- 3.2	(17)	Detroit
Boston	- 6.9	(1)	- 11	(1)	- 7.5	(5)	- 7.0	(6)	Boston
S.F./Oakland	+ 2.0	(18)	- 5	(17)	- 4.6	(10)	- 5.4	(15)	S.F./Oakland
WASHINGTON	- 4.9	(3)	- 7	(2)	- 3.2	(14)	- 5.5	(14)	WASHINGTON
Pittsburgh	- 3.2	(5)	- 6	(12)	- 4.7	(9)	- 5.7	(13)	Pittsburgh
St. Louis	- 0.6	(15)	- 6	(13)	- 3.9	(13)	- 6.0	(11)	St. Louis
Cleveland	- 3.1	(6)	- 6	(7)	- 6.5	(7)	- 6.1	(10)	Cleveland
Baltimore	+ 0.4	(17)	- 2	(18-2)	- 8.2	(3)	+ 6.5	(18)	Baltimore
Houston	- 3.0	(8)	- 7	(18)	- 7.3	(6)	- 4.2	(16)	Houston
Minn./St. Paul	- 1.2	(13)	- 6	(6)	- 8.4	(1)	- 6.4	(9)	Minn./St. Paul
Dallas	- 3.0	(7)	- 11	(15)	- 8.2	(2)	- 5.7	(12)	Dallas
Cincinnati	- 2.5	(10)	- 4	(16)	- 7.7	(4)	- 6.5	(8)	Cincinnati
Milwaukee	- 0.8	(14)	- 11	(9)	- 1.8	(18)	- 7.1	(4-5)	Milwaukee
Buffalo	- 1.7	(11)	- 6	(8-9)	- 3.0	(16)	- 8.4	(2)	Buffalo
AVERAGE	- 2.3%		- 7%		- 5.0%		- 5.0%		AVERAGE

* Percent of all households with cash incomes under $3,000 per year. (Includes all governmental transfer payments.) See Explanatory Notes, page 58.

a/These data appeared in the initial version of this report.

b/The lower rankings are assigned to the larger negative rates of change.

ADJUSTED PER CAPITA INCOME - EXPLANATORY NOTES

Data Sources

U.S. Department of Commerce, Survey of Current Business, May 1971, (Vol. 51, No. 5, Table 2).

U.S. Department of Labor, Bureau of Labor Statistics, Three Budgets for an Urban Family of Four Persons 1967--USDL-10-296, March 1969; 1968-BLS Bulletin 1570-5, Autumn 1968, and 1969 Final Spring 1969 Cost Estimates, December 1970.

Method of Calculation

The income level figures were calculated as follows:

$$\text{Adjusted per Capita Income} = \frac{\text{Metropolitan Area Per Capita Income}}{\text{Index of Relative Total Cost of Moderate Budget for Family of Four}}$$

The rate of change was calculated using the following formula:

$$\text{Annual Average Rate of Change} = \frac{\text{Adjusted Income (latest)} - \text{Adjusted Income (earlier)}}{\text{Adjusted Income (earlier)}} \div \text{Number of Years between latest and earlier data}$$

Caveats

1. Per capita income has certain shortcomings as an accurate measure of standard of living. For instance, it includes all governmental transfer payments, but does not take account of non-monetary income such as free recreational facilities, free or subsidized school lunches, food stamps, etc. It also does not take into account differences in the average size of households or the number of wage earners per household. It was used as the best yearly estimate available from a reliable source.
2. The cost of a moderate income budget for a family of four (about $10,255 in 1969) does not accurately reflect inter-area cost differences for larger or smaller sized families or those with higher or lower incomes. An index of comparative costs is presented in Table A-8 (p.65).
3. The initial report used the Consumer Price Index to adjust the 1966 and 1967 income figures in order to calculate the 1966-67 rate of change. This was necessary because Family Budget data was not available for years before 1967.

TABLE A-6
ADJUSTED PER CAPITA INCOME* (RECENT LEVELS)
(An Income Level Indicator)

Metropolitan Area	1967[a]	(Rank)	1968	(Rank)[b]	1969	(Rank)[b]	Metropolitan Area
New York	$3,932	(3)	$4,275	(2)	$4,513	(4)	New York
L.A./Long Beach	3,911	(5)	4,199	(4)	4,635	(3)	L.A./Long Beach
Chicago	3,932	(4)	4,138	(5)	4,498	(5)	Chicago
Philadelphia	3,513	(12)	3,788	(13)	3,949	(14)	Philadelphia
Detroit	3,966	(1)	4,359	(1)	4,724	(1)	Detroit
Boston	3,318	(17)	3,605	(17)	3,822	(17)	Boston
S.F./Oakland	3,956	(2)	4,238	(3)	4,638	(2)	S.F./Oakland
WASHINGTON	3,682	(7)	3,990	(8)	4,232	(8)	WASHINGTON
Pittsburgh	3,400	(16)	3,639	(15)	3,966	(13)	Pittsburgh
St. Louis	3,552	(10)	3,830	(11)	3,993	(12)	St. Louis
Cleveland	3,650	(9)	3,905	(9)	4,224	(9)	Cleveland
Baltimore	3,417	(15)	3,800	(12)	3,935	(16)	Baltimore
Houston	3,486	(13)	3,637	(16)	4,037	(11)	Houston
Minn./St. Paul	3,677	(8)	4,111	(6)	4,375	(6)	Minn./St. Paul
Dallas	3,721	(6)	4,034	(7)	4,357	(7)	Dallas
Cincinnati	3,432	(14)	3,734	(14)	4,046	(10)	Cincinnati
Milwaukee	3,524	(11)	3,848	(10)	3,939	(15)	Milwaukee
Buffalo	3,088	(18)	3,354	(18)	3,628	(18)	Buffalo
AVERAGE	$3,620		$4,114		$4,195		AVERAGE

* Per capita personal income where received, adusted for metropolitan area cost of living differences.
a/These data appeared in the initial version of this report.
b/The lower rankings are assigned to the higher adjusted income figures. See Explanatory Notes, page 62.

TABLE A-7

ADJUSTED PER CAPITA INCOME* (RECENT ANNUAL AVERAGE CHANGES)

(An Income Level Indicator)

Metropolitan Area	1967-69	(Rank)[a]	1967-68	(Rank)	1968-69	(Rank)	Metropolitan Area
New York	+ 7.4%	(14)	+ 8.7%	(6)	+ 5.6%	(14)	New York
L.A./Long Beach	9.3	(3)	7.3	(13)	10.4	(2)	L.A./Long Beach
Chicago	7.2	(15)	5.2	(17)	8.7	(5)	Chicago
Philadelphia	6.2	(17)	7.8	(12)	4.2	(16)	Philadelphia
Detroit	9.6	(1)	9.9	(3)	7.5	(10)	Detroit
Boston	7.6	(11)	8.6	(7)	6.0	(13)	Boston
S.F./Oakland	8.6	(6)	7.1	(14)	9.4	(3)	S.F./Oakland
WASHINGTON	7.5	(13)	8.4	(10)	6.1	(12)	WASHINGTON
Pittsburgh	8.3	(8)	7.0	(15)	9.0	(4)	Pittsburgh
St. Louis	6.2	(16)	7.8	(11)	4.3	(15)	St. Louis
Cleveland	7.9	(10)	7.0	(16)	8.2	(7-8)	Cleveland
Baltimore	7.6	(12)	11.2	(2)	3.6	(17)	Baltimore
Houston	7.9	(9)	4.3	(18)	11.0	(1)	Houston
Minn./St. Paul	9.5	(2)	11.8	(1)	6.4	(11)	Minn./St. Paul
Dallas	8.5	(7)	8.4	(9)	8.0	(9)	Dallas
Cincinnati	8.9	(4)	8.8	(5)	8.4	(6)	Cincinnati
Milwaukee	5.9	(18)	9.1	(4)	2.5	(18)	Milwaukee
Buffalo	8.7	(5)	8.6	(8)	8.2	(7-8)	Buffalo
AVERAGE	7.9%		8.1%		7.1%		AVERAGE

* Per capita personal income where received, adjusted for metropolitan area cost of living differences. See Explanatory Notes, page 62.

a/The lower rankings are assigned to the larger rates of change.

TABLE A-8
ADJUSTED PER CAPITA INCOME* 1969, (SOURCE DATA)

Metropolitan Area	Per Capita Income 1969	(Rank)[a]	Adjusted Per Capita Income 1969	(Rank)	Total Cost of Moderate Budget for Family of Four 1969	(Rank)	Index of Cost of Moderate Budget 1969	(Rank)
New York	$5,055	(1)	$4,513	(4)	$11,247	(2)	112	(1-2)
L.A./Long Beach	4,728	(3)	4,635	(3)	10,247	(9)	102	(9-10)
Chicago	4,678	(4)	4,498	(5)	10,452	(7)	104	(6)
Philadelphia	4,028	(12)	3,949	(14)	10,221	(10)	102	(9-10)
Detroit	4,677	(5)	4,724	(1)	9,949	(13)	99	(13)
Boston	4,281	(9)	3,822	(17)	11,253	(1)	112	(1-2)
S.F./Oakland	5,009	(2)	4,638	(2)	10,837	(3)	108	(3)
WASHINGTON	4,359	(8)	4,232	(8)	10,390	(8)	103	(8)
Pittsburgh	3,807	(17)	3,966	(13)	9,684	(16)	96	(16)
St. Louis	3,993	(13)	3,993	(12)	10,019	(12)	100	(12)
Cleveland	4,393	(7)	4,224	(9)	10,470	(6)	104	(7)
Baltimore	3,856	(16)	3,935	(16)	9,898	(14)	98	(14)
Houston	3,674	(18)	4,037	(11)	9,176	(18)	91	(18)
Minn./St. Paul	4,419	(6)	4,375	(6)	10,191	(11)	101	(11)
Dallas	4,052	(11)	4,357	(7)	9,340	(17)	93	(17)
Cincinnati	3,925	(14)	4,046	(10)	9,736	(15)	97	(15)
Milwaukee	4,215	(10)	3,939	(15)	10,739	(5)	107	(4-5)
Buffalo	3,882	(15)	3,628	(18)	10,747	(4)	107	(4-5)
AVERAGE*	$4,281		$4,195		$10,255		102	

* Per capita personal income where received, adjusted for metropolitan area cost of living differences. See Explanatory Notes, page 62.

a/The lower rankings are assigned to the higher incomes or higher costs.

COST OF HOUSING - EXPLANATORY NOTES

Data Sources

U.S. Department of Labor, "New BLS Budgets Provide Yardsticks for Measuring Family Living Costs," Monthly Labor Review, April 1969, p.3. (1967 data). U.S. Department of Labor, BLS Bulletin 1570-5, (1968 data); and U.S. Department of Labor, Bureau of Labor Statistics, "Three Budgets for an Urban Family of Four Persons Final Spring 1969 Cost Estimates," (1969 data).

Method of Calculation

The housing costs for a moderate income family of four were taken directly from the listed sources. The rates of change were calculated as follows:

$$\text{Annual Average Rate of Change} = \frac{\text{Housing Data (latest)} - \text{Housing Data (earlier)}}{\text{Housing Data (earlier)}} \div \text{Number of Years between latest and earlier data}$$

Caveats

1. These housing costs for a moderate family of four do not accurately reflect differences in costs for different parts of a given metropolitan area, for larger or smaller families or for those families with higher or lower standards of living.
2. These costs include renter and homeowner costs (weighted 25% renter and 75% homeowner), house furnishings, and household operations. Interest and principal payments are those for a home bought 8 years ago. (The Consumer Price Index (CPI) housing component assumes current mortgage costs and shows a higher rate of change.) An index of the 1969 moderate cost of living for these metropolitan areas is presented in Table A-8 (p. 65).
3. The family budgets were designed primarily to compare similar levels of living across different metropolitan areas at a given point in time, while the CPS was designed to measure change in the cost of living for each individual area. Therefore, the rate of change data presented here is of more value as a measure of relative change between the metropolitan areas than as a measure of the absolute amount of change in each area.
4. Two housing indicators from the 1970 Census have recently become available, and they are presented for reference in Table A-9. The plumbing indicator suffers from the fact that only a very small fraction of housing units do not qualify. The overcrowding measure does not take into account the size and composition of the family (e.g., children of the same sex can share rooms) nor the amount of uncounted space (e.g., an unfinished basement, or various farm buildings). A factor of 1.5 persons/room would be a better overcrowding measure (and will be available from the Census) but it will also encompass only a small proportion of all housing.

Table A-9
COST OF HOUSING* (RECENT RATES)
(A Housing Indicator)

Metropolitan Area	1967[a]	(Rank)[b]	1968[a]	(Rank)[b]	1969	(Rank)[b]	Metropolitan Area
New York	$2,637	(17)	$2,727	(17)	$2,888	(17)	New York
L.A./Long Beach	2,189	(7)	2,278	(8)	2,419	(10)	L.A./Long Beach
Chicago	2,555	(16)	2,617	(15)	2,680	(13)	Chicago
Philadelphia	2,140	(6)	2,222	(6)	2,351	(9)	Philadelphia
Detroit	2,120	(5)	2,208	(5)	2,258	(5)	Detroit
Boston	2,728	(18)	2,832	(18)	2,976	(18)	Boston
S.F./Oakland	2,411	(13)	2,578	(13)	2,696	(14)	S.F./Oakland
WASHINGTON	2,316	(10)	2,406	(11)	2,463	(11)	WASHINGTON
Pittsburgh	1,963	(3)	2,032	(3)	2,144	(3)	Pittsburgh
St. Louis	2,247	(9)	2,315	(9)	2,344	(8)	St. Louis
Cleveland	2,529	(15)	2,646	(16)	2,742	(15)	Cleveland
Baltimore	2,003	(4)	2,056	(4)	2,163	(4)	Baltimore
Houston	1,844	(1)	1,927	(1)	1,980	(1)	Houston
Minn./St. Paul	2,323	(11)	2,392	(10)	2,326	(6)	Minn./St. Paul
Dallas	1,923	(2)	2,005	(2)	2,076	(2)	Dallas
Cincinnati	2,190	(8)	2,272	(7)	2,327	(7)	Cincinnati
Milwaukee	2,436	(14)	2,584	(14)	2,757	(17)	Milwaukee
Buffalo	2,382	(12)	2,498	(12)	2,591	(12)	Buffalo
AVERAGE	$2,276		$2,366		$2,455		

* Cost of housing for a moderate income family of four. (This is a composite measure of renter [25%] and homeowner [75%] costs.) In addition to the cost of the dwelling unit, it includes house-furnishing and household operation expenses. The 1967 metropolitan area average total cost for this moderate standard of living was about $9,200. (The 1969 total cost was $10,279; for Washington, D. C., it was $10,390). See Explanatory Notes, page 66.

a/These data appeared in the initial version of this report.

b/The lower rankings are assigned to the lower costs of housing.

TABLE A-10
COST OF HOUSING* (RECENT ANNUAL AVERAGE CHANGES)
(A Housing Indicator)

Metropolitan Area	1967-69	(Rank) [b]	1967-68 [a]	(Rank)	1968-69	(Rank)	Metropolitan Area
New York	+ 4.8%	(14)	+ 3.4%	(5)	+ 5.9%	(16)	New York
L.A./Long Beach	+ 5.3	(16)	+ 4.1	(11)	+ 6.2	(17)	L.A./Long Beach
Chicago	+ 2.4	(3)	+ 2.4	(1)	+ 2.4	(4-6)	Chicago
Philadelphia	+ 5.0	(15)	+ 3.8	(8-9)	+ 5.8	(15)	Philadelphia
Detroit	+ 3.3	(6)	+ 4.2	(12)	+ 2.3	(3)	Detroit
Boston	+ 4.5	(12)	+ 3.8	(8-9)	+ 5.1	(12)	Boston
S.F./Oakland	+ 6.0	(17-18)	+ 6.9	(18)	+ 4.6	(11)	S.F./Oakland
WASHINGTON	+ 3.2	(5)	+ 3.9	(10)	+ 2.4	(4-6)	WASHINGTON
Pittsburgh	+ 4.6	(13)	+ 3.5	(6)	+ 5.5	(14)	Pittsburgh
St. Louis	+ 2.2	(2)	+ 3.0	(4)	+ 1.3	(2)	St. Louis
Cleveland	+ 4.2	(10)	+ 4.6	(15)	+ 3.6	(9)	Cleveland
Baltimore	+ 4.0	(8-9)	+ 2.6	(2)	+ 5.2	(13)	Baltimore
Houston	+ 3.7	(7)	+ 4.5	(14)	+ 2.8	(7)	Houston
Minn./St. Paul	+ 0.06	(1)	+ 2.9	(3)	- 2.8	(1)	Minn./St. Paul
Dallas	+ 4.0	(8-9)	+ 4.3	(13)	+ 3.5	(8)	Dallas
Cincinnati	+ 3.1	(4)	+ 3.7	(7)	+ 2.4	(4-6)	Cincinnati
Milwaukee	+ 6.0	(17-18)	+ 4.9	(16-17)	+ 6.7	(18)	Milwaukee
Buffalo	+ 4.4	(11)	+ 4.9	(16-17)	+ 3.7	(10)	Buffalo
AVERAGE	+ 3.9%		+ 4.0%		+ 3.3%		AVERAGE

* These figures are for a house 7-8 years old, and do not reflect recent high mortgage rates. See Explanatory Notes, page 66.

a/These data appeared in the initial version of this report.

b/The lower rankings are assigned to the lower rates of change.

TABLE A-11

TWO MEASURES OF HOUSING QUALITY (1970 CENSUS DATA)

Metropolitan Area	Occupied Households	
	% Lacking Some or all Plumbing a/	% With 1.01 or More Persons/Room b/
New York	2.4% (8)	8.9% (15)
L.A./Long Beach	1.3 (1)	8.5 (13)
Chicago	2.7 (10)	8.2 (12)
Philadelphia	1.8 (3-5)	5.5 (2-3)
Detroit	1.8 (3-5)	7.8 (11)
Boston	3.2 (15)	5.7 (4)
S.F./Oakland	2.9 (11)	6.1 (6)
WASHINGTON	1.8 (3-5)	6.9 (9)
Pittsburgh	4.3 (17)	6.0 (5)
St. Louis	4.0 (16)	10.0 (17)
Cleveland	1.7 (2)	5.5 (2-3)
Baltimore	2.6 (9)	7.1 (10)
Houston	3.0 (12)	10.1 (18)
Minn./St. Paul	3.1 (13-14)	6.7 (7)
Dallas	2.3 (7)	8.6 (14)
Cincinnati	4.7 (18)	9.3 (16)
Milwaukee	3.1 (13-14)	6.8 (8)
Buffalo	2.1 (6)	5.3 (1)
AVERAGE: 18 AREAS	2.7%	7.4%
LARGER SMSA'S c/	3.0%	7.7%
ALL U.S.	6.0%	8.2%

Source: U.S. Department of Commerce, Statistical Abstract of the United States, 1971, p.838. See Explanatory Notes, page 66.

a/Lacks any of the following: hot and cold piped water, flush toilet, bathtub or shower--inside the structure and for the exclusive use of the occupants of the unit. b/Number of persons divided by the number of rooms in a housing unit. c/Over 200,000 population.

INFANT MORTALITY RATES - EXPLANATORY NOTES

Data Sources

Vital Statistics of the United States, National Center for Health Statistics, U.S. Department of Health, Education and Welfare (U.S. Government Printing Office), Volume II, Part B, Table 7-4 and Volume I, Table 1-53, from 1962, 1966, 1967 and 1968.

Method of Calculation

The infant mortality rates were calculated by dividing area deaths under one year by total area live births for the year in question. The rates of change were calculated as follows:

$$\text{Annual Average Rate of Change} = \frac{\text{Infant Mortality Rate (latest)} - \text{Infant Mortality Rate (earlier)}}{\text{Infant Mortality Rate (earlier)}} \div \text{Number of Years between latest and earlier data}$$

Caveats

1. Infant mortality is a commonly accepted measure of community health. It does not explicitly measure the health of the adult population, but it does relate to maternal health, and has been found to correlate with income which is associated with many other health factors. Other indicators available from the above source include neo-natal mortality (including late period miscarriages, still births, and deaths during the first 28 days of life), and mortality data for 60 ailments. Data are also available from an annual HEW Health Survey on the number of doctors, dentists and hospital beds in each metropolitan area. Data on the cost of medical care in each metropolitan area are available from the BLS standard budgets, and changes in medical costs can be obtained from the Consumer Price Index.

2. The data used were reported by residence of mother rather than by community where birth occurred. The data were obtained from a 50% sample of microfilmed birth certificates.

3. These data do not include "still births" (babies born dead), late-period (6-9 month) miscarriages, and child deaths occurring later than one-year after birth.

4. Despite a revision of the International Lists of Causes of Death (see note #4, Suicide Rate, p.76), the 1967 and 1968 rates are comparable since all infant deaths were reported in each version.

TABLE A-12

METROPOLITAN INFANT MORTALITY RATES* (RECENT LEVELS)

(A Health Indicator)

Metropolitan Area	1962	(Rank)[b]	1966[a]	(Rank)	1967[a]	(Rank)	1968	(Rank)	Metropolitan Area
New York	25.7	(14)	23.2	(11)	22.7	(13)	21.6	(9)	New York
L.A./Long Beach	22.9	(7)	21.0	(5)	20.0	(4)	18.9	(2-3)	L.A./Long Beach
Chicago	24.7	(13)	26.3	(18)	24.4	(17)	24.4	(18)	Chicago
Philadelphia	26.1	(16)	23.9	(12)	24.9	(18)	23.4	(17)	Philadelphia
Detroit	24.3	(10)	23.0	(10)	22.0	(11)	22.2	(12)	Detroit
Boston	22.1	(5)	20.3	(2)	19.4	(2)	20.2	(6)	Boston
S.F./Oakland	22.3	(6)	20.5	(3)	19.3	(1)	18.9	(2-3)	S.F./Oakland
WASHINGTON	28.3	(18)	24.9	(17)	20.7	(7)	19.8	(5)	WASHINGTON
Pittsburgh	23.3	(8)	21.5	(6)	21.4	(9)	22.1	(11)	Pittsburgh
St. Louis	24.6	(12)	24.1	(14)	24.1	(16)	21.8	(10)	St. Louis
Cleveland	24.4	(11)	20.7	(4)	21.1	(8)	21.3	(8)	Cleveland
Baltimore	27.3	(17)	24.3	(15)	23.2	(14)	23.0	(15)	Baltimore
Houston	25.7	(15)	24.6	(16)	21.9	(10)	23.1	(16)	Houston
Minn./St. Paul	20.6	(1)	19.5	(1)	19.7	(3)	18.6	(1)	Minn./St. Paul
Dallas	23.8	(9)	24.0	(13)	23.2	(15)	22.8	(14)	Dallas
Cincinnati	21.1	(2)	22.3	(9)	20.5	(6)	20.3	(7)	Cincinnati
Milwaukee	21.3	(3)	21.5	(8)	20.2	(5)	19.2	(4)	Milwaukee
Buffalo	21.9	(4)	21.5	(7)	22.3	(12)	22.3	(13)	Buffalo
AVERAGE	23.9		22.6		21.7		21.3		AVERAGE

* Infant deaths (under one year) per 1,000 live births. See Explanatory Notes, page 70.

a/These data appeared in the initial version of this report.

b/The lower rankings are assigned to the lower infant mortality rates.

TABLE A-13

METROPOLITAN INFANT MORTALITY RATES* (RECENT ANNUAL AVERAGE CHANGES)

(A Health Indicator)

Metropolitan Area	1962-67	(Rank)[b]	1962-68	(Rank)	1966-67[a]	(Rank)	1967-68	(Rank)	Metropolitan Area
New York	- 2.3%	(8)	- 2.7%	(3)	- 1.9%	(12)	- 4.9%	(6)	New York
L.A./Long Beach	- 2.5	(6)	- 2.9	(2)	- 5.1	(7)	- 5.4	(4)	L.A./Long Beach
Chicago	- 0.2	(17)	- 0.2	(17)	- 6.9	(4)	- 0.3	(13)	Chicago
Phiadelphia	- 0.9	(12)	- 1.7	(8)	+ 4.2	(18)	- 5.8	(2)	Philadelphia
Detroit	- 1.9	(9)	- 1.4	(13)	- 4.1	(10)	+ 1.1	(14)	Detroit
Boston	- 2.5	(7)	- 1.4	(12)	- 4.6	(9)	+ 4.3	(16)	Boston
S.F./Oakland	- 2.7	(5)	- 2.5	(5)	- 5.6	(6)	- 2.3	(8)	S.F./Oakland
WASHINGTON	- 5.4	(1)	- 5.0	(1)	- 16.7	(1)	- 4.3	(7)	WASHINGTON
Pittsburgh	- 1.6	(10)	- 0.9	(14)	- 0.2	(13)	+ 3.0	(17)	Pittsburgh
St. Louis	- 0.4	(16)	- 1.9	(7)	- 0.2	(14)	- 9.6	(1)	St. Louis
Cleveland	- 2.8	(4)	- 2.1	(6)	+ 2.2	(16)	+ 1.1	(15)	Cleveland
Baltimore	- 3.0	(2)	- 2.6	(4)	- 4.7	(8)	- 0.7	(11)	Baltimore
Houston	- 3.0	(3)	- 1.7	(9)	- 10.8	(2)	+ 5.5	(18)	Houston
Minn./St. Paul	- 0.9	(13)	- 1.6	(11)	+ 0.9	(15)	- 5.5	(3)	Minn./St. Paul
Dallas	- 0.5	(15)	- 0.7	(15)	- 3.4	(11)	- 1.9	(9)	Dallas
Cincinnati	- 0.5	(14)	- 0.6	(16)	- 7.9	(3)	- 0.8	(10)	Cincinnati
Milwaukee	- 1.1	(11)	- 1.6	(10)	- 6.4	(5)	- 5.0	(5)	Milwaukee
Buffalo	+ 0.4	(18)	+ 0.3	(18)	+ 4.0	(17)	- 0.3	(12)	Buffalo
AVERAGE	- 1.7%		- 1.7%		- 3.7%		- 1.8%		AVERAGE

* Infant deaths (under one year) per 1,000 live births. See Explanatory Notes, page 70.

a/These data appeared in the initial version of this report.

b/The lower rankings are assigned to the higher negative rates of change.

REPORTED SUICIDE RATES - EXPLANATORY NOTES

Data Sources

Vital Statistics of the United States, National Center for Health Statistics, U.S. Department of Health, Education and Welfare (U.S. Government Printing Office), Volume II, Part B, Table 7-4, from 1962, 1966, 1967 and 1968 editions.

U.S. Department of Commerce, Statistical Abstract of the United States, 1971, (1970 population).

Method of Calculation

Population estimates for the years between 1960 and 1970 were obtained by linear interpolation between the 1960 and 1970 Census figures for each area.

The total number of suicides for each area was divided by the population estimate for the appropriate year to give the rate per 100,000 population. The rates of change were calculated as follows:

$$\text{Annual Average Rate of Change} = \frac{\text{Suicide Rate (latest)} - \text{Suicide Rate (earlier)}}{\text{Suicide Rate (earlier)}} \div \text{Number of Years between latest and earlier data.}$$

Caveats

1. The number of suicides is a measure of only one aspect of mental health. It is usually a measure of one type of serious depression. Data on morbidity rates from cirrhosis of the liver (an indicator of alcoholism) are also available. Other indicators used in this report (reported crime, narcotics addiction) might also reflect the mental health of the community.

2. The data were subject to various forms of under reporting. It is believed that the stigma against suicide causes under reporting among the middle and upper classes. There is also evidence that it is under reported by the lower classes (especially young nonwhites) due to the inconvenience and expense of the often required autopsy.

(Explanatory Notes continued on page 76)

TABLE A-14

METROPOLITAN REPORTED SUICIDE RATES* (RECENT LEVELS)

(A Mental Health Indicator)

Metropolitan Area	1962	(Rank)[b]	1966[a]	(Rank)	1967[a]	(Rank)	1968	(Rank)	Metropolitan Area
New York	8.6	(4)	8.5	(5)	7.3	(2)	5.3	(1)	New York
L.A./Long Beach	20.9	(18)	22.8	(17)	22.8	(17)	20.1	(17)	L.A./Long Beach
Chicago	8.9	(5)	8.9	(8)	8.2	(4)	8.2	(3)	Chicago
Philadelphia	9.6	(10)	9.4	(9)	9.4	(8)	10.6	(13)	Philadelphia
Detroit	9.0	(7)	10.4	(12)	10.5	(14)	10.8	(15)	Detroit
Boston	7.9	(3)	8.4	(3)	8.5	(7)	9.7	(10)	Boston
S.F./Oakland	20.3	(17)	24.2	(18)	23.7	(18)	21.5	(18)	S.F./Oakland
WASHINGTON	9.7	(12)	9.7	(10)	8.3	(5)	9.0	(7)	WASHINGTON
Pittsburgh	9.0	(6)	8.5	(6)	8.5	(6)	9.9	(11)	Pittsburgh
St. Louis	10.7	(16)	9.9	(11)	10.4	(13)	8.3	(4)	St. Louis
Cleveland	10.2	(15)	10.9	(14)	10.6	(15)	11.0	(16)	Cleveland
Baltimore	9.5	(9)	11.2	(16)	8.1	(3)	10.6	(14)	Baltimore
Houston	7.6	(1)	8.7	(7)	11.1	(16)	10.6	(12)	Houston
Minn./St. Paul	9.7	(11)	11.0	(15)	9.5	(9)	8.5	(5)	Minn./St. Paul
Dallas	9.8	(13)	7.4	(2)	9.8	(10)	8.9	(6)	Dallas
Cincinnati	9.5	(8)	8.4	(4)	10.2	(12)	9.2	(9)	Cincinnati
Milwaukee	10.2	(14)	11.0	(13)	9.8	(11)	9.1	(8)	Milwaukee
Buffalo	7.9	(2)	5.5	(1)	6.1	(1)	8.1	(2)	Buffalo
AVERAGE	10.5		10.8		10.7		10.5		AVERAGE

* Reported suicides per 100,000 population. See Explanatory Notes, page 74.

a/These data appeared in the initial version of this report.

b/The lower rankings are assigned to the lower rates.

REPORTED SUICIDE RATES - EXPLANATORY NOTES (CONTINUED)

3. The data do not record attempted unsuccessful suicides, or some fraction of auto deaths and other fatal accidents which may involve self-destructive tendencies. They do include all deaths which occurred as a result of a previously self-inflicted injury.

4. The International Lists of Causes of Death were revised (Eighth Revision) between the 1967 and 1968 reporting periods. A study was conducted in which 1966 data were compared using the seventh and eighth (new) revision standards (Monthly Vital Statistics Report, Vol. 17, No. 8 Supplement, October 24, 1968; Public Health Service, DHEW, Washington, D. C.). For suicides, the new classification resulted in a 6% decrease in the number of deaths. Therefore, if there were actually no change, we would still expect an average 6% decrease in the 1967-68 suicide change rate, and an annual average decrease in the 1962-68 change rate of 1%.

TABLE A-15

METROPOLITAN REPORTED SUICIDE RATES* (RECENT ANNUAL AVERAGE CHANGES)

(A Mental Health Indicator)

Metropolitan Area	1962-67	(Rank)[b]	1962-68	(Rank)	1966-67[a]	(Rank)	1967-68	(Rank)	Metropolitan Area
New York	+ 3.0%	(3)	- 6.3%	(1)	- 13.8%	(3)	- 27.0%	(1)	New York
L.A./Long Beach	+ 1.8	(15)	- 0.6	(9)	+ 0.9	(12)	- 11.6	(3)	L.A./L. Beach
Chicago	- 1.5	(5)	- 1.8	(6)	- 7.6	(5)	- 0.5	(10)	Chicago
Philadelphia	- 0.5	(9)	+ 1.8	(14)	- 0.1	(9)	+ 13.1	(14)	Philadelphia
Detroit	+ 3.2	(16)	+ 3.3	(16)	+ 0.8	(11)	+ 3.3	(11)	Detroit
Boston	+ 1.6	(14)	+ 3.8	(17)	+ 1.2	(13)	+ 13.7	(15)	Boston
S.F./Oakland	+ 3.4	(17)	+ 1.0	(11)	- 2.1	(8)	- 9.2	(6)	S.F./Oakland
WASHINGTON	- 2.9	(4)	- 1.3	(7)	- 14.0	(2)	+ 8.1	(13)	WASHINGTON
Pittsburgh	- 1.0	(6)	+ 1.7	(13)	+ 0.5	(10)	+ 16.4	(16)	Pittsburgh
St. Louis	- 0.7	(8)	- 3.8	(2)	+ 4.2	(14)	- 20.0	(2)	St. Louis
Cleveland	+ 0.6	(12)	+ 1.2	(12)	- 3.5	(7)	+ 4.3	(12)	Cleveland
Baltimore	- 3.1	(2)	+ 1.9	(15)	- 28.2	(1)	+ 31.9	(17)	Baltimore
Houston	+ 9.2	(18)	+ 6.5	(18)	+ 26.7	(17)	- 4.5	(9)	Houston
Minn./St. Paul	- 0.3	(10)	- 2.0	(3)	- 13.1	(4)	- 10.4	(4)	Minn./St. Paul
Dallas	- 0.04	(11)	- 1.5	(5)	+ 32.1	(18)	- 8.6	(7)	Dallas
Cincinnati	+ 1.5	(13)	- 0.6	(8)	+ 21.1	(16)	- 10.3	(5)	Cincinnati
Milwaukee	- 0.8	(7)	- 1.8	(4)	- 7.2	(6)	- 6.8	(8)	Milwaukeee
Buffalo	- 4.7	(1)	+ 0.3	(10)	+ 10.6	(15)	+ 33.0	(18)	Buffalo
AVERAGE	+ 1.5%		+ 2.4%		+ 4.7%		+ 8.2%		AVERAGE

* Reported sucides per 100,000 population. See Explanatory Notes, page 74.

a/These data appeared in the initial version of this report.

b/The lower rankings are assigned to the larger negative (or smaller positive) rates.

REPORTED ROBBERY RATES - EXPLANATORY NOTES

Data Sources

Federal Bureau of Investigation, Uniform Crime Reports, 1964 through 1970.

Method of Calculation

The reported robbery rate data were taken directly from the sources cited. The rates of change were calculated as follows:

$$\text{Annual Average Rate of Change} = \frac{\text{Reported Robbery Rate(latest)} - \text{Reported Robbery Rate(earlier)}}{\text{Reported Robbery Rate(earlier)}} \div \text{Number of Years between latest and earlier data}$$

Caveats

1. The data used include only robberies reported to the police. The actual number of robberies occurring may be much higher,[a] and for various reasons there may be differences between different cities in the percentage of robberies that are reported. Also, the robbery figure includes both attempted robberies and those successfully completed. When more than one type of crime is committed only the "most serious" criminal act is reported in the Uniform Crime Reports. Indicators that are not subject to such reporting variations are badly needed (improved police protection might result in higher reported crime rates, since increased confidence in the police might results in a higher reporting rate). A victimization study which will result in a new crime index based on victimization rates is under development by the LEAA. False fire alarm rates are another possible indicator of a breakdown in public order.

2. The FBI monitors, but is not able to exert much "quality control" over the data reported by different cities. Accordingly, the extent to which different cities exercise the same record-keeping precision relative to crime data is not known. However, each year the data from certain cities are not used in computing national trends because the FBI has determined that the data was influenced by changes in reporting practices and is not comparable with previous year figures. The footnotes in Tables A-16 and A-17 point out the cities and years where this caveat is applicable.

(Explanatory Notes continued page 80)

a/The President's Crime Commission (1967) estimated that the true robbery rate is about 50% higher than the reported rate.

TABLE A-16
METROPOLITAN REPORTED ROBBERY RATES* (RECENT LEVELS)
(A Public Order Indicator)

Metropolitan Area	1964	(Rank)[b]	1967[a]	(Rank)	1968[a]	(Rank)	1969	(Rank)	1970	(Rank)	Metropolitan Area
New York[2]	76[c]	(8)	318[c]	(16)	485	(18)	522	(17)	665	(18)	New York[2]
L.A./Long Beach	171	(17)	234	(13)	273	(12)	286	(10)	307	(11)	L.A./Long Beach
Chicago	274	(18)	295	(15)	305	(13)	340	(13)	363	(14)	Chicago
Philadelphia	75	(7)	82	(6)	115	(6)	131	(5)	173	(6)	Philadelphia
Detroit[3]	153[c]	(16)	341[c]	(17)	378	(15)	477	(16)	649	(17)	Detroit[3]
Boston	41	(3)	69	(3)	97	(4)	122	(4)	136	(3)	Boston
S.F./Oakland	117	(13)	227	(12)	377	(14)	383	(14)	348	(13)	S.F./Oakland
WASHINGTON	129	(15)	263	(14)	379	(16)	524	(18)	504	(15)	WASHINGTON
Pittsburgh	59	(5)	98	(7)	150	(7)	143	(6)	145	(5)	Pittsburgh
St. Louis	122	(14)	170	(9)	220	(10)	248	(9)	280	(9)	St. Louis
Cleveland	93	(11)	189	(10)	186	(9)	290	(12)	288	(10)	Cleveland
Baltimore[4]	84[c]	(10)	353[c]	(18)	455[c]	(17)	468	(15)	564	(16)	Baltimore[4]
Houston	112	(12)	195	(11)	232	(11)	289	(11)	335	(12)	Houston
Minn./St. Paul	78	(9)	138	(8)	167	(8)	16	(7)	179	(7)	Minn./St. Paul
Dallas[5]	61[c]	(6)	80	(5)	86	(3)	184[c]	(8)	206[c]	(8)	Dallas[5]
Cincinnati	43	(4)	62	(2)	79	(2)	84	(2)	120	(2)	Cincinnati
Milwaukee	21	(1)	55	(1)	62	(1)	53	(1)	53	(1)	Milwaukee
Buffalo	39	(2)	77	(4)	107	(5)	110	(3)	145	(4)	Buffalo
AVERAGE	97		180		231		267		303		AVERAGE

* Reported robberies per 100,000 population. See Explanatory Notes, page 78.
a/These data appeared in the initial version of this report.
b/The lower rankings are assigned to the lower reported robbery rates.
c/Changes in reporting procedures caused the FBI to exclude data from the following cities when calculating national trends for the years indicated: 2/New York City-1964, 1967; 3/Detroit-1964, 1967; 4/Baltimore-1964, 1965, 1966, 1967, 1968; 5/Dallas-1964, 1969, 1970.

REPORTED ROBBERY RATES - EXPLANATORY NOTES (Continued)

3. The President's Crime Commission Report (1967) states that a number of large cities still do not have the central complaint bureaus and strong staffs required for accurate crime reporting. Also, it has been alleged by some that certain cities may over or under report the crime count for various reasons. City/suburban crime rate ratios change drastically if reported burglaries instead of robberies are tabulated. (See footnote, Appendix B, page 134.)

4. Reported robbery (defined by the FBI as "taking of anything of value from a person by use of force or threat of force"), was chosen as an indicator since it best represents crimes perpetrated by strangers ("crime in the streets") which is the subject of much concern today. However, a rise in the reported rate could result from a higher percentage of robberies being reported as well as from an actual increase in the number of robberies.

TABLE A-17
METROPOLITAN REPORTED ROBBERY RATES* (RECENT ANNUAL AVERAGE CHANGES)
(A Public Order Indicator)

Metropolitan Area	1964-69	(Rank)[b]	1964-70	(Rank)	1967-68[a]	(Rank)	1968-69	(Rank)	1969-70	(Rank)	Metropolitan Area
New York	+ 116.3%[c]	(18)	+ 129.2%[c]	(18)	+ 52.5%	(16)	+ 7.6%	(8)	+ 27.4%	(14)	New York
L.A./Long Beach	+ 12.1	(2)	+ 13.3	(2)	+ 16.7	(6)	+ 4.8	(7)	+ 7.3	(7)	L.A./Long Beach
Chicago	+ 4.8	(1)	+ 5.4	(1)	+ 3.4	(2)	+ 11.6	(9)	+ 6.8	(6)	Chicago
Philadelphia	+ 14.7	(3)	+ 21.8	(5)	+ 40.2	(13)	+ 13.6	(12)	+ 32.1	(16)	Philadelphia
Detroit	+ 44.2[c]	(15)	+ 54.0[c]	(16)	+ 10.9	(4)	+ 26.2	(15)	+ 36.1	(17)	Detroit
Boston	+ 37.3	(10)	+ 38.6	(12)	+ 40.6	(14)	+ 25.9	(14)	+ 11.5	(9)	Boston
S.F./Oakland	+ 42.9	(14)	+ 32.9	(9)	+ 66.1	(18)	+ 1.6	(4)	- 9.1	(2)	S.F./Oakland
WASHINGTON	+ 64.9	(16)	+ 48.4	(15)	+ 44.1	(15)	+ 38.3	(16)	- 3.8	(3)	WASHINGTON
Pittsburgh	+ 28.9	(7)	+ 24.3	(6)	+ 53.1	(17)	- 4.7	(2)	+ 1.4	(5)	Pittsburgh
St. Louis	+ 22.7	(6)	+ 21.6	(3-4)	+ 29.4	(11)	+ 12.7	(11)	+ 12.9	(11)	St. Louis
Cleveland	+ 42.8	(13)	+ 34.9	(11)	- 1.6	(1)	+ 55.8	(17)	- 0.7	(4)	Cleveland
Baltimore	+ 92.6[c]	(17)	+ 95.2[c]	(17)	+ 28.9[c]	(10)	+ 2.8	(6)	+ 20.5	(13)	Baltimore
Houston	+ 41.0	(11)	+ 33.2	(10)	+ 19.0	(7)	+ 24.7	(13)	+ 15.9	(12)	Houston
Minn./St. Paul	+ 22.4	(5)	+ 21.6	(3-4)	+ 21.0	(9)	- 1.5	(3)	+ 9.1	(8)	Minn./St. Paul
Dallas	+ 41.1[c]	(12)	+ 39.6[c]	(13)	+ 7.5	(3)	+ 113.5[c]	(18)	+ 12.0[c]	(10)	Dallas
Cincinnati	+ 17.9	(4)	+ 29.8	(8)	+ 21.0	(8)	+ 12.3	(10)	+ 42.9	(18)	Cincinnati
Milwaukee	+ 29.4	(8)	+ 25.4	(7)	+ 12.7	(5)	- 15.3	(1)	0.0	(1)	Milwaukee
Buffalo	+ 31.8	(9)	+ 45.3	(14)	+ 39.0	(12)	+ 2.3	(5)	+ 31.8	(15)	Buffalo
AVERAGE	+ 29.5%[d]		+ 28.3%[d]		+ 29.8%[e]		+ 12.9%[e]		+ 14.2%[e]		AVERAGE

* Reported robberies per 100,000 population. See Explanatory Notes, page 78.
a/These data appeared in the initial version of this report.
b/The lower rankings are assigned to the lower (or negative) rates of change.
c/These rates of change were not included by the FBI in calculating its national trends. (see footnotes, Table A-16).
d/Does not include data excluded by FBI (calculated for 14 areas).
e/Does not include data excluded by FBI (calculated for 17 areas).

METROPOLITAN NONWHITE/WHITE UNEMPLOYMENT RATES - EXPLANATORY NOTES

Data Sources

U.S. Department of Labor, Washington, D.C. Unemployment Declines in 20 Largest Urban Areas in 1968, March 6, 1969, Table 3, (for 1967 and 1968 data).

_____. Geographic Aspects of Unemployment in 1969, April 6, 1970, Table 5, (for 1969 data).

_____. Characteristics of Workers in Large States and SMSA's - 1970, Report 388, Table 2 (1970 data).

Methods of Calculation

White and nonwhite unemployment rates were taken directly from the data sources cited. The racial equality ratios were obtained by dividing the white unemployment rates into the nonwhite rates for each metropolitan area. The rates of change were calculated as follows:

$$\text{Annual Average Rate of Change} = \frac{\text{latest ratio - earlier ratio}}{\text{earlier ratio}} \div \text{Number of Years between latest and earlier data}$$

Caveats

1. Nonwhite unemployment data are not available for Boston, Minneapolis, Cincinnati, Milwaukee, Dallas and Buffalo because either the total nonwhite labor force numbers less than 50,000 or the number of nonwhite unemployed is less than 5,000. (The latter is a Bureau of Census requirement to protect anonymity of respondents.)
2. The unemployment rates used here are subject to substantial error, e.g., approximately ±15%.
3. See also caveats on Unemployment Indicator, page 54. The data used here come from the same source (The Current Population Survey - a 50,000 household monthly sample survey) and so suffer from the same limitations.
4. Similar ratios might have different meanings for different metropolitan areas since the proportion of teenagers, females and adult males is not necessarily similar for the white and nonwhite labor force nor for different metropolitan areas. Numerous alternate measures of racial equality can be developed from available data (infant mortality, educational achievement, etc.) Further discussion of alternate measures can be found in Blacks and Whites - An Experiment in Racial Indicators, 85-136-5, The Urban Institute, Washington, D.C., 1971.
5. The participation rates in the labor force for whites and nonwhites may vary for different cities. See data in Table A-3, page 57. In 1970 the average participation rate for the metropolitan areas covered averaged 61.5% for whites (varying from 69.3% to 54.2%) and 64.4% for Negro and Other Races (varying from 81.3% to 55.3%).

TABLE A-18
METROPOLITAN NONWHITE/WHITE UNEMPLOYMENT RATES* (RECENT LEVELS)
(A Racial Equality Indicator)
(12 Metropolitan Areas)

Metropolitan Area	1967[a]	(Rank)[b]	1968[a]	(Rank)	1969	(Rank)	1970	(Rank)	Metropolitan Area
New York	1.4	(1)	1.3	(1)	1.5	(3)	1.2	(1)	New York
L.A./Long Beach	1.5	(2)	2.0	(3)	1.8	(4)	1.3	(3)	L.A./Long Beach
Chicago	3.4	(9-11)	3.3	(12)	2.5	(8-9)	1.6	(6)	Chicago
Philadelphia	2.5	(5)	2.3	(6)	2.4	(6-7)	2.0	(9)	Philadelphia
Detroit	3.4	(9-11)	2.5	(7-8)	2.5	(8-9)	1.9	(8)	Detroit
S.F./Oakland	2.0	(4)	1.8	(2)	1.3	(1-2)	1.2	(2)	S.F./Oakland
WASHINGTON	1.6	(3)	2.2	(4-5)	1.3	(1-2)	1.8	(7)	WASHINGTON
Pittsburgh	3.0	(7)	3.1	(11)	1.9	(5)	1.4	(5)	Pittsburgh
St. Louis	4.2	(12)	2.7	(9)	2.8	(10)	2.4	(11)	St. Louis
Cleveland	3.1	(8)	3.0	(10)	3.1	(12)	4.0	(12)	Cleveland
Baltimore	3.4	(9-11)	2.5	(7-8)	2.4	(6-7)	1.4	(4)	Baltimore
Houston	2.6	(6)	2.2	(4-5)	3.0	(11)	2.3	(10)	Houston
AVERAGE	2.7		2.4		2.2		2.1		AVERAGE

* Ratio between nonwhite and white unemployment rates. Twelve metropolitan areas only. See Explanatory Notes, page 82.

a/These data appeared in the initial version of this report.

b/Ranked for 12 areas. The lower rankings are assigned to the lower ratios.

TABLE A-19

METROPOLITAN NONWHITE/WHITE UNEMPLOYMENT RATES* (RECENT ANNUAL AVERAGE CHANGES)

(A Racial Equality Indicator)

(12 Metropolitan Areas)

Metropolitan Area	67-70	(Rank)[b]	67-69	(Rank)	67-68[a]	(Rank)	68-69	(Rank)	69-70	(Rank)	Metropolitan Area
New York	- 4.8%	(8)	+ 3.6%	(10)	- 7.1%	(7)	+15.3%	(11)	-20.0%	(7)	New York
L.A./Long Beach	+ 4.4	(9)	+10.0	(12)	+33.5	(11)	-10.0	(5)	-27.8	(3)	L.A./Long Beach
Chicago	-17.6	(3)	-13.2	(5-6)	- 2.9	(8-9)	-24.2	(4)	-36.0	(2)	Chicago
Philadelphia	- 6.7	(7)	- 2.0	(8)	- 8.0	(6)	+ 4.3	(10)	-16.7	(8)	Philadelphia
Detroit	-14.7	(4)	-13.2	(5-6)	-26.4	(2-3)	0.0	(7)	-24.0	(5)	Detroit
S.F./Oakland	-13.3	(6)	-17.5	(3)	-10.0	(5)	-27.8	(3)	- 7.7	(10)	S.F./Oakland
WASHINGTON	+ 4.2	(11)	- 9.4	(7)	+37.5	(12)	-40.9	(1)	+38.5	(12)	WASHINGTON
Pittsburgh	-17.8	(2)	-18.3	(2)	+ 3.3	(10)	-38.7	(2)	-26.3	(4)	Pittsburgh
St. Louis	-14.3	(5)	-33.3	(1)	-35.7	(1)	+ 3.7	(9)	-14.3	(9)	St. Louis
Cleveland	+ 9.7	(12)	0.0	(9)	- 3.2	(8-9)	+ 3.3	(8)	+29.0	(11)	Cleveland
Baltimore	-19.6	(1)	-14.7	(4)	-26.4	(2-3)	- 4.0	(6)	-41.7	(1)	Baltimore
Houston	- 3.8	(10)	+ 7.7	(11)	-15.4	(4)	+36.4	(12)	-23.3	(6)	Houston
AVERAGE	- 8.6%		- 8.4%		- 5.1%		- 6.9%		-14.2%		AVERAGE

* Ratio between nonwhite and white unemployment rates. Twelve metropolitan areas only. See Explanatory Notes, page 82.

a/These data appeared in the initial version of this report.

b/Ranked for 12 metropolitan areas. The lower rankings are assigned to the larger negative (or smaller positive) rates of change.

PER CAPITA CONTRIBUTIONS TO UNITED FUNDS - EXPLANATORY NOTES

Data Source

1970 Metro I Campaign Analysis, Research and Systems Development Division, United Way of America, New York, N.Y., April 1970, page 6.

Method of Calculation

Per capita contributions were obtained from the document cited above. The rates of change were calculated as follows:

$$\text{Annual Average Rate of Change} = \frac{\text{Fund Contributions (latest)} - \text{Fund Contributions (earlier)}}{\text{Fund Contributions (earlier)}} \div \text{Number of Years Between latest and earlier data}$$

Caveats

1. Although this is the best available measure of community concern we could find, it is at best a rough approximation. The figures given do not include religious, hospital and other non-United Fund charities, and represent a varying proportion of the total charitable effort in each area. The proportion of the above figures which represent corporate, employee, and private citizen donations also varies among areas. However, these figures do provide a measure of the ability of an area to consolidate its charitable efforts in a single combined campaign. We would prefer to have included data on the percent of the population contributing to the United Fund Appeal, but such data are not available.

2. The geographic boundaries of the United Fund organization are locally determined; in most areas they roughly correspond to the metropolitan-area boundaries used for most of our measurements, with the following exceptions: New York and Philadelphia include primarily the central cities; while Pittsburgh and St. Louis include both the center cities and portions of the surrounding suburbs.

TABLE A-20
PER CAPITA CONTRIBUTIONS TO UNITED FUNDS* (RECENT LEVELS)
(A Community Concern Indicator)

United Fund Solicitation Area	1965	(Rank)[d]	1967[a]	(Rank)	1968[a]	(Rank)	1969	(Rank)	1970	(Rank)	United Fund Solicitation Area
New York	$1.25	(18)	$1.40	(18)	$1.42	(18)	$2.06[b]	(18)	$2.24	(18)	New York
L.A./Long Beach	3.00	(17)	3.27	(17)	3.56	(17)	3.71	(17)	3.64	(17)	L.A./Long Beach
Chicago	3.62	(15)	4.15	(14)	4.36	(14)	4.49	(15)	4.93	(15)	Chicago
Philadelphia	5.25	(9)	5.72	(9)	6.02	(9)	5.95	(10)	6.23	(10)	Philadelphia
Detroit	6.86	(4)	7.00	(4)	7.45	(4)	7.74	(5)	7.74	(7)	Detroit
Boston	5.14	(10)	5.61	(10)	5.88	(11)	5.94	(11)	5.68	(12)	Boston
S.F./Oakland	4.46	(13)	4.67	(13)	4.90	(13)	5.37	(13)	5.48	(13)	S.F./Oakland
WASHINGTON	4.31	(14)	3.80	(15)	4.16	(15)	4.54	(16)	4.79	(16)	WASHINGTON
Pittsburgh	7.27	(2)	7.95	(2)	8.34	(2)	9.27	(1)	9.06	(2)	Pittsburgh
St. Louis	6.89	(3)	6.94	(5)	7.42	(5)	7.79	(4)	7.78	(6)	St. Louis
Cleveland	7.97	(1)	8.44	(1)	8.85	(1)	9.23	(2)	9.17	(1)	Cleveland
Baltimore	3.35	(16)	3.66	(16)	3.79	(16)	4.71[c]	(14)	4.99	(14)	Baltimore
Houston	4.93	(11)	5.03	(12)	5.39	(12)	5.62	(12)	5.77	(11)	Houston
Minn./St. Paul	6.62	(5)	6.11	(8)	6.66	(8)	7.84	(3)	7.98	(5)	Minn./St. Paul
Dallas	4.69	(12)	5.38	(11)	5.95	(10)	6.34	(9)	6.42	(9)	Dallas
Cincinnati	6.31	(8)	6.77	(7)	7.11	(6)	7.24	(7)	8.11	(3)	Cincinnati
Milwaukee	6.60	(6)	6.83	(6)	6.97	(7)	7.08	(8)	7.33	(8)	Milwaukee
Buffalo	6.54	(7)	7.25	(3)	7.52	(3)	7.66	(8)	8.04	(4)	Buffalo
AVERAGE	$5.28		$5.55		$5.88		$6.25		$6.41		AVERAGE

* Per capita contributions to the United Fund Appeal during campaigns conducted in the Spring of specified year. See Explanatory Notes, page 86.

a/These data (slightly modified in later issues of source document) were presented in the initial version of this report.

b/First campaign to include Red Cross.

c/First campaign to include Catholic Charities and the Jewish Federation.

d/The lower rankings are assigned to the higher per capita contributions.

TABLE A-21
PER CAPITA CONTIBUTIONS TO UNITED FUNDS* (RECENT ANNUAL AVERAGE CHANGES)
(A Community Concern Indicator)

United Fund Solicitation Area	1965-70	(Rank)[d]	1967-68[a]	(Rank)	1969-70	(Rank)	United Fund Solicitation Area
New York	+ 15.8%[b]	(1)	+ 1.4%	(18)	+ 8.7%	(3)	New York
L.A./Long Beach	+ 4.3	(9)	+ 8.9	(4)	- 1.9	(16)	L.A./Long Beach
Chicago	+ 7.2	(4)	+ 5.1	(9)	+ 9.8	(2)	Chicago
Philadelphia	+ 3.7	(11)	+ 5.2	(8)	+ 4.7	(7)	Philadelphia
Detroit	+ 2	(15)	+ 6.4	(7)	0.0	(13)	Detroit
Boston	+ 2.1	(18)	+ 4.8	(14)	- 4.4	(18)	Boston
S.F./Oakland	+ 4.6	(8)	+ 4.9	(11-13)	+ 2.0	(10)	S.F./Oakland
WASHINGTON	+ 2.2	(16)	+ 9.5	(2)	+ 5.5	(5)	WASHINGTON
Pittsburgh	+ 4.9	(6)	+ 4.9	(11-13)	- 2.3	(17)	Pittsburgh
St. Louis	+ 2.6	(14)	+ 6.9	(6)	- 0.1	(14)	St. Louis
Cleveland	+ 3.0	(13)	+ 4.9	(11-13)	- 0.7	(15)	Cleveland
Baltimore	+ 9.8[c]	(2)	+ 3.8	(16)	+ 5.9	(4)	Baltimore
Houston	+ 3.4	(12)	+ 7.2	(5)	+ 2.7	(9)	Houston
Minn./St. Paul	+ 4.1	(10)	+ 9.0	(3)	+ 1.8	(11)	Minn./St. Paul
Dallas	+ 7.4	(3)	+ 10.6	(1)	+ 1.3	(12)	Dallas
Cincinnati	+ 5.7	(5)	+ 5.0	(10)	+ 12.0	(1)	Cincinnati
Milwaukee	+ 2.2	(17)	+ 2.0	(17)	+ 3.5	(8)	Milwaukee
Buffalo	+ 4.6	(7)	+ 3.7	(15)	+ 5.0	(6)	Buffalo
AVERAGE	+ 5.0%		+ 5.7%		+ 3.0%		AVERAGE

*Per capita contributions during campaign conducted in specified year. See Explanatory Notes, page 86.
a/These data (slightly modified in later issues of source document) were presented in intial version of this report. b/Red Cross was included in 1969 and 1970 campaigns. c/Catholic Charities and the Jewish Federation were included in 1969 and 1970 campaigns. d/The lower rankings are assigned to the higher rates of change.

VOTING IN PRESIDENTIAL ELECTIONS - EXPLANATORY NOTES*

Data Sources

U.S. Bureau of the Census, Population Characteristics - Voter Participation in 1968, Series P-20, No. 177, December 27, 1968, p.14.

_____. Estimates of the Population of States by Age, Series P-25, No. 420, October 3, 1969, p.2.

_____. Population Estimates and Projections, Estimates of the Population of 100 Metropolitan Areas, 1967 and 1968. Series P-25, No. 432, October 3, 1969, p.2.

U.S. Department of Commerce, Statistical Abstract of the United States, (U.S. Government Printing Office), 1966 and 1969.

Method of Calculation

These calculations were performed with 1964 and 1968 data. All figures were calculated to one decimal place, and then rounded off to the nearest percent.

Code: VAPMA = Voting Age Population Metropolitan Area
VAPS = Voting Age Population State
STP = State Total Population
MATP = Metropolitan Area Total Population
NVP = Number Voting for President

a) $VAPMA = \frac{VAPS \times MATP}{STP}$ % Voting = $\frac{NVP}{VAPMA}$

The rate of change was calculated as follows:

b) $\frac{1968\ (\%\ voting) - 1964\ (\%\ voting)}{1964\ (\%\ voting)}$

Caveats

1. The population estimates made by the Bureau of the Census in years between the decennial censuses are based on a variety of methods rather than by actual count.
2. Data are available for % voting-age population in each State, but not for each metropolitan area. To derive our measure, we assumed that the ratio of voting age population to total population was the same in the metropolitan area as it was in the State in which the largest metropolitan area city is located.
3. In producing this revised report we would have preferred to have obtained the over 21 years of age population for each metropolitan area for 1970 and 1960 and linearly extrapolated to obtain better 1964 and 1968 population figures for use in this revision. We were not able to obtain suitable 1960 figures, however, so we used our former estimates.
4. Eighteen year olds will be eligible to vote in 1972. Since the proportion of new voters varies among areas, the values for this indicator will change as a result of this factor, and should not be compared with their 1968 levels.

*This indicator has been reproduced from the initial report.

TABLE A-22
PERCENT VOTING IN PRESIDENTIAL ELECTIONS*
(A Citizen Participation Indicator)[a]

Metropolitan Area	% Presidential Vote		Percent Change	Area Ranking	
	1964	1968	1964-68[b]	% Change[c] 64-68	1968[d] Voting
New York	62%	57%	- 9%	17	14-15
Los Angeles	68	63	- 7	16	11-13
Chicago	74	70	- 5	11-13	2-4
Philadelphia	69	66	- 4	9-10	8
Detroit	70	68	- 3	6-8	5-6
Boston	72	70	- 3	6-8	2-4
San Francisco	70	67	- 5	11-13	7
WASHINGTON	45	46	+ 1	3	18
Pittsburgh	71	70	- 2	4-5	2-4
St. Louis	66	63	- 5	11-13	11-13
Cleveland	69	65	- 6	14-15	9
Baltimore	59	57	- 4	9-10	14-15
Houston	47	50	+ 7	1	16-17
Minneapolis	78	76	- 2	4-5	1
Dallas	49	50	+ 3	2	16-17
Cincinnati	65	63	- 3	6-8	11-13
Milwaukee	76	68	-10	18	5-6
Buffalo	68	64	- 6	14-15	10
AVERAGE	65%	63%	- 4%		

* Percent of voting age population that voted in presidential elections.
a/This indicator has been reproduced from the initial report.
b/This is the total percentage change and not the annual average change that is used in the remainder of this report.
c/The lower rankings are assigned to the higher rates of change.
d/The lower rankings are assigned to the higher participation rates.

APPENDIX A (Continued)

METROPOLITAN AREA DATA
SOURCES, METHODS, CAVEATS AND DATA

PART 2: NEW INDICATORS

The same organization and formats utilized in Appendix A are continued for these new indicators. The caveats and notes for Appendix A apply here also (see page 53)..

Median School Years Completed by Persons 25 Years and Older. (Replaces - Selective Service Mental Test Rejection Rate [furnished as reference data, page 98]).

Cost of Transportation for a Moderate Income Family of Four. (Replaces - Traffic Death Rate [furnished as reference data, page 102]).

Concentrations of Three Air Pollutants and Changes in Suspended Particulate Concentrations. (Replaces - An Air Pollution Index [furnished as reference data, page 112]).

Estimated Narcotics Addiction Rates. (Replaces - Narcotics Addiction Rates. [furnished as reference data, page 118]).

MEDIAN SCHOOL YEARS COMPLETED BY PERSONS 25 YEARS AND OVER* -- EXPLANATORY NOTES

Data Sources

U.S. Department of Commerce, Bureau of the Census, Educational Attainment in 30 Selected Standard Metropolitan Statistical Areas, (1967, P-20, No. 209, January 197; 1968, P-20, No. 214, March 3, 1971; 1969, P-20, No. 219, April 5, 1971.)

Method of Calculation

Data were taken from the above sources. The rates of change were calculated as follows:

$$\text{Annual Average Rate of Change} = \frac{\text{Median Years (latest)} - \text{Median Years (earlier)}}{\text{Median Years (earlier)}} \div \text{Number of Years between latest and earlier data}$$

Caveats

1. Median School Years Completed measures the educational exposure (but not necessarily the educational achievement) of the last generation. It is at best a crude measure of educational achievement of the area's adult population, and tells little about the learning currently being imparted to the youth by an area's school system. (However, there are some research findings that link children's school performance to the educational level of their parents.) It excludes non-credit adult education course, or job-oriented training taken by the city's adult population.

2. These data are taken from a Census Bureau 50,000 household monthly survey (Current Population Survey), and are based on an annual average of the monthly data. The sample results were inflated in accordance with population estimates based on the 1960 Census and statistics of births, deaths, immigration and emmigration. (See notes on the CPS, under "Caveats" page 54.)

3. The data are not strictly comparable to that gathered in the decennial Census, since they exclude members of the armed forces and inmates of institutions, and employ different enumeration techniques and methods of allocating non-responses. They are also subject to sampling errors. The median years of school completed are defined as the value which divides the population into two equal parts--one half having completed more, and one half less, schooling than the median number of years. More educational data on the central cities of these metropolitan areas can be found in our Urban Institute Working Paper 136-4, May 1971, Selected Indicators for Twenty-One Major Cities: Some Statistical Benchmarks.

4. The standard error (the chances are about 68 out of 100 that an estimate from the sample would differ from a complete Census figure by less than the standard error) for the median school years varies from ±.12 school years (for the smaller areas) to ±.04 school years (for New York.)

*This is a new indicator which measures adult educational attainment. It was substituted for our previous indicator of the education imparted to metropolitan area youth (see discussion, page 8). For reference only, data for the previously used indicator (Selective Service Mental Test Rejection Rate) can be found on page 99.

TABLE A-23

MEDIAN SCHOOL YEARS COMPLETED* (RECENT LEVELS)

(An Education Attainment Indicator)

Metropolitan Area	1967	(Rank)[a]	1968	(Rank)	1969	(Rank)	Metropolitan Area
New York	12.1	(9-12)	12.1	(11-13)	12.2	(9-12)	New York
L.A./Long Beach	12.4	(3-6)	12.5	(2-3)	12.5	(3-5)	L.A./Long Beach
Chicago	12.2	(8)	12.2	(8-10)	12.3	(7-8)	Chicago
Philadelphia	12.1	(9-12)	12.1	(11-13)	12.1	(13-16)	Philadelphia
Detroit	12.0	(13-14)	12.0	(14-16)	12.1	(13-16)	Detroit
Boston	12.4	(3-6)	12.4	(4-6)	12.4	(6)	Boston
S.F./Oakland	12.5	(2)	12.5	(2-3)	12.6	(2)	S.F./Oakland
WASHINGTON	12.6	(1)	12.7	(1)	12.7	(1)	WASHINGTON
Pittsburgh	12.0	(13-14)	12.1	(11-13)	12.1	(13-16)	Pittsburgh
St. Louis	11.6	(17)	11.6	(17)	11.8	(17)	St. Louis
Cleveland	12.1	(9-12)	12.2	(8-10)	12.2	(9-12)	Cleveland
Baltimore	11.2	(18)	11.3	(18)	11.3	(18)	Baltimore
Houston	12.3	(7)	12.3	(7)	12.2	(9-12)	Houston
Minn./St. Paul	12.4	(3-6)	12.4	(4-6)	12.5	(3-5)	Minn./St. Paul
Dallas	12.4	(3-6)	12.4	(4-6)	12.5	(3-5)	Dallas
Cincinnati	11.8	(15-16)	12.0	(14-16)	12.1	(13-16)	Cincinnati
Milwaukee	12.1	(9-12)	12.2	(8-10)	12.3	(7-8)	Milwaukee
Buffalo	11.8	(15-16)	12.0	(14-16)	12.2	(9-12)	Buffalo
AVERAGE	12.1 years		12.2 years		12.2 years		AVERAGE

* Median school years completed by persons 25 years and older. See Explanatory Notes, page 94.

a/The lower rankings are assigned to higher years of educational attainment.

TABLE A-24
MEDIAN SCHOOL YEARS COMPLETED* (RECENT ANNUAL AVERAGE CHANGES)
(An Education Attainment Indicator)

Metropolitan Area	1967-69	(Rank)[a]	1968-69	(Rank)
New York	+ 0.41%	(8-10)	+ 0.82%	(5-7)
L.A./Long Beach	+ 0.40	(11-15)	0.00	(11-17)
Chicago	+ 0.41	(8-10)	+ 0.82	(5-7)
Philadelphia	0.00	(17-17)	0.00	(11-17)
Detroit	+ 0.42	(6-7)	+ 0.83	(3-4)
Boston	0:00	(16-17)	0.00	(11-17)
S.F./Oakland	+ 0.40	(11-15)	+ 0.80	(10)
WASHINGTON	+ 0.40	(11-15)	0.00	(11-17)
Pittsburgh	+ 0.42	(6-7)	0.00	(11-17)
St. Louis	+ 0.86	(3)	+ 1.72	(1)
Cleveland	+ 0.41	(8-10)	0.00	(11-17)
Baltimore	+ 0.45	(5)	0.00	(11-17)
Houston	- 0.41	(18)	- 0.81	(18)
Minn./St. Paul	+ 0.40	(11-15)	+ 0.81	(8-9)
Dallas	+ 0.40	(11-15)	+ 0.81	(8-9)
Cincinnati	+ 1.27	(2)	+ 0.83	(3-4)
Milwaukee	+ 0.83	(4)	+ 0.82	(5-7)
Buffalo	+ 1.69	(1)	+ 1.66	(2)
AVERAGE	+ 0.48%		+ 0.51%	

* Median school years completed by persons 25 years and older. See Explanatory Notes, page 95.
a/The lower rankings are assigned to the higher positive rates of change.

SELECTIVE SERVICE MENTAL TEST REJECTION RATE* - EXPLANATORY NOTES

Data Sources

Supplement to Health of the Army, Medical Statistics Agency, Office of the Surgeon General, Department of the Army, Tables 16, 54 and 57, December 1968 and June 1969 editions.

The Economy of Metropolitan Washington, Hammer, Greene, Seler Assoc., Washington, D.C. 1969, p. 70 (1967 pop. estimates).

Method of Calculation

The estimates of metropolitan area scores were taken from data by recruiting district from the above sources. The Washington area rates for 1967 and 1968 were estimated as follows (see caveat note 2).

$$WMR = \left(\frac{DCP}{WMP} \times DCR\right) + \left(\frac{MSP}{WMP} \times MR\right) + \left(\frac{VSP}{WMR} \times VR\right)$$

WMR = Washington Metropolitan Area Rejection Rate
DCP = Washington, D.C. Population
WMP = Washington Metropolitan Area Population
DCR = Washington D.C. Draftee Rejection Rate
MSP = Maryland Suburbs (of Washington) Population
MR = State of Maryland Draftee Rejection Rate
VSP = Virginia Suburbs (of Washington) Population
VR = State of Virginia Draftee Rejection Rate

The rate of change was calculated as follows:

$$\frac{\text{1968 rejection rate - 1967 rejection rate}}{\text{1967 rejection rate}}$$

The rate of change was calculated using figures with one decimal place accuracy, and then all figures were rounded to the nearest percent.

Caveats

1. The areas reported only approximate SMSA's, since the figures are based on those who took the tests in SMSA central cities.

2. Only data on city rejection rates were available for Washington. To estimate Washington Metropolitan Area's rejection rate, the rejection rates of Maryland, Virginia and the District of Columbia were weighted in accordance with the population composition of the Washington metropolitan area.

3. Those drafted are a residual group after deferments have been granted, so the rejection rates are not representative of all youths. Changes in college deferments in 1968 may have biased the data.

4. Reserves, ROTC, enlistees, and the National Guard are excluded.

5. Another limitation: draft data apply only to males.

*These data were used as an indicator of education imparted to metropolitan area youth in the initial report and are presented here for reference only. See discussion, page 9.

TABLE A-25

SELECTIVE SERVICE MENTAL TEST REJECTION RATES*
(An Education Indicator Used in the Initial Report)[a]

Metropolitan Area	Rejection Rate[b]		Per Cent Change	Area Ranking	
	1967	1968	1967-68	% Change[c] 67-68	1968[d] Rate
New York	15%	12%	-20%	6	17
Los Angeles	8	7	- 9	8	9
Chicago	11	11	- 4	10	15
Philadelphia	9	11	+24	16	16
Detrdit	5	8	+67	18	10
Boston	8	7	-15	7	7
San Francisco	5	6	+10	14-15	5
WASHINGTON a/	15	15	- 1	11	18
Pittsburgh	3	5	+46	17	4
St. Louis	7	6	-22	4-5	6
Cleveland	8	8	+ 3	12	11
Baltimore	11	10	- 8	9	14
Houston	9	10	+10	14-15	13
Minneapolis	3	2	-36	2	1
Dallas	8	8	+ 4	13	12
Cincinnati	9	7	-22	4-5	8
Milwaukee	5	3	-46	1	2
Buffalo	5	4	-25	3	3
AVERAGE	8%	8%	- 2%		

*Percent draftees failing pre-induction mental test. See Explanatory Notes, page 98.

a/This indicator was used in the initial report and is presented here for reference only.

b/These figures were estimated from State data. See caveats for details.

c/The lower rankings are assigned to the more negative (or less positive) rates of change.

d/The lower rankings are assigned to the lower rejection rates.

COST OF TRANSPORTATION* - EXPLANATORY NOTES

Data Sources

U.S. Department of Labor, Bureau of Labor Statistics, Three Budgets for an Urban Family of Four Persons-Final Spring 1969 Cost Estimates, December 1970.

_____. Estimated Annual Costs of Consumption in a Moderate Standard Budget, Autumn 1968.

_____. New BLS Budgets Provide Yardsticks for Measuring Family Living Costs, Monthly Labor Review, April 1969. (1967 data).

Method of Calculation

The transportation costs for a moderate income family of four, were taken directly from the sources. The rates of change were calculated as follows:

$$\text{Annual Average Rate of Change} = \frac{\text{Transportation Cost(latest)} - \text{Transportation Cost(earlier)}}{\text{Transportation Cost (earlier)}} \div \text{Number of Years between latest and earlier data}$$

Caveats

1. The costs for transportation of a moderate income family of four do not reflect the convenience or speed (quality) of the transportation received by those in this type family, nor do they measure the amount of time spent traveling or the family's satisfaction with the available transportation options. As a matter of fact, a low transportation cost could result from transportation being so costly or so inconvenient that the family hesitates to use the available transportation services. However, the amount spent on transportation is one measure of one aspect of the transportation picture, and it is the only quantitative indicator available on a yearly comparable basis for the 18 metropolitan areas.
2. These transportation costs for a moderate income family of four do not accurately reflect inter-area (e.g., city vs. suburban) cost differences, or cost difference for larger or smaller families, or for families with higher or lower incomes.
3. In arriving at these figures, the BLS assumed that 80% of the moderate income families in New York, Chicago, Philadelphia and Boston owned cars. In the smaller metropolitan areas (below 1.4 million population in 1960; i.e., Dallas, Cincinnati, Milwaukee and Buffalo) 100% auto ownership was assumed. In the remaining areas, 95% auto ownership was assumed. Available data indicate that in fact car ownership in New York is significantly lower than in any other city.
4. The moderate budget assumes the purchase of a two-year old used car every four years. Data from the 1963 Passenger Transportation Survey were used to estimate average auto mileage per car. The cost estimates take into account all costs involved in owning a car, as well as mass transit fare rates in each area.

*This is a new indicator which measures one aspect of transportation quality. It was substituted for our previous indicator of traffic safety. (For discussion, see page 8). For reference, data for the previously used indicator (Traffic Deaths) can be found on page 102.

TABLE A-26
COST OF TRANSPORTATION* (LEVELS AND ANNUAL AVERAGE CHANGE)
(A Transportation Indicator)

Metropolitan Area	1967	(Rank)[a]	1969	(Rank)[a]	Annual Average Change 67-69	(Rank)[b]	Metropolitan Area
New York	$771	(1)	$806	(1)	+ 2.3%	(13)	New York
L.A./Long Beach	881	(13)	884	(7)	0.2	(2)	L.A./Long Beach
Chicago	812	(3)	919	(13)	6.6	(18)	Chicago
Philadelphia	788	(2)	834	(2)	2.9	(16)	Philadelphia
Detroit	855	(6)	889	(8)	2.0	(11)	Detroit
Boston	869	(10)	924	(15)	3.2	(17)	Boston
S.F./Oakland	923	(16)	925	(16)	0.1	(1)	S.F./Oakland
WASHINGTON	871	(12)	898	(10)	1.6	(10)	WASHINGTON
Pittsburgh	846	(4-5)	864	(3)	1.1	(6)	Pittsburgh
St. Louis	898	(18)	922	(14)	1.3	(8)	St. Louis
Cleveland	859	(7-9)	882	(6)	1.3	(9)	Cleveland
Baltimore	846	(4-5)	892	(9)	2.7	(14)	Baltimore
Houston	913	(15)	928	(17)	0.8	(4)	Houston
Minn./St. Paul	886	(14)	903	(11)	1.0	(5)	Minn./St. Paul
Dallas	859	(7-9)	878	(4-5)	1.1	(7)	Dallas
Cincinnati	859	(7-9)	906	(12)	2.7	(15)	Cincinnati
Milwaukee	870	(11)	878	(4-5)	0.4	(3)	Milwaukee
Buffalo	929	(17)	968	(18)	2.1	(12)	Buffalo
AVERAGE	$863		$894		+ 1.9%		AVERAGE

* The Cost of Transportation for a moderate income family of four. The 1969 metropolitan area average total cost for this moderate standard of living was $10,272 with a transportation cost of $881. The lower standard was $6,635 ($461 transportation) and the higher standard was $14,991 ($1,160 transportation). 1968 estimates are available, but were not used since they consist of 1967 figures updated by the Consumber Price Index. The 1969 data are based on a complete update of the methodology used in 1967, and are a more valid measure of change. See Explanatory Notes, page 100.

a/The lower rankings are assigned to the lower costs.

b/The lower rankings are assigned to the lower rates of change.

TRAFFIC DEATHS* - EXPLANATORY NOTES

Data Sources

Vital Statistics of the United States, National Center for Health Statistics, U.S. Department of Health, Education and Welfare (U.S. Government Printing Office), Volume II, Part B, Table 7-4, from 1966 and 1967 editions.

Statistical Abstract of the United States, U.S. Department of Commerce, (U.S. Government Printing Office), 1970, p. 865 (population data).

Method of Calculation

The number of auto accident deaths was divided by the population estimate for the appropriate year to give the rate per 100,000 population.

The rate of change was calculated as follows:

$$\frac{\text{1967 rate - 1966 rate}}{\text{1966 rate}}$$

The rate of change was calculated to one decimal place and then rounded off to the nearest per cent.

Caveats

1. Number of deaths per 100,000 population is only one of a number of possible measures of traffic safety. We would have preferred to use traffic injuries rather than deaths as an indicator; however, these data were not available on a metropolitan area basis.

2. There is no commonly accepted measure of "transportation" efficiency or convenience. Traffic safety was used as the best available quantitative measure related to transportation.

*This indicator was used in the initial report. It is presented for reference only. See discussion on page 8.

TABLE A-27
TRAFFIC DEATH RATES*
(A Traffic Safety Indicator Used in the Initial Report)[a]

Metropolitan Area	Traffic Deaths/ 100,000 pop.		Per Cent Change	Area Ranking	
	1966	1967	1966-67	[b] % Change 66-67	[c] 1967 Rates
New York	13.4	13.3	- .1%	11	1
Los Angeles	25.7	24.8	- 4	7	16
Chicago	18.1	17.2	- 5	5-6	6
Philadelphia	15.1	17.9	+19	18	8
Detroit	23.5	20.7	-13	3	13
Boston	16.5	15.6	- 6	4	3
San Francisco	23.8	25.0	+ 5	13	17
WASHINGTON	15.6	17.4	+12	15	7
Pittsburgh	17.2	19.0	+11	14	9
St. Louis	24.2	23.5	- 3	8-9	15
Cleveland	15.5	15.9	+ 3	12	4
Baltimore	17.7	20.1	+14	17	11
Houston	22.3	21.8	- 2	10	14
Minneapolis	24.3	20.5	-16	2	12
Dallas	26.1	25.3	- 3	8-9	18
Cincinnati	17.9	14.8	-17	1	2
Milwaukee	15.2	17.1	+13	16	5
Buffalo	20.1	19.2	- 5	5-6	10
AVERAGE	19.6	19.4	0		

*Deaths from auto accidents per 100,000 population.
a/This indicator of traffic safety was used in the initial report. It is presented here for reference only. See discussion, page 8.
b/The lower rankings are assigned to the larger negative (or smaller positive) rates of change.
c/The lower rankings are assigned to the lower death rates.

CONCENTRATIONS OF THREE AIR POLLUTANTS* - EXPLANATORY NOTES

Data Sources

Air Quality Data:

Environmental Protection Agency (EPA), (Division of Atmospheric Surveillance, Air Quality Information Systems Branch), Research Triangle Park, North Carolina. (Lists of Particulate, Sulfur Dioxide and Nitrogen Oxide data were obtained from this source.)

Data Report, Aerometric Network, Department of Air Resources, The City of New York, 1970, page 115.

Profile of Air Pollution Control, Air Pollution Control District, County of Los Angeles, 1971, p. 69.

EPA Standards: Federal Register, April 30, 1971.

Method of Calculation

It was decided (see discussion on page 108) to publish data on the three available air pollution components, and relate that data to the EPA standards. The data for Sulfur Dioxide and Nitrogen Dioxide, taken from the above sources, were converted to parts per million. (See "Technical Notes" page 111.)

The index numbers were calculated by dividing the individual values by the appropriate EPA standards. The average figures were obtained by addition and division by 18. (data for 18 area are provided).

As an indicator of one aspect of changing air quality, the rates of change of the suspended particulate concentrations have been calculated as follows:

$$\text{Annual Average Rate of Change} = \frac{\text{Concentration (latest)} - \text{Concentration (earlier)}}{\text{Concentration (earlier)}} \div \text{Number of Years between latest and earlier data}$$

Caveats

1. The data are for the central cities. They are used here as the best available indicators of conditions in the different metropolitan areas. The data has greatest validity when used for approximate comparisons between areas. Dividing the yearly average pollutant concentrations for each city by the EPA yearly standards means that on the average, for the given year, the average pollution level in a particular city was a certain percentage of the EPA standard. This does not tell us how often the EPA standard for shorter periods of time (i.e., 24 hour or 1 hour tolerances) was exceeded, or how often pollution "alerts" occurred. It is similar to the use of the average yearly temperature of a city to give an approximate picture of the city's climate. It does not tell us how cold or hot the winters and summers were or how often the temperature went below 0° or above 90°.

*This is a new indicator. See discussion on pages 108-109. The indicator used in the initial version of this report is presented on page 112 for reference only. (Explanatory Notes continued, page 106).

TABLE A-28
CONCENTRATIONS OF THREE AIR POLLUTANTS, 1969*
(An Air Quality Indicator)

City	SUSPENDED PARTICULATES			SULFUR DIOXIDE (SO_2)			NITROGEN DIOXIDE (NO_2)			City
	Yearly Average[a] ug/m^3	(Rank)[c]	% of EPA Yearly Standard	Yearly Average[b] ppm	(Rank)	% of EPA Yearly Standard	Yearly Average[b] ppm	(Rank)	% of EPA Yearly Standard	
New York	105	(10)	140%	.08[d]	(18)	266%	.072[d]	(8)	144%	NY
L.A./Long Beach	93	(8)	124	.02[d]	(10)	67	.17[d]	(18)	340	LA
Chicago	135	(16)	180	.064	(17)	213	.05	(5)	100	Chi
Philadelphia	127	(15)	170	.025	(13)	83	.022	(1)	44	Phila
Detroit	116	(14)	154	.019	(9)	63	.11	(16)	220	Det
Boston	85	(5-7)	114	.026[e]	(14-15)	87	.047[e]	(4)	94	Bos
S.F./Oakland	54	(1)	72	.005	(4)	17	.088	(10)	176	SF
WASHINGTON	76	(3-4)	102	.01	(7-8)	33	.037	(3)	74	DC
Pittsburgh	144	(17)	192	.027	(16)	90	.103	(15)	206	Pitt
St.Louis	186	(18)	248	.026	(14-15)	87	.12	(17)	240	StL
Cleveland	112	(13)	150	.024	(12)	80	.094	(13)	188	Cleve
Baltimore	110	(11-12)	146	.021	(11)	70	.091	(11-12)	182	Balt
Houston	85	(5-7)	114	.004	(2-3)	13	.096	(14)	192	Hous
Minn./St. Paul	70	(2)	94	.01	(7-8)	33	.069	(7)	138	Minn
Dallas	76	(3-4)	102	.003	(1)	10	.068	(6)	136	Dal
Cincinnati	104	(9)	138	.009	(6)	30	.091	(11-12)	182	Cinc
Milwaukee	110	(11-12)	146	.006	(5)	20	.082	(9)	164	Milw
Buffalo	85	(5-7)	114	.004	(2-3)	13	.025	(2)	50	Buff
AVERAGE	104 ug/m^3		138	.021 ppm		70	.080 ppm		160	Avg
EPA Yearly Primary Standard[f]	75 ug/m^3		100	0.03 ppm		100	0.05 ppm		100	

*Average yearly values for three (Particulates, Sulfur Dioxide, and Nitrogen Dioxide) of the six principal air contaminants (comparable data for Carbon Monoxide, Hydrocarbon and Oxidant concentrations are not available). See Explanatory Notes, page 104.

a/Annual geometric mean of 24-hour readings. b/Annual arithmetic mean of 24-hour readings. c/The lower rankings are assigned to the lower average concentrations. d/Data obtained from report from individual city. e/1970 estimates. f/See page 109 for explanation.

2. Comparative data on the principal automotive pollutants (Hydrocarbons, Carbon Monoxide and Oxidant) are not being gathered by EPA, and in some cities these are major pollutants. (New York, Chicago, Los Angeles and St. Louis, for example.) Data gathered by individual jurisdictions are difficult to compare accurately. The EPA plans gradually to turn over its present data gathering facilities to the individual States, and the States participation in a centralized air pollution data bank will be voluntary.

3. The data in Table A-28 and Exhibit 22 give the concentrations in the central business districts of the central cities. The EPA data are based on the yearly average of 24-hour readings of a sensor in each city. The placement of this sensor is not similar in each city. (Inspection of individual city reports--non-EPA data--reveals wide variations between concentrations of pollutants in different areas of the city and suburbs, different times of the day and different seasons of the year.) The average EPA values presented are at best rough, comparative, estimates of the pollution in each metropolitan area.

4. Data over several years for SO_2 and NO_2 are incomplete, and yearly climatic variations in different parts of the country might cause Eastern or Midwestern cities, for example, to have more serious than normal pollution problems in any given year. At a minimum, averages over several years are necessary for the estimating of trends in different areas. Since such data on particulate levels are available, they have been presented in Table A-29 and Exhibit 23 as an indicator of one aspect of air quality. Three additional caveats should be taken into account in interpreting this change data. It is reported that some cities have moved the location of their particulate sensors to obtain more favorable readings. Whether or not this is true there are no controls to prevent such maneuvers. Secondly, in some cases, techniques that control one pollutant may increase some of the others (e.g., the use of "smokeless" burner cans to reduce total air contamination of jet engines reduces particulate emissions by 23% but increases nitrogen oxide emissions by about 40% -- see reference 1, page 109). In other words, a lowering of particulate concentrations does not necessarily indicate a similar reduction in other pollutants. Finally, there are considerable variations from year to year in the annual rates of change for many of these cities. The use of a five-year average tends to obscure these large variations..

5. The exact relation of the EPA standards to human health or discomfort is still subject to disagreement. Also, the means for establishing pollution standards and interpreting pollution data for different periods of time are still being developed.

6. The relationship between the EPA standards and "alert levels" in different cities varies considerably.

TABLE A-29

SUSPENDED PARTICULATE CONCENTRATIONS*
(LEVELS AND ANNUAL AVERAGE CHANGES)
(An Air Quality Indicator)

City	Yearly Average (ug/m^3)[a] 1964	(Rank)[b]	1968	(Rank)[b]	1969	(Rank)[b]	Annual Average Change 1964-69	(Rank)[c]	1968-69	(Rank)[c]	City
New York	197	(16)	127	(11)	105	(10)	- 9.3 %	(1)	-17.3 %	(8)	N.Y.
Los Angeles	e		135	(12)	93	(8)	e		-31.1	(3)	L.A.
Chicago	176	(13)	124	(9)	135	(16)	- 4.7	(8)	+ 8.9	(16)	Chi.
Philadelphia	179	(14)	125	(10)	127	(15)	- 5.8	(6)	+ 1.6	(14)	Phila
Detroit	185	(15)	154	(15)	116	(14)	- 7.5	(3)	-24.7	(4)	Det.
Boston	144	(7)	93	(6)	85	(5-7)	- 8.2	(2)	8.6		Bost.
San Francisco	63	(1)	92	(4-5)	54	(1)	- 2.9	(12)	-41.3	(1)	S.F.
WASHINGTON	84	(3)	92	(4-5)	73	(3)	- 2.6	(13)	-20.7	(5)	D.C.
Pittsburgh	174	(12)	180	(17)	144	(17)	- 3.5	(10)	-20.0	(6)	Pitts.
St. Louis	148	(9)	148	(14)	186	(18)	+ 5.1	(16)	+25.7	(17)	St.L.
Cleveland	128	(6)	139	(13)	112	(13)	- 2.5	(14)	-19.4	(7)	Cleve.
Baltimore	158	(11)	110	(7-8)	110	(11-12)	- 6.1	(5)	0.0	(12-13)	Balti.
Houston	97	(4-5)	79	(2)	85	(5-7)	- 2.5	(15)	+ 7.6	(15)	Hstn.
Minneapolis	83	(2)	84	(3)	70	(2)	- 3.1	(11)	-16.7	(9)	Minn.
Dallas	97	(4-5)	76	(1)	76	(4)	- 4.3	(9)	0.0	(12-13)	Dallas
Cincinnati	157	(10)	110	(7-8)	104	(9)	- 6.8	(4)	- 5.5	(11)	Cinci.
Milwaukee	146	(8)	165	(16)	110	(11-12)	- 4.9	(7)	-33.3	(2)	Mlwk.
Buffalo	e		e		85	(5-7)	e		e		Buff.
AVERAGE	139	(186%)[d]	121	(163%)[d]	104	(139%)[d]	- 4.3 %		-10.5%		AVG.

*One aspect of changing air quality. See Explanatory Notes, page 104.

[a]Annual geometric mean of 24-hour readings. [b]The lower rankings are assigned to the lower concentrations.

[c]The lower rankings are assigned to the more negative rates of change. [d]% of yearly EPA primary standard ($75\ ug/m^3$).

[e]Data not available.

THE SELECTION OF AN AIR QUALITY INDICATOR

Since the rank-sum index used in the initial version of this report is no longer issued, we considered alternative means of measuring the comparative pollution levels of the different metropolitan areas.

A composite index[1-2] has been proposed which has many attractive characteristics. ORAQI (Oak Ridge Air Quality Index) is a weighted summation of the air pollution contributions from the five principal components (Particulate Matter, Sulfur Oxides, Nitrogen Oxides, Carbon Monoxide, and Oxidant). Each component is weighted by its relationship to the latest EPA tolerance standards (other weights could be used, of course). These tolerance standards have been adjusted so they are all on a common 24-hour basis using a statistical method of conversion. The index has been constructed so that when average daily values are used a value of 10 then corresponds to non-polluted background levels with no additional pollutants introduced. A city that just met the average daily standards for each of the pollutants would receive a score of 100.

By summing the pollutants in accordance with the EPA standards--which set the Carbon Monoxide (the principle pollution product of the automobile) danger levels at about 70 times the level of Sulfur Dioxide (the principle pollution product of industry and power plants)--the index provides a different perspective on the origins of the U.S. air pollution threat. If the pollutants are summed by adding the tons produced per year (as is usually done) then transportation contributes about 60% of all U.S. air pollution (compared to an industry and power plant contribution of about 37%). When the components are adjusted according to the EPA danger levels, the figures reverse and become 19% for transportation and 67% for industry and power generation.

As presently constructed the ORAQI index estimates values (where data on specific pollutant levels are missing for a given city) of missing pollutants by assuming that their proportional contribution is equal to that in average urban air (e.g. 6% of NO_2, 27% for Oxidant, etc.)

Despite the many attractive features of the ORAQI index, we did not publish it at the present time because comparable data for only three pollutants was available (Particulates, Sulfur Dioxide and Nitrogen Dioxide) for the metropolitan areas considered, and those cities with high levels of automobile type pollution (Carbon Monoxide, Hydrocarbons and Oxidant) would not be evaluated accurately at all.

Other problems with the proposed index are listed below:

a) It is assumed that the negative effects of each of the pollutants are identical at the EPA standards and can be added linearly. This assumption is at best doubtful.[3] It also neglects possible threshold effects, as yet unknown synergistic effects, and other possible non-linear intensification of damage at certain levels.

b) The means for establishing pollution standards, and interpreting pollution data, for different periods of time, are still being developed. For example, one way in which standards have been derived is to statistically estimate the maximum yearly level (and use this as the yearly standard) at which there would be only one chance in a hundred that the one hour EPA standard would be exceeded anytime during the year. Then the yearly average level for particular pollutants and areas are compared with these derived standards. (The use of these derived standards might not be necessary if accurate data from each metropolitan area were available on how often the EPA one hour standards were exceeded). It is also not clear whether the statistically derived standards (just described) agree with physiologically derived standards (e.g., how high an average concentration of a particular pollutant could be tolerated by most people for eight hours, 24 hours or a year).

c) Metropolitan areas follow different policies in setting pollution "alert" levels. The relation of the ORAQI index (and the EPA standards) to these levels in different areas needs to be clarified, or unnecessary confusion will result.

Because of these difficulties, we decided to list and rank the data available: the 1969 concentrations of Suspended Particulates, Sulfur Dioxide and Nitrogen Dioxide. For each of these three pollutants, we established an index relating these data to the EPA standards by dividing the yearly values for each area by the EPA yearly standard for the pollutant being measured. We also calculated and presented the annual average changes in suspended particulates for the 16 cities where such data were available. (See Explanatory Notes, page 104).

REFERENCES

A. Index Methodology

1. Babcock, Lyndon R., jr. "A Combined Pollution Index for Measurement of Total Air Pollution," Journal of the Air Pollution Control Association, October 1970 (Vol. 20, No. 10), p.653-659.

2. _____. Oak Ridge Air Quality Index (ORNL-NSF-EP-8) Oak Ridge National Laboratory, Tennessee (September 1971).

B. Criticisms of EPA Standards

3. Heuss, J.M. et al., "National Air Quality Standards for Automotive Pollutants-A Critical Review," with Discussion by Barth, D.S., et al. Journal of the Air Pollution Association, September 1971, p.535-548.

(Additional Technical Notes are provided on page 111).

SOME ADDITIONAL TECHNICAL NOTES

a) To convert data from micrograms/meter (ug/m^3) to parts per million (ppm). use the following formula:

$$(ug/m^3) \times K = ppm$$

where $K = \frac{\text{wt of mol of air}}{\text{molecular wt of pollutant}}$, e.g. for Sulfur Dioxide

$K = \frac{22.4}{64} \times 10^{-3} = 3.5 \times 10^{-4}$; other values of K are:

For Nitrogen Dioxide, $K = 4.87 \times 10^{-4}$

For Carbon Monoxide, $K = 8.00 \times 10^{-4}$

b) In some cases these components tend to react together producing more severe effects than the two taken separately. This is true of Nitrogen Dioxide and Hydrocarbons, which react with sunlight to produce Oxidant. Similarly, the effects of particulates are increased when Sulfur Dioxide is present.

c) A summary of EPA Primary[a] Air Quality Standards is presented below:

Particulate (ug/m^3)	260 (24 hrs)[b]	75 (1 yr.)
Sulfur Dioxide (ppm)	0.14 (24 hrs)[b]	0.03 (1 yr.)
Nitrogen Dioxide (ppm)	--	0.05 (1 yr.)
Carbon Monoxide (ppm)	35.0 (1 hr.)[b]	9.00 (8 hrs)[b]
Photo chemical Oxidants (ppm)		0.03 (1 hr.)[b]
Hydrocarbons (non-methane) (ppm)		0.24 (3 hrs)[c]

a/ Primary standards are levels deemed necessary "to protect health and air quality goals" -- ("secondary standards would protect the public welfare from any known or anticipated effect"; yearly secondary standards are as follows: particulates, 60 ug/m^3; SO_2, 0:02 ppm).

b/ Not to be exceeded more than once per year.

c/ Not to be exceeded more than once per year, between 6 and 9 a.m.

AIR POLLUTION INDEX* - EXPLANATORY NOTES

Data Sources

U. S. Department of Health, Education and Welfare, Public Health Service, Press Release, August 4, 1967, HEW-R43. (Pollution Index)

U. S. Department of Commerce, Statistical Abstract of the United States (U. S. Government Printing Office), 1969 edition (p. 172), and 1968 edition (p. 176) (suspended particulate data).

Method of Calculation

The rank-sum index data were taken from the source cited. The only available measure of rate of change is suspended particulate concentration taken from the U. S. Statistical Abstracts. These readings were annual averages of biweekly samples taken by the National Center for Air Pollution Control

The rate of change was calculated as follows:

$$\frac{\text{1967 rate} - \text{1966 rate}}{\text{1966 rate}}$$

The percent change was calculated to one decimal place and then rounded off to the nearest percent.

Caveats

1. Air pollution differs chemically in different areas, and varies over time, so highly accurate comparisons cannot be made.

2. Adequate data for photo-chemical smog (sunlight effects on auto exhaust) are not available.

3. The change in suspended particulate concentration levels is a very crude measure of overall pollution change.

4. The Cincinnati headquarters of the Division of Air Quality and Emissions Data, National Center for Air Pollution Control, plans to issue composite area pollution measures for 185 regions of the United States in May, 1970. For this report we were forced to use city data to get even a crude estimate of changing conditions.

*This indicator was used in the initial report and is reproduced here for reference only.

TABLE A-30
AN AIR POLLUTION INDEX*
(An Air Pollution Indicator Used in the Initial Report)[a]

Metropolitan Area or Central City	Air Pollution Index	Suspended Particulate Concentration			Area Ranking	
	1966	1966	1967	% Change[b] 1966-67	% Change of[c] Particulate 66-67	1966[d] Index
New York	457.5	134	186	+39%	16	18
Los Angeles	393.5	119	103	-13	2-3	15
Chicago	422.0	124	143	+15	14	17
Philadelphia	404.5	154	162	+ 5	11	16
Detroit	370.0	137	141	+ 3	10	11
Boston	389.0	-	-	-	-	12
San Francisco	253.0	68	75	+10	12	3
WASHINGTON	327.5	77	104	+35	15	8
Pittsburgh	390.0	151	145	- 4	7	13
St. Louis	369.0	143	124	-13	2-3	10
Cleveland	390.5	116	102	-12	4	14
Baltimore	355.0	144	132	- 8	5	9
Houston	233.5	102	113	+11	13	2
Minneapolis	257.0	87	84	- 3	8	4
Dallas	178.0	101	101	0	9	1
Cincinnati	325.5	154	107	-31	1	7
Milwaukee	301.5	150	142	- 5	6	6
Buffalo	260.0	-	-	-	-	5
AVERAGE	331.5	123	123	+ 2%		

*An arithmetic rank-sum combining particulate, gasoline and sulfur emissions.

a/This indicator was used in the initial report and is presented here for reference only.

b/Suspended particulate matter per cubic meter. (Micrograms/Cubic meter. Particles range from 1-100 microns). These data available for only 16 cities.

c/The lower rankings are assigned to the higher negative (or lower positive) rates of change.

d/The lower rankings are assigned to the lower index values.

ESTIMATED NARCOTICS ADDICTION RATES* - EXPLANATORY NOTES

Data Sources

Greenwood, Joseph, Estimating the Number of Narcotic Addicts, SCID-TR-3, October 1971, Bureau of Narcotics and Dangerous Drugs (BNDD), U.S. Department of Justice, Washington, D.C.

1969 Population Estimates were obtained by linear extrapolation from 1960 and 1970 Census figures.

Method of Calculation

The above source used the "fish in the lake" method of estimating addict population. A simplified version of this method follows:

n_1 = the number of addicts reported (in files) in period 1 who could be reported in period 2 (corrected for those who die or discontinued use of narcotics).

n_2 = the number of addicts reported in period 2.

c = the number of addicts reported in period 2 who were previously reported (in BNDD files) in period 1 (reported in both periods).

N = the estimated total number of addicts in the city.

then, $\frac{c}{n_2} = \frac{n_1}{N}$ or $N = n_1 \times \frac{n_2}{c}$

The reference cited uses a similar but more detailed version of the above to estimate the number of addicts in selected large cities and for the entire U.S. These addict population estimates were normalized by dividing by 1969 total population estimates for each city.

Caveats

1. It should be recognized that much of society's recent interest in the extent of narcotics addiction (and statistics such as these) derives from the perceived disruptive effects of such addiction upon society. The data are drawn mainly from the more underprivileged in our society (those arrested or in public treatment) and neglect the unreported use by the affluent. The actual costs of alcoholism (number of victims and the cost in lives) to society may be greater than that of heroin use.

2. This method is similar to techniques used in estimating the number of fish in a lake. A sample of fish, n_1 is caught, tagged and then put back into the lake. Later a second sample of n_2 fish is caught and this sample contains c tagged fish. If the second sample of n_2 fish is a random catch from the unknown total number of fish, N, in the lake, then it can be assumed that: $\frac{n_1}{N} = \frac{c}{n_2}$

(Explanatory Notes continued, page 116.)

TABLE A-31
ESTIMATED NARCOTICS ADDICTION RATES*
(A Social Disintegration Indicator)
(Data Available for 7 Central Cities Only)

City	Estimated Addict Population 1969	Total Population 1969	Addicts/10,000 Population 1969	(Rank)[a]
New York	150,000	7,867,268	190.6	(7)
Los Angeles	9,800	2,776,582	35.2	(3)
Chicago	10,500	3,375,516	35.1	(2)
Philadelphia	-	1,952,679	-	
Detroit	-	1,524,074	-	
Boston	2,800	640,767	43.6	(4)
San Francisco	4,200	714,171	58.8	(5)
WASHINGTON	4,600	754,668	60.9	(6)
Pittsburgh	-	526,563	-	
St. Louis	2,000	627,419	31.8	(1)
Cleveland	-	759,320	-	
Baltimore	-	891,659	-	
Houston	-	1,196,492	-	
Minneapolis	-	440,959	-	
Dallas	-	827,995	-	
Cincinnati	-	457,937	-	
Milwaukee	-	719,103	-	
Buffalo	-	469,426	-	
TOTAL U.S.	315,000	204,766,000	15.3	

* Estimated heroin addicts per 10,000 population. See Explanatory Notes, page 112.

a/The lower rankings are assigned to the lower addicted population ratio.

ESTIMATED NARCOTICS ADDICTION RATES*- EXPLANATORY NOTES (Continued)

This would be true if the probability of an individual reported in period 1 being reported in period 2 is the same as that for individuals not reported in period 1 being reported in period 2. Those reported in period 1 may be more likely to be reported in period 2 (greater surveillance, heavier drug use, more frequent and riskier crimes, etc.) This would cause the estimated total, N, to be less than the true total. If those not previously reported are more likely to be reported in period 2 (younger addicts committing crimes with high clearance rates), then N will be too large. It is not clear which of the above is true, but Dr. Greenwood estimates that N is more likely to be a little low. The fact that the above assumption has not been verified, is a serious weakness in this method.

3. The addicts in BNDD files in period 1 should be corrected to give those addicts who could be reported in period 2. Dr. Greenwood believes that reasonably satisfactory results can be obtained by adjusting only for deaths and maturation (ceased usage). His investigations of available data on addicts incarcerated or in treatment seems to indicate that corrections for these factors are not necessary at present, but the increased use of methadone treatment may force a revision of this assumption.

4. The data for other large cities are available to Dr. Greenwood, and the calculations for these cities should be available in the near future. The calculations of Dr. Greenwood indicate that given the truth of the assumptions in part one (above) the results reported for the entire U.S. are accurate to ±10% (at ±3 standard deviations).

5. The exact rules used in entering names on the BNDD narcotics register exist but are not available to the public. Addicts should be removed from the BNDD register if they are not reported for five consecutive years, but there is little assurance that similar procedures are actually utilized in different cities, and in fact, the exact definition of when a heroin user becomes "addicted" is not clear or agreed upon. In reality there are many degrees of heroin use, and a single classification represents considerable simplification. In some cities only law enforcement agencies submit names of those arrested, while in others, health and educational agencies also contribute the names of those treated. In some cities the submission of names is mandatory, while in others it is voluntary. The procedures for deleting names as a result of death, maturation, incarcertation or treatment are not necessarily consistent between cities. In theory, in any given city, as long as the probability of addicts being put on the BNDD register in period 2 is the same for those who were on the register previously and those who were not, the estimating technique used here is valid for that city. In practice, variations in the operation of the BNDD register in different cities have caused many analysts to lack confidence in data derived from it and to challenge the accuracy of the figures given here for specific cities. Finally, local registries, independent of and differing from the BNDD register, are maintained and utilized by some cities and analysts often have more confidence in these local figures than in the BNDD totals. Despite these caveats, the comparative data presented here is the most reliable available.

6. Some analysts recommend that, considering the lack of reliable data, several methods of estimating the prevalence of narcotics addiction in cities be used in parallel. (See discussion, page 117).

*This is a new indicator. Data on the previous indicator used is presented on pages 118 and 119 for reference only.

ESTIMATING THE NUMBER OF NARCOTICS ADDICTS IN LARGE UNITED STATES CITIES

The estimates used in the initial report have recently been improved upon by the Bureau of Narcotics and Dangerous Drugs (BNDD), and the large city estimates presented in this paper (page 115) are the only comparative data available.

The "fish in the lake" method used in obtaining this data and some of its weaknesses are described in the Explanatory Notes on page 114. However, due to its reliance on the BNDD register some analysts have suggested that estimates from as many different sources as possible should be examined in order to improve the validity of the estimates for a given city. Other estimating techniques are briefly described below:

a) The "Baden formula" developed in New York City estimates the total number of addicts by assuming that the proportion of heroin related deaths of addicts on the New York City Narcotics Register (roughly one percent) is the same as that for all addicts. Using this figure, an estimate of 104,000 addicts was reached for 1969 (compared to the BNDD estimate of 150,000 [see page 115]). Weaknesses of this method include: the fact that the probability of death depends on the amount of heroin use, variations in the quality of the heroin, as well as the health and injecting skill of the addicts. Also, there is no assurance that addicts on the Register have the same probability of dying as others; for example, those off the Register may be less experienced users and so more susceptable to overdoses. Although the New York estimating factor has been used in other cities, there is no assurance that such a use is warranted. The accuracy of and extent of autopsies vary in different cities (e.g. autopsies are performed on varying proportions of the dead in different cities), as do the proportion of all addicts on the Register, the extent and effectiveness of police narcotics squads, and the proportion of addicts in treatment. (A New York Times article (January 2, 1972) estimates that 38,000 U.S. addicts are in methadone treatment.)

b) On-going health surveys (mainly from studies of high schools and colleges) give some figures on heroin use (in general less than 4% of students sampled). Since such studies are usually done in middle-class environments, the extent of addiction in high risk areas is inadequately covered. Also, there may be some under-reporting in voluntary surveys, since the activities involved are illegal.

c) Sometimes "best guess" estimates are made and then the results are tested for "reasonableness," by comparing the estimated numbers of addicts with the total numbers of certain population groups. However, it is often not clear what is reasonable. For example, different estimates resulted in a 8.2% or 12.1% rate of addiction among Washington's 15-24 year old blacks. Both of these seem equally "reasonable."

This brief discussion illustrates some of the difficulties of obtaining reliable addiction estimates. The simultaneous use of several estimation techniques would seem to be highly desirable.

NARCOTICS ADDICTION* - EXPLANATORY NOTES

Data Sources

a) Active Narcotics Addicts Recorded by the United States Bureau of Narcotics and Dangerous Drugs as of December 31, 1968, for Selected Cities and States, Unpublished Report, National Institute of Mental Health, 1969.

b) New Narcotic Addicts Reported to the U.S. Bureau of Narcotics and Dangerous Drugs During the Calendar Years 1964-68 by State, Op. Cit. NIMH, 1969.

c) Estimates of Average Increase in Addict Population by City, Op. Cit. NIMH, 1969.

d) Estimates of U.S. City Population, January 1, 1969, Rand McNally Commercial Atlas, New York Times Encyclopedia Almanac 1970, p. 198.

Method of Calculation

The known addict/10,000 population figures were obtained by dividing city addiction estimates by population estimates from the above sources.

The average rates of change for each city were obtained from the above NIMH report.

Caveats

1. There is a consensus among experts that the data in the Bureau of Narcotics and Dangerous Drugs Register are consistently low. (A.D. Little Company estimated that 55.5 percent of addicts were "known" in 1960). If it is assumed that this under-reporting is consistent over different cities, then the actual Bureau figures are suitable for a comparative analysis such as this.

2. No data were reported for Cincinnati because of its very low known addict population.

3. Narcotics addicts consist primarily of those addicted to Heroin (91%).

*This indicator was used in the initial report and is presented here for reference only.

TABLE A-32
NARCOTICS ADDICTION RATE - ESTIMATES
(A Social Disintegration Indicator Used in the Initial Report)[a]
(17 Central Cities)

Cities	Known Addicts/ 10,000 pop.	Average Annual Increase	City Ranking	
	1968	1964-68	Average[b] % Change 64-68	1968[c] Data
New York	38	11%	5-8	17
Los Angeles	14	9	2-4	12-14
Chicago	17	8	1	15-16
Philadelphia	7	13	10-13	8-9
Detroit	12	9	2-4	11
Boston	7	13	10-13	8-9
San Francisco	9	9	2-4	10
WASHINGTON	14	11	5-8	12-14
Pittsburgh	4	13	10-13	6-7
St. Louis	4	11	5-8	6-7
Cleveland	1	12	9	1-3
Baltimore	20	16	15-16	15-16
Houston	1	20	17	1-3
Minneapolis	3	16	15-16	5
Dallas	1	14	14	1-3
Milwaukee	2	13	10-13	4
Buffalo	14	11	5-8	12-14
AVERAGE	10	12%		

* Known heroin addicts/10,000 population. This is an emerging problem which impacts on health, mental Health, and crime.

a/This indicator was used in the initial report and is presented here for reference only.

b/The lowet rankings are assigned to the lower rates of change.

c/The lower rankings are assigned to the lower addict ratios.

APPENDIX B

CITY/SUBURBAN ANALYSES

PART B-1: WASHINGTON AND ITS SUBURBS--SUMMARY EXHIBITS; AN EXAMPLE OF THE USE OF THESE DATA

In this section we have prepared summary exhibits for Washington, D.C. based on the data contained in the exhibits of Section V-B (the recent levels of metropolitan, city and suburban conditions) and Appendix B-2 (the rates of change in metropolitan, city and suburban conditions). Similar exhibits can be prepared from these data for each of the 17 other metropolitan areas. Tables summarizing these data can be found in Appendix C, page 137.

We have examined metropolitan Washington, Washington, D.C., and its suburbs in three ways:

1. How do the metropolitan area, central city and its suburbs, compare with their past? (Exhibit B-1)

2. How do these jurisdictions compare with similar jurisdictions in the 17 other metropolitan areas? (Exhibit B-2)

3. How do the rates of change of each of these jurisdictions compare with the average change for similar jurisdictions for all 18 metropolitan areas? (Exhibit B-3)

EXHIBIT B-1

HAVE METROPOLITAN WASHINGTON, WASHINGTON, D.C., AND ITS SUBURBS BEEN IMPROVING OR DETERIORATING IN FIVE QUALITY CATEGORIES?[a]

In Which Direction Have The Indicators Been Moving During The Past Five (5) Years?

Quality Category	Indicator (Years Compared)	Metropolitan Washington[b]	Washington D.C.	Suburban Washington
Unemployment	% Unemployed (1967-69)	Deteriorating	Deteriorating	Deteriorating
Poverty	% Low Income Households (1964-69)	Improving	Improving	Unchanged[c]
Health	Infant Mortality Rate (1962-67)	Improving	Improving	Unchanged
Mental Health	Reported Suicide Rate (1962-67)	Improving	Improving	Unchanged
Public Order	Reported Robbery Rate (1964-69)	Deteriorating[d]	Deteriorating	Deteriorating

a/Washington and its suburbs are not being compared with other areas in this Exhibit.
b/Later data are available. See footnote, Exhibit B-2.
c/Conditions are defined as "unchanged" if the rate of change of a jurisdiction's performance varied from zero by less than ±10% of the range of the rates of change of the comparable jurisdictions of all 18 metropolitan areas.
d/1970 data (see Table A-17) indicates a slight lowering of the robbery rate for metropolitan Washington (i.e., Washington is improving).

EXHIBIT B-2

WHERE DOES WASHINGTON RANK?*
(Relative to 18 Metropolitan Areas, Central Cities and Suburbs)

Quality Category	Indicator (year)	Metropolitan[a] Washington	Washington D.C.	Suburban Washington
Unemployment	% Unemployed (1969)	4th[b]	5th[b]	4th[b]
Poverty	% Low Income Households (1969)	2nd	1-3[c]	11-12th[c]
Health	Infant Mortality Rates (1967)	7th	13th	4th
Mental Health	Reported Suicide Rates (1967)	2nd	5th	9th
Public Order	Reported Robbery Rates (1969)	17th	18th	16th

* Metropolitan Washington, Washington, D.C., and its suburbs ranked relative to other metropolitan areas, central cities, and suburbs. The lower numerical rankings represent more favorable conditions.

a/Later metropolitan data became available after the city/suburban calculations were completed. The ranks here are for the same year as is used for the city and suburban rankings in this exhibit. For later rankings see Table A-1 (Unemployment); A-4 (Low Income Households); A-12 (Infant Mortality); A-14 (Reported Suicides); and A-16 (Reported Robberies).
b/Ranked for only the 14 areas for which data were available.
c/More than one rank indicates a tie in the rankings for all those ranks between and including the two numbers listed.

EXHIBIT B-3

WASHINGTON'S COMPARATIVE RATES OF CHANGE IN FIVE QUALITY CATEGORIES

(The Rates of Change of the Washington Metropolitan Area, Washington, D.C., and its Suburbs vs. the Average (mean) of the Rates of Change of the 18 Metropolitan Areas, Cities, and Suburbs Over the Past Five Years)

Quality Category	Indicator (Years Compared)	Metropolitan Washington[a]	Washington, D.C.	Suburban Washington
Unemployment	% Unemployed (1967-69)	Unfavorable	Unfavorable	Average[b]
Poverty	% Low Income Households (1964-69)	Unfavorable	Favorable	Average
Health	Infant Mortality Rate (1962-67)	Favorable	Favorable	Favorable
Mental Health	Reported Suicide Rate (1962-67)	Favorable	Favorable	Favorable
Public Order	Reported Robbery Rate (1964-69)	Unfavorable[c]	Unfavorable	Unfavorable

a/Later data are available. See footnote, Exhibit B-2.
b/The rate of change for a particular indicator is defined as "average" when it varied from the average rate of change of the comparable jurisdiction in all 18 metropolitan areas by less than ±10% of the range of the values of the rates of change for these areas.
c/1970 data (see Table A-17) indicate Metropolitan Washington's reported robbery rate is changing more favorable (decreasing) than the 18 area average.

APPENDIX B (Continued)

CITY/SUBURBAN ANALYSES

PART B-2: SOURCES, METHODS, CAVEATS AND RATE OF CHANGE DATA

1. This Appendix presents data that supplements information provided in the City/Suburban Exhibits in Section V-B. Methods of calculation, caveats peculiar to the city/suburban analyses, and data on the annual average rate of change of these indicators is presented here. Tables summarizing these data can be found in Appendix C, page 137.

2. Data availability considerations resulted in this city/suburban analysis being performed for only five of our fourteen quality categories. The methodology demonstrated here could be used for other appropriate variables.

3. The suburban data used here were not measured directly, since our data sources reported data by metropolitan area and central city. We obtained "outside central city" or suburban measurements by subtracting central city figures from the metropolitan area total. This method is subject to large errors if the city and metropolitan area data originate from different sources or have large errors. In this report the subtracted data all originate from similar sources, and this type subtraction process is in general use with regard to the indicators used here. The category "suburban" as used here sometimes includes fairly large cities (e.g., Yonkers, N.Y., and Cambridge, Mass., etc.).

4. The rankings in the tables are in descending order of quality (unless otherwise noted): Areas having the most favorable conditions and rates of change have the lowest numerical rankings; i.e., #1 is the best and #18 the worst.

5. The average level, or the average (for the 18 areas) annual average rates of change, were obtained by summing the individual values and dividing by the number of areas.

6. The annual average rates of change are tabulated for a five-year period (when available) and for the most recent one-year period available.

7. In all cases the data were first ranked and then rounded off to a number of decimal places consistent with their accuracy and range of values.

8. Although the emphasis in this paper is on Washington, D.C., the information included enables the examination of conditions in any of the 18 metropolitan areas.

UNEMPLOYMENT RATES* (An Unemployment Indicator)

METROPOLITAN, CITY, AND CITY/SUBURBAN RATIOS -- NOTES AND RECENT RATES OF CHANGE

Data Sources and Caveats: See notes, Appendix A, page 54.
Method of Calculation: The unemployment rate was obtained by dividing the number of unemployed (level) for the metropolitan area, the central city, or suburban areas, by the appropriate civilian labor force figure. For each area the number of suburban unemployed, and the size of the suburban civilian labor force were obtained by subtracting central city figures from the appropriate metropolitan area data. The rates of change were calculated as in Appendix A, page 54.

TABLE B-1: METROPOLITAN UNEMPLOYMENT RATES -- RECENT RATES OF CHANGE

Metropolitan Area	ANNUAL AVERAGE CHANGE 1967-69		68-69[b]		Metropolitan Area	ANNUAL AVERAGE CHANGE 1967-69		68-69	
	% Chg.	(Rank)[a]	% Chg.	(Rank)		% Chg.	(Rank)	% Chg.	(Rank)
Milwaukee	-11.7%	(1)	- 21%	(1)	18 AREA AVERAGE	- 5.6%		- 2%	
Philadelphia	-10.8	(2)	- 9	(3)					
St. Louis	-10.2	(3)	+ 13	(18)	Chicago	- 4.5	(11)	0.0	(12)
Cleveland	- 9.2	(4)	- 11	(2)	Detroit	- 4.4	(12)	+ 8	(16)
S.F./Oakland	- 8.3	(5)	- 6	(7)	Baltimore	- 2.7	(13)	+ 3	(14)
Pittsburgh	- 7.3	(6)	- 7	(6)	Cincinnati	- 1.8	(14)	- 7	(5)
L.A./Long Beach	- 7.1	(7)	+ 2	(13)	Boston	- 1.7	(15)	+ 12	(17)
New York	- 6.8	(8)	+ 7	(15)	Houston	- 1.5	(16)	- 3	(11)
Dallas	- 6.0	(9-10)	- 4	(8)	Minn./St. Paul	+ 2.3	(17)	- 4	(9)
Buffalo	- 6.0	(9-10)	- 8	(4)	WASHINGTON	+ 6.5	(18)	- 4	(10)

* Percent of labor force unemployed. (Does not include those not seeking employment during the past month.) See notes on page 54.
a/Data for 14 metropolitan areas only. Lower rankings are assigned to higher negative (or smaller positive) rates of change. b/The data for the last year's rate of change were rounded to the nearest integer to highlight their variability. The annual average change data were listed to one decimal place accuracy.

UNEMPLOYMENT RATES* (An Unemployment Indicator) Continued.

Further Comments: There was a sharp increase in unemployment rates from 1969-70 which is not reflected in these 1969 figures. (See Part V-B, page 22). The Washington metropolitan area increased at an above average[a] rate from 1967-69, (although it decreased from 1968-69) as did Washington, D.C. Also, there was an average increase in the Washington suburbs from 1967-69. The city/suburban ratio, indicating the difference between Washington and its suburbs, also increased at an above average rate from 1967-69 but decreased from 1968-69.

TABLE B-2: CITY/SUBURBAN UNEMPLOYMENT RATES - RECENT RATES OF CHANGE

CENTRAL CITY					SUBURBAN					CITY/SUBURBAN RATIO				
CITY	ANNUAL AVERAGE CHANGE 1967-69		68-69		Metropolitan Area	ANNUAL AVERAGE CHANGE 1967-69		68-69		Metropolitan Area	ANNUAL AVERAGE CHANGE 1967-69		68-69	
	% Chg.	(Rank)[b]	% Chg.	(Rank)		% Chg.	(Rank)	% Chg.	(Rank)		% Chg.	(Rank)	% Chg.	(Rank)
Milwaukee	-23.9%	(1)	-38%	(1)	Cleveland	-11.2%	(1)	- 8%	(3)	Houston	-35.4%	(1)	-55%	(1)
S.F./Oakland	-14.0	(2)	-27	(2)	Philadelphia	-10.7	(2)	-11	(1-2)	Milwaukee	-30.5	(2)	-43	(2)
St. Louis	-12.8	(3)	+ 1	(12)	Detroit	-10.5	(3)	+ 7	(4-5)	Baltimore	-19.3	(3)	-30	(6-7)
Chicago	-11.3	(4)	-14	(6)	St. Louis	- 5.7	(4)	+26	(11)	Chicago	-17.9	(4)	-29	(8)
L.A./Long Beach	-10.9	(5)	- 6	(10-11)	Dallas	- 5.3	(5)	+29	(12)	S.F./Oakland	-11.2	(5)	-34	(3)
										Minn./St. Paul	- 8.6	(6)	-31	(5)
Houston	-10.8	(6)	-17	(5)	L.A./Long Beach	- 4.4	(6)	+ 7	(4-5)					
Philadelphia	- 9.4	(7)	- 7	(9)	New York	- 4.0	(7)	-11	(1-2)	14 AREA AVERAGE	- 8.1%		-21%	
Baltimore	- 9.0	(8)	- 6	(10-11)	S.F./Oakland	- 3.6	(8)	+11	(8)					
										St. Louis	- 8.0	(7)	-20	(9)
14 CITY AVERAGE	- 8.2%		-11%		WASHINGTON	+ 3.3	(9)	+14	(9)	L.A./Long Beach	- 7.1	(8)	-12	(10)
					Minn./St. Paul	+ 4.7	(10)	+10	(7)	New York	- 3.0	(9)	+29	(14)
Dallas	- 7.2	(9)	-12	(7)						Dallas	- 2.2	(10)	-32	(4)
New York	- 6.7	(10)	+16	(14)	14 AREA AVERAGE	+ 5.7%		+16%						
Cleveland	- 6.6	(11)	-11	(8)						Philadelphia	+ 1.6	(11)	+ 4	(13)
Minn./St. Paul	- 4.7	(12)	-24	(3)	Chicago	+10.2	(11)	+22	(10)	Cleveland	+ 6.0	(12)	- 3	(11-12)
					Milwaukee	+16.8	(12)	+ 9	(6)					
Detroit	+ 0.9	(13)	+ 4	(13)	Baltimore	+16.8	(13)	+35	(13)	WASHINGTON	+ 7.8	(13)	-30	(6-7)
WASHINGTON	+11.8	(14)	-21	(4)	Houston	+83.8	(14)	+83	(14)	Detroit	+14.5	(14)	- 3	(11-12)

* Percent of labor force unemployed. (Does not include those not seeking employment during the past month). See notes, page 54.
a/Washington's annual average rate of change varied from the average (of all the rates of change) by less than ±10% of the range of the rates of change of all the areas.
b/Data available for 14 areas only. Lower rankings are assigned to higher negative (or lower positive) rates of change.

% LOW INCOME HOUSEHOLDS* (A Poverty Indicator)

METROPOLITAN, CITY, CITY/SURBURBAN RATIOS — NOTES AND RECENT RATES OF CHANGE

Data Sources and Caveats: See Notes, Appendix A, page 58.

Method of Calculation: The number of low income households for metropolitan areas and cities was obtained by multiplying the total number of households by the percent households with cash incomes below $3,000 per year, for the appropriate area. For each area, the number of suburban low income households and the total number of suburban households were obtained by subtracting central city figures from the appropriate metropolitan area data. The low income household rates for suburbs were obtained by dividing the number of low income households by the total number of households for the appropriate area. When two cities made up the "central city," the number of low income households and the total households were summed and then the combined rate obtained by division. The city/suburban ratio was obtained by dividing city low income household rates by similar suburban figures. Rates of change were calculated as in Appendix A, page 58.

TABLE B-3: METROPOLITAN LOW INCOME HOUSEHOLD RATES - RECENT RATES OF CHANGE

Metropolitan Area	68-69 % Chg.	(Rank)	ANNUAL AVERAGE CHANGE 1964-69 % Chg.	(Rank)	Metropolitan Area	68-69 % Chg.	(Rank)	ANNUAL AVERAGE CHANGE 1964-69 % Chg.	(Rank)
Minn./St. Paul	- 8%	(1)	- 0.2%	(14)	18 AREA AVERAGE	- 5%		- 0.4%	
Dallas	- 8	(2)	- 2.6	(7)					
Baltimore	- 8	(3)	- 0.8	(11)	L.A./Long Beach	- 4	(11)	+ 0.8	(17)
Cincinnati	- 8	(4)	- 1.8	(10)	New York	- 4	(12)	- 2.3	(8)
Boston	- 8	(5)	- 7.4	(1)	St. Louis	- 4	(13)	+ 0.6	(15-16)
Houston	- 7	(6)	- 2.8	(5)	WASHINTON	- 3	(14)	- 5.1	(3)
Cleveland	- 6	(7)	- 2.7	(6)	Detroit	- 3	(15)	- 5.9	(2)
Philadelphia	- 5	(8)	- 2.2	(9)	Buffalo	- 3	(16)	- 0.5	(12)
Pittsburgh	- 5	(9)	- 3.0	(4)	Chicago	- 2	(17)	- 0.4	(13)
S.F./Oakland	- 5	(10)	+ 3.7	(18)	Milwaukee	+ 2	(18)	+ 0.6	(15-16)

% LOW INCOME HOUSEHOLDS* (A Poverty Indicator) Continued.

Further Comments: The Washington metropolitan area poverty rate decreased at an above average[a] rate from 1964-69 as did that of Washington, D.C. The Washington suburbs, on the other hand, increased (got worse) at an above average rate during this period. The city/suburban ratio decreased (got better) at an above average rate.

TABLE B-4: CITY/SUBURBAN LOW INCOME HOUSEHOLD RATES - RECENT RATES OF CHANGE

CENTRAL CITY			
CITY	68-69 % Chg.	ANNUAL AVERAGE CHANGE 1964-69 % Chg.	(Rank)[b]
Dallas	- 8%	- 3.0%	(3)
WASHINGTON	- 8	- 6.9	(1)
Minn./St. Paul	- 7	+ 1.8	(15)
Cleveland	- 7	- 2.2	(5)
Houston	- 7	- 2.2	(6)
Cincinnati	- 7	- 1.4	(9)
Baltimore	- 6	+ 3.7	(18)
Boston	- 6	+ 1.2	(12)
18 CITY AVERAGE	- 5	- 0.6	
Philadelphia	- 5	- 1.6	(7)
S.F./Oakland	- 5	+ 2.2	(16)
L.A./Long Beach	- 5	+ 1.7	(14)
New York	- 4	- 2.5	(4)
Pittsburgh	- 4	- 0.5	(9)
St. Louis	- 3	+ 2.7	(17)
Buffalo	- 3	- 0.2	(10)
Detroit	- 1	- 5.4	(2)
Chicago	0	+ 0.8	(11)
Milwaukee	+ 2	+ 1.2	(13)

SUBURBAN			
Metropolitan Area	68-69 % Chg.	ANNUAL AVERAGE CHANGE 1964-69 % Chg.	(Rank)
Cleveland	- 9%	- 1.5%	(11)
Cincinnati	- 9	- 2.1	(8)
Minn./St. Paul	- 9	- 3.5	(6)
Baltimore	- 8	- 6.1	(3)
Boston	- 8	-10.5	(1)
Dallas	- 7	- 1.7	(10)
Houston	- 7	- 4.1	(4)
Pittsburgh	- 5	- 3.9	(5)
Chicago	- 5	- 1.9	(9)
Philadelphia	- 5	- 2.5	(7)
L.A./Long Beach	- 5	- 0.6	(13)
18 AREA AVERAGE	- 5	- 2.2	
Detroit	- 4	- 6.1	(2)
S.F./Oakland	- 4	+ 6.0	(18)
St. Louis	- 3	- 0.4	(15)
Buffalo	- 3	- 0.5	(14)
New York	- 3	- 0.8	(12)
Milwaukee	+ 3	- 0.1	(16)
WASHINGTON	+ 4	+ 0.7	(17)

CITY/SUBURBAN RATIO			
Metropolitan Area	68-69 % Chg.	ANNUAL AVERAGE CHANGE 1964-69 % Chg.	(Rank)
WASHINGTON	-11%	- 7.0%	(1)
Cleveland	- 2	- 0.2	(5)
New York	- 2	- 1.4	(3)
Dallas	- 2	- 0.4	(4)
S.F./Oakland	- 1	- 2.9	(2)
Milwaukee	-.4	+ 1.3	(8)
L.A./Long Beach	0	+ 2.4	(11)
Philadelphia	0	+ 1.6	(10)
18 AREA AVERAGE	+.3	+ 3.4	
St. Louis	+.4	+ 4.9	(13)
Buffalo	+.9	+ 0.5	(6)
Pittsburgh	+ 1	+ 8.9	(16)
Minn./St. Paul	+ 2	+ 6.4	(15)
Houston	+ 2	+ 5.2	(14)
Cincinnati	+ 2	+ 1.0	(7)
Detroit	+ 3	+ 1.4	(9)
Boston	+ 3	+23.2	(18)
Baltimore	+ 3	+14.0	(17)
Chicago	+ 5	+ 2.8	(12)

* Percent of all households with cash incomes under $3,000 per year. (Includes all governmental transfer payments.) See notes page 58.

a/See footnote, page 127, for explanation.

b/Lower rankings are assigned to higher negative (or lower positive) rates of change.

INFANT MORTALITY RATES* (A Health Indicator)

METROPOLITAN, CITY, AND CITY/SUBURBAN RATIOS -- NOTES AND RECENT RATES OF CHANGE

Data Sources and Caveats: See notes, Appendix A, page 70.
Method of Calculation: All infant mortality rates were calculated by dividing deaths (under one year) by live births for the area and year desired. For each area, the number of suburban infant deaths and suburban live births were obtained by subtracting city figures from the appropriate metropolitan area data. When two cities made up the "central city," the deaths and live births were summed and then the combined rate obtained by division. The city/suburban ratio was obtained by dividing city suburban infant mortality rates for each area for the year in question. Rates of change were calcualted as in Appendix A, page 70.

TABLE B-5: METROPOLITAN INFANT MORTALITY RATES - RECENT RATES OF CHANGE

Metropoitan Area	ANNUAL AVERAGE CHANGE 1962-67		66-67		Metropolitan Area	ANNUAL AVERAGE CHANGE 1962-67		66-67	
	% Chg.	(Rank)	% Chg.	(Rank)		% Chg.	(Rank)	% Chg.	(Rank)
WASHINGTON	- 5.4%	(1)	-16.7%	(1)	Pittsburgh	- 1.6%	(10)	- 0.2%	(13)
Baltimore	- 3.0	(2)	- 4.7	(8)	Milwaukee	- 1.1	(11)	- 6.4	(5)
Houston	- 3.0	(3)	-10.8	(2)	Philadelphia	- 0.9	(12)	+ 4.2	(18)
Cleveland	- 2.7	(4)	+ 2.2	(16)	Minn./St. Paul	- 0.9	(13)	+ 0.9	(15)
S.F./Oakland	- 2.7	(5)	- 5.6	(6)					
					Cinncinnati	- 0.5	(14)	- 7.9	(3)
L.A./Long Beach	- 2.5	(6)	- 5.1	(7)	Dallas	- 0.5	(15)	- 3.4	(11)
Boston	- 2.5	(7)	- 4.6	(9)	St. Louis	- 0.4	(16)	- 0.2	(14)
New York	- 2.3	(8)	- 1.9	(12)	Chicago	- 0.2	(17)	- 6.9	(4)
Detroit	- 1.9	(9)	- 4.1	(10)	Buffalo	+ 0.4	(18)	+ 4.0	(17)
18 AREA AVERAGE	- 1.7%		- 3.7%						

INFANT MORTALITY RATES* (A Health Indicator) Continued.

Further Comments: The Washington Metropolitan area infant mortality rate decreased at an above average[a] rate from 1962-67 as did the rate in Washington, D.C., and its suburbs. The city/suburban ratio increased (got worse) at about the average rate.

TABLE B-6: CITY/SUBURBAN INFANT MORTALITY RATES - RECENT RATES OF CHANGE

CENTRAL CITY				SUBURBAN				CITY/SUBURBAN RATIO			
CITY	66-67 % Chg.	ANNUAL AVERAGE CHANGE 1962-67 % Chg.	(Rank)[b]	Metropolitan Area	66-67 % Chg.	ANNUAL AVERAGE CHANGE 1962-67 % Chg.	(Rank)	Metropolitan Area	66-67 % Chg.	ANNUAL AVERAGE CHANGE 1962-67 % Chg.	(Rank)
Washington	-21%	-4.4%	(1)	Houston	-20%	-3.6%	(3)	Houston	-30%	+ 0.9%	(10)
Houston	-16	-2.8	(5)	WASHINGTON	-13	-5.4	(2)	Dallas	-16	- 1.8	(3)
S.F./Oakland	-13	-3.3	(3)	Detroit	- 7	-3.3	(4)	Cleveland	-14	- 1.8	(2)
Milwaukee	-11	+2.2	(18)	Boston	- 6	-3.0	(5)	Milwaukee	-13	+11.3	(18)
Cincinnati	-11	-0.4	(11)	Chicago	- 5	-0.7	(16)	S.F./Oakland	-12	- 1.4	(5)
				Cincinnati	- 5	-0.7	(15)	New York	-12	- 2.0	(1)
Dallas	- 9	-1.1	(8)								
Chicago	- 8	+0.3	(14)	L.A./Long Beach	- 4	-2.6	(6)	WASHINGTON	- 9	+ 1.4	(14)
L.A./Long Beach	- 6	-2.3	(7)	Baltimore	- 4	-1.9	(9)	St. Louis	- 8	+1.4	(13)
				S.F./Oakland	- 1	-2.0	(8)	Cincinnati	- 7	+ 0.4	(9)
18 CITY AVERAGE	- 6	-1.2									
				18 AREA AVERAGE	- 1	-2.0		18 AREA AVERAGE	- 7	+ 0.9	
New York	- 5	-2.8	(6)								
Baltimore	- 4	-3.4	(2)	Minn./St. Paul	+.4	-1.2	(11)	Philadelphia	- 6	+ 0.2	(6)
Pittsburgh	- 4	+0.9	(17)	Pittsburgh	+ 2	-2.5	(7)	Pittsburgh	- 6	+ 3.9	(17)
St. Louis	- 4	+0.5	(15)	Milwaukee	+ 2	-5.8	(1)	Buffalo	- 5	+ 0.3	(8)
Cleveland	- 4	-3.0	(4)	St. Louis	+.4	-0.9	(13)	Chicago	- 2	+ 1.0	(11)
				Buffalo	+ 7	+0.3	(17)	L.A./Long Beach	- 1	+ 0.3	(7)
Detroit	- 1	-0.3	(12-13)								
Boston	- 1	-0.9	(9)	Dallas	+ 8	+0.8	(18)	Baltimore	-.1	- 1.7	(4)
Buffalo	+ 1	+0.7	(16)	New York	+ 8	-0.8	(14)	Minn./St. Paul	+ 1	+ 1.0	(12)
Minn./St. Paul	+ 1	-0.3	(12-13)	Philadelphia	+ 8	-1.0	(12)	Boston	+ 5	+ 2.5	(15)
Philadelphia	+ 2	-0.8	(10)	Cleveland	+12	-1.3	(10)	Detroit	+ 7	+ 3.6	(16)

* Infant deaths (under one year) per 1,000 live births. See notes, page 70.
a/See footnote, page 127, for explanation.
b/Lower rankings are assigned to higher negative (or smaller positive) rates of change.

REPORTED SUICIDE RATES* (A Mental Health Indicator)

METROPOLITAN, CITY, AND CITY/SUBURBAN RATIOS - NOTES AND RECENT RATES OF CHANGE

Data Sources and Caveats: See notes, Appendix A, page 74:
Method of Calculation: The population estimates for each metropolitan area and central city for the years between 1960 and 1970 were obtained by linear interpolation between 1960 and 1970 Census figures. The reported suicide rate per 100,000 population was obtained by dividing the number of suicides (for each central city or suburb) by the appropriate population. For each area, the number of reported suburban suicides and the suburban population were obtained by subtracting central city figures from the appropriate metropolitan area data. When two cities made up the "central city," the reported suicides and populations were summed and then the combined rate obtained by division. The city/suburban ratio was obtained by dividing city by suburban reported suicide rates for each area for the year in question. Rates of change were calculated as in Appendix A, page 74.

TABLE B-7: METROPOLITAN REPORTED SUICIDE RATES - RECENT RATES OF CHANGE

Metropolitan Area	ANNUAL AVERAGE CHANGE 1962-67		'66-67		Metropolitan Area	ANNUAL AVERAGE CHANGE 1962-67		66-67	
	% Chg.	(Rank)	% Chg.	(Rank)		% Chg.	(Rank)	% Chg.	(Rank)
Buffalo	- 4.7%	(1)	+ 11%	(15)	Dallas	- .04%	(11)	+ 32%	(18)
Baltimore	- 3.1	(2)	- 28	(1)	18 AREA AVERAGE	+ 0.5		+ 1	
New York	- 3.0	(3)	- 14	(3)					
WASHINGTON	- 2.9	(4)	- 14	(2)	Cleveland	+ 0.6	(12)	- 4	(7)
Chicago	- 1.5	(5)	- 8	(5)	Cincinnati	+ 1.5	(13)	+ 22	(16)
					Boston	+ 1.6	(14)	+ 1	(13)
Pittsburgh	- 1.0	(6)	+ 1	(10)					
Milwaukee	- 0.8	(7)	- 7	(6)	L.A./Long Beach	+ 1.8	(15)	+ 1	(12)
St. Louis	- 0.7	(8)	+ 4	(14)	Detroit	+ 3.2	(16)	+ 1	(11)
Philadelphia	- 0.5	(9)	- .1	(9)	S.F./Oakland	+ 3.4	(17)	- 2	(8)
Minn./St. Paul	- 0.3	(10)	- 13	(4)	Houston	+ 9.2	(18)	+ 27	(17)

REPORTED SUICIDE RATES* (A Mental Health Indicator) Continued.

Further Comments: The Washington metropolitan area reported suicide rate decreased from 1962-67 as did the central city and its suburbs, (while the average for all 18 areas increased for metropolitan areas, cities and suburbs). The city/suburban ratio decreased (got better) at an above average[a] rate from 1962-67 (but increased at an above average rate during 1966-67).

TABLE B-8: CITY/SUBURBAN REPORTED SUICIDE RATES - RECENT RATES OF CHANGE

CENTRAL CITY				SUBURBAN				CITY/SUBURBAN RATIO			
CITY	66-67 % Chg.	ANNUAL AVERAGE CHANGE 1962-67 % Chg.	(Rank)[b]	Metropolitan Area	66-67 % Chg.	ANNUAL AVERAGE CHANGE 1962-67 % Chg.	(Rank)	Metropolitan Area	66-67 % Chg.	ANNUAL AVERAGE CHANGE 1962-67 % Chg.	(Rank)
Baltimore	-34%	+ 0.8%	(11)	Baltimore	-18%	- 6.5%	(1)	Milwaukee	-40%	+ 0.4%	(9)
Milwaukee	-20	- 0.3	(6)	WASHINGTON	-17	- 1.4	(3)	Philadelphia	-26	- 2.3	(5)
Philadelphia	-14	- 1.6	(5)	Minn./St. Paul	-15	- 1.0	(4)	Baltimore	-19	+10.9	(18)
New York	-14	- 4.0	(3)	New York	-14	+ 1.2	(12-13)	S.F./Oakland	- 6	- 4.0	(3)
Minn./St. Paul	-11	+ 1.3	(14)	L.A./Long Beach	-12	+ 0.4	(9)	Detroit	- 5	+ 2.0	(13)
Chicago	-10	- 1.7	(4)	Dallas	- 9	- 0.6	(8)	Chicago	- 5	- 0.8	(7)
WASHINGTON	- 8	- 4.7	(2)	Cleveland	- 9	+ 1.1	(11)	New York	+ 1	- 4.9	(2)
S.F./Oakland	- 5	+ 1.3	(13)	Chicago	- 5	- 1.0	(5)	Cincinnati	+ 3	- 1.3	(6)
Detroit	- 2	+ 4.7	(17)	Pittsburgh	- 2	- 1.5	(2)	St. Louis	+ 4	+ 1.3	(10)
Cleveland	+ 4	+ 0.6	(9)	Boston	- 2	+ 1.2	(12-13)	Minn./St. Paul	+ 5	+ 2.5	(15)
18 CITY AVERAGE	+ 4	+ 0.4		Buffalo	- 1	+20.2	(18)	18 AREA AVERAGE	+ 6	- 0.1	
St. Louis	+ 7	+ 0.4	(7)	18 AREA AVERAGE	- 1	+ 1.5		Pittsburgh	+10	+ 2.0	(14)
Pittsburgh	+ 8	+ 0.4	(8)	S.F./Oakland	+ 1	+ 6.6	(17)	WASHINGTON	+11	- 3.6	(4)
Boston	+11	+ 2.6	(15)	St. Louis	+ 3	- 0.9	(6)	Boston	+13	+ 1.4	(12)
L.A./Long Beach	+16	+ 3.4	(16)	Detroit	+ 4	+ 2.4	(14)	Cleveland	+14	- 0.5	(8)
Cincinnati	+23	+ 1.1	(12)	Houston	+12	+ 3.0	(16)	Houston	+17	+ 7.5	(17)
Buffalo	+29	-10.3	(1)	Philadelphia	+15	+ 1.0	(10)	Buffalo	+30	-15.2	(1)
Houston	+31	+11.6	(18)	Cincinnati	+19	+ 2.5	(15)	L.A./Long Beach	+31	+ 2.9	(16)
Dallas	+64	+ 0.7	(10)	Milwaukee	+34	- 0.8	(7)	Dallas	+79	+ 1.3	(11)

* Reported suicides per 100,000 population. See notes, page 74.
a/See footnote, page 127, for explanation.
b/Lower rankings are assigned to higher negative (or smaller positive) rates of change.

REPORTED ROBBERY RATES* (A Public Order Indicator)

METROPOLITAN, CITY, AND CITY/SUBURBAN RATIOS - NOTES AND RECENT RATES OF CHANGE

Data Sources and Caveats: See notes[a], Appendix A, page 78.
Method of Calculation: The population estimates for each metropolitan area and central city for the years between 1960 and 1970 were obtained by linear interpolation between 1960 and 1970 Census figures. The reported robbery rate per 100,000 population was obtained by dividing the number of reported robberies (for each central city or suburb) by the appropriate population. For each area, the number of suburban reported robberies and the suburban population were obtained by subtracting central city figures from the appropriate metropolitan area data. When two cities made up the "central City," the reported robberies and populations were summed and then the combined rate obtained by division. The city/suburban ratio was obtained by dividing city by suburban reported robbery rates for each area for the year in question. Rates of change were calculated as in Appendix A, page 78.

TABLE B-9: METROPOLITAN REPORTED ROBERY RATES -- RECENT RATES OF CHANGE

Metropolitan Area	ANNUAL AVERAGE CHANGE 1964-69		68-69		Metropolitan Area	ANNUAL AVERAGE CHANGE 1964-69		68-69	
	% Chg.	(Rank)	% Chg.	(Rank)		% Chg.	(Rank)	% Chg.	(Rank)
Chicago	+ 4.8%	(1)	+ 12%	(9)	Buffalo	+ 31.8%	(9)	+ 2%	(5)
L.A./Long Beach	+ 12.1	(2)	+ 5	(7)	Boston	+ 37.3	(10)	+ 26	(14)
Philadelphia	+ 14.7	(3)	+ 14	(12)	Houston	+ 41.0	(11)	+ 25	(13)
Cincinnati	+ 17.9	(4)	+ 12	(10)	Dallas	+ 41.1[b]	(12)	+114[b]	(18)
Minn./St. Paul	+ 22.4	(5)	- 2	(3)	Cleveland	+ 42.8	(13)	+ 56	(17)
					S.F./Oakland	+ 42.9	(14)	+ 2	(4)
St. Louis	+ 22.7	(6)	+ 13	(11)					
Pittsburgh	+ 28.9	(7)	- 5	(2)	Detroit	+ 44.2[b]	(15)	+ 26	(15)
Milwaukee	+ 29.4	(8)	- 15	(1)	WASHINGTON	+ 64.9	(16)	+ 38	(16)
					Baltimore	+ 92.6[b]	(17)	+ 3	(6)
					New York	+116.3[b]	(18)	+ 8	(8)
AREA AVERAGE	+ 29.5%[d]		+ 13%[c]						

* Reported robberies per 100,000 population.
a/If reported burglary instead of robbery were used as a public order indicator, then smaller city/suburban ratios would have resulted. The 1970 FBI Uniform Crime Reports show a ratio of about 7:1 for center city versus suburban robbery rates in the U.S. metropolitan areas. For reported burglaries' rates, the corresponding ratio is 2:1. b/These rates of change were not included by the FBI in calculating its national trends. (See footnote, page 79.) Nor were they included in the calculated averages in Tables B-9 or B-10.
c/A 17 area average. d/A 14 area average.

REPORTED ROBBERY RATES* (A Public Order Indicator) Continued.

Further Comments: The Washington metropolitan area reported robbery rate increased at an above average[e] rate during 1964-69.

TABLE B-10: CITY/SUBURBAN REPORTED ROBBERY RATES -- RECENT RATES OF CHANGE

CENTRAL CITY				
CITY	ANNUAL AVERAGE CHANGE 1964-69		68-69	
	% Chg.	(Rank)[b]	% Chg.	(Rank)
Chicago	+ 6.3%	(1)	+ 14%	(9)
L.A./Long Beach	+ 12.1	(2)	+ 3	(6)
Philadelphia	+ 15.8	(3)	+ 14	(10)
Cincinnati	+ 19.7	(4)	+ 9	(7)
Minn./St. Paul	+ 27.6	(5)	+ 17	(11)
St. Louis	+ 29.9	(6)	+ 21	(12)
Milwaukee	+ 33.4	(7)	- 24	(1)
Pittsburgh	+ 34.3	(8)	- 3	(2)
CITY AVERAGE	+ 36.7%[c]		+ 15%[d]	
Buffalo	+ 40.0	(9)	- 2	(3)
Houston	+ 46.1	(10)	+ 27	(13)
Dallas	+ 48.7[a]	(11)	+126[a]	(18)
Cleveland	+ 52.4	(12)	+ 62	(17)
Boston	+ 53.0	(13)	+ 41	(15)
S.F./Oakland	+ 54.4	(14)	0	(4)
Detroit	+ 57.4[a]	(15)	+ 28	(14)
WASHINGTON	+ 89.3	(16)	+ 44	(16)
Baltimore	+110.0[a]	(17)	+ 2	(5)
New York	+127.2[a]	(18)	+ 9	(8)

SUBURBAN				
Metropolitan Area	ANNUAL AVERAGE CHANGE 1964-69		68-69	
	% Chg.	(Rank)	% Chg.	(Rank)
Houston	- 3.8%	(1)	-35%	(1)
Chicago	+11.6	(2)	- 3	(5)
Dallas	+12.2[a]	(3)	+33[a]	(18)
L.A./Long Beach	+12.7	(4)	+ 5	(10)
Philadelphia	+17.4	(5)	+ 4	(8)
Boston	+17.7	(6)	- 7	(4)
AREA AVERAGE	+19.8%[a]		+ 3%[d]	
Detroit	+20.3%[a]	(7)	+22	(16)
St. Louis	+20.4	(8)	- 2	(6)
Pittsburgh	+21.3	(9)	-19	(2)
Milwaukee	+21.4	(10)	-18	(3)
Cincinnati	+22.3	(11)	+12	(13)
Buffalo	+22.8	(12)	+19	(14)
Cleveland	+25.2	(13)	+24	(17)
Minn./St. Paul	+26.5	(14)	+ 3	(7)
S.F./Oakland	+27.6	(15)	+ 7	(11)
Baltimore	+32.0[a]	(16)	+ 4	(9)
WASHINGTON	+33.8	(17)	+22	(15)
New York	+36.2[a]	(18)	+12	(12)

CITY/SUBURBAN RATIO				
Metropolitan Area	ANNUAL AVERAGE CHANGE 1964-69		68-69	
	% Chg.	(Rank)	% Chg.	(Rank)
Chicago	- 3.4%	(1)	+17%	(11)
Cincinnati	- 1.3	(2)	+ 3	(8)
Philadelphia	- 0.8	(3)	+10	(10)
L.A./Long Beach	- 0.4	(4)	- 2	(5)
Minn./St. Paul	+ 0.5	(5)	- 1	(6)
St. Louis	+ 4.7	(6)	+24	(14)
Milwaukee	+ 5.8	(7)	- 7	(2)
Pittsburgh	+ 6.3	(8)	+19	(13)
Buffalo	+ 8.0	(9)	-17	(1)
AREA AVERAGE	+10.2%[c]		+14%[d]	
S.F./Oakland	+11.3	(10)	- 6	(3)
Cleveland	+12.0	(11)	+31	(15)
Detroit	+18.5[a]	(12)	+ 5	(9)
Boston	+18.7	(13)	+51	(16)
WASHINGTON	+20.6	(14)	+18	(12)
Dallas	+22.6[a]	(15)	+70[a]	(17)
Baltimore	+30.3[a]	(16)	- 1	(7)
New York	+32.4[a]	(17)	- 3	(4)
Houston	+61.4	(18)	+96	(18)

* Reported robberies per 100,000 population.
a/These rates of change were not included by the FBI in calculating its national trends, nor in the averages presented in this table.
b/Lower rankings are assigned to higher negative (or smaller positve) rates of change.
c/A 14 area average.
d/A 17 area average.
e/See footnote, page 127, for explanation.

APPENDIX C

SUMMARY TABLES FOR ALL DATA

Three summary tables are presented in this appendix.

1. Summary Ranking Table for the 18 Metropolitan Areas --

   The rankings using the most recent metropolitan area data are presented.

2. Summary Ranking Table for the City/Suburban Analyses --

   Relative standings of metropolitan areas, central cities and suburban areas are tabulated.

3. Metropolitan Summary Table --

   Symbols representing direction of recent progress, latest standing and comparative rates of change are tabulated.

TABLE C-1: HOW THE 18 METROPOLITAN AREAS RANK: A SUMMARY[a]

Metropolitan Area	Unemployment	Poverty	Income Level	Housing	Health	Mental Health	Public Order	Metro. Area
	% Unemployed (1970)[b]	% Low Income Households (1970)[b]	Adj. Per Capita Income (1969)[b]	Cost for Moderate Income Family (1969)[b]	Infant Mortality Rate (1968)[b]	Reported Suicide Rate (1968)[b]	Reported Robbery Rate (1970)[b]	
New York	9	9*	4	17	9	1	18	N.Y.
L.A./Long Beach	18	15	3	10	2*	17	11	L.A.
Chicago	2	5	5	13	18	3	14	Chicago
Philadelphia	7*	9*	14	9	17	13	6	Phila.
Detroit	17	3	1	5	12	15	17	Detroit
Boston	4	1	17	18	6	10	3	Boston
S.F./Oakland	16	17*	2	14	2*	18	13	S.F.
WASHINGTON	1	2	8	11	5	7	15	D.C.
Pittsburgh	14*	12	13	3	11	11	5	Pitts.
St. Louis	10*	13	12	8	10	4	9	St. L.
Cleveland	12*	7	9	15	8	16	10	Cleve.
Baltimore	5*	11	16	4	15	14	16	Balti.
Houston	5*	17*	11	1	16	12	12	Houston
Minn./St. Paul	14*	4	6	6	1	5	7	Minn.
Dallas	3	16	7	2	14	6	8	Dallas
Cincinnati	7*	14	10	7	7	9	2	Cinci.
Milwaukee	10*	5*	15	16	4	8	1	Mlwk.
Buffalo	12*	8	18	12	13	2	4	Buffalo

a/The lowest rankings are assigned to the most favorable conditions. More detailed data for each quality category are provided in the exhibits of Section V or Appendix A.

b/Latest year available.

* Tie ranking (the lowest rank in the tie is listed). For example, Baltimore and Houston are tied for ranks 5-6 in % unemployed and are both listed "5*" in this table.

TABLE C-1: HOW THE 18 METROPOLITAN AREAS RANK: A SUMMARY[a] (Continued)

Metropolitan Area	Racial Equality[c]	Community Concern	Citizen Partici.	Educational Attainment	Transportation	Air Quality[d]			Social Disintegration[e]	Metro. Area
	Nonwhite/ White Unemp. Ratio (1970)[b]	Per Capita United Funds Contrib. (1970)[b]	% Eligible Vote for Pres. (1968)[b]	Med. School Years for Adults (1969)[b]	Cost for Moderate Income Family (1969)[b]	Levels Of 3 Pollutants (1969)[b] Part.	SO_2	NO_2	Estimates of Narcotics Addiction (1969)[b]	
New York	1	18	14*	9*	1	10	18	8	7	N.Y.
L.A./Long Beach	3	17	11*	3*	7	8	10	18	3	L.A./L.
Chicago	6	15	2*	7*	13	16	17	5	1	Chicago
Philadelphia	9	10	8	13*	2	15	13	1	f	Phila.
Detroit	8	7	5*	13*	8	14	9	16	f	Detroit
Boston	f	12	2*	6	15	5*	14*	4	4	Boston
S.F./Oakland	2	13	7	2	16	1	4	10	5	S.F.
WASHINGTON	7	16	18	1	10	3*	7*	3	6	D.C.
Pittsburgh	5	2	2*	13*	3	17	16	15	f	Pitts.
St. Louis	11	6	11*	17	14	18	14*	17	2	St. L.
Cleveland	12	3	9	9*	6	13	12	13	f	Cleve.
Baltimore	4	14	14*	18	9	11*	11	11*	f	Balti.
Houston	10	11	16*	9*	17	5*	2*	14	f	Houston
Minn./St. Paul	f	5	1	3*	11	2	7*	7	f	Minn.
Dallas	f	9	16*	3*	4*	3*	1	6	f	Dallas
Cincinnati	f	3	11*	13*	12	9	6	11*	f	Cinci.
Milwaukee	f	8	5*	7*	4*	11*	5	9	f	Mlwk.
Buffalo	f	4	10	9*	18	5*	2*	2	f	Buffalo

a/The Lowest rankings are assigned to the most favorable conditions. More detailed data for each quality category are provided in the exhibits of Section V or Appendix A.
b/Latest year available
c/Data available for only 12 metropolitan areas.
d/Pollutants are: Particulate matter, sulfur dioxide and nitrogen dioxide.
e/Data available for only seven central cities.
f/No data available.
* Tie ranking (the lowest rank in the tie is listed). For example, Baltimore and Houston are tied for ranks 5-6 in % unemployed and are both listed "5*" in this table.

TABLE C-2
METROPOLITAN, CITY AND SUBURBAN RANKINGS: A SUMMARY OF RELATIVE STANDINGS FOR THE LATES YEAR.

Metropolitan Area	Unemployment			Poverty			Health			Mental Health			Public Order			Metro. Area
	% Unemployed[b] (1969)[c]			% Low Income Households (1969)[c]			Infant Mortality Rate (1967)[c]			Reported Suicide Rate (1967)[c]			Reported Robbery Rate (1969)[c]			
	Met.	Cy.	Sub.	Met.	Cy.	Sub.	Met.	Cy.	Sub.	Met.	Cy.	Sub.	Met.	Cy.	Sub.	
New York	9	7	7	11	7	9	12*	6	12	2	1	4	18	13	13	N.Y.
L.A./Long Beach	14	13	13*	16	12	15	4	3	8	17	17	17	10	7	18	L.A./L.B.
Chicago	6	6	8	5*	4	5	17	15	13	4	4	8	13	11	12	Chicago
Philadelphia	5	8	5	10	10	11	18	18	15	8	7	13	4	4	11	Phila.
Detroit	12	14	11	3	1*	4	12*	14	7	14	9	16	16	17	15	Detroit
Boston	d	d	d	1	16	1	2	9	5	7	3	11	6	9	8	Boston
S.F./Oakland	13	9	13*	18	14	16	1	2	6	18	18	18	14	15	17	S.F./Okl.
WASHINGTON	4	5	4	2	1*	6	7	13	4	5	5	9	17	18	16	D.C.
Pittsburgh	d	d	d	12	15	14	9	16	9	6	6	10	5	10	4	Pitts.
St. Louis	11	11	10	13	18	12	16	17	17	13	14	14	9	14	14	St. Louis
Cleveland	7	12	3	7	9	7	8	10	3	15	12	15	12	12	7	Cleve.
Baltimore	10	10	8	8	13	3	14	12	11	3	8	3	15	16	10	Balti.
Houston	8	4	12	17	8	18	10	5	10	16	16	2	11	8	2	Houston
Minn./St. Paul	1	3	1	4	5	2	3	4	2	9	13	6	7	6	3	M./St.P.
Dallas	2	2	2	15	6	17	15	7	18	10	11	5	8	5	5	Dallas
Cincinnati	c	c	c	14	17	13	6	1	16	12	15	12	2	2	6	Cinci.
Milwaukee	3	1	6	5*	1*	8	5	8	1	11	10	7	1	1	1	Mlwk.
Buffalo	d	d	d	9	11	10	11	11	14	1	2	1	3	3	9	Buffalo

a/These are rankings, with the lowest numbers assigned to the most favorable conditions. More detailed data are provided in the exhibits of Section V for each quality category.
b/Data available for 14 areas only.
c/Latest year data available.
d/Data not available.
* Tie ranking (the lowest rank in the tie is listed).

EXPLANATORY NOTES FOR SUMMARY TABLE C-3

The table below has been prepared to provide a quick summary of the quality measures used for all the metropolitan areas studied.

CODE USED IN TABLE

Each metropolitan area has a three character code with respect to each quality category.

(1) The first character indicates the Direction of Change comparing the recent annual average rate of change with a zero baseline.	(2) The second character indicates the Latest Level of quality of the particular metropolitan area with respect to the average (mean) level of all 18 metropolitan areas.	(3) The third character indicates the particular metropolitan area's average annual Rate of Change with respect to the average (mean) change of the 18 metropolitan areas.
(+) Conditions Improved	(+) Better than Average	(+) Rate of Change Favorable
(-) Conditions Worsened	(-) Worse than Average	(-) Rate of Change Unfavorable
(0) Conditions Unchanged*	(0) About Average*	(0) Rate of Change Average*

FOR EXAMPLE: +0- means that the metropolitan area is improving, its latest level of quality is about average, and its rate of change is less favorable than average.

* Conditions are defined as "unchanged" or "average" if the particular metropolitan area's performance varied by less than ± 10 per cent of the range of values of the other metropolitan areas.

TABLE C-3: 18 METROPOLITAN AREA INDICATORS FOR 14 QUALITY CATEGORIES*

Metropolitan Area	Unemployment	Poverty	Income Level	Housing	Health	Mental Health	Public Order	
	% Unemployed (1970)[a]	% Low Income Households (1970)[a]	Adj. Per Capita Income (1969)[a]	Cost for Moderate Income Family (1969)[a]	Infant Mortality Rate (1968)[a]	Reported Suicide Rate (1968)[a]	Reported Robbery Rate (1970)[a]	Metro. Area
New York	-0+	+0+	++-	---	+0+	+++	---	N.Y
L.A./Long Beach	--0	0--	+++	-0-	+++	0-+	-0+	L.A.
Chicago	0++	++0	++-	--+	0--	+++	-0+	Chicago
Philadelphia	-++	+00	+--	-+-	+-0	--0	-++	Phila.
Detroit	---	+++	+++	-++	+-0	--0	---	Detroit
Boston	--+0	+++	+-0	---	++0	-0-	-+-	Boston
S.F./Oakland	--0	---	+++	---	+++	0-+	-0-	S.F.
WASHINGTON	-00	+++	+0-	-0+	+++	+0+	---	D.C.
Pittsburgh	0-+	+-+	+-+	-+-	+--	--0	-+-	Pitts.
St. Louis	00+	0--	+--	-++	+00	+++	-0+	St. L.
Cleveland	-00	++0	+00	--0	+00	0-0	-0-	Cleve.
Baltimore	0++	0--	+-0	-+0	+-+	--0	---	Balti.
Houston	-+0	+-0	+-0	-+0	+-0	---	-0-	Houston
Minn./St. Paul	---	++-	+++	0++	++0	+++	-++	Minn.
Dallas	-+-	+-0	+++	-+0	+--	+0+	-+-	Dallas
Cincinnati	-+-	+-0	+-+	-++	++-	00+	-+0	Cinci.
Milwaukee	-0-	0+-	+--	---	++0	+0+	-+0	Mlwk.
Buffalo	00+	+00	+-+	--0	0--	0++	-+-	Buffalo

* For coding used in this table, see page 140.
a/Latest year data available.

TABLE C-3: 18 METROPOLITAN AREA INDICATORS FOR 14 QUALITY CATEGORIES* (Continued)

Metropolitan Area	Racial Equality[b]	Community Concern	Citizen Partici.	Educational Attainment	Transportation	Air Quality		Social[d] Disintegration[d]	Metro. Area
	Nonwhite/ White Uempl. Ratio (1970)[a]	Per Capita United Funds Contrib. (1970)[a]	% Eligible Vote for Pres. (1968)[a]	Med. School Years of Adults (1969)[a]	Cost for Moderate Income Family (1969)[a]	Suspended Part. Con. (1969)[a]	Levels of 2 Pollutants (69)[c] SO_2 NO_2	Estimates of Narcotics Addiction (69)[a]	
New York	+-	+-+	---	+00	-+0	+0+	- 0	e-e	N.Y.
L.A./Long Beach	+-	+-0	-0-	++0	00+	e0e	0 -	e-e	L.A.
Chicago	+++	+-+	-+0	+00	---	+0-	- +	e-e	Chicago
Philadelphia	+00	+00	-00	00-	-+-	+-+	0 +	eee	Phila.
Detroit	+0+	++-	-+0	+00	-00	+0+	0 -	eee	Detroit
Boston	ddd	+--	-+0	0+-	---	+++	0 +	e-e	Boston
S.F./Oakland	+++	+-0	-+0	++0	0-+	++0	+ 0	e0e	S.F.
WASHINGTON	-+-	+--	0-+	++0	-00	++-	+ +	e0e	D.C.
Pittsburgh	+++	++0	-++	+00	-++	+-0	0 -	eee	Pitts.
St. Louis	+-+	++-	-00	+-+	--0	---	0 -	e-e	St. L.
Cleveland	---	++-	-0-	+00	-00	+0-	0 0	eee	Cleveland
Baltimore	+++	+-+	--0	+-0	-0-	+0+	0 0	eee	Balt.
Houston	+0-	+0-	+-+	-0-	--+	++-	+ -	eee	Houston
Minn./St. Paul	ddd	++0	-++	++0	-0+	++0	+ 0	eee	Minn.
Dallas	ddd	+0+	+-+	++0	-0+	++0	+ 0	eee	Dallas
Cincinnati	ddd	-++0	-00	+0+	-0-	+0+	+ 0	eee	Cinci.
Milwaukee	ddd	++-	-+-	+0+	00+	+00	+ 0	eee	Mlwk.
Buffalo	ddd	++0	-0-	+0+	--0	e-e	+ +	eee	Buffalo

* For coding used in this table, see page 140.
b/Data available for only 12 metropolitan areas.
c/Each of the two characters represents the level of one of the pollutants. (Each character is equivalent to the "2nd character" described on page 140.)
d/Data available for only 7 central cities.
e/Data not available.

APPENDIX D

PERSONS AND ORGANIZATIONS CONSULTED

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