¹³ Map data computed from: "Chemical Profile, Polyethylene -HD," <u>Oil, Paint and Drug Reporter</u>, October 9, 1967, p. 9. And "Chemical Profile, Polyethylene - LD," <u>Oil, Paint and Drug Re</u>porter, Oct. 23, 1967, p. 9.

¹⁴ "A New Look at the Markets for Plastics," <u>Plastics World</u>, Jan., 1968, p. 22.

¹⁵ Ibid., pp. 22-27.

¹⁶ Ibid., p. 27.

¹⁷ The map was based on data for the total number of employees in SIC 3079 and computed from Table 2 in: U.S. Bureau of the Census, <u>Census of Manufactures</u>, 1963, Vol. 2, Industry Statistics, <u>Part II, Major Groups 29 to 39 and 19</u>. (Washington: U.S. Government Printing Office, 1966), p. 30A-10.

¹⁸ "New Technologies Spur Polypropylene into New Markets, Record Sales," Modern Plastics, Jan., 1967, pp. 101-102.

¹⁹ "Styrenic Materials Zoom, But Where's New Capacity Coming From?" Modern Plastics, Jan., 1967, pp. 89-92.

²⁰ Map data computed from: "Benzene's New Look," <u>Chemical</u> Week, March 6, 1965, p. 50.

²¹ Map data computed from: "Chemical Profile, Ethylbenzene," Oil, Paint and Drug Reporter, Oct. 11, 1965, p. 9.

²² Map data computed from: "Chemical Profile, Styrene," <u>Oil</u>, Paint and Drug Reporter, April 18, 1966, p. 9.

²³ Map data computed from: "War, Monomer Supply Squeeze Polystyrene," Chemical and Engineering News, July 18, 1966, p. 24.

²⁴ "Polyvinyl Chloride Sales Climb But Low Prices Pose Big Problems," Modern Plastics, Jan., 1967, pp. 93-95.

²⁵ W.L. Faith, D.B. Keyes, and R.L. Clark, <u>Industrial Chemi</u>cals (New York: John Wiley and Sons, 1965), pp. 805-810.

²⁶ Map data computed from: "Chemical Profile, Ethylene Dichloride," Oil, Paint and Drug Reporter, April 22, 1968, p. 9.

²⁷ Map data computed from: "New Technology Might Lower Acetylene's Cost," Chemical and Engineering News, July 22, 1963, p. 55. æ Ibid.

²⁹ Map data computed from: "Chemical Profile, Vinyl Chloride," Oil, Paint and Drug Reporter, Oct. 18, 1965, p. 9.

³⁰ Map data computed from: "Polyvinyl Chloride Output at Capacity," Chemical and Engineering News, Feb, 3, 1964, p. 26.

Table 1*

WORLD CONSUMPTION OF PLASTICS IN TONS

Year	Tons
1930	70,000
1935	160,000
1940	320,000
1945	650,000
1950	1,500,000
1955	3,100,000
1960	6,900,000
1965	12,800,000
1967	16,700,000

* "Abstract #1477," Search-Plastics and Resins <u>Division</u>, Sept., 1966, translated from, <u>Plastiques Informations</u>, 8-1-66, p. 1/

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Table 2

PLASTICS PRODUCTION IN THE UNITED STATES*

PLASTICS BY PERCENT OF TOTAL

	Percent of Total
Polyethylene	29.0
Polyvinyl Chloride	18.2
Polystyrene	19.7
Phenolic	8.0
Amine	5.4
Polypropylene	4.0
Polyesters	3.3
Coumarone-Indine	2.8
Acrylics	2.3
Cellulosics	1,5
Polyurethanes	3.0
Epoxy	1.1
Other	1.7

Total

100.0

* The figures refer to sales but are very close to production because of the high demand for plastics.

The table was compiled from: "The Plastics Industry in 1966: The Facts and The Figures," Modern Plastics, Jan., 1967, pp. 115-122.

Table 3**

THE TOP 25 USERS OF PLASTICS

SIC Number

Industry

2071	Candy and Confectionery Products
2111	Cigarettes
2295	Coated Fabric, Not Rubber
2499	Wood Products, n.e.c.*
2621	Paper Mills, Except Building
2641	Paper Coating and Glazing
2643	Bags, Except Textile Bags
2821	Plastics Materials
2851	Paints and Varnishes
2911	Petroleum Refining
3069	Fabricated Rubber Products, n.e.c.*
3079	Miscellaneous Plastics Products
3292	Asbestos Products
3357	Drawing and Insulating Nonferrous Wire
3461	Metal Stampings
3611	Electric Measuring Instruments
3621	Motors and Generators
3622	Industrial Controls
3652	Phonograph Records
3679	Electronic Components, n.e.c.*
3711	Motor Vehicles Assembly
3721	Aircraft
3732	Boat Building and Repairing
3941	Games and Toys, n.e.c.*
3993	Signs, and Advertising Display

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* Not elsewhere classified

** "A New Look At The Market For Plastics," <u>Plastics</u> World, Jan., 1968, p. 25.

	STAGE OF PRODUCT					
	RAW MATERIAL	ORGANIC CHEMICALS	MONOMER	POLYMERIZATION	FINAL PRODUCT	
POLYETHYLENE	NATURAL GAS	ETHYLENE	ETHYLENE	POLYETHYLENE	BAGS, HOUSEWARES, TOYS, ETC.	
MAJOR LOCATION	GULF COAST	GULF COAST	GULF COAST	GULF COAST	NORTHEASTERN U.S.	
TYPE OF ORIENTATION		RAW MATERIAL	RAW MATERIAL	RÀW MATERIAL	MARKET	
POLYSTYRENE	NATURAL GAS PETROLEUM	ETHYLENE ETHYLBENZENE	STYRENE	POLYSTYRENE	APPLIANCES, TOYS, SHIPPING CONTAINERS, ETC.	
MAJOR LOCATION	GULF COAST	GULF COAST	GULF COAST	NORTHEASTERN U.S.	NORTHEASTERN U.S.	
TYPE OF ORIENTATION		RAW MATERIAL	RAW MATERIAL	MARKET	MARKET	
POLYVINYL CHLORIDE	NATURAL GAS SEA WATER COAL PETROLEUM	ETHYLENE CHLORINE ETHYLENE DICHLORIDE ACETYLENE HYDROCHLORIC ACID	VINYL CHLORIDE	POLYVINYL Chlor Ide	FLOOR COVERING, TOYS, BOTTLES, ETC.	
MAJOR LOCATION	GULF COAST AND KENTUCKY	GULF COAST AND KENTUCKY	GULF COAST AND KENTUCKY	NORTHEASTERN U:S.	NORTHEASTERN U.S.	
TYPE OF ORIENTATION		RAW MATERIAL	RAW MATERIAL	MARKET	MARKET	

TABLE 4 PLASTICS - RAW MATERIAL TO FINISHED PRODUCT

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LEGEND FOR ALL MAPS ALL MAPS ARE PERCENTAGE GRADUATED CIRCLES WITH THE FOLLOWING SCALE



PRODUCTION OF LESS THAN 2% IS NOT INDICATED.

ALL MAPS EXCEPT 1 , 2 , AND 5 ARE BASED ON CAPACITY OF PRODUCTION. POLYETHYLENE - 1967





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THE GEOGRAPHY OF POVERTY IN NEW YORK STATE:

A SELECTIVE ANALYSIS

Lieutenant Colonel John B. Garver, Jr. United States Military Academy

In his State of the Union message to Congress in 1964, President Lyndon B. Johnson declared "unconditional war on poverty in America." Since then national attention has focused sharply on the poor. A number of pilot projects have been initiated to probe the roots of the problem and to establish program strategies which will ameliorate and hopefully eliminate the social and economic conditions of poverty in the United States.

Relevancy of Geographic Analysis to Poverty

But poverty also has its geographic conditions. In his study of "Poor Regions and Poor Nations: Perspectives on the Problem of Appalachia," John Friedmann of the Ford Foundation concluded that

> If we are concerned with its meaning, any social phenomenon must be studied in relation to its historical, geographic, and social setting. An analysis of the origins and structures that link the phenomenon of regional poverty to its environment is absolutely essential as a basis for a sound policy of social action.¹

¹ John Friedmann, "Poor Regions and Poor Nations: Perspectives on the Problem of Appalachia," <u>Southern Economic Journal</u>, Volume XXXII, No. 4 (April, 1966), p. 473.

As recent as June of this year, Wilbur Cohen, new Secretary of Health, Education, and Welfare, commenting on the federal antipoverty program, said:

I would not advise the President to come up with a simple idea. It would have to be a plan that was very measured and considered with regard to all its implications in Arkansas, in New York, in rural areas, in urban areas, in the West, among Protestants, among Catholics, among blacks and among whites, and I just don't think all that much study has been given to those kinds of implications.²

The thesis of this paper is that if the poverty problem in the United States is to be dealt with intelligently and effectively, spatial implications of the problem must be examined. These implications can best be examined using the regional/spatial approach that geographers are uniquely trained to provide. This paper considers selected aspects of the geography of poverty in New York State. More precisely, it examines the spatial variation of poverty among New York counties in 1960.

Dimensions of Poverty

The two dimensions of poverty measured in this analysis are magnitude and intensity.³ Each dimension points out different facets of the poverty problem in New York State. Poverty magnitude measures aggregate poverty, the total numbers of poor in a county. Poverty intensity, on the other hand, measures the percentage or proportion of poor among a county's population. In studying either dimension, the first steps of geographical analysis are the definition of the poor and the selection of relevant criteria which will identify

² Wilbur Cohen, as quoted in the <u>New York Times Magazine</u>, "Wilbur Cohen Talks about Poverty and How to Fight It," June 23, 1968, p. 11.

³ Certainly, there are other possible dimensions that might be of assistance to the investigation of poverty, such as density, severity, or persistence. Those two which appear initially to be most useful in describing the spatial aspects of poverty have been selected.

concentrations of poverty that can be mapped and examined for spatial cause and consequence.⁴

Definition of Poverty

Contemporary definitions of poverty vary, just as poverty itself varies in degree and in extent.⁵ But to arrive at any measure of significance in time, place, and culture, poverty must be defined objectively and somewhat arbitrarily. As a working definition for this study, the poor are those Americans who occupy status positions at or near the bottom of the American socio-economic scale, and who do not maintain decent living standards in comparison to the rest of the community. Hence, poverty is defined primarily in economic terms and is treated herein as a relative phenomenon. Specifically, it is marked by an annual income which is below minimum acceptable needs for the average American family.

Poverty Measurement Criterion

New York county poverty levels are based on measurement of the "average" poor family. It is assumed that counties contain a mix of large and small, young and old, poor families. But, as noted in the 1964 Economic Report of the President, "there is no precise way to measure the number of families who do not have the resources to pro-

⁴ As with many similar empirical studies using census data, restrictions on geographic analysis are imposed simply because the data are available only for certain areal units, and for certain years, or because of the absence of desired data. The researcher who attempts to "isolate" poverty areas by using census data alone is forced to deal with statistical units (e.g., the county or the city) at decennial periods; units which are often quite heterogeneous in their socioeconomic makeup, and years that may not be directly relevant to a local poverty problem. Distinct clusters of poverty may exist in subareas, either in isolated rural situations or deep within the central city. Such clusters may be masked using available census data at the county or city level.

⁵ The phenomena of poverty are not divided into neat, mutually exclusive characteristics or areas which, if studied hard enough, become obvious.

vide minimum satisfaction of their own particular needs."⁶ Since needs differ from family to family, and from area to area, any attempt at quantification should first consider a concept of an average need for an average family.

Even for an average family, there is no clear or unchanging concept of what constitutes minimum acceptable needs. In 1964, the President's Council of Economic Advisors proposed an annual income below 33,000 as the threshold of poverty for the "average" nonfarm family of four persons. The 33,000 family income index for poverty reflects a wide variety of socio-economic characteristics and conditions most often associated with concentrations of poor and is presently the most satisfactory single criterion for measuring and mapping the spatial variation of poverty. It shows a high, positive correlation (r=.94) with an independently developed multiple-criteria poverty index.⁷

Studies by Mollie Orshansky and others of the Social Security Administration redefined the 1960 \$3,000 threshold of poverty for a nonfarm family of four to roughly \$3,130 in 1963, and \$3,335 in 1967.⁸ Considering the corresponding increase in consumer cost of living during the intervening years, these more recent adjustments do not differ markedly from the Council's rounded-off index of \$3,000 in 1960, which is available as published county and city census data.⁹

⁶ U.S., President (Johnson), <u>Economic Report of the President</u>: <u>Transmitted to the Congress January 1964</u> (Washington: U.S. Government Printing Office, 1964), p. 57. Poverty consists of qualitative nonmaterial as well as quantitative material factors. Certain of its basic characteristics are not directly measurable.

⁷ The \$3,000 family income poverty index is not so crude and impractical an index as some have asserted. A thorough analysis of the advantages and disadvantages of using the \$3,000 family income as an index for mapping poverty in 1960, as opposed to a rationally developed multiple-criteria index is presented in John B. Garver, "Selected Aspects of the Geography of Poverty" (unpublished Master's thesis, Department of Geography, Syracuse University, 1966), pp. 48-104.

³ U.S., Department of Commerce, "Consumer Income," <u>Current</u> Population Reports, Series P-60, No. 55, August 5, 1968, p. 2.

⁹ U.S., Bureau of the Census, <u>County and City Data Book</u>, 1962, A Statistical Abstract Supplement (Washington: U.S. Government Printing Office, 1962).

Urban-Rural Income Disparity

As regards the urban-rural real income disparity, Mr. James L. Sunquist, Deputy Under Secretary, U.S. Department of Agriculture, reported in 1964 that

It is sometimes assumed that rural residents have a lower "cost of living" than do urban families ..., these differences are not so valid today as they were 25 years ago ... To have educational parity, health services, and various cultural amenities requires that rural families have the approximate incomes of urban people.¹⁰

Walter Heller, then Chairman of the Council of Economic Advisors, added that

Some critics would prefer to use a different income cutoff for farm families than for nonfarm families ... However, even if we bring the income cutoff for farm families as low as \$2,000, we do not greatly change the overall total.¹¹

A later study has established that the Social Security Administration Poverty Index which differentiates between farm and nonfarm income needs, does not alter appreciably the geographic patterns of poverty shown by the less precise, but simpler \$3,000 family income index. Rank order correlation coefficients (r) of the two indexes were calculated at r = .98 for the New York county level, and r = .99 for the national level by state.¹² Thus, adjustments for differences between farm and nonfarm living costs, often significant in individual circumstances, are less important in examining the magnitude or intensity of poverty at the county level in New York.

¹⁰ U.S., Congress, House, Committee on Education and Labor, Poverty in the United States, 88th Cong., 2d Sess., 1964, p. 128.

¹¹ U.S., Congress, House, Committee on Education and Labor, <u>Hearings, Subcommittee on the War on Poverty Program, Part 1, 88th</u> Cong., 2d Sess., 1964, p. 27.

¹² Garver, p. 120. All coefficients of correlation are statistically significant at the one percent level.

Magnitude of Poverty

The magnitude of poverty among New York counties in 1960 is shown in Figure 1. The poverty line is based on families with incomes under \$3,000. Generally, urban counties rank high in poverty magnitude (see Figure 2 for county locations and place names).¹³ From Figure 1 it is also apparent that the counties with the largest aggregate populations have the greatest number of low-income families: New York City, Yonkers, Albany, Utica, Syracuse, Rochester, Buffalo, and Niagara Falls. Rank correlation between aggregate population and poverty magnitude for New York counties is r = .95. Clearly, magnitude of poverty in New York State is an urban phenomenon, and more directly a big-city problem.

Intensity of Poverty

The spatial variation of poverty intensity among New York counties establishes different areal patterns than those outlined by magnitude measurement. The standard deviation is used to determine county variability from the national average, or mean value of poverty intensity.

Table 1 shows county poverty intensity in 1960 as measured by standard deviation $(1 \text{ SD} = \frac{1}{2} 10.0)$. Counties which measure a positive deviation are <u>above</u> the national norm of poverty intensity and can be described as having "more" than their share of the nation's poor. Conversely, those counties which show a negative deviation, are <u>below</u> the national norm and have "less" than their share of the nation's poor. Twelve New York counties exceed the mean value and have more than their share of poverty families. Forty-six counties, including New York City, have less than their share. Nine of these are more than one standard deviation below the national average and thus have considerably less than their share of the poor.

¹³ A distinction should be made between "urban" and "rural" poverty. For this study, urban poverty refers to poverty located in standard metropolitan statistical area (SMSA) counties in New York State, as defined and mapped in the County and City Data Book, 1962. Rural poverty, obviously is that poverty found in counties not designated as part of an SMSA. For this study, the five metropolitan counties: Bronx, Kings, New York, Queens, and Richmond are combined as <u>New</u> York City.



*****	Rank	Standard		Rank	Standard
County	Order	Deviation	County	Order	Deviation
Schoharie	1	+,65	Cortland	30 '	-, 34
Franklin	2	+.60	Steuben	31	35
Lewis	3	+.48	Ulster	32	40
Allegany	4	+. 45	Chautaugua	34	43
Delaware	5	÷.41	Fulton	34	43
Otsego	6	+.39	Saratoga	35	44
Yates	6	+.39	Orange .	36	47
Essex	· 8	+.21	Herkimer	37.	49
Greene	9	+.07	Ontario ,	38	56
Washington	· 10	+.06	Rensselaer	40	-, 62
Sullivan	11	+.05	New York City	40	62
Clinton	12	+.02	Genesee	42	63
St. Lawrence	14	-, 01	Seneca	42 :	~.63
Chenango	14	01	Chemung	43	64
Hamilton	16	08	Schenectady	44	-,71
Jefferson	16	08	Tompkins	44	-,71
Warren	17	11	Albany	46	- 76
Wyoming	18	-,18	Oneida	47	77
Cayuga	, 19	22	Dutchess	48	85
Madison	20	27	Erie	49	88
Montgomery	.22	, 28	Putnam	50	91
Oswego	22	-, 28	Broome	51	-1,02
Cattaraugus	. 24	-, 29	Onondaga	52	-1.03
Columbia	24	29	Niagara	53	-1.05
Orleans	24	29	Suffolk	54	-1.08
Wayne	26	-, 31	Monroe	55	-1,09
Livingston	.28	-, 32	Rockland	56	-1.31
Schuyler	· 28	32	Westchester	57	-1,34
Tioga	29	33	Nassau	58	-1.59

Computed from data in U.S., Bureau of the Census, <u>County and</u> <u>City Data Book</u>; 1962 (Washington: U.S. Government Printing Office, 1962), pp. 253, 263.



FIGURE 3

Figure 3 shows intensity of poverty by county in 1960. Note that those counties that have more than their share (from 0 to +1 standard deviation) exhibit rurality; they can claim no sizeable urban centers and in general, are some distance from larger cities. On the other hand, counties with low intensity ratings contain the large urban agglomerations. As Table 1 indicates, urban counties in the 0 to -1 standard deviation group, Erie (Buffalo city), Oneida (Utica and Rome cities), Albany (Albany city), and Schenectady (Schenectady city) also rank low in poverty intensity. This suggests a negative relationship between poverty intensity and population; counties with high population concentrations -- the urban counties -- exhibit low poverty intensity. Conversely, counties with low population levels -- the rural counties -- show comparatively high levels of poverty intensity.

Poverty Intensity and Percent of Farm Families

As shown by the scatter diagram in Figure 4a., the counties which rank high in poverty intensity (Table 1), Schoharie, Franklin, Lewis, Allegany, Deleware, Otsego, and Yates, also rank relatively high in proportion of farm families. The county rank correlation between high poverty intensity and high proportions of rural farm families was determined at r = .76. In general, poverty among farmers is not due to the lack of employment but to underemployment and the low earning capacity of many small farm units, often clustered in areas that are no longer agriculturally competitive.

Poverty Intensity and Unproductive Age Groups

In a 1960 study, Economic Status of Upstate New York at Mid-Century, it was noted that

... possibly the best single index of economic wellbeing is the proportion of the population in the 20-49 year aye bracket. Almost invariably counties and communities which have a low fraction of the population in the 20-49 year age group tend to be low income, stagnant or static.¹⁴

¹⁴ Sufrin, et al., The Economic Status of Upstate New York at Mid-Century, with Special Reference to Distressed Communities and Their Adjustments (Syracuse: Syracuse University, Business Research Center, College of Business Administration, 1960), p. vi.





HIGH POVERTY INTENSITY AND SELECTED LANDFORM REGIONS

NEW YORK STATE



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FIGURE 5

By adopting the 20-49 year age group criterion as a measure of the economically most productive, it follows that counties with a large percentage of the population not in this age group are less productive and tend to have higher poverty intensity levels. It would also suggest that the poorer counties have a larger fraction of the dependent population.

The percent of the population not in the 20-49 year age group was examined for its relationship with poverty intensity. The relationship among New York counties is shown by a scatter diagram in Figure 4b. Note that counties which rank high in poverty intensity (Table 1) also rank high in population not in the 20-49 year age group. The county correlation between this criterion and the \$3,000 index was measured at r = .80.

Poverty Intensity and Terrain Considerations

Physical factors combine with a number of related cultural factors to inhibit economic growth and increase the intensity of poverty in many rural counties of New York. Spatial relationships between hilly or rugged terrain and high intensity poverty in New York State are shown in Figure 5. The Tug Hill Upland, a sparsely inhabited and largely forested area covering the western half of Lewis county is a high poverty intensity area. On the east, the Adirondack Mountains limit the agricultural production and potential in much of Hamilton, Franklin, Essex, and Clinton Counties. With the exception of Hamilton, these counties are located in the extreme northeastern portion of the state, a considerable distance away from the main axes of transportation and centers of economic activity. Similarly, because of its location east of the Hudson River and Lake George, Washington County is somewhat isolated and removed from state and regional economic growth areas. The cluster of counties (Schoharie, Delaware, and Otsego), centering on the rugged Catskills, also rates as a high poverty intensity area. Allegany County is relatively disfavored by terrain for agricultural or industrial development as much of the county is covered by steeply sloping ridges and narrow valleys of the unglaciated Allegheny Hills. Like Allegany County, most of the high poverty intensity counties are heavily wooded, support a sparse permanent population and have little industry or agriculture.

Differentiating Poverty Magnitude and Intensity Patterns and Program Strategies

Poverty appears to be a paradoxical condition in a number of New York counties. Two very different patterns are apparent in comparing the magnitude and intensity maps shown in Figures 1 and 3.

Poverty magnitude may impact directly on only a small portion of a county or city population and, although large in total numbers of poor, may be confined within a relatively small area. New York City provides a striking example of this condition. In other situations, such as Schoharie County, although magnitude levels are low, intensity levels are relatively high. Here poverty intensity measures the broad areal impact of poverty as a social and economic force throughout much of the county and may in fact be evidenced by depressed area conditions. However, individual situations may be misleading. Joseph A. Kershaw, former Assistant Director for Research, Plans, Programs and Evaluation, Office of Economic Opportunity, cautioned that when using the intensity dimension alone as a measure of poverty

... a county with a few poor comprising the bulk of the population will be identified as poor, but a county with hundreds of thousands of poor comprising a minor fraction of its population will be shown as prosperous.¹⁵

These important differentiations between the magnitude and intensity dimensions of poverty should be recognized by officials responsible for antipoverty programs being developed to meet the needs of areas or of individuals. In rural counties where the intensity of poverty is high, program strategies might include broad areal economic development aimed at the in-migration of new industries and the revival and expansion of existing older industries. Out-migration of labor from depressed rural areas to areas of greater economic opportunity would be encouraged. In urban counties where the magnitude of poverty is high, urban clustering of large numbers of poor suggests program strategies to improve individual job skill levels, thereby increasing employment potential within an expanding and more complex urban economic structure. In either case, long range programs in education and technical training are necessary adjuncts to short range plans designed primarily to ameliorate existing poverty conditions.

¹⁵ Letter from Mr. Joseph A. Kershaw, Assistant Director for Research, Plans, Programs and Evaluation, Office of Economic Opportunity, Washington, D.C., July 1, 1965.

Findings

1. Intensity and magnitude are dual aspects of the poverty problem, each of which is a significant dimension in different areal circumstances.

2. In general, New York counties which exhibit a high magnitude of poverty show a low intensity; those with a high intensity of poverty exhibit a low magnitude.

3. At the county scale, magnitude of poverty is an urban problem. There is a strong positive correlation between the size of urban populations and the magnitude of poverty; the larger the population, the greater the aggregate poverty. Magnitude of poverty is least significant in rural areas.

4. At the county scale, intensity of poverty is primarily a rural problem. However, intensity of poverty may become an urban problem when concentrated in enclaves within the central city.

5. By mapping the spatial variation of poverty intensity, a number of areal associations with other relevant phenomena can be identified. High positive relationships are found between high poverty intensity counties and (1) farm families, (2) population not in the productive age group, and (3) terrain conditions.

Findings developed in this study at present apply only to the county level in New York. It is anticipated that the methods used herein to measure poverty magnitude and intensity will prove useful for examining poverty and establishing program strategies among other areal units of New York State, such as cities, towns, or even city wards and blocks, as statistical data become available for these units.

The identification and mapping of poverty by these methods can substantially aid the geographer in interpreting the spatial variation of poverty, thereby increasing our understanding of the poverty problem in general and of the geography of poverty in New York in particular.