The major towns and cities of the Southern Highlands are sometimes not categorized as "Appalachian," yet they have considerable impact on the character of the region. This study examines the distribution of selected human activities and quality of life variables in 156 counties in West Virginia, Virginia, Kentucky, Tennessee, North Carolina, South Carolina, and Georgia. In 1980, 17 of these counties had urban population proportions over 50%, 19 had urban proportions of 25-50%, and 57 were totally rural. High concentrations of urban population were generally found in the Piedmont, the Great Valley of Tennessee and Virginia, the Kanawha and Ohio River Valleys, and the Asheville basin. Major urban areas exhibited the highest housing values and per capita income, and highest numbers of colleges, college graduates, hospitals and medical services, employment opportunities, and other services. Part of the magnitude of these urban differences can be explained simply by population size differences. However, many rural-urban differences are much stronger than expected, mainly because each urban node has its own hinterland of rural areas that it serves. It would be expected that new urban nodes would form with the advent of new and better highways, but this has not been the case. Rather, rural dwellers with greater mobility have increased their interaction with the larger urban service centers. Perhaps the Southern Highlands is becoming a "rurban" region, an area that appears to be rural but depends heavily on its urban infrastructure. Twenty maps illustrate statistical data. (SV)
"THE NATURE AND ROLE OF URBAN PLACES IN THE SOUTHERN HIGHLANDS"

by

Robert E. Reiman
Department of Geography and Planning
Appalachian State University

and

Paul E. Lovingood, Jr.
Department of Geography
University of South Carolina
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Introduction

It is a well-established fact that the Appalachian Highlands of the eastern United States is essentially a rural area, especially in the southern portion. The "Southern Highlands" as defined herein encompasses a 156-county area, in seven states, that has been delimited by the Appalachian Consortium as its "sphere of influence." Urbanization here is a much more recent phenomenon than in most of the rest of the nation. However, considerable urbanization has developed in certain locations within the region in large part as a response to industrialization. The purpose of this paper is to fully recognize the rurality of this area, but also to contrast conditions in the urban places of this region with non-urban and rural areas.
The major towns and cities of the region are sometimes not thought of as "Appalachian," yet they play an important role in the development of the character of the region. An attempt will be made to define this role and to explain the "fit" of urban places in the overall fabric of the region. A series of maps and accompanying commentary will be used to illustrate the phenomenon by contrasting the distribution of selected human activities throughout the region.

The Study Area

All of the 156 counties in this study (Figure 1), except for the cluster of Montgomery, Roanoke, Franklin, Patrick, and Henry in Virginia, Catawba and Cleveland in North Carolina, and Hart in Georgia, lie within the Appalachian Region as defined by the Appalachian Regional Commission. The area encompasses 62,825 square miles and supported a population of 6,880,787 in the 1980 census.

As can be seen in Figure 2, the Southern Highlands is not highly urbanized. The counties show a wide variation in the proportion of their population classed as urban or rural. In 1980 there were 57 counties (over one-third of the total) which had no population concentrations of as much as 2,500 people and thus are classified as entirely rural. These totally rural counties are located for the most part in the more mountainous portions of the study area.

The counties with some urban population range from a low of just under one percent to as much as 90 percent urban in Hamilton County in Tennessee. Seventeen counties had urban proportions
above 50 percent and thus can truly be classed as urban. An additional 39 counties contain important urban centers, and their percentage of the population that is urban ranges from 25 to 50. High concentrations of urban population are generally found in the Piedmont, in the Great Valley of Tennessee and Virginia, in the Kanawha Valley and along the Ohio River, and in the Asheville Basin. The counties that have the greatest population densities also have the highest percentage of their population classed as urban.

Figures 3 and 4 show the distribution of incorporated places in the study area. Towns with less than 5,000 population (1980) are classed as "small;" towns and cities of 5,000 or more are classed as "major." As mentioned previously, considerable urbanization has developed in certain locations within the region in large part as a response to industrialization.

Parts of the Ohio River area and the adjacent lower Kanawha have experienced much industrialization in the last three decades, and urban growth has followed. Nearby coal supplies, inexpensive river transportation, and surpluses of suitable labor have been assets for industry. The principal urban nodes in this area are Huntington (West Virginia) and Ashland (Kentucky) on the Ohio River and Charleston (West Virginia) on the Kanawha.

The valleys of eastern Tennessee also have experienced considerable urban and industrial growth. Much of this has been associated with Tennessee Valley Authority power development. The principal urban nodes in this area are Chattanooga, Knoxville, and Bristol/Kingsport/Johnson City (Tennessee).
A plentiful supply of cheap electric power facilitated the development of a diverse pattern and composition of industry in and around these urban centers.

Urbanization has long been on the rise in some of the Piedmont and more easterly counties within the study area. Again, manufacturing has been the driving force, in the form of textile, tobacco, electrical, electronics, and transportation related industries. The principal urban nodes located here are Roanoke (Virginia), Winston-Salem (North Carolina) and Anderson, Greenville and Spartanburg (South Carolina). The one remaining major urban node is Asheville (North Carolina).

**Quality of Life Indicators**

In examining the characteristics of urbanization there are several distinct indicators that point to a somewhat higher quality of life in the urban areas of the Southern Highlands. Figure 5, (a map of housing values) illustrates the fact that the highest values are found generally in the major urban areas and the lowest values in the "coal-mining" counties.

Per capita income (Figure 6) also shows the same direct relationship. This should be expected, because in urban areas there is more employment in service activities, business, finance, government, and, in some cases, manufacturing.

The comparison also is strong in terms of persons who have the most education. Figure 7 shows the location of institutions offering four or more years of higher education--it can be seen that these institutions are located primarily in the urban centers of the Southern Highlands. Figure 8 indicates the
percentage of persons who have completed college. In the region
a college education is primarily an urban phenomenon; many job
opportunities tend to be available where more college graduates
exist, and in general higher levels of living are found in those
counties having a higher percentage of their population in the
ranks of college graduates.

Health Care

Hospital distribution in the region (Figure 9) also matches
the pattern of urbanization. Each of the concentrations of
hospitals coincides with an important urban center. For example,
the six county area that includes the city of Roanoke (Virginia)
is the location of 12 hospitals, eight of which are in Roanoke
County. Of the remaining four (3 in Montgomery County and 1 in
Franklin County), only the last is situated in or near a
population center of less than 2,500 people. Three of these six
counties (Floyd, Craig, and Botetourt) depend on the others for
medical support. Similar patterns emerge around the other major
towns and cities.

In West Virginia, 7 hospitals in Kanawha County (located in
and around Charleston) provide health care for the residents of
the nearby counties of Clay, Putnam, and Lincoln Counties.

Similar observations can be made concerning Chattanooga and
Knoxville, which are the health care hubs of their respective
areas; the tri-city area of Bristol, Kingsport, and Johnson City
provides the bulk of hospital facilities for northeast
Tennessee. Comparable patterns hold true for Winston-Salem
(North Carolina), and Greenville (South Carolina).
The same situation exists in regard to surgical services (Figure 10), newborn care (Figure 11), and nursing homes (Figure 12).

Employment Opportunities

Figures 13 through 20 illustrate vividly that the number of places where people can find employment in the region is weighted heavily in favor of the urban areas. Here one can find opportunities in every sector of business and industry.

What is reported on Figure 13 are jobs in agricultural services, such as veterinary and other animal services, landscape, lawn, and horticultural services, proprietary services in soil preparation, commercial applications of fertilizer, lime, and chemicals, crop harvesting, drying, storage, and the like. Included under the forestry category are timber tracts, tree farms, forest nurseries and seed gathering, and gathering of forest products. [The fisheries category is of almost no importance in the Southern Highlands.]

The contract construction category (Figure 14) consists of all building and related subcontractors such as plumbing, heating and air conditioning, paint and papering, well drilling, and tile, brick, and masonry contractors, to name a few.

Manufacturing (Figure 15) is the dominant economic activity in the Southern Highlands. These industries account for only 6.5 percent of all business establishments, yet they employ 36 percent of the labor force and provide half of the establishment payroll; they also provide more higher paying jobs than any other line of business. It can be seen, however, that the
largest number of establishments are in the southern part of the region.

Transportation, communication, and utilities (Figure 16) provide the infrastructure of shipping, energy, and water and waste processing necessary for manufacturing and commerce. Transportation includes railroads, trucking and warehousing, airlines and buses, and transport services such as packing. They provide access to raw materials, supplies and equipment. Communication includes telephone, radio, and television, which make transactions possible and provides information about new products, jobs and markets. Electric, gas and sanitary services include the water supply; sewerage and refuse systems provide the primary raw materials of production. Looked at individually there would be too few of them in any local area to see a pattern, but grouped together they show the strength of local foundations for economic activity within the region.

Wholesale trade (Figure 17) includes establishments or places of business engaged in selling merchandise to retailers; to industrial, commercial, or farm business users; to other wholesalers; or acting as agents or brokers in buying and selling merchandise to persons or companies. The bulk of this activity is likely to occur in urban centers because of access to retail outlets and industrial and commercial establishments.

Retail trade establishments (Figure 18) sell merchandise for personal or household consumption for the most part. This differentiates them from wholesale trade establishments where sales to other businesses is the main purpose. They are present
to some degree in most of the Southern Highlands counties. However, the higher wages and larger retail establishments tend to be concentrated in the urban counties.

Figure 19 shows the distribution of establishments that provide finance, insurance and real estate services. Finance includes such widely recognized operations such as commercial banks, savings and loan associations, credit unions, credit agencies, loan brokers, stock and commodity brokers, investment fund managers, and the like. Insurance is a more narrow group consisting of such well-known services as life and health insurance carriers; fire, hospital, credit, and title insurance and pension, health and welfare funds. Real estate includes salespeople, brokers, managers of real property, mobile home site operators, railroad property operators, title abstract offices, and subdividers and developers of residential, commercial, and cemetery projects.

Service establishments (Figure 20) offer employment in hotels, rooming houses, camps, and other lodging places; personal services include laundry, cleaning and garment services, photographic services, beauty and barber shops, tax preparations services and the like. Business services include a very wide range of opportunities in advertising, dwelling maintenance services, computer and data processing services, management, consulting and public relations firms, equipment rental and leasing, personnel supply services, research and development, protective services, and a myriad of others. The general area of services also covers such things as automotive repair, electrical
and electronic shops, amusement and recreation services, commercial sports, plus health services (except hospitals). Also, legal services, some educational services, accounting, auditing and bookkeeping services, engineering services, and social and other services.

Summary and Conclusions

The impact of the larger urban places in the Southern Highlands has been illustrated on every map in this series. It should be noted that part of the magnitude of urban differences can be explained by the simple fact that the total population there is significantly greater. However, in many cases these differences are much stronger than would otherwise be expected, mainly because each urban node has its own hinterland of rural areas that it serves.

It should also be noted that most of the urbanization has taken place along the edges of the region or in the river valleys or basins. This is due primarily to the fact that the original transportation routes often ended at or traversed through these places. With the advent of newer and better routeways it would therefore be expected that new urban nodes would form. This has not been the case, however. What has happened is that as rural dwellers have achieved greater mobility they have begun to interact more and more with the larger urban service centers.

This phenomenon is not peculiar to the Southern Highlands; it is in evidence across the United States (and, in fact, around the world). Perhaps the Southern Highlands is becoming what we might call a "rurban" region--an area that appears to be rural in nature, but depends heavily on its urban infrastructure.
Figure 1
Figure 2

PERCENT OF TOTAL POPULATION THAT IS URBAN - 1980

SOURCE: DATA BY COUNTIES FROM 1980 CENSUS OF POPULATION
Figure 3

SMALL TOWNS IN THE SOUTHERN HIGHLANDS

PLACE SIZES
- 2,500 - 4,999
- 0 - 2,499

SOURCE: DATA FROM 1980 CENSUS OF POPULATION
Figure 4

MAJOR TOWNS AND CITIES IN THE SOUTHERN HIGHLANDS

SOURCE: DATA FROM 1980 CENSUS OF POPULATION
Figure 5

M E D I A N V A L U E O W N E R-O CC U P I E D H O U S I N G - 1 9 8 0

S O U R C E : D A T A B Y C O U N T I E S F R O M 1 9 8 0 C E N S U S O F P O P U L A T I O N
Figure 6

PER CAPITA INCOME - 1980

SOURCE: DATA BY COUNTIES FROM 1980 CENSUS OF POPULATION
Figure 7

NUMBER OF INSTITUTIONS OFFERING FOUR OR MORE YEARS
OF HIGHER EDUCATION - 1986

SOURCE: 1986 HIGHER EDUCATION DIRECTORY
BLANK - NO INSTITUTIONS
Figure 8

PERCENT OF PERSONS 25 YEARS AND OVER COMPLETED COLLEGE - 1980

SOURCE: DATA BY COUNTIES FROM 1980 BUREAU OF CENSUS
Figure 9

NUMBER OF HOSPITALS - 1983

SOURCE: AMERICAN HOSPITAL ASSOCIATION
Figure 10

NUMBER OF HOSPITALS WITH GENERAL SURGICAL SERVICES - 1983

SOURCE: AMERICAN HOSPITAL ASSOCIATION

BLANK = NO SERVICE
Figure 11

NUMBER OF NEWBORN BASSINETS - 1983

SOURCE: AMERICAN HOSPITAL ASSOCIATION

Legend:
- 48 TO 100
- 28 TO 40
- 16 TO 25
- 10 TO 15
- 3 TO 9
- BLANK = NO BASSINETS

States: TN, KY, VA, WV, NC, SC, GA
Figure 12

NUMBER OF NURSING HOME BEDS SETUP - 1980

SOURCE: NATIONAL CENTER FOR HEALTH STATISTICS
Figure 13

NUMBER OF AGRICULTURAL SERVICES, FORESTRY AND FISHERIES ESTABLISHMENTS - 1985

Source: Bureau of Census - 1985 County Business Patterns
NUMBER OF CONTRACT CONSTRUCTION ESTABLISHMENTS - 1985

Figure 14

SOURCE: BUREAU OF CENSUS - 1985 COUNTY BUSINESS PATTERNS
NUMBER OF MANUFACTURING ESTABLISHMENTS - 1985

Figure 15

SOURCE: BUREAU OF CENSUS - 1985 COUNTY BUSINESS PATTERNS
BLANK=NO ESTABLISHMENTS
NUMBER OF TRANSPORTATION, COMMUNICATION, ELECTRIC, GAS AND SANITARY SERVICES ESTABLISHMENTS - 1985

Figure 16

SOURCE: BUREAU OF CENSUS - 1985 COUNTY BUSINESS PATTERNS
NUMBER OF WHOLESALE TRADE ESTABLISHMENTS - 1985

Figure 17
NUMBER OF RETAIL TRADE ESTABLISHMENTS - 1985

Figure 18

SOURCE: BUREAU OF CENSUS - 1985 COUNTY BUSINESS PATTERNS
NUMBER OF FINANCE, INSURANCE AND REAL ESTATE ESTABLISHMENTS - 1985

Figure 19

SOURCE: BUREAU OF CENSUS - 1985 COUNTY BUSINESS PATTERNS
NUMBER OF SERVICES ESTABLISHMENTS - 1985

Figure 20

SOURCE: BUREAU OF CENSUS - 1985 COUNTY BUSINESS PATTERNS