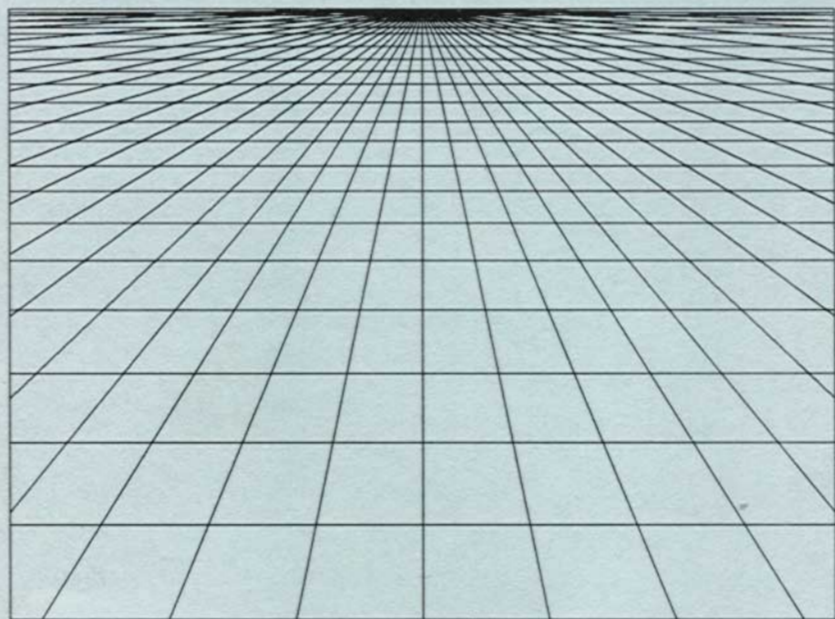


The Florida Geographer

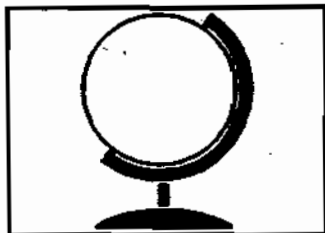


==== 1990 =====

==== Vol 24 =====



From the Editor

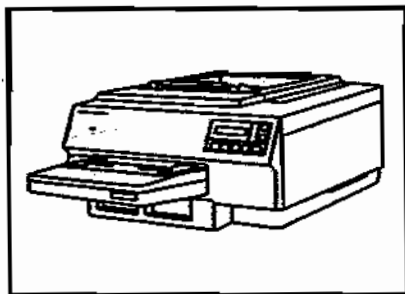


The Florida Geographer is the official publication of the Florida Society of Geographers and is distributed free to members of the Society. It is a state-wide journal, with coverage of geographical topics relating to the state. Manuscripts should deal with some

social science or physical geography aspect or include Florida as an important component of a larger study.

Manuscripts are solicited from all who feel they have research worthy of dissemination. For stylistic requirements, see the articles in the present number, but authors should not be dissuaded from submitting articles for review because of format considerations.

It is expected that authors will submit the final copy of the paper on an IBM-compatible diskette (3.5" or 5.25") in either double or high density format. WordPerfect files are preferred; if not, please save files in ASCII (DOS text file) format.



This issue of the journal was desktop published using Wordperfect 5.1 and Facelift for Wordperfect on a LaserJet Series III printer. Graphics were scanned on a ScanJet with Scanning Gallery Software.

Ira M. Sheskin
University of Miami

Editor, *The Florida Geographer*



Volume 24

October 1990

Contents

Articles

- Effects of Weather on Weekly Municipal Water Use
in the Tampa Bay Area
Donald Brandes 2
- Gibsonton, Florida—Seasonal Retreat
for the Carnival-Circus World
Harry J. Schaleman, Jr. and Dewey M. Stowers, Jr. 12
- Local Planning for Economic Development:
Florida's Growth Management Act in Practice
Betty Waldron, University of Florida 22
- Hispanic Segregation Patterns in Metropolitan Miami
Thomas D. Boswell 34

Book Reviews

- Arthur S. Evans and David Lee
Pearl City: A Black Community Remembers
Reviewed by Eugene F. Provenzo, Jr. 67
- Morton D. Winsberg. *Florida Weather.*
Reviewed by Donald Brandes 69

Effects of Weather on Weekly Municipal Water Use in the Tampa Bay Area

Donald Brandes

University of South Florida

Municipal water use fluctuates in response to many independent variables. Although long-term trends are related closely to economic and demographic factors, short-term variations are more frequently influenced by recent weather events. This study analyzes the relationships between recent weather events and weekly fluctuations in water use for the greater Tampa Bay urban area.

During the regional drought of 1989 and 1990, staff at the Southwest Florida Water Management District (SWFWMD) routinely evaluated the potential need for water use restrictions aimed at protecting this natural resource. Anticipated municipal water use was one of several variables considered in those deliberations. Although large quantities of data were available, it soon became apparent that there were no systematic evaluation procedures. The present work is intended to contribute to the development of such a procedure.

Hypotheses

It was hypothesized that weather contributes significantly to the fluctuations in weekly water use for the greater Tampa Bay area. It was further hypothesized that some weather variables are more relevant for modeling the area's water use than others and that such differences can be identified numerically.

Similar data had been used previously to model water use for other locations (Franklin and Maidment, 1986; Hansen and Narayanan, 1981; Maidment and Miaou, 1986; Maidment and Parzen, 1984a and 1984b; Miaou, 1990; Morgan and Smolen, 1976; Wilson, 1989; and Steiner, 1984). These studies have generally concentrated on somewhat closed supply and demand environments, where all the water supplied to the study area was provided by one or a few utilities and went to a well-defined consumer population. The present model, however, faces the real-world necessity of forecasting water use for a large, diverse urban

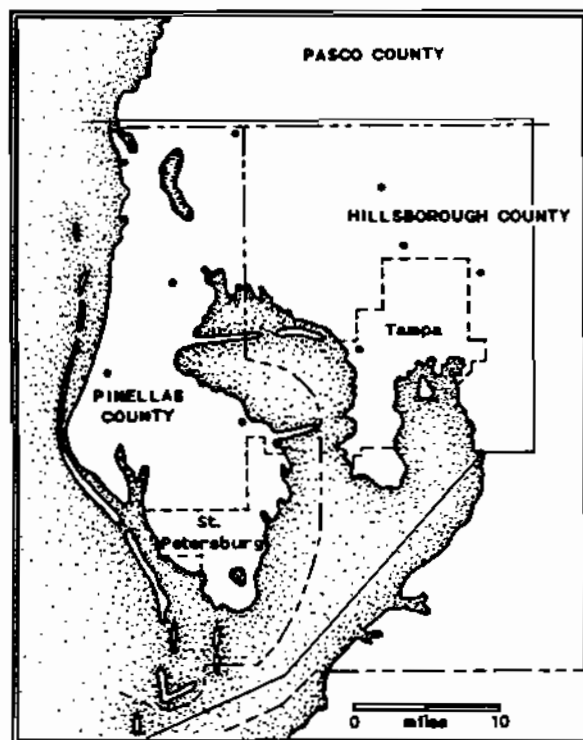


Figure 1. Study area

● meteorological stations — study area boundary

area with many supply sources and markets. This work indicates whether the variables and methodology that have been used to model simpler systems can be successfully applied under complex circumstances.

Study area

The study area includes the cities of Tampa and St. Petersburg, all of Pinellas County, and a substantial part of Hillsborough County, Florida (Figure 1). The population is about 1.6 million.

Average water use for the four major city

and county utilities in the area was 228 million gallons per day (mgd) for the twelve-month study period (March, 1989 - February, 1990).

Public water supplies for the area come from many sources, including some in neighboring Pasco County. The supply and distribution system is large and complex, with many interconnections and exchanges of water.

Tampa and St. Petersburg and Hillsborough and Pinellas Counties, with nearby Pasco County, are members of the West Coast Regional Water Supply Authority (WCRWSA). This agency operates well fields and pipelines and coordinates bulk distribution. The WCRWSA directly manages some production and transmission facilities and coordinates with

other facilities operated independently by the member local governments. The WCRWSA sells and buys water to and from its members. The members, in turn, carry on similar transactions with each other and with non-member smaller local governments and private utilities.

The study area is largely suburban and residents place high cultural value on the quality of lawns and landscaping. During the warm season, up to 53% of publicly-supplied water is used for this purpose (Hillsborough County, 1987). For hookups with separate irrigation meters, this figure rises to 74% (Camp, Dresser, and McKee, Inc., 1988). Thus, it can be expected that a substantial proportion of water use variability can be explained by meteorological conditions that affect the water needs of vegetation.

Data sources

Meteorological data were supplied by the Southwest Florida Water Management District. The SWFWMD collects data directly as well as compiling it from other agencies. Meteorological data from ten stations in or near the study area were used (Figure 1). Water use data were obtained from the Tampa, St. Petersburg, Hillsborough County, and Pinellas County public water systems via the SWFWMD.

Prior to the official declaration of a water shortage, in late February 1989, only daily and monthly data were compiled by the SWFWMD. Data compilation for weekly intervals began with the onset of the declared shortage. This study uses the first available full year of weekly data.

Methodology

Selected meteorological variables were used in a multiple linear regression model to analyze their relationships to fluctuations in weekly water use for the Tampa Bay area. Alternative combinations of variables were examined until statistical tests indicated that the best possible fit was achieved.

Selection of the linear regression methodology and of specific types of meteorological variables to be used were based upon the literature cited

above. Multiple linear regression, or modified regression procedures, were used in all the previous works involved with modeling short-term municipal water use.

Although previous studies have generally used regression-based methodologies, their selection of independent variables has been inconsistent. No two models found in the literature have used the same variables set. Therefore, the relative performance of several independent variables was tested as part of the process of model development for the Tampa Bay area water use model. The selected variables have all been used in one or more of the cited references. They include the following items, taken individually and in combination:

Rainfall

- Current week rainfall;
- Lagged rainfall for up to four weeks, entered as separate variables;
- Cumulative rainfall for two, three, and four weeks; and
- Average number of rainy days per station for the current week.

Duration of daylight

- Minutes of daylight per day.

Temperature

- Mean high temperature;
- Temperature above 60°, 70°, and 80° F (15°, 21°, and 26° C);
- Combination of temperature above 70° F (21° C) with temperature above of 85° F (29° C) and 90° F (32° C); and
- Combination of temperature above 70° F (21° C) with the number of days during the week in which any station recorded a temperature below 45° degrees F (7° C).

Calibration of the model was based on standard error (se), goodness of fit (R^2), and probability that the variance of the resulting distribution was not significantly different from that of the dependent variable being modeled (F-ratio). Models with lower standard error and higher R^2 were considered superior. An F-ratio indicating significance at the .05 probability level was considered the minimum for the model to be acceptable. The significance of individual variables, within combined

variable models, was determined by t-scores. The relative importance of each variable in contributing to the overall outcome of the model was measured by standardized partial regression coefficients.

Results

Rainfall, with up to a three week lag, duration of daylight, and temperature proved to be the most effective variables for forecasting the Tampa Bay area's municipal water use. Rainfall and temperature were expected to be important factors in the model. The effects of daylight, however, are less obvious because they are indirect. Duration of daylight is a causal factor affecting both temperature and plant growth, and, therefore, the water needs of plants. Longer duration of daylight also provides greater opportunity for people who irrigate manually to apply water to their yards.

Several models produced significantly similar results at the .05 confidence level. R^2 values for these models varied from .79 to .86, with corresponding s.e. values of 10.23 to 8.91. The average difference between actual weekly water use and quantities generated by the models covered a range from a maximum of 3.6% down to 3.1%.

Improved results for R^2 , s.e., and forecasting of actual water use quantities were obtained by including more variables in the model. The simplest model, which produced the R^2 of .79, s.e. of 10.23, and a 3.6% forecasting error, used only two independent variables. These were four weeks of cumulative rainfall and the current daily duration of daylight. The model that produced the .86 R^2 value, as well as the lowest s.e. and forecasting error, required six independent variables. These were four weeks of rainfall entered separately, current duration of daylight, and one week of average temperature above a 60° F (17° C) threshold. Models which compromised between these two approaches, using three or five variables produced intermediate R^2 , s.e., and forecasting error values.

The author prefers the simplest model, containing only two variables. This approach dispenses with unnecessary complexity beyond that needed to achieve an adequate forecast. The more complex models, however, produce progressively better results as more variables are added, yielding

R² values up to 7% higher than that obtained by the two-variable version. This may indicate that differences between the model outputs are meaningful, though conventional statistical practices indicate they could be the result of random chance. Therefore, an alternative rationale exists for selecting the most complex model, based on the greater apparent precision obtained. Because a reasonable rationale exists for selecting either model, both are described below in greater detail.

The models take the general multiple linear regression form of:

$$y = a + b_1X_1 + b_2X_2 \dots b_nX_n$$

where y is the estimated water use, a is the constant (y-axis intercept), b's are partial regression coefficients, and X's are the independent variables. Inserting the actual partial regression coefficients in place of the b's, the specific formulae used to estimate weekly water use for the greater Tampa Bay area are:

$$y = 69.66 - 6.40X_1 + 0.25X_2$$

for the two-variable model, where X₁ is four weeks of cumulative rainfall in inches, and X₂ is the current week's average duration of daylight in minutes; and

$$y = 88.492 - 4.77X_1 - 4.56X_2 - 11.06X_3 - 7.69X_4 + 0.19X_5 + 0.94X_6$$

for the six-variable model, where X₁ through X₄ are four consecutive weeks of rainfall in inches, from earliest to latest; X₅ is the current week's average duration of daylight in minutes; and X₆ is the average daily number of degrees above a 60° F (15° C) threshold.

Table 1 shows partial regression coefficients and t-scores for both models. The standardized partial regression coefficients indicate the relative contribution of each independent variable. The t-scores indicate that all variables contribute significantly to the regressions.

Tests against later data

An additional five and one-half months of data, covering March through mid-August, 1990, became available while the initial study was

Table 1
T-scores and Standardized Partial Regression Coefficients

	Lagged Rain			Current Week Rain	4 Wks Total Rain	Daylight in Minutes	Degrees Above 60 F
	1 Wk	2 Wk	3 Wk				
t-scores							
4 Weeks Total Rain, Daylight					-12.81	12.19	
4 Separate Week Rain, Daylight >60°F (15° C)	-3.95	-3.73	-9.13	-6.44		11.33	4.98
Standardized Partial Regression Coefficients							
4 Weeks Total Rain, Daylight					-1.026	0.914	
4 Separate Week Rain, Daylight >60°F (15° C)	-0.240	-0.227	-0.556	-0.393		0.691	0.303
Note: All shown t-scores are significant at the .01 level.							

underway. These data, with adjustments described below, were combined with the partial regression coefficients generated by both selected models. The average difference between actual weekly water use and forecasted quantities for the follow-up interval was 3.6% for the two-variable model and 2.9% for the six-variable model. These results indicate that both models could forecast future water use as accurately as they accounted for the original water use data.

Conformity to actual use

Figures 2 and 3 illustrate the close conformance of the two-variable model's output to actual water use. The scattergram (Figure 2) however, reveals a tendency for the model to underestimate extremely high water use and overestimate extremely low use. The line graph (Figure 3) shows

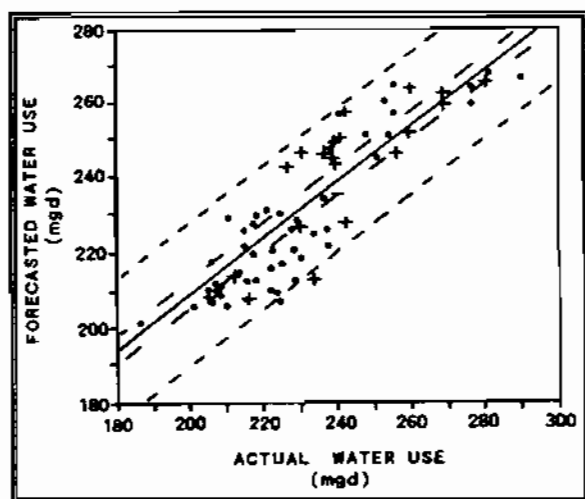


Figure 2
Actual and forecasted water use, scattergram

- initial 12 months
- + 5½ month test period
- — .05 predictive limits
- - - .05 confidence interval

consequently the City of Tampa's water use declined during the spring and summer of 1990, compared to the previous year, by about 15%, or 13 mgd. The throughput of the other three utilities used in the study also exhibited a consistent, though smaller, decline, probably resulting from the increased publicity given to water conservation at that time. The total decline in water use from April through mid-August amounted to about 21.6 mgd. To test the model, this amount was added to the actual 1990 water use for those months, to adjust for the successful conservation program.

that this happens because the model output has a smoother distribution than actual water use. The standard deviation for the model output is 19.7 mgd. This may be compared with 21.8 mgd for actual use. Graphics for the six-variable model are sufficiently similar as to be redundant and, therefore, are not shown.

Data adjustments

Beginning in April 1990, the City of Tampa implemented a major water conserva-

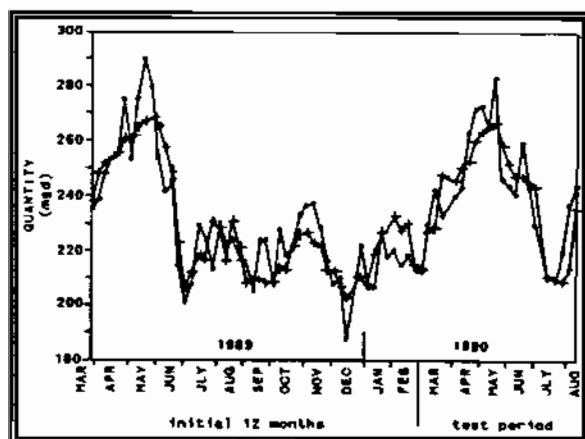


Figure 3. Actual and forecasted water use, lineplot

● Actual water use + Forecasted water use

the spring and summer of 1990 was the result of a local crackdown and increased public awareness, rather than a decree from the regional water management district.

Conclusions

The underlying hypotheses on which this project was based are supported by the model. The numerical procedures applied indicate that fluctuations in weekly water use for the Tampa Bay area can be adequately explained by climatic variables alone. Combinations of rainfall, duration of daylight, and temperature provided the most acceptable models.

The transfer of methodology from simpler supply and demand scenarios to the complex structure of the Tampa Bay area proved successful. This work has produced a valid model for forecasting public supply water use in the Tampa Bay area. In the present work, aggregate water use had to be determined for an area with a multiplicity of supply sources and markets. Meteorological data also had to be aggregated for the area from several stations. The modeling procedure was successful despite these complexities.

No previous adjustments had been made for the effects of legal water use restrictions during the development of the model because the SWFWMD could not identify such impacts. Water use frequently continued to rise after the SWFWMD imposed or tightened restrictions. The decrease in use during

Literature cited

- Camp, Dresser, and McKee, Inc. (1988). *Effluent Reuse Feasibility Study and Master Plan for Urban Reuse* (for Manatee County, Florida). Bradenton, Florida.
- Franklin, S. L. and D. R. Maidment. (1986). "An Evaluation of Weekly and Monthly Time Series Forecasts of Municipal Water Use." *Water Resources Bulletin* 22(4):611-621.
- Hansen, R. D. and R. Narayanan. (1981). A Monthly Time Series Model of Municipal Water Demand. *Water Resources Bulletin* 17(4):578-585.
- Hillsborough County, Florida. (1987). *Water Conservation Demonstration Program*. Tampa, Florida.
- Maidment, D. R. and E. Parzen. (1984a). "Time Patterns of Monthly Water Use in Six Texas Cities." *Journal of Water Resources Planning and Management*, American Society of Civil Engineering. 110(1): 90-106.
- Maidment, D. R. and E. Parzen. (1984b). "A Cascade Model of Municipal Water Use." *Water Resources Research* 20(1):15-23.
- Maidment, D. R. and S-P. Miaou. (1986). "Daily Water Use in Nine Cities." *Water Resources Research* 22(6):845-851.
- Miaou, S-P. (1990). "A Class of Time Series Urban Water Demand Models With Non-Linear Climatic Effects." *Water Resources Research* 26(2):169-178.
- Morgan, W. D. and J. C. Smolen. (1976). "Climatic Indicators in the Estimation of Municipal Water Demand." *Water Resources Bulletin* 12(3):511-515.
- Wilson, L. (1989). "Addition of a Climatic Variable to the Howe and Linaweaver Western Sprinkling Equation." *Water Resources Research* 25(6):1067-1069.
- Steiner, R. C. (1984). "Short-term Forecasting of Municipal Water Use," Paper presented at American Water Resources Association Symposium: A Critical Assessment of Forecasting in Western Water Resources Management, Seattle, WA, June 1984.

Gibsonton, Florida—Seasonal Retreat for the Carnival-Circus World

Harry J. Schaleman, Jr.

Dewey M. Stowers, Jr.

University of South Florida

The occurrence of the autumnal equinox not only signals the arrival of the Fall season, but also the annual migration of thousands of showmen to their winter homes. With the cessation of state and county fairs across the country, machinery, animals, and show equipment are loaded onto trucks to begin the homeward trek. During the winter months, these circuit entertainers use the off-season to practice new acts, sew new costumes, repair rides, and enjoy some recreational pursuits (Figure 1).

This annual migration results in large colonies of showmen settling in Michigan, California, Texas, and Florida. They tend to congregate in small communities that serve their specific needs for recreational clubs, circus and carnival novelties, and a climate conducive to a working vacation. The largest community of showmen in the United States is found in the Gibsonton-Riverview area of Florida, which is on the old

Atlantic Coast Line Railroad between U.S. Highway 41 on the west and I-75 on the east, next to Tampa Bay (George Sanders, interview, April 1989). A smaller contingent is also found in the north central part of the city of Tampa (Figure 2).

In early autumn, the interstate highways are dotted with brightly-decorated trucks,



Figure 1. Winter home of showmen

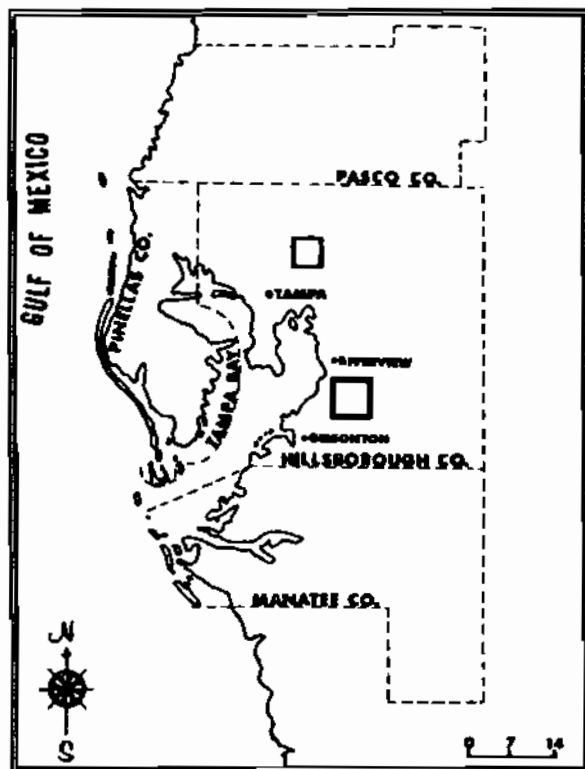


Figure 2. Showmen settlement pattern

vans, and cars converging upon the area. The population of the Gibsonton-Riverview region multiplies during the winter months (George Sanders, interview, April 1989). Signs along U.S. Highway 41 near Gibsonton herald their arrival. Thus, a sleepy summer community suddenly becomes alive with the sounds of vigorous activity. During this time businesses in the area report a 50% to 75% increase in sales (White, 1988). Friends and acquaintances meet at the showmen's clubs and bars and

exchange stories of their travels during the past show season (Figure 3).

This region of Florida boasts mild, somewhat dry winters. While the city of Tampa is a rapidly-growing urban area, the Gibsonton-Riverview community is, by comparison, a rural environment. Nestled in a low area are the somewhat poorly drained Leon Fine Sand Soils, underlain by a shallow hard pan. The district is on the fringes of mangrove swamp and supports a natural vegetation consisting primarily of longleaf pine, sawpalmetto, runner oak, and wire grass (USDA, 1950).

Besides the showmen's enclave, this area supports other small economic activities including tropical fish farms, Hartz Mountain pet supplies, truck farms, and show-world specialty shops. These shops provide the

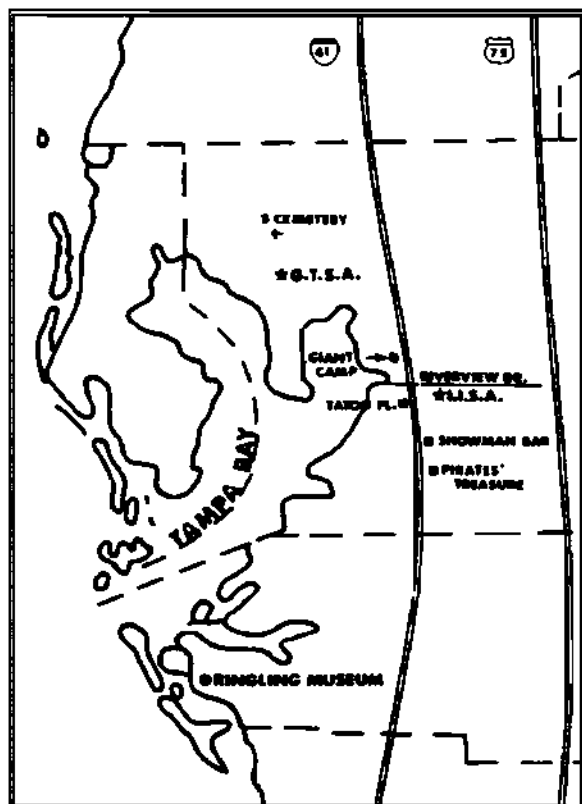


Figure 3. Showmen community sites and facilities

materials needed by the entertainers for novelties, fabrics for costumes, replacement parts for rides and other attractions, etc.

During the winter season, old and young alike, both carnival and circus people, discuss their travels and experiences. This research focused upon four basic questions:

1. Why did the carnival-circus showmen originally settle in this area, and who were the founders?
2. How do the carnival and circus people interact?
3. What are the activities in which the showmen engage during their stay in their winter home?
4. What are the trends and challenges for the future of the community?

History

Warm weather and good fishing attracted showmen Eddie and Grace Le May to the area in December 1922. Camping in a tent, the Le Mays decided the following year to build a cabin and locate permanently in the area. Except for a farmer and his family, the nameless, undeveloped expanse along the Alafia River was without streets, houses, and amenities. The owner of the property, Tampa lawyer and real estate

speculator John B. Gibson, Jr., realized the potential for development and profit and subsequently platted the site with a dirt road grid and lent his name to the fledgling community (Anonymous, 1958).

Soon, others from the showmen world of carnival, fair, and circus life were attracted to the area by reputation. By 1928, some thirty people lived on the campsite, mostly in tents, but a few in converted buses (Kobler, 1953). Rates were modest, with 1928 prices of \$1.50 per week for a camping permit. For \$100, it was possible to spend the entire winter living on local fish, basking in the warm salubrious climate, and enjoying the revelry and camaraderie of fellow "carnies." John Whittaker (interview, March 1988) introduced the first trailer in 1932. By the 1940's the population of the tent city, including a few trailers, had expanded to an estimated 400-500, and occupied a site that today is Williams Park next to U.S. Highway 41 (Anonymous, 1958).

In 1933, the Le Mays bought a cabin south of the Alafia River. In 1941, the Le Mays left show business and built and operated Eddie's Hut at what today is U.S. Highway 41 and Gibsonton Drive just south of the Alafia River (Johnny Whittaker, interview, March 1988). There they continued to serve the growing community with a hut complex that included cabins, rooms, a bar and grill, and a trailer park. This "grease joint," as the "carnies" called it, became the social center for the "outdoor showmen."

During and following the World War II era, showmen and "marks," or non-carnival people, continued to settle in the area as the community of Riverview, originally called Peru, expanded on the north bank of the Alafia River with Gardenville, Remlap, and Adamsville extending south beyond Gibsonton. The settlements and villages assumed appropriate names from early local pioneers such as Gibson, Adams, and Palmer (Remlap spelled backward) or a prominent geographic feature or activity such as "river" and "garden." Many area place names such as Bullfrog Creek, Whiskey Stump Key, The Kitchen, and Hog and Hominy Cove add local color to the map.

Gibsonton developed a real spirit of community as more showmen settled the area. The community became more than a seasonal place in which to

live and recuperate from the arduous entertainment circuit. It served as a "communication center," a source of supply, credit, and support, and an employment exchange. In short, it served as home base for the showmen where they could relax in the relative privacy of their enclave.

With the nearby opening some 60 years ago of the U.S. Phosphoric Products Corporation (now called Gardinier Inc.), an influx of non-showmen settled the area. As the plant grew in size and importance and quarrying operations expanded, port facilities were developed. Eventually, the residents donated their original land site for the establishment of Williams Park. Most located further inland east of U.S. Highway 41 (Tamiami Trail).

Today the showmen, concessionaires, and ride operators have settled on both sides of the Alafia River that serves as a boundary between the communities of Riverview on the north bank and Gibsonton on the south. By the mid-1950's, Gibsonton's population had grown to seasonal highs of approximately 500 summer residents and twice that figure during the winter months when the "carnies" returned to their Florida retreat after a busy summer on the road (Preston, 1954). October through April is the time to relax, fish, reflect on the past season, and prepare for the next. As the nearby Tampa urban area expands south, Gibsonton continues to attract new residents, most of them non-show people. The showmen, however, though fading in dominance, are still the element that gives character and color to the community. Lacking definitive boundaries, the unincorporated community has reached an estimated population of 8,000 (quote from Shirley Mims, Librarian, Hillsborough County Planning Commission, in White, 1988).

The casual visitor to Gibsonton is quickly aware that this is no ordinary community reflecting residential clones elsewhere in the United States. Gibsonton is special and unique. Large carnival trucks parked in driveways, trapeze and aerial equipment in front and back yards, elephants, monkeys, and horses roaming enclosed areas, garage doors and houses painted with colorful carnival or circus scenes—all are in evidence as one wanders the narrow streets.

As Bill Rodgers (interview, October 1988), owner of the Pirates Treasure Cove where many people shop, observes: it is not in every community that one can spot a ferris wheel, popcorn machine, or aerial equipment in a residential yard (White, 1988). Often, signs on houses, vehicles, or in yards identify the local residents and their activities and areas of expertise. The cast of players comprising the community is equally interesting, as one might meet an aerialist, sword swallower, animal trainer, clown, or a performer with some physical anomaly regarding weight, stature, or unusual talent or skill, such as diminutive 45" Dolly Reagan Scott, a 46-year veteran of the show world (Mahan, 1988). One of the more celebrated couples in Gibsonton were Al and Jeanie Tomaini. As local fire chief, Al, the former circus giant, stood 8'4 1/4" tall while his wife Jeanie—born without legs, was but 30" in height. Together they operated the Giant Fish Camp, a bait and small restaurant complex in the community. As a widow, she still operates the camp.

Variety abounds on four-lane U.S. Highway 41, the chief artery of Gibsonton. Besides the Giant Fish Camp, a tattoo parlor, a large souvenir and fireworks store, a carnival supply shop, individual houses, and a popular nightclub/cocktail lounge are parallel to the highway. The latter, the Showtown Club, serves as unofficial social center, local watering hole, dance hall, and communication exchange for many. The decor, including colorful wall murals, depicts show life. It serves as a rallying point for activities such as the annual "Christmas in July" celebration.

The International Independent Showmen's Association

Hillsborough County in the Tampa Bay area has the largest concentration of showmen in the U.S. with enclaves in Riverview, Gibsonton, and the north central area of Tampa. Within Florida, Miami also has a cluster of carnival people, while the Sarasota-Venice area is noted historically for its circus folk. In the Gibsonton-Riverview area, the carnival and circus people live in harmony despite some historic differences between the two performing groups. The International Independent Showman's Association (IISA) in Riverview, across the river from Gibsonton, was formed

in 1960 as an outgrowth and splinter faction of the Greater Tampa Showmen's Association organized in 1948. The Tampa club, recipient of thousands of dollars from famed Sally Rand, served the showmen's community as the elite, prestige establishment. The IISA is today a large organization of approximately 1,000 members of the carnival and circus world serving the Gibsonton-Riverview area and beyond. Meeting rooms, bar, restaurant, and offices are housed in the main building. Directly behind the clubhouse structure is a spacious exhibit hall that serves as site for the annual carnival trade show held each January. "Manufacturers and distributors from all parts of the world come to the Gibsonton trade exhibit because, with so many carnival people in the area for the winter, they get more exposure here than anywhere else in the U.S.," said Doris Clark, past president of the IISA (Mercke, 1981). Behind the exhibit hall is a baseball diamond and large area that serves as the location for the Gibsonton annual showmen's circus held each January. Held under a big top, this charity event is a local club effort to activate community performers with all proceeds going to the Florida Sheriff's Boys Ranch, the local junior high school, and the handicapped Boy Scouts. Normally a full tent is assured for each performance. Opened in 1986 and housed in several small rooms in a separate one-story structure is the IISA museum, one of six carnival museums in the United States (George Sanders, interview, April 1989). Museum curator George Sanders is "a kiddie ride operator" who has managed to collect diverse memorabilia from the carnival-circus world. In his offseason months, he catalogs the many items stored in the museum, including carnival posters, ferris wheel seats, kewpie dolls, books, photographs, a banjo lamp for midway lighting, and giant Al Tomaini's size 24 shoes.

Also in the area is a retirement facility for showmen. Except for the museum, the complex is not normally available to the public and operates as a private club. This special identity and camaraderie among the carnival people extends to the grave. On nearby U.S. Highway 301 west of the Gibsonton-Riverview area in the local cemetery is a special showman's plot that includes an \$80,000 mausoleum for show people. In Tampa, Showmen's Rest Cemetery in addition to ground burial plots contains a mausoleum as well as memorial statuary.

The future

The community of Gibsonton is rich in carnival tradition. The small modest one story dwellings reflect the liberal zoning that helped attract residents to the community. In many ways, the carnival community is facing a crisis for identity and survival. Family tradition and love of the profession are threatened by new challenges. Within the past ten to fifteen years, government tax and licensing regulations have severely curtailed the occupations and activities associated with show business. The Department of Transportation more closely regulates drivers of trucks, trailers, and other show vehicles, thereby discouraging many traditional acts in need of such conveyances. Stricter regulation of animal acts also has resulted in a decline in that area. The current trend is for use of larger, more expensive equipment and rides, such as the water flume. So, smaller operators are forced to merge to remain in business or to cooperate with others to afford larger rides or acts. The number of thrill rides is increasing, as side show attractions decrease (Sanders, 1987). People still are interested in side show oddities, but modern techniques in makeup and illusion can today create oddities more awesome than real life itself. Recent mishaps on amusement rides in Florida have resulted in expensive litigations and have brought all such operations under tighter inspection and control. As the number of tent circuses and carnivals declines, the carnival world becomes more dependent on state and county fairs for income. Consequently, as the carnival world undergoes an evolutionary metamorphosis, so does Gibsonton and its residents. As more "markers" arrive in the community and carnival people experience increased economic and regulatory pressure, Gibsonton struggles to maintain its tradition, uniqueness, and preeminence in the carnival-circus world.

Gardinier Inc., the local fertilizer company, following a phosphoric acid spill in the Alafia River, in May 1988, is attempting to improve its relationship with Gibsonton (Orsi, 1988). Local residents complain about the fumes and odors that frequently blanket the area. The Environmental Protection Agency has investigated many such complaints. Earlier mishaps at the plant resulted in warnings and fines by the State (Burr, 1988). The community now finds itself in the spotlight. The Alafia

River, one of four Hillsborough rivers emptying into Tampa Bay, is recognized as the most polluted, mainly from the waste of phosphate companies and other industries along its banks. With at least 28 known archeological sites on the Alafia as well as a refuge for much wild life, the river's pristine beauty is threatened. The expansion of Gibsonton and Riverview along its banks can only complicate environmental concerns (Kleman, 1987).

Favorable geographic factors helped spawn the community of Gibsonton earlier in the 20th century. As the century closes, geography again is a matter of interest and concern. Not only are cultural and historical forces at work bringing change to the community, but modification of the physical environment is of great concern. The carnival-circus enclave of the show world faces change and challenge for the future.

Summary

Since the early 1920's, the population of showmen has grown steadily within the Gibsonton-Riverview area. The physical and human geography of the region has resulted in its becoming the largest winter home for showmen in the United States. A place where carnival and circus people live, work, and play in harmony, these people have built two attractive clubs, designed and built their own cemetery, and established a permanent and unique enclave. They have also created an historical museum and a newsletter. Many articles and books have been written about their lives, travels, and history. However, unlike other ethnic, religious, or political communities, the Gibsonton-Riverview community includes such diversity as mechanics, concessionaires, small entrepreneurs, aerial artists and animal trainers. This community is truly a cultural phenomenon.

Literature Cited

- Anonymous. "Long-time resident tells of Gibsonton past," (1958, October 5). *East Bay Breeze*, p.4.
- Burr, J. (1988, May 5). "Fishkill in Hillsborough grows: Cleanup plan to be tried today," *St. Petersburg Times*, Metro and State Section, p. 1.
- Kleman, K. D. (1987, March 6). "Measures sought to save the Alafia River from future harm," *St. Petersburg Times*, Tampa Bay Section, p. 1.
- Kobler, J. (1953, February 28). "The town that's hard to believe," *Saturday Evening Post*, p. 27.
- Anonymous. "Long-time resident tells of Gibsonton past," (1958, October 5). *East Bay Breeze*, p.4.
- Mahan, M. (1988, January 9). "Sideshow veteran set to return to circus," *The Tampa Tribune*, p. 1.
- Mercke, M. (1981, February 9). "Fair for sales pitch at this show," *St. Petersburg Times*, p. 2.
- Orsi, J. (1988, July 14). "Gibsonton," *St. Petersburg Times*, Tampa Bay Section, p. 1.
- Preston, B. (1954, February 28). "Showtown, USA: One of the state's most unusual towns is Gibsonton, where the fire chief's a giant, and the policeman a midget," *St. Petersburg Times*, Magazine Section G, p. 1.
- Sanders, J. (1987, December 1). "Side show life begins to fade for the carnies," *St. Petersburg Times*, Metro and State Section, p. 1.
- U.S. Department of Agriculture. (1950). *Hillsborough County, Florida—soil survey*, (3), p. 27.
- White, J. (1988, November 20). "Showtown, USA," *Tampa Tribune*, Baylife Section, p. 1.

Local Planning for Economic Development: Florida's Growth Management Act in Practice

Betty Waldron, University of Florida

The terms "growth" and "development" are increasingly being viewed as distinct, but interrelated, processes with spatially-specific outcomes. (Flammang, 1979). Local development efforts must cope with rapidly changing economic situations, and the roles of technology, innovation, and entrepreneurship are recognized as critical to the long-term development process (Malecki and Nijkamp, 1988). "New" economic development strategies address community-specific needs for new and better jobs, diversified economic bases, and revitalized economic environments that build on local strengths to shape the community's economic future. As an endogenous process that involves local governments and public or private organizations, "local economic development" attempts to ". . . stimulate or maintain business activity and/or employment . . . to develop local employment opportunities in sectors that improve the community . . ." (Blakely, 1989, p. 15). Local development efforts also occur in the context of planning, overseen by local, regional and state governments.

Florida's growth and development during the past four decades has been especially dynamic. Its population has soared, climbing from the twentieth most populous state in 1950 to its 1190 rank of fourth. As late as 1900, with a population of approximately 500,000, it was still the smallest state in the South. Projections indicate a ranking of third by the end of the decade. Migration has fueled this population growth, settling primarily in southern coastal communities, and it has been this population growth that has fueled the economy. During the past decade the state has out paced both the nation and the rest of the Southeast in population, employment, and income growth, and has entered the competitive global marketplace.

But there are concerns. A "good business climate" no longer depends simply on low factor costs. In 1988, the state had the second lowest percentage of high school graduates in the nation, and the third lowest

percentage of scientists and engineers. The Florida Chamber of Commerce noted that more than half the state's workers are still employed in low-paying service and retail trade jobs (Lubove, 1988, p. 51). The role of local government in shaping business climates was addressed recently in *Florida Trend*: "... (An important key) is the aggressiveness and farsightedness of the local government and the locale's private sector leadership. Where public/private partnerships are in evidence, things happen" (Powers, 1990, p. 16).

Florida's planning history

Historically, Florida's development efforts at both the state and local levels have relied on the lure of cheap land, low taxes, and an attractive natural environment. But there has long been concern for protection of resources and inability of urban areas to keep up with infrastructure demands (Carter, 1979). In 1969, the state legislature passed an act allowing local governments to adopt plans regulating land use, but few did so. (Florida, incidentally, in 1939 was the last state to enact zoning-enabling legislation.)

In 1972, four resource management acts were passed, including the State Comprehensive Planning Act. The Local Government Comprehensive Planning Act was passed in 1975, requiring local governments to prepare and adopt comprehensive plans. The subsequent establishment of Regional Planning Councils was deemed necessary to help local governments in planning matters. The state is presently divided into eleven planning regions (Figure 1).

Although most local governments had adopted plans by 1983, the state agency in charge of reviewing and administering these plans, the Department of Community Affairs (DCA), found the overall quality "below the level necessary" to guide future development. Needed also, according to a Governor's Task Force established to evaluate plans, were clear state policies to direct local planning and a "cumulative understanding of growth's impacts beyond local jurisdictional boundaries" (*Guidelines, 1983, p. 7*). Among seven issues critical to plan development, including the need for more public participation and intergovernmental coordination, was the need to address economic assumptions and

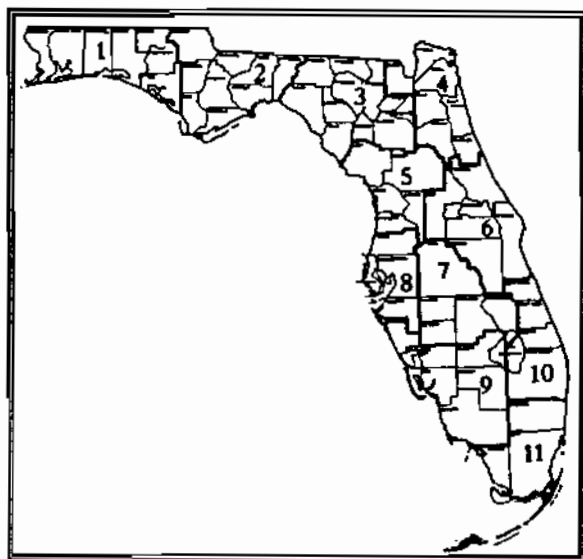


Figure 1. Regional Planning Councils

- 1: West Florida
- 2: Apalachee
- 3: North Central Florida
- 4: Northeast Florida
- 5: Withlacoochee
- 6: East Central Florida
- 7: Central Florida
- 8: Tampa Bay
- 9: Southwest Florida
- 10: Treasure Coast
- 11: South Florida

analysis. Each plan should, according to the Task Force, include an economic base study and a "shift-share analysis or some other analysis which identifies the community's strengths and weaknesses, and imbalances, including economic and employment needs."

1985 Growth management act

To address these deficiencies, the legislature in 1985 passed the new Growth Management Act. All 67 counties and 392 municipalities were required, under a staggered schedule, to prepare and adopt comprehensive plans. These plans were to

"consist of materials in such descriptive form, written or graphic, as may be appropriate to the prescription of principles, guidelines, and standards for the orderly and balanced future economic, social, physical, environmental and fiscal development of the area." [Florida Statutes, 163.3177(1)]

Each comprehensive plan must include eight elements: 1) Future Land Use; 2) Traffic Circulation; 3) Sanitary Sewer, Solid Waste, Drainage,

Potable Water, and Natural Groundwater Aquifer Recharge; 4) Conservation; 5) Recreation and Open Space; 6) Housing; 7) Intergovernmental Coordination; and 8) Capital Improvements. In addition, all coastal governments are required to include a Coastal Management Element, and all governments with population greater than 50,000 are required to prepare a Mass Transit Element and a Ports, Aviation and Related Facilities Element. The requirements for each element are specified, and must include maps. *Any other elements, including an Economic Element, are optional.* The previously recognized need, therefore, to address economic concerns, did not make it into the new Growth Management Act.

To address the lack of state direction, the new Growth Management Act mandated the new State Comprehensive Plan. It includes 26 goals (ranging from education, the economy, and employment, to housing and public safety) with suggested policies for each goal. The state goal for the economy, for example, is that Florida "shall promote an economic climate which provides economic stability, maximizes job opportunities, and increases per capita income for its residents." But the 14 suggested policies for achieving this goal range from "attracting new job-producing industries, corporate headquarters, distribution and service centers, regional offices, and research and development facilities" to "promoting entrepreneurship and small and minority-owned business startup" and "providing quality child day care for public assistance families." Local governments were to choose those policies most appropriate for their plans, with the idea that this would promote a "bottom-up" versus "top-down" approach. (But again, including an Economic Element in the local comprehensive plan was optional.)

LGCP Submittal

The schedule for submitting local government comprehensive plans (LGCP) was designed to address coastal concerns first. Starting at the southern end of the state with Dade County, the first plans were due in September 1988. The four-year schedule will be completed during the summer of 1991 (Figure 2).

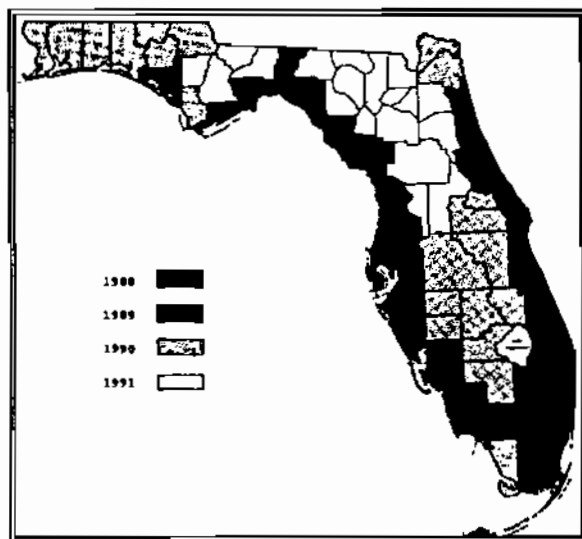


Figure 2. Comprehensive plan schedule of submittal

As of September 10, 1990, of the 238 LGCP's reviewed by the Department of Community Affairs (DCA), 111 had been determined to be "in compliance" with state statutes and administrative rules. (Seven of these were county plans; 104, municipality.) In addition, 9 plans (including one county), had been "brought into compliance

through settlement agreements between DCA and local governments. There were 62 LGCP's (including one county) that had negotiated a final agreement, and 10 more (including 7 counties) with "settlement agreements pending." An additional 46 LGCP's (11 county, 35 municipality) were "not in compliance."

The procedure for plan submittal involves a 90-day review by the state. If a plan does not satisfy DCA requirements, it is returned to the local government with suggested recommendations. Local government then has 60 days to comply and submit a revised plan. There is a 1-year period between the time a plan is adopted and the time local ordinances must be in place to assure implementation. Implementation, therefore, has only recently begun.

It is particularly significant that no Economic Element was required by the 1985 Growth Management Act. By December 1, 1990, only 7 counties had included Economic Elements in their plans—Bay, Indian River, Martin, Palm Beach, Polk, Sarasota and St. Johns. Four additional counties were in the process of developing Economic Elements (Alachua, Lake, Tallahassee/Leon and Putnam). Two counties, Lake and

Lee, were considering developing Economic Elements to be included as amendments to their already adopted plans.

Most local governments are completing *only* those elements required by the state. The plans are usually being prepared by either the local planning department, the regional planning council, or an engineering consulting firm, with little public participation. As long as technical requirements are met, little incentive exists to develop a more "comprehensive" approach. The local plans have often become simply a land-use plan.

As a result, local economic development efforts are still being pursued in a fragmented fashion—many localities have multiple development agencies "doing" development. The more "successful" metropolitan areas have unified efforts. Orlando's Economic Development Commission of Mid-Florida represents not only the city, but also the counties of Orange, Seminole, Lake and Osceola. Dade County with its many Miami municipalities created a county-wide economic development agency in 1985 that replaced 136 separate agencies and now concentrates on small-firm relocation. Jacksonville, the only city in the state with a consolidated city/county form of government, also has a strong centralized Chamber of Commerce that has facilitated economic development efforts (Lubove, 1989).

When asked why their LGCP "did not include any optional elements, such as an Economic Element," the primary reason cited by planners was the lack of financial resources. Funding limitations precluded hiring additional staff, and time constraints in meeting DCA's schedule of submittal exacerbated pressures to complete required elements. Many rural counties had not even considered the possibility of addressing economic concerns. (Comments ranged from "It's not applicable to our area" . . . "That would be too involved." . . . "Too complicated to tie in with state regulations" . . . to "We're so small that an Economic Element really wouldn't pertain to us." A planner in one of the largest urban counties, however, stated "We're really too large to deal with economic concerns—every area is impacted by that.") The impetus to include an Economic Element has most often originated with local

businesses (i.e., Chambers of Commerce). But in at least two counties, Polk and Palm Beach, local elected officials directed the inclusion of the Element.

LGCP elements consist of goals, objectives and policies. A "goal" is "the long-term end toward which programs and activities are ultimately directed." An objective is a measurable, intermediate step toward that goal. A "policy" means the way in which programs and activities are conducted to achieve an identified goal." (*Florida Statutes*, Ch. 186) In those counties with adopted Economic Elements, the Goal often encompasses such phrases as "to support balanced and orderly economic growth" (Martin, Palm Beach and Indian River), or "to provide a diversified and stable economy" (Bay and Sarasota).

Martin County included an Economic Element developed in cooperation with a private Economic Council, and seeks, among other objectives, increased growth in manufacturing. Policies to be implemented focus on ensuring adequate acreage designated for industrial use (with the assistance of a GIS) and the establishment of an "Economic Development Board to attract and retain firms providing basic employment such as manufacturing, research and development, and corporate headquarters." Indian River County's Economic Element (which contains 52 policies) states that the County "shall encourage the expansion of existing business and attraction of new industry and business, including 'high-tech' industries," . . . "shall focus its industrial expansion efforts on attracting and expanding clean, small-scale light manufacturing and assembly concerns," . . . and "shall by 1993 prepare an Economic Base Study." Palm Beach County had begun a series of analyses in 1986, including an economic base study, and this led to an Economic Element that focuses on three of their basic industries—manufacturing, tourism and seasonal residents, and retired persons. (One of several policies is that "the County shall aggressively pursue and encourage the establishment of a major, nationally recognized university in Palm Beach County.") Polk County, too, has focused attention on its economic base. Working cooperatively with its Economic Development Council and Tourist Development Council, "to ensure that the government remains a positive force on the County's economy," the County has included 31

policies related to economic base maintenance and diversification, economic development integrated with planning, and implementation. (Examples of policies include "The Economic Development Council shall continue to market and recruit film producers in the County through a strategic marketing plan" . . . "shall continue programs which encourage and assist existing businesses in the expansion of their market through international trade" . . . "shall continue to market for trade and reverse investment opportunities through the development of an international strategic marketing plan.")

Central to the new Growth Management Act, and critical to local economic development efforts, are the Act's concurrency requirements. The required Capital Improvements Element, for example, which focuses on fiscal capabilities for five-year planning periods, ". . . shall include provisions that facilities and services . . . meet the standards established and are available *concurrent* with the impacts of development so that no development order or development permit may be issued which results in a reduction in the levels of service standards established in the comprehensive plan . . ." [*Florida Administrative Code 9J-5016(4)*]. Development can only occur, therefore, if it does not lower any service levels, for any plan elements, below those standards adopted in the plan. Development costs are being addressed in many localities by the adoption or increase in impact fees, but the question of long-term housing affordability and impact on the construction industry has generally not been addressed. Designed to control urban sprawl, the state has encouraged the establishment of urban service areas based on the assumption that services are more efficiently provided in compact urban areas.

Agricultural interests are becoming more vocal as the more northern, rural counties develop their comprehensive plans. Agriculture, still the state's second largest industry with revenues of \$5.1 billion, is concerned that by restricting growth the concurrency requirements will devalue land. Farmers who rely on land values to finance the purchase of needed equipment face uncertain economic impacts. And the state's three largest agricultural counties, based on the value of farm goods sold, are some of its most populous—Palm Beach county, with 40% of its land in

agriculture, is the top-producing county in the state, followed by Dade (the Miami metropolitan area) and Hillsborough (including the Tampa area) (Powers, 1990).

Development perspectives

Economic development needs, therefore, vary among different regions and local governments. The needs facing a county such as Alachua, for example, located in the rural North Central Florida area (Regional Planning Council 3), are very different from the needs of a county such as St. Lucie, located in the Treasure Coast area (Regional Planning Council 10). St. Lucie's population has almost doubled during the past decade to its presently estimated 150,000. Per capita personal income (1987 estimate) was \$12,530, compared to the surrounding Treasure Coast region's \$19,956. St. Lucie's unemployment rate in 1987 was 10.2%—twice the state's average.

Alachua County, with a population of approximately 180,000 and per capita income of \$12,655, is comparable to St. Lucie's population and income averages, but higher than its surrounding region's \$11,330 per capita personal income. The 1987 official unemployment rate for Alachua County was 3.4%. But analysis in the Economic Element of the county's comprehensive plan (Alachua is one of those counties in the process of including an Economic Element), notes that these statistics are misleading since they fail to illustrate the significantly higher unemployment rate for minorities (averaging 10.8%), and do not begin to address the underemployment problem.

Further analysis of Alachua County's efforts to address economic development concerns reveals varied responses to the planning process. The city of Gainesville in Alachua County is home to the University of Florida, a major research university. It is the region's largest employer, and it is hoped that a research and technology park established seven years ago in the small town of Alachua (10 miles northwest of Gainesville) will promote economic development. The county has the highest percentage of service sector employment in the state (48%). There are at least ten groups in the county involved in economic development, and during the past year there has been increased activity to expand

development efforts. The city of Gainesville will include one optional element in its comprehensive plan—Historic Preservation.

Several smaller towns in Alachua County, using broad public participation, have been developing their own comprehensive plans. In High Springs, a town of approximately 2,500 population, more than 90 people have been involved in the planning process. High Springs, 10 miles northwest of the small town of Alachua and 7 miles from Interstate 75, watched as Alachua annexed its surrounding land (ostensibly to reap the benefits anticipated by growth and development). Annexation has also recently been employed by High Springs to provide more local control over the surrounding area, but by last year they proposed adoption of the state's "urban reserve" concept. The town proposed to establish boundaries that encompass an area of approximately 60 square miles instead of their present 10. High Springs' vision of economic development will be part of an Economic Element in their comprehensive plan, and includes promoting tourism to enhance the growth of local small businesses and encourage the addition of new establishments. The town of Micanopy, population 800 within 1-square mile city limits, considered annexing an area of approximately 60 square miles to have more control over surrounding growth. (That option has since been eliminated.) Micanopy's comprehensive plan will include both Economic and Historic Preservation Elements.

Annexation efforts by the city of Gainesville have not been productive during the past several years, and growth is evident beyond political boundaries. The county's state legislative delegation proposed structural change in city/county consolidation last spring, but voters rejected the proposal in the September 4th primary. The new Boundary Adjustment Act, facilitating annexation efforts, was automatically established. The only other local government in Florida presently considering consolidation is Leon County. (Leon is one of four counties developing an Economic Element for their comprehensive plan. They have consolidated their planning efforts by producing a combined Leon/Tallahassee comprehensive plan.)

Summary

Florida's local governments, therefore, are rarely addressing long-term economic issues in responding to the 1985 Growth Management Act. Funding limitations, technical requirements and time constraints limit incentives to more "comprehensively" plan for future growth and development. But it is local economic vitality that establishes the foundation for state-wide economic health. As Florida moves forward in new planning directions, its vision of the future must address development concerns. A shared understanding of the impacts and opportunities provided by Growth Management must be cultivated by both the public and private sectors. Development needs differ—between and among municipalities, counties and regional planning areas. Florida's future is being shaped—but by whom, and with what consequences—is yet to be decided.

Literature Cited

- Blakely, Edward. (1989). *Planning Local Economic Development: Theory and Practice*. Vol. 168. (Newbury Park, CA: Sage Publications).
- Carter, Luther J. (1974). *The Florida Experience: Land and Water Policy in a Growth State*. (Washington, D.C.: Johns Hopkins University Press).
- Flammang, Robert. (1979). "Economic Growth and Economic Development: Counterparts or Competitors," *Economic Development and Cultural Change*.
- Florida Administrative Code Annotated*, Vol. 4, Title 9, (Norcross, Georgia: Harrison Publishing Co.).
- Florida Statistical Abstract*. (1989). Bureau of Economic and Business Research, University of Florida, Gainesville, Florida.
- Florida Statutes 1987*, Chapters 163, 186 and 187; Tallahassee, Florida.
- Governors Task Force on Urban Growth Patterns*. (1989). (Tallahassee, FL: State of Florida).

Guidelines and Standards for the Local Government Comprehensive Planning Act. (1983). Prepared by University of Florida Department of Urban and Regional Planning for the Department of Community Affairs, Tallahassee, Florida.

Lubove, Seth (June 1989). "Who's #1," *Florida Trend*, Vol. 32, No. 2. pp. 46-58.

Malecki, Edward and Nijkamp, P. (1988) "Technology and Regional Development: Some Thoughts on Policy," *Environment and Planning C: Government and Policy*, Vol. 6. pp.383-399.

Powers, R. Thomas. (January 1990). "Where Growth Will Emerge Next," *Florida Trend*, Vol. 32, No. 9. pp. 15-16.

Vogel, Ronald K. and Swanson, Bert E. (1988). *Journal of Urban Affairs*, Vol. 10, No. 1. pp. 41-61.

Hispanic Segregation Patterns in Metropolitan Miami

Thomas D. Boswell, University of Miami

To a casual observer it might appear that metropolitan Miami is a typical Sun Belt urban complex.¹ Historically, its mild winter climate has generated a tourist-dominated economy. As a post-automobile-era metropolis, Miami's central business district is somewhat small and its suburbs have undergone massive expansion. In addition, Miami's ethnic mix is similar to that of many southwestern cities, its population being comprised of large percentages of non-Latin whites, Jews, blacks, and Hispanics.

Still, closer analysis reveals that Miami is significantly different from other Sun Belt cities. The Hispanic component dominates its population more than with most other United States cities. According to the 1980 Census of Population, only eight Standard Metropolitan Statistical Areas had higher proportions of their populations being Hispanic, when compared to Miami's 35.7%.²

Even more significant is that the Hispanic domination of Dade County's population is recent in origin (Mohl, 1984, pp. 15-21). For instance, in 1950 only 1.3% (6,200 persons) of Dade's population was born in Latin America (U.S. Bureau of the Census, 1952, p. 7). However, by 1990 the Hispanic population had grown to approximately 916,000, 47.5% of Dade residents, an increase of almost 12 percentage points over what it

¹In this paper "Miami," "Metropolitan Miami," "Greater Miami," and the "Miami Standard Metropolitan Statistical Area" all refer to Dade County; the "City of Miami" refers to the central city which is legally defined as one of Dade County's twenty-six separate municipalities.

²The eight SMSAs whose populations were more heavily Hispanic in 1980 were: (1) Laredo, Texas (92%), (2) McAllen-Pharr-Edinburg, Texas (81%), (3) Brownsville-Harlingen-San Benito, Texas (77%), (4) El Paso, Texas (62%), (5) Las Cruces, New Mexico (52%), (6) Corpus Christi, Texas (48%), (7) San Antonio, Texas (45%), and Albuquerque, New Mexico (36%).

was as recently as 1980.³ Blacks currently are about 22% of the county's population. Non-Latin whites account for the remaining 32%; approximately 11% is Jewish (Sheskin, 1990A, p. 1). No other large American city has undergone such drastic proportional changes in its ethnic composition in such a short period.

The purpose of this paper is to investigate the ethnic and racial residential segregation patterns that have emerged in metropolitan Miami, with an emphasis on Hispanics and the position they have occupied in this residential differentiation process. Segregation is important because it plays a significant role in shaping an ethnic group's opportunities for housing, education, shopping, and employment. The literature dealing with segregation in Miami will be surveyed, followed by discussion of the results of an empirical analysis of the levels of segregation in Dade County.

Literature review

Almost all the literature on segregation dealing with metropolitan Miami has compared the residential patterns of blacks and Hispanics with those of whites and non-Latin whites. For instance, it has been found that although it might appear that blacks are well-dispersed throughout Dade County because they are not concentrated in a single core area, as they are in many northern and western cities, that this is at least partially an illusion. Instead, they are concentrated in several well-defined communities (Figure 1). These areas contain close to 70% of Dade's

³The estimates of Hispanics in Dade County were obtained from Mr. Oliver Kerr (Director of Research, Metropolitan Dade County Planning Department) during a phone conversation on September 5, 1989.

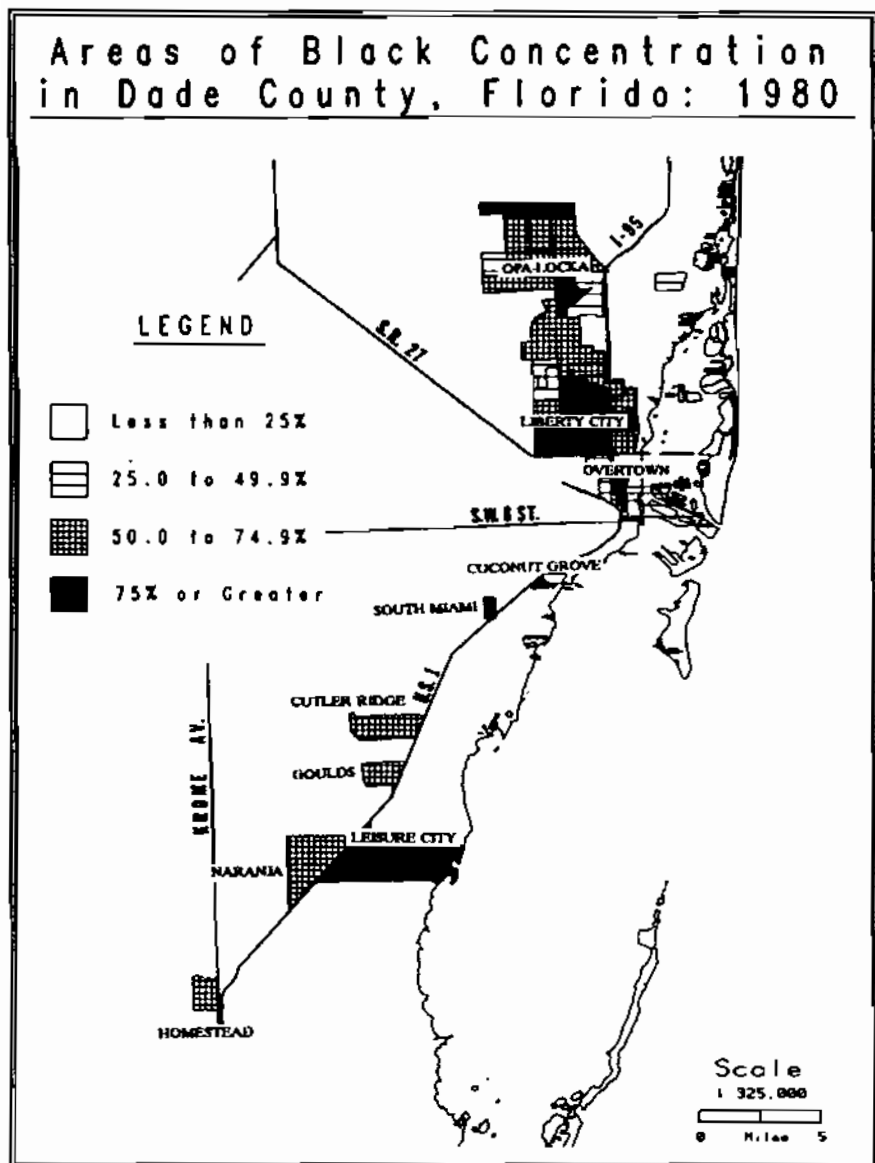


Figure 1.

black population.⁴ Not only are there relatively few blacks outside these areas, but there are few whites or Hispanics in these communities. Dudas and Longbrake (1971) found that in 1970 about 86% of Dade County's black population would have had to be redistributed for it to have exhibited the same distribution as that of the county's white population. This level of segregation has remained stable over the past several decades, since the comparable 1950 and 1960 figures were 84% and 88%, respectively. The authors claim that, besides overt discrimination and white-flight succession, two factors were responsible for the continued high level of black segregation. First, public housing projects designed to aid the poor were found only in black areas. They suggest that locating some housing projects in white areas would have hastened residential integration by attracting low-income blacks to live in them. Second, the development of suburban communities specifically designed for blacks, such as Richmond Heights, deterred integration by absorbing many middle-income blacks who otherwise might have settled in white or Hispanic neighborhoods (Dudas and Longbrake, 1971, pp. 157-168). As in black ghettos of other cities, Miami's areas of black concentration tend to expand by a contagious diffusion process, by which the territory closest to them is exposed to black in-movement, followed by either white or Hispanic succession (Winsberg, 1983, p. 310).

A study using the 1973-1974 "Social Register for Cubans" compared the distributions of upper- and middle-class Cubans in Miami, San Juan

⁴The percentage concentration of blacks in these ten areas has declined steadily since 1960. In 1960, 96% of all Dade's blacks lived in these areas; in 1970 and 1980 the comparable figures were 93% and 71%, respectively. Oliver Kerr, *Profile of the Black Population* (Miami: Metropolitan Dade County Planning Department, Research Division, 1984), 144-147; Harold M. Rose, "Metropolitan Miami's Changing Negro Population, 1950-1960," *Economic Geography*, 40 (1964), 221-238; David B. Longbrake and Woodrow W. Nichols, Jr., *Sunshine and Shadows in Metropolitan Miami* (Cambridge, Massachusetts: Ballinger Publishing Company, 1976), 47-49, and Harold M. Rose, "Blacks and Cubans in Metropolitan Miami's Changing Economy," *Urban Geography*, 10 (1989) 464-486.

(Puerto Rico), and New York City. The purpose was to determine the degree to which Milton Gordon's concept of "ethclass" applied to Cubans. This idea suggests that people choose residential locations based on both ethnic affiliation and socioeconomic conditions. The study hypothesized that upper- and middle-class Cubans would tend to locate in upper-middle income neighborhoods dominated by Cubans. While this was so for San Juan where 70% of the Social Register Cubans resided in such areas, it was not the situation in Miami and New York City. For Miami, only 17% lived in upper-middle class Cuban neighborhoods. On the other hand, 34% resided in non-upper-class Cuban areas. Thus, 51% chose to live in some type of Cuban neighborhood, while 49% lived in non-Cuban areas. In New York City, 79% of Social Register Cubans resided outside Cuban neighborhoods, with most living in upper-middle class areas. Therefore, in San Juan the ethclass dimension appeared to prevail. In Miami, ethnicity appeared to be more important than economic status; whereas in New York City socioeconomic class seemed most important. The study explains these differences as follows. In San Juan, the Cuban population is more homogeneous, with a disproportionately large share from the upper and middle classes. In Miami, there is a large Cuban population, but most Cubans have middle-incomes and prefer to live in Cuban-dominated neighborhoods, despite economic status. New York City does not have any neighborhoods that are strongly dominated by Cubans.⁵ As a result, it is difficult for wealthy Cubans to find a place to live that is both wealthy and predominantly Cuban. So, many choose to live in well-to-do neighborhoods where other middle- or high-income non-Cubans reside (Cooney and Contreras, 1978, pp. 33-49).

Another study of Dade County used 1970 census data to compare Mexicans, Puerto Ricans, and Cubans both with each other and with

⁵There is a large Cuban-American settlement adjacent to New York City in New Jersey on the western side of the Hudson River, in the vicinity of Union City and West New York. Although technically outside New York City, it is part of its metropolitan area. In fact, this settlement is second only to Miami as a concentration of US Cubans.

other racial and ethnic groups (Aguirre, Schwirian, and La Greca, 1980, pp. 35-63). It found that Cubans were the most heavily concentrated group in the City of Miami (the central city of the SMSA), with blacks and Puerto Ricans ranking second and third. When comparing each group's segregation from the rest of the population, it found that blacks were the most segregated, Hispanics were moderately segregated, and persons of European stock were the least segregated. Among Hispanics, Cubans were the most segregated, followed closely by Mexicans. Puerto Ricans were the least segregated. Another finding was that socioeconomic status explains only part of the variability in segregation patterns, as also noted by Cooney and Contreras (1978). Furthermore, the study notes a high correlation between segregation patterns in the central city and the metropolitan fringe. That is, those groups most segregated in the central city tend also to be the ones most segregated in the suburbs. However, Puerto Ricans were more highly segregated within the central city from the non-Latin ethnic classes than were either Cubans or Mexicans. But, in the suburbs, Mexicans were the most segregated. The authors concluded that, despite elements of enforced constraint in housing choice, a greater influence in metropolitan Miami's segregation patterns is ethnic self-selectivity, especially among Cubans. In this regard, the authors draw a parallel between Cubans and the Europeans who immigrated to the United States earlier in this century.

Winsberg (1979) examined the residential patterns associated with Cuban immigration into Dade County. He found that, contrary to common belief, a small Cuban population resided primarily in Little Havana as early as 1950—prior to the Castro Revolution in 1959. In fact, in 1960, 70% of the county's Cubans lived within a three-mile radius of Miami's central business district. By 1970, this percentage had declined to only 28%, indicative of a widespread diffusion of Hispanics into suburban locations. Compared to the ethnic expansion that typified U.S. cities between 1880 and 1914, Miami's Latin expansion between 1960 and 1970 occurred more rapidly and diffused more widely. The economic success of Miami's Hispanics, as well as their rapid growth, promoted this dispersal. Their residential expansion has been much less tied to the contagious diffusion process described earlier in the Dudas and

Longbrake study for blacks. Latin growth has frequently occurred in areas far removed from those areas in which Hispanics are already heavily concentrated. In 1950, Dade's Latins were well integrated with other populations, such as non-Latin whites and Jews. By 1970, however, clearly Hispanics were taking over former non-Latin white and Jewish neighborhoods through a process of invasion and succession. Between 1960 and 1970 non-Latin whites in the areas of Hispanic concentration declined by over 111,000. Consequently, the level of segregation between Latins and non-Latin whites increased significantly during this period. In 1950, 31% of Hispanics would have had to be redistributed to exhibit the same residential patterns as Anglos. This figure rose to 44% in 1960 and to 52% in 1970. Winsberg concludes that, because of the large growth of metropolitan Miami's Latin population, its various racial and ethnic groups appear to be polarized. As evidence, he presents indices of segregation for Latins, Jews, and Anglos that have steadily increased between 1950 and 1970 (Winsberg, 1979, pp. 403-418).

Winsberg (1983) updated his earlier study using 1980 census data. He found a slight decrease in the degree of segregation between blacks and Hispanics during the seventies. In 1970, 86% of the blacks would have needed to be redistributed to exhibit the same residential patterns as Latins, whereas in 1980 the proportion declined to 81%. The segregation index between non-Hispanic whites and blacks also dropped from 87% to 80%. When non-Latin whites were compared to Hispanics there was almost no change, the indices for 1970 and 1980 being 52% and 53%, respectively. His conclusions were: (1) the large growth of both blacks and Hispanics during the seventies continued to fuel segregation through the processes of invasion and succession discussed in his 1979 paper; (2) Hispanics have competed more successfully than blacks for housing space because of the Hispanics' ability to improve their economic status; and (3) Dade County will remain highly segregated in the future, particularly if large-scale Latin immigration continues to South Florida (Winsberg, 1983, pp. 305-314).

In 1989, the *Miami Herald* published results of a study conducted by its research staff dealing with ethnic segregation in Dade County using 1988 voter registration rolls. It found that seven of every ten blacks live in neighborhoods that are at least two-thirds black, about three in five

non-Latin whites reside where two-thirds of their neighbors are Anglo, and nearly half the Hispanics live in areas that are two-thirds Hispanic. The Hispanics have expanded primarily in westerly and southerly directions throughout the county, as they have become less segregated from whites. Blacks have been dispersing at a much slower rate, as they remain concentrated in the ten black communities mentioned above (Grant and Doig, 1989, p. B1).

Empirical Analysis of Segregation Patterns in Miami

This section updates and expands upon some findings of the study conducted by Aguirre et al. (1980) and the two investigations by Winsberg (1979, 1983) of the racial and Hispanic ethnic segregation patterns in metropolitan Miami, using 1980 census data at the scale of census tracts. The following six questions are addressed:

1. To what degrees are the various Hispanic and racial components of Dade County concentrated in its central cities of Miami and Hialeah?
2. What are the patterns of segregation when the residential distributions of individual Hispanic nationality components are compared to those of metropolitan Miami's various racial classes?
3. Are the Hispanic nationality components segregated from each other? If so, which are most highly segregated?
4. To what degree are the three Hispanic racial components segregated from the various racial classes of metropolitan Miami?
5. To what extent are the three Hispanic racial components segregated from each other?
6. Are there notable levels of segregation between the Hispanic racial classes and the Hispanic nationality groups?

Concentration in the central cities of Miami and Hialeah

Most studies of segregation find that the poorest people and newest immigrants of a metropolitan area are more concentrated in the central city than are the middle and upper classes. Most investigations dealing with U.S. cities report that blacks are most concentrated in central cities,

followed by Hispanics and non-Latin whites, respectively.⁶ The studies by Winsberg and by Aguirre et al. suggest that the central city of Miami has served as a receiving area for newly-arriving immigrants from Latin America. As arrivals enter this area, they displace more affluent Hispanic and non-Latin white older residents, who either leave Dade County or move into the county's middle- and upper-class suburbs (Winsberg, 1983, p. 308 and Aguirre et al., 1980, p. 54). Boswell and Curtis (1989, pp. 83-85) note that there are two reception centers, rather than one, for Cuban arrivals (Figure 2). One is the Little Havana area in the City of Miami; the other is Hialeah.

Table 1 shows the percentages of Dade County's sub-populations that are concentrated in the Cities of Miami and Hialeah. About 21% of the county's total population lives in the City of Miami. Only 9% of non-Latin whites live here, whereas 31% of blacks and 33% of Hispanics live in this city. Blacks and Hispanics together accounted for 81% of the City of Miami's total population in 1980. Blacks are largely found in Overtown and the Liberty City-Brownsville complex; whereas most Hispanics reside in Little Havana and areas further west. Among the Hispanics, Cubans are most concentrated in the central city, followed by "Other Hispanics," Puerto Ricans, and, more distantly, by Mexicans. That Cubans and the "Other Spanish" are the most recent arrivals accounts for the finding that the total Hispanic population is somewhat more concentrated in the central city than is the black population, a result that contradicts most other studies of blacks and Hispanics. In addition, some growth of Liberty City has extended northward outside the city limits of Miami.

⁶Douglas S. Massey, "Residential Segregation of Spanish Americans in United States Urbanized Areas," *Demography*, 16 (1979), pp. 553-563; Douglas S. Massey, "Hispanic Residential Segregation: A Comparison of Mexicans, Cubans, and Puerto Ricans," *Sociology and Social Research*, 65 (1981), pp. 311-322; and Douglas S. Massey and Brendan P. Mullan, "Processes of Hispanic and Black Spatial Assimilation," *American Journal of Sociology*, 89 (1989), pp. 836-873.

Areas of Cuban Concentration in Dade County, Florida: 1980

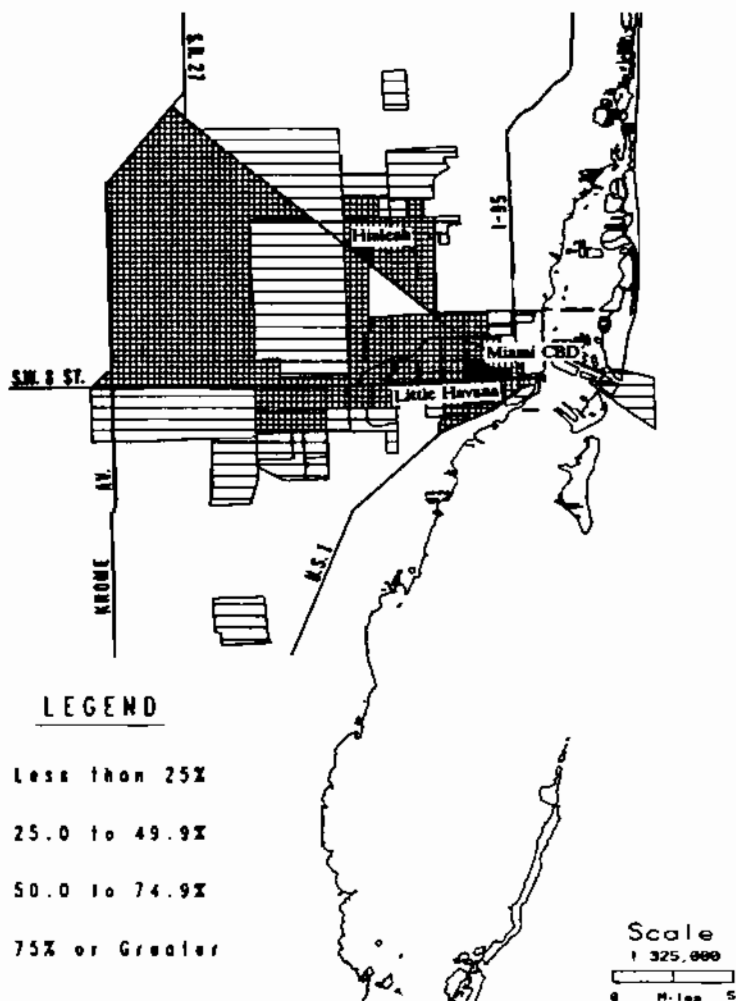


Figure 2

Table 1

Percentages of Dade County's Population in the Cities of Miami and Hialeah for Dade County's Racial and Nationality Groups (1980)

Racial or Nationality Classes	Miami	Hialeah
Total Population	21.3%	8.9%
Total White	18.3	10.4
Non-Latin White	8.9	4.6
Total Black	31.1	0.8
Total Hispanic Nationalities	33.4%	18.6%
Mexican Origin	11.3	4.0
Puerto Rican Origin	27.6	10.6
Cuban Origin	36.2	21.5
Other Hispanic Nationalities	28.4	13.0
Total Hispanic Races	33.4%	18.6%
Hispanic White	32.2	19.0
Hispanic Black	46.6	4.8
Other Hispanic Races	40.5	17.6

Source: U.S. Bureau of the Census, *1980 Census of Population and Housing, "Census Tracts,"* PHC-2-241, Miami, Florida Standard Metropolitan Statistical Area (Washington, D.C.: U.S. Government Printing Office, 1983), Table P-7.

When the Hispanic population is divided into its racial components, it is clear that the black Hispanics are most concentrated in the City of Miami, followed closely by the "Other Hispanic Races" class. The factors of race and ethnicity make both classes more likely to settle in the central city.

Figures for the city of Hialeah also are displayed in Table 1 because, after Miami (346,865), Hialeah (145,254) is Dade County's second largest city and, as previously stated, it has become the county's other major node of Hispanic settlement. In most respects, living in Hialeah is very similar to living in Little Havana. Compared to other ethnic groups of Dade County, only Hispanics are over represented in Hialeah. About 9% of the county's population live in Hialeah, but only 5% of non-Latin whites and 1% of all blacks live here. On the other hand, 19% of persons of Spanish origin live in Hialeah, with Cubans having the highest representation at 22%. In 1980, 74% of Hialeah's population was Hispanic, with 60% being of Cuban descent.

When the figures in Table 1 for the percentage concentrations in the City of Miami are compared to those calculated by Aguirre et al. for 1970, it is obvious that the percentage of the subpopulation in the central city has declined substantially. For instance, in 1970, 26% of the county's total population was in the City of Miami. For all whites, blacks, Mexicans, Cubans, and Puerto Ricans, the respective figures were 23.4%, 40.2%, 21.7%, 56.4%, and 38.2% (Aguirre et al, 1980, p. 40). This decline in central city concentration is exactly what one would expect in a county whose population has been rapidly suburbanizing.

Segregation of hispanic nationalities

This section compares the residential patterns of the four Spanish-origin nationalities, to the racial classes of Dade County and to each other (U.S. Bureau of the Census, 1983, Table P-7). The index of segregation used is the index of dissimilarity.⁷ This statistic expresses the percentage of either of two populations, whose percentage distributions are being compared on a census tract scale, that must be redistributed for both to have identical residential distributions. The possible values range from

⁷The index of dissimilarity has been calculated according to the following formula:

$$I.D. = \{\Sigma (X_i - Y_i)\}/2$$

Where: I.D. = index of dissimilarity. X_i = the % of the first population in the i th census tract. Y_i = the % of the second population in the i th tract.

0% to 100%. Following the suggestion of Kantrowitz (1973, pp. 14-15), indices of 70% or above will be considered "high" and those below 30% will be considered "low"; "moderate" levels will range between 30% and 70%. Differences between indices that are less than 5 percentage points will be regarded as unimportant (Kantrowitz, 1973, pp. 14-15). While there is some debate on the pros and cons of using this measure, it is employed here to facilitate comparisons with previous studies of ethnic and racial segregation.⁸

The figures in the upper half of Table 2 are the indices of dissimilarity for comparing the residential distributions of the Hispanic nationality classes with Dade County's two major racial components. For comparison, the index for the distribution of all blacks and all whites is 80.9%, and the index for all blacks with non-Latin whites is 83.9%. A study of the twenty-nine largest cities in the United States found that, based on data for 1970, the average index of dissimilarity comparing whites to blacks was 83.1 (Massey, 1979, p. 556), almost identical with the Miami figure.

Two generalizations can be made about the upper half of Table 2. First, the degree of segregation for each of the four Spanish nationalities is higher relative to blacks than to whites in Dade County; the levels of the indices for Cubans and the Other Spanish with respect to blacks are high, while the levels for Mexicans and Puerto Ricans are in the moderate range. Miami is not atypical when compared to most other cities of the United States. For instance, a study of ten urban areas in the U.S.

⁸Henry S. Shryock, Jacob S. Siegel, and Associates, *The Methods and Materials of Demography*. (Washington, D.C.: U.S. Government Printing Office, Bureau of the Census, 1971), pp. 232-233; Otis D. Duncan and Beverly Duncan, "A Methodological Analysis of Segregation Indexes," *American Journal of Sociology*, 20 (1955), pp. 210-217; and Karl E. Taeuber and Alma F. Taeuber, "A Practitioner's Perspective on the Index of Dissimilarity," *American Sociological Review*, 42 (1976), pp. 884-889.

Table 2

Indices of Dissimilarity Comparing Dade County's Hispanic Nationalities with Non-Hispanic Racial Groups and Comparing Hispanic Nationalities with Each Other (1980)

Racial or Nationality Classes	Hispanic Nationalities			
Non-Hispanic Racial Classes	Mexican	Puerto Rican	Cuban	Other Hispanic Nationalities
Non-Latin White	49.0	37.2	60.0	25.8
Non-Latin Blacks	69.9	60.3	86.3	75.8
Averages	59.4	48.8	73.2	50.8
Hispanic Nationalities	Mexican	Puerto Rican	Cuban	Other Hispanic Nationalities
Mexican Origin		51.3	66.9	58.0
Puerto Rican Origin	51.3		46.7	30.6
Cuban Origin	66.9	46.7		32.0
Other Hispanic Origin	58.0	30.6	32.0	
Averages	58.7	42.9	48.5	40.2

reported that average indices for comparing blacks with Mexicans, Cubans, and Puerto Ricans were 85.1%, 88.0%, and 78.0% (Massey, 1981, p. 314). The levels of segregation of the four Hispanic nationalities from non-Latin whites are all in the moderate or low ranges. The same study of ten cities found average indices for comparing non-Latin whites to Mexicans, Cubans, and Puerto Ricans to be 63.6%, 71.3%, and 69.1%. Thus, the Miami levels of segregation for non-Latin whites were significantly below these levels. Clearly, in Miami, Hispanics are much less segregated from whites than from blacks. They

also are less segregated from whites than are blacks. For example, one study determined that the census tracts in 1980 that contained a combined 90% of Dade County's black population comprised only about 11% of the area's non-Latin whites. In contrast, the tracts that contained 90% of the county's Hispanics comprised about 47% of the non-Latin white population (Kerr, 1984, pp. 28-29). Massey's studies (1979, 1981, and 1984) document a similar finding for other U.S. cities.

The second generalization that can be made is that Cubans are more segregated from both of Dade's racial components than are the other three Hispanic nationalities. On average, Mexicans rank second, with Puerto Ricans and the Other Spanish exhibiting the lowest average indices. These are reasonable findings because it is easier for Cubans to live in their own enclaves, due to their large numbers and recency of arrival. In addition, it is logical that Mexicans would be more highly segregated than either Puerto Ricans or the Other Spanish, since a large percentage of Mexicans live in the southern part of Dade County (near Homestead and Florida City), where many are employed in agricultural enterprises (Aguirre et al, 1980, pp. 51-52). Some studies of other cities have found that Puerto Ricans are more segregated than Mexicans from non-Latin whites and less segregated than both Cubans and Mexicans from blacks (Guest and Weed, 1976, pp. 1088-1111 and Massey, 1981, p. 314). The reason for this finding is that Puerto Ricans in these other cities are generally poor and many are dark-skinned. On the other hand, Puerto Ricans who live in Florida are very similar to the state's Cuban population in terms of socioeconomic achievement, although for the entire United States Puerto Ricans are much poorer than Cubans (Boswell and Rivero, 1986, pp. 60-63 and Boswell and Rivero, 1984, pp. 47-53). Therefore, in Florida, Puerto Ricans are more successful in competing for residential space than they are, for instance, in New York City, where they are more similar in socioeconomic terms to blacks than to whites (Kantrowitz, 1973, p. 29).

The lower half of Table 2 indicates the levels of segregation among the four Spanish nationality groups. Given their common language, religion, and Spanish cultural roots, it might seem reasonable to expect segregation levels among the four nationality classes to be low. But the

numbers in Table 2 and the patterns shown in Figures 2, 3, 4, and 5 clearly show that this is not so. All the indices fall in the moderate range. The highest value is 66.9%, suggesting that close to two-thirds of the Mexicans or Cubans would need to be redistributed for their residential distributions to be identical. The lowest index, 30.6%, compares the distributions of Puerto Ricans and Other Hispanics. In terms of averages, Mexicans are the most segregated, with a mean index of almost 60%. Cubans occupy an in-between position, with a mean index of almost 50%. Puerto Ricans and the Other Hispanics are characterized by the least segregation, with indices approaching 40%. Massey's research on ten American cities found that the average index of segregation between Mexicans and Cubans was 74%, similar to the value of 67% for Miami shown in Table 2. When he compared Mexicans and Puerto Ricans the average index was 66%, notably higher than the value of 51% for Miami. Finally, when Massey investigated Cubans and Puerto Ricans he found an index of 72%, much higher than the figure of 47% in Table 2 (Massey, 1981, p. 36). Conway, Bigby, and Swann (1986, p. 36) (based on 1980 data for New York City) report an index of 54.8% when the residential patterns of Cubans and Puerto Ricans are compared. It may be concluded that, although there is a moderate degree of segregation among the Spanish nationalities in metropolitan Miami, the levels of this segregation are generally lower than in most other U.S. cities. Furthermore, the levels of dissimilarity are always lower than when each nationality is compared to blacks. When compared to non-Latin whites, however, the results vary. Sometimes the Spanish nationality classes are more segregated from each other than from Anglos, and sometimes the reverse is true.

Segregation of hispanic racial classes

Table 3 examines the fourth and fifth questions referred to above. No other published studies could be found comparing the segregation patterns of all Hispanics by their racial characteristics, although several have investigated the residential patterns of black Puerto Ricans (Kantrowitz, 1969, pp. 685-695 and Jackson, 1981, pp. 117-120).

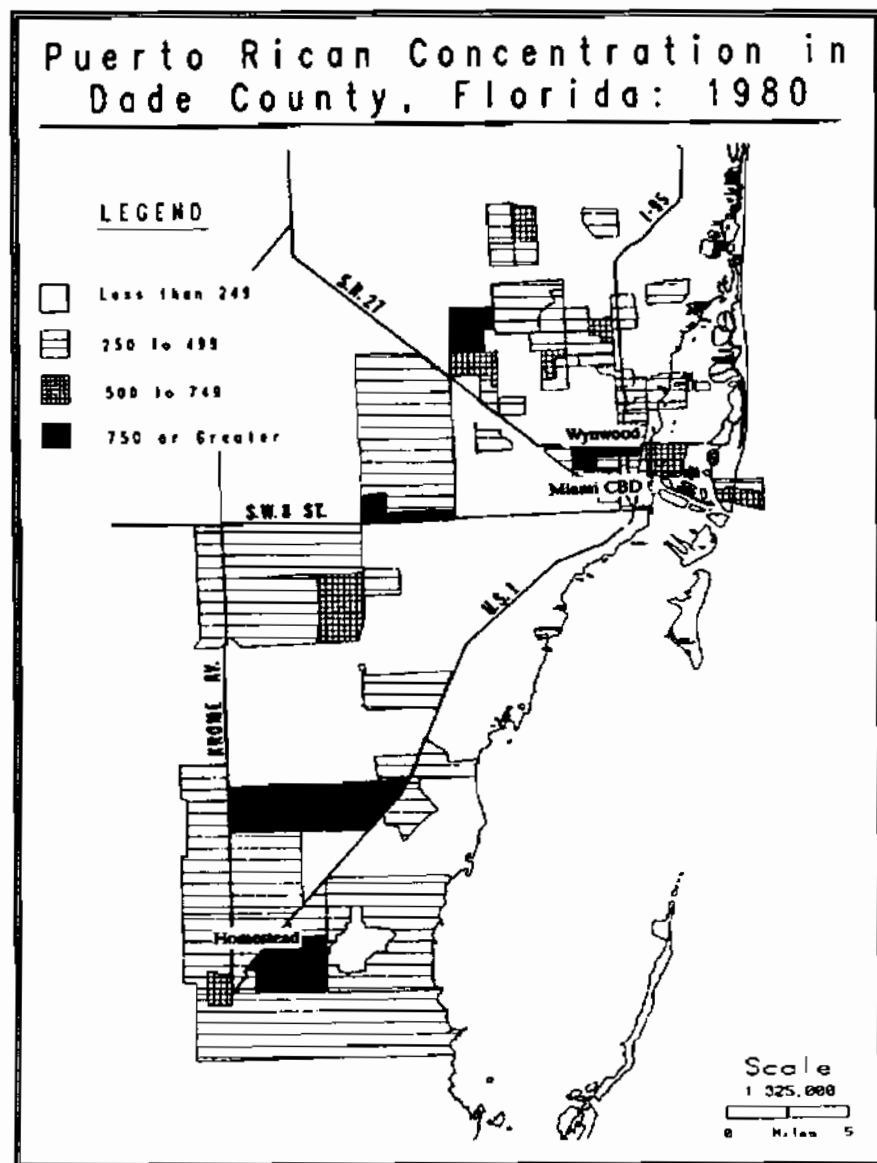


Figure 3.

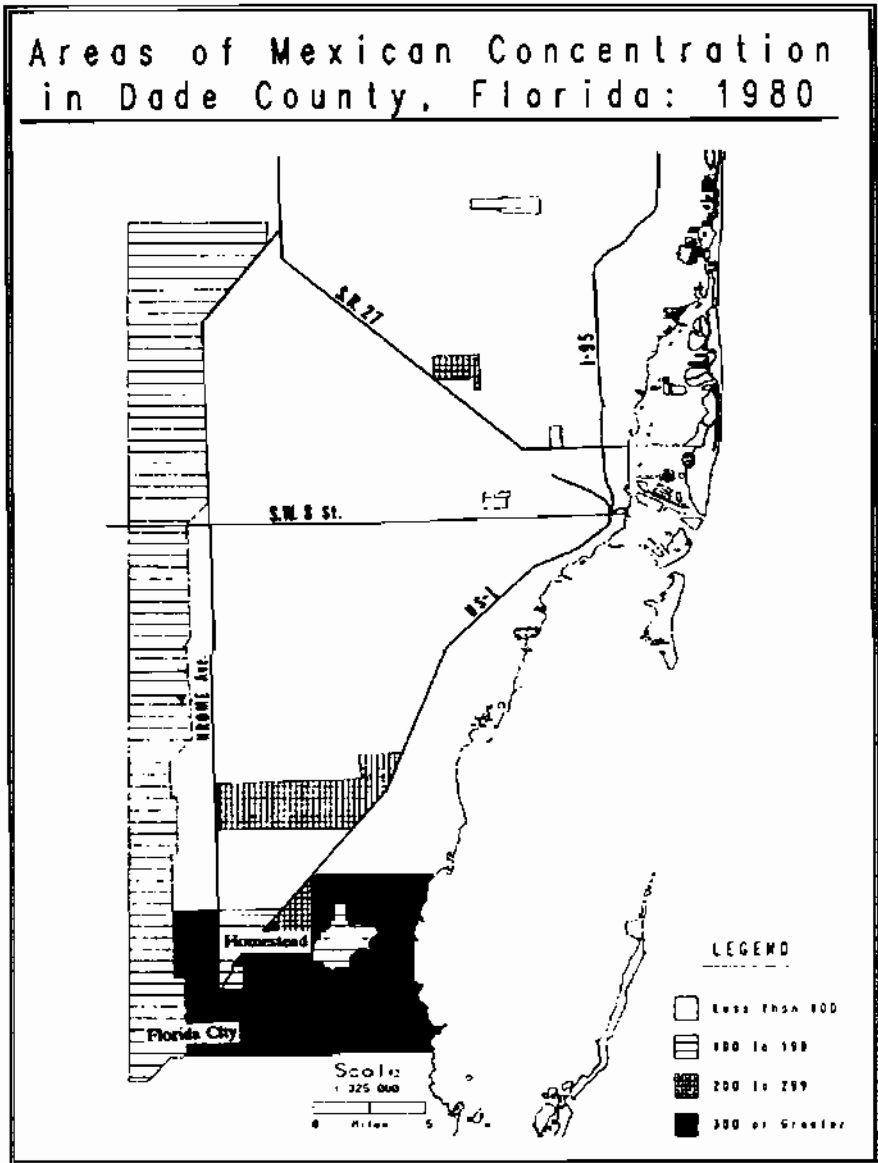


Figure 4.

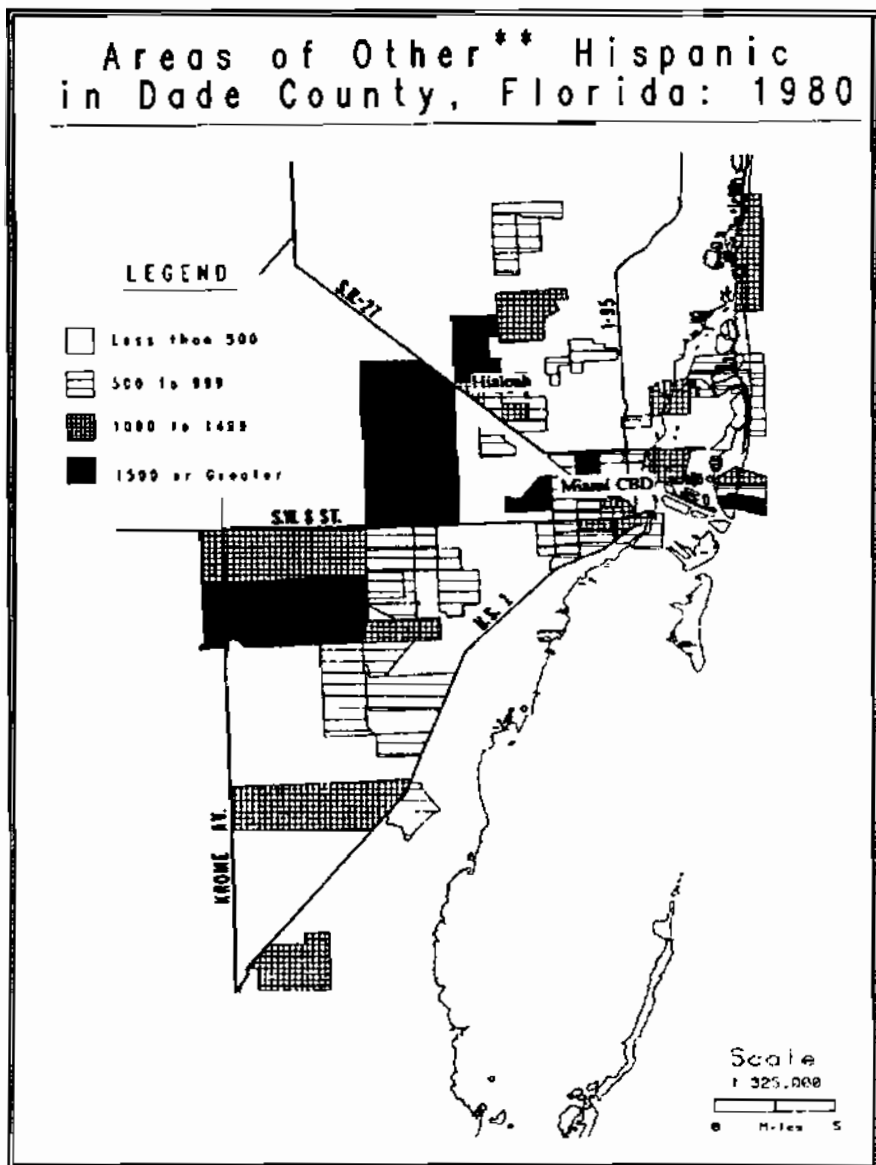


Figure 5. **Other means not of Cuban, Puerto Rican, or Mexican descent.

A priori reasoning suggests that black Hispanics would be the most segregated from non-Latin whites and the least segregated from blacks. Conversely, Hispanic whites should be least segregated from non-Latin whites and most segregated from blacks. It is also reasonable to hypothesize that the Other Spanish Races category will occupy intermediate levels of segregation from both blacks and whites. The results displayed in the upper third of Table 3 corroborate these expectations so closely that the averages of the indices of dissimilarity for each racial class (line three) are similar. It appears that the Hispanic reaction to Dade County's racial differences is comparable to that of non-Latin blacks and whites.

The indices in the middle third of Table 3 and the patterns in Figures 6, 7, and 8 reveal four important points about the degrees of segregation between the three Hispanic racial classes. First, all the indices are in the moderate range, meaning that there is a significant amount of segregation within the Spanish racial categories. These segregation patterns are logical. For instance, black Hispanics are more segregated from white Hispanics than they are from the Other Spanish Races; and white Hispanics are less segregated from the Other Spanish Races than from black Hispanics.

The second point is that, although there are significant differences among the Hispanic racial classes, these differences are considerably less than when the Hispanic racial classes are compared to the non-Hispanic racial classes for all Dade County. For example, when Hispanic whites are compared to Dade's black population, the segregation index is 79%. But, when Hispanic whites are compared to Hispanic blacks, the index is only 59%. While this latter figure is moderate, it is 20 points lower than 79%. When Hispanic whites are compared to Other Spanish Races, the index is 38%. Yet, when non-Latin whites for the county are compared to the Other Hispanic Races, the value is 61%, 23 points higher. The inescapable conclusion is that ethnic affiliation among Hispanics partially, but not totally, compensates for racial differences in residential patterns in greater Miami.

The third point is that the patterns displayed in Figure 6, 7, and 8 exhibit a moderate tendency for the Other Spanish Races to be located in areas between the main concentrations of black and white Hispanics. In other

Table 3

Indices of Dissimilarity Comparing Dade County's Hispanic Racial Classes with Non-Hispanic Racial Classes, Hispanic Racial Classes, and Hispanic Nationalities (1980)

Racial Classes	Hispanic Racial Classes		
Non-Latin Racial Classes	White Hispanic	Black Hispanics	Other Hispanic Races
Non-Latin White	46.3	70.0	60.7
Non-Latin Blacks	79.2	39.5	72.5
Averages	62.8	54.8	66.6
Hispanic Racial Classes			
White Hispanics	N.A.	58.8	37.8
Black Hispanics	58.8	N.A.	46.2
Other Hispanic Races	37.8	46.2	N.A.
Averages	48.3	52.5	42.0
Hispanic Nationalities			
Mexican Origin	61.2	59.3	58.0
Puerto Rican Origin	40.0	39.2	73.7
Cuban Origin	10.6	63.5	38.2
Other Hispanic Origins	22.7	51.4	35.9
Averages for All Hispanic Nationalities	33.6	53.4	51.4

Hispanic White Concentration in Dade County, Florida: 1980

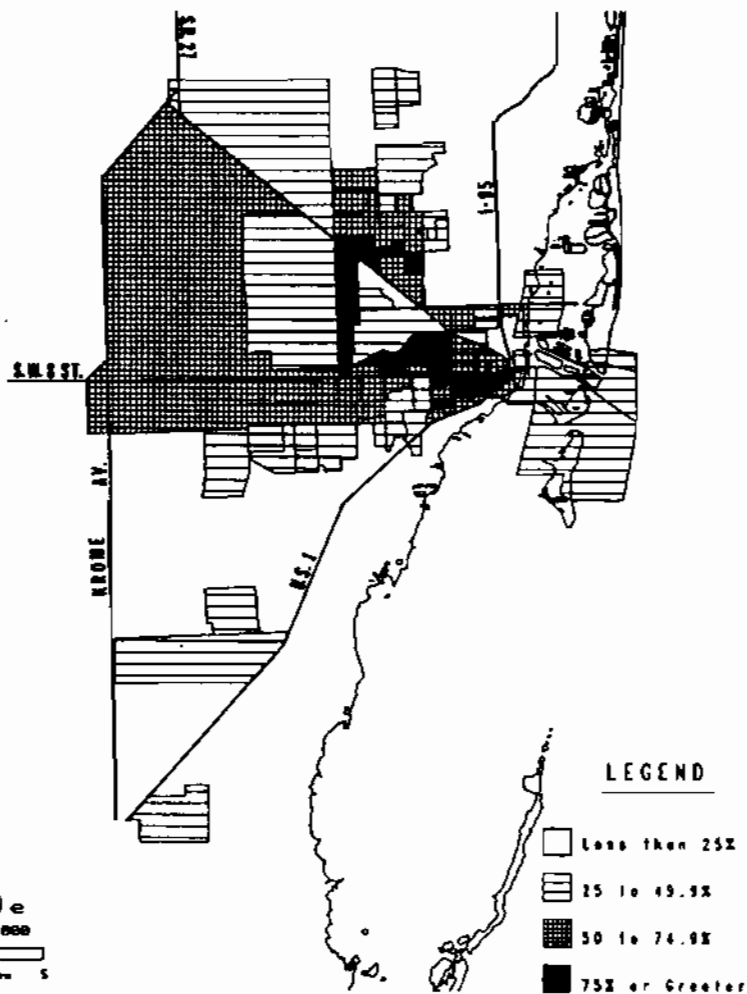


Figure 6.

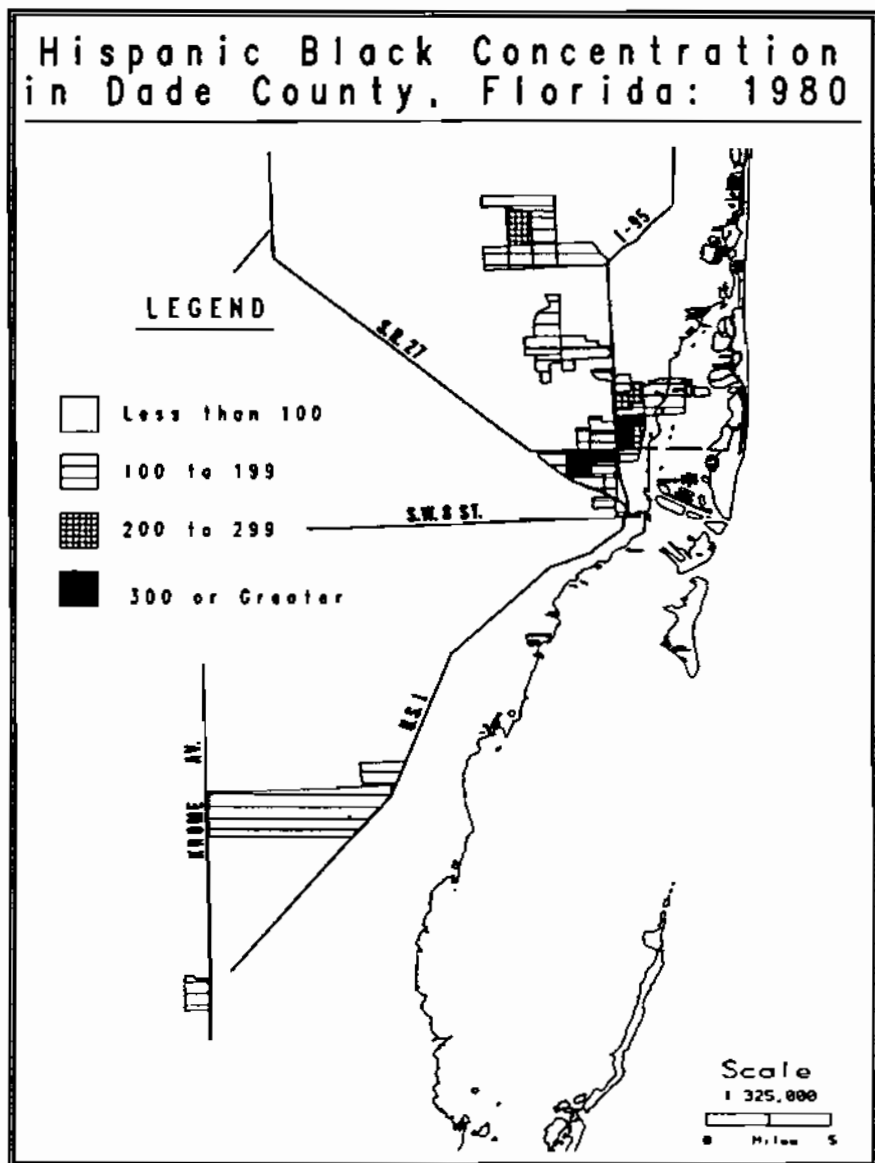






Figure 7.

Other Hispanics* (By Race) in Dade County, Florida: 1980

LEGEND

-  Less than 500
-  500 to 999
-  1000 to 1499
-  1500 or Greater

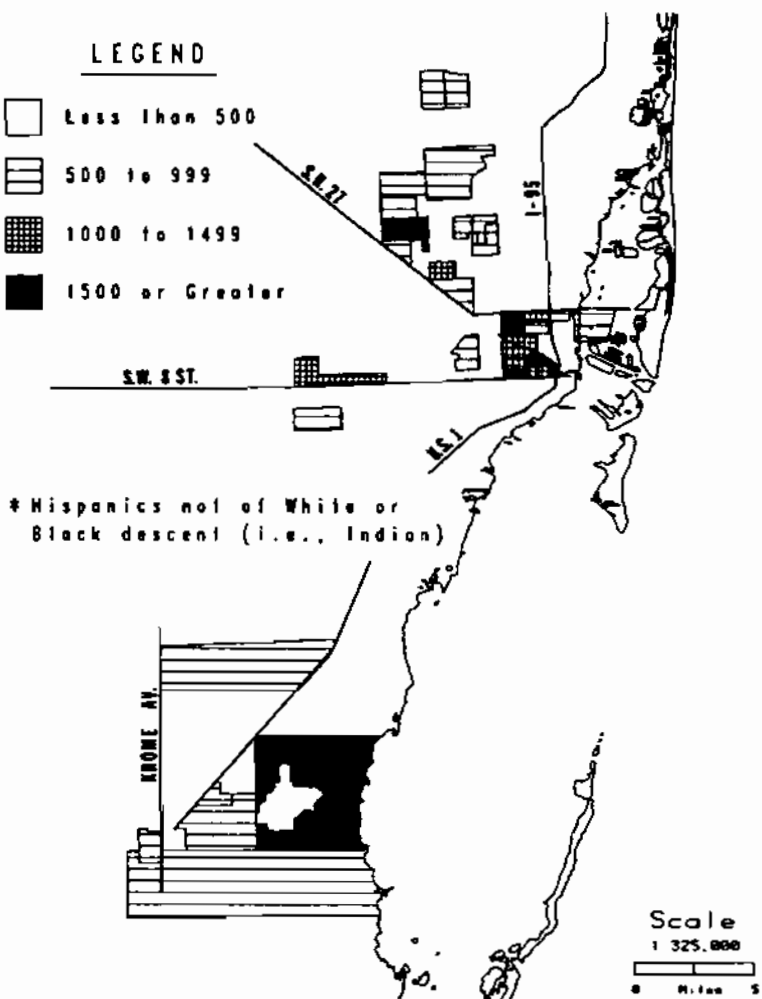


Figure 8.

words, the Other Spanish appear to exhibit a tendency to occupy transitional zones between the other two Hispanic racial classes.

The fourth point is that Spanish blacks are less segregated from Dade's non-Latin black population (I.D. = 39.5%) than they are from its Spanish white residents (I.D. = 58.8%). The patterns displayed in Figure 4 clearly show that Spanish blacks tend to be most concentrated in the north central sector of Dade County, corresponding with local black neighborhoods such as Liberty City, Brownsville, and Opa Locka. They are also found in transitional areas between white Hispanic and black neighborhoods, such as the eastern side of Hialeah and in Allapatta. Jackson, in his study of Puerto Ricans in New York City, has reported similar findings. He suggests that "Puerto Ricans are being 'pulled apart' spatially, with their darker-skinned members residing more with blacks than with other Puerto Ricans or with non-Hispanic whites (Jackson, 1981, p. 120)." Metropolitan Miami's Hispanics appear to be exhibiting similar residential behavior.

Segregation of hispanic racial and nationality classes

The indices in the lower third of Table 3 provide answers for the sixth question in this analysis, which asked if there were notable levels of segregation between the Hispanic racial classes and the Spanish nationality groups. The averages reveal that white Hispanics have the lowest mean segregation. Black Hispanics and Other Hispanic Races exhibit averages that are very similar to each other and are almost 20 percentage points higher than that of the Hispanic whites. These averages, however, mask important detailed differences. The individual indices for all three Spanish racial classes exhibit values in all three category levels (low, medium, and high). Mexicans are the most highly segregated from the Hispanic whites, and Cubans are the least segregated from this class. On the other hand, Cubans are most segregated from black Hispanics and Puerto Ricans are least segregated from this subpopulation of Hispanics. It is possible that these differences are at least partly related to the fact that Puerto Ricans on the United States mainland have a larger share of their constituency comprised of non-whites than is the case with Cuban-Americans. Unfortunately, data

to test this notion are not available in the published 1980 census materials.

Conclusions

Miami has experienced a dramatic change in its ethnic composition over the past 30 years as it has evolved from a fairly typical southern Sun Belt city into a major center of Hispanic settlement. The Hispanization of the population during this period has produced major changes in the landscape, economy, culture, and politics of Dade County (Mohl, July 1982, pp. 8-10 and Mohl, April 1982, p. 10). It also has promoted increased competition among its various ethnic groups for residential space. This study has described the segregation patterns that have resulted from this competition.

It was determined that Cubans are most concentrated in the central cities of Miami and Hialeah, due to their recency of arrival in the United States. Mexican-Americans are concentrated in the southern part of Dade County, where they can more easily find agricultural jobs. Both Puerto Ricans and the Other Hispanics exhibit a more dispersed pattern with no single major concentration.⁹

When the residential patterns of the Hispanic nationality components were compared to metropolitan Miami's racial classes, the study noted

⁹Since the enumeration of the 1980 census, large numbers of Nicaraguans have immigrated to Dade County. Because many have arrived illegally, there is no authoritative count of their numbers. However, most estimates range from 82,000 to 150,000 for 1989. By the middle 1980s a concentration of Nicaraguans has become noticeable in the municipality of Sweetwater, just north of Tamiami Trail in western Dade County. This area is now beginning to be referred to as "Little Managua." Christopher Marquis, "Nicaraguan Exiles Changed Miami's Face," *The Miami Herald*, July 16, 1989, p. A1. The Metro Dade Planning Department estimated that there were about 101,000 Nicaraguans in Dade County in 1990, but most experts believe that this figure is on the low side (Oliver Kerr, Research Division, Metro Dade Planning Department, personal conversation on December 10, 1990).

that the Spanish nationalities were much more highly segregated from blacks than they were from non-Latin whites. Despite certain cultural similarities, it also found that the four Hispanic nationalities were moderately segregated from each other. Mexicans were the most segregated, followed by Cubans.

The Spanish racial components were segregated from Dade County's racial subpopulations as expected. For example, black Hispanics were more segregated from non-Latin whites than they were from the county's black population. There was a moderate amount of segregation between the three Hispanic racial classes, but this was less than when the residential patterns of Spanish racial groups were compared to those of metropolitan Miami's non-Hispanic racial classes. This finding is significant because it suggests that ethnic affiliation only partly compensates for racial differences. It was observed that there is a moderate tendency for the Other Spanish Races to be located in transitional zones between black and white Hispanics and for black Hispanics to be less segregated from the county's black population than from white Hispanics.

Finally, this study had determined that moderate degrees of segregation exist between Hispanic racial classes and the four Spanish nationalities. As expected, black Hispanics are most segregated and white Hispanics are least segregated. It was hypothesized that the racial composition of each Hispanic nationality group affected its degree of segregation from the various Spanish racial classes. Thus, Miami's Cubans were more strongly segregated from black Hispanics and less segregated from Spanish whites than were Puerto Ricans because the Puerto Ricans contain a larger component of blacks in their population.

Clearly, historian Raymond Mohl is correct when he states that ". . . ethnicity is alive and well in Miami." (Mohl, November 1985, p. 30 and Mohl, April 1985, p. 10) On a more general level, sociologist and urban planner Nathan Kantrowitz has argued that ethnic segregation (as a manifestation of slow assimilation) does not quickly disappear in most American cities (Kantrowitz, 1981, pp. 117-120). Winsberg predicts that segregation among blacks, Jews, Hispanics, and non-Latin whites will not only persist but probably will increase in metropolitan Miami.

On the other hand, Jaffe, Cullen, and Boswell found that Cuban-Americans, who account for approximately 66% (Sheskin, 1990B, p. 5) of Dade County's Hispanic population, appear to be as rapidly acculturating demographically to American characteristics as any other non-English-speaking immigrant group in U.S. history. They base this claim on the fact that certain characteristics of the Cubans are rapidly evolving toward American norms (Jaffe et al., 1980, pp. 245-278). Boswell and Rivero reached identical conclusions in a more recent study using the 1980 census (Boswell and Rivero, 1987, pp. 61-63).

It is important to recognize that acculturation and assimilation are different concepts. Assimilation implies that the melting pot thesis will prevail, whereby Hispanics would become indistinguishable from the rest of American society. Acculturation suggests that one culture borrows certain attributes from another, but does not necessarily lose its distinctiveness. The latter idea allows for the possibility of cultural pluralism. Certainly, Miami today is more a pluralistic society than a melting pot. Whether Dade's Cubans and other Latin components will "melt" soon depends on a couple of factors. Perhaps the most important of these is whether large-scale immigration from Latin America continues. If it does, it will provide an infusion of new arrivals that will begin the assimilation process again. The second factor is whether the Cuban-American population continues to concentrate in South Florida.¹⁰ Obviously, such continued geographic concentration will slow the rate of assimilation. The tradeoff is that it will ease the adjustment processes for the more recently-arrived migrants and many elderly Cuban-Americans who may never fully assimilate.

The first large-scale wave of Cubans did not begin arriving in Miami until 30 years ago, and most of these arrivals thought their stay in the

¹⁰Since the late 1960s there has been a return flow of Cubans, who formerly lived elsewhere in the United States, to the Miami metropolitan area. This, in addition to immigration, is one of the reasons that Florida's share of the Cuban-American population increased from 46 percent in 1970 to almost 60 percent in 1980 (Boswell and Curtis, 1984, pp. 66-67 and Boswell and Curtis, 1991, p. 141).

United States would be temporary. Not until the middle-to-late 1960s did the majority realize that they were in the United States to stay. Therefore, for all practical purposes, the assimilation process for the earliest arriving Cubans did not begin until sometime between 1965 and 1970. Of course, for many other Hispanics now in Miami, it started even more recently. In fact, the approximately 100,000 Mariel refugees who have settled in Dade County since 1980, and most of the Nicaraguans, have been in the United States for only about a decade. It should not be surprising, then, that ethnicity is "alive and well in Miami." This fact, however, does not mean that Hispanics will never become assimilated because most evidence suggests otherwise. Historian Walter Kamphoefner is probably correct in hypothesizing that Miami's Hispanics can be expected to follow closely the acculturation and assimilation patterns experienced by most earlier waves of European immigrants to the United States (Kamphoefner, 1985, p. 9), although it should be emphasized that this process occurred over several generations. What is more, these European groups have not completely disappeared as distinct ethnic populations. For instance, Italian-speaking neighborhoods remain in several northeastern cities, and German-speaking communities still exist in parts of the Midwest and northern Great Plains states. The most important point is that segregated residential patterns are likely to continue to exist in metropolitan Miami into the future, while immigration from Latin America and in-migration of Hispanics from the rest of the U.S. continue to be directed toward South Florida. Housing segregation is an inescapable consequence of ethnic differentiation in the United States when a large, recently arrived, immigrant group is involved, as it is in Miami with Hispanics.

Literature Cited

- Aguirre, B. E., Kent P. Schwirian, and Anthony J. La Greca. (1980). "The Residential Patterning of Latin American and Other Ethnic Populations in Metropolitan Miami," *Latin American Research Review*, Vol. 15, pp. 35-63.
- Boswell, Thomas D. and James R. Curtis. (1984). *The Cuban-American Experience*, (Totowa, NJ: Rowman and Allanheld).
- Boswell, Thomas D. and James R. Curtis. (1991). "The Hispanization of Metropolitan Miami," in Thomas D. Boswell, (ed.), *South Florida: The Winds of Change*, (Washington, DC, The Association of American Geographers) pp. 140-162.
- Boswell, Thomas D. and Manuel Rivero. (1985). "Cubans in America: A Minority Group Comes of Age," *Focus*, Vol. 35, pp. 2-9.
- Boswell, Thomas D. and Manuel Rivero. (1987). "Demographic Characteristics of Pre-Mariel Cubans Living in the United States: 1980," Research Institute for Cuban Studies, Graduate School of International Studies, University of Miami, Coral Gables, Florida.
- Conway, Dennis, Ualthan Bigby, and Ronald S. Swann. (1986). "Caribbean Migrant Experiences in New York City," paper presented at the Latin American Studies Association annual meeting in Boston.
- Cooney, Rosemary Santana and Maria Alina Contreras. (1978). "Residence Patterns of Social Register Cubans: A Study of Miami, San Juan, and New York SMSAs," *Cuban Studies*, Vol. 8, pp. 33-49.
- Dudas, John J. and David B. Longbrake. (1971). Problems and Future Directions of Residential Integration: The Local Application of Federally Funded Programs in Dade County, Florida," *Southeastern Geographer*, Vol. 11, pp. 157-168.
- Duncan, Otis D. and Beverly Duncan. (1955). "A Methodological Analysis of Segregation Indices," *American Journal of Sociology*, Vol. 20, pp. 210-217.

- Garreau, Joel. (1981). *The Nine Nations of North America*, (Boston: Houghton Mifflin).
- Grant, Charisse L. and Stephen Doig, (1989), "Dade's Ethnic Groups Keep to Themselves," *The Miami Herald*, March 12, 1989, p. B1.
- Guest, Avery M. and James A. Weed. (1981). "Ethnic Residential Segregation: Patterns of Change," *American Journal of Sociology*, Vol. 81, pp. 300-320.
- Jackson, Peter. (1981). "Paradoxes of Puerto Rican Segregation in New York City," in Ceri Peach, Vaughan Robinson, and Susan Smith, (eds.), *Ethnic Segregation in Cities*, (London: Croom Helm) pp. 117-120.
- Jaffe, Abram J., Ruth M. Cullen, and Thomas D. Boswell. (1980). *The Changing Demography of Spanish Americans*, (New York: Academic Press).
- Kamphoefner, Walter D. (1985). "Contemporary Immigration: What's New?" paper presented at the Sunbelt Research Conference, Miami, Florida.
- Kantrowitz, Nathan. (1969). "Ethnic and Racial Segregation in the New York Metropolis," *American Journal of Sociology*, Vol 74, pp. 685-695.
- Kantrowitz, Nathan. (1973). *Ethnic and Racial Segregation in the New York Metropolis*, (New York: Praeger Publishers).
- Kantrowitz, Nathan. (1981). "Ethnic Segregation: Social Reality and Academic Myth," in Ceri Peach, Vaughan Robinson, and Susan Smith, (eds.), *Ethnic Segregation in Cities*, (London: Croom Helm) pp. 43-57.
- Kerr, Oliver. (1984). *Profile of the Black Population*, Metropolitan Dade County Planning Department, Research Division, Miami, Florida.
- Longbrake, David B. and Woodrow W. Nichols, Jr. (1976). *Sunshine and Shadows in Metropolitan Miami*, (Cambridge, Massachusetts: Ballinger Publishing Company).

- Marquis, Christopher. (1989). "Nicaraguan Exiles Changed Miami's Face," *The Miami Herald*, July 16, 1989, p. A1.
- Massey, Douglas S. (1979). "Residential Segregation of Spanish Americans in United States Urbanized Areas," *Demography*, Vol. 16, pp. 553-563.
- Massey, Douglas S. (1981). "Hispanic Residential Segregation: A Comparison of Mexicans, Cubans, and Puerto Ricans," *Sociology and Social Research*, Vol. 65, pp. 311-322.
- Massey, Douglas S. and Brendan P. Mullan. (1984). "Processes of Hispanic and Black Spatial Assimilation," *American Journal of Sociology*, Vol. 89, pp. 830-857.
- Mohl, Raymond A. (April 1982). "Race, Ethnicity, and Urban Politics in the Miami Metropolitan Area," *Florida Environmental and Urban Issues*, Vol. 9, pp. 1-25.
- Mohl, Raymond A. (July 1982). "Forty Years of Economic Change in the Miami Area," *Florida Environmental and Urban Issues*, Vol. 9, pp. 5-30.
- Mohl, Raymond A. (1984). "The Changing American City Since World War II," *Florida Environmental and Urban Issues*, Vol. 11, pp. 15-21.
- Mohl, Raymond A. (April 1985). "Ethnic Politics in Miami, 1960-1985," paper presented at the annual meeting of the Organization of American Historians in Minneapolis, Minnesota.
- Mohl, Raymond A. (November 1985). "Miami: New Immigrant City," paper presented at the Sunbelt Research Conference, Miami, Florida.
- Rose, Harold M. (1964). "Metropolitan Miami's Changing Negro Population, 1950-1960," *Economic Geography*, Vol. 40, pp. 221-238.
- Rose, Harold M. (1989). "Blacks and Cubans in Metropolitan Miami's Changing Economy," *Urban Geography*, 10:464-486.

- Sheskin, Ira M. (1990A). "1990 Population Estimates," Greater Miami Jewish Federation, GMJF Demographic Study, Supplementary Report #11, Miami.
- Sheskin, Ira M. (1990B). "The Miami Ethnic Archipelago," Paper presented at Ethnic Minorities and Multiculturalism: Dade County's Tomorrow, An Ethnic Dialogue, Historical Museum of Southern Florida, Miami, December 10, 1990.
- Shryock, Henry S. and Jacob S. Siegel, and Associates. (1971). *The Methods and Materials of Demography*, (Washington, DC: U.S. Government Printing Office, Bureau of the Census).
- Tauber, Karl E. and Alma F. Tauber. (1976). "A Practitioner's Perspective on the Index of Dissimilarity," *American Sociological Review*, Vol. 42, pp. 884-889.
- U.S. Bureau of the Census. (1952). *1950 Census of Population, Census Tract Statistics*, "Miami, Florida," (Washington, DC: U.S. Government Printing Office).
- U.S. Bureau of the Census. (1983). *1980 Census of Population, "General Population Characteristics," United States Summary*, PC80-1-B1, (Washington, DC: U.S. Government Printing Office).
- U.S. Bureau of the Census. (1983). *1980 Census of Population and Housing, "Census Tracts," PHC-2-241*, Miami, Florida Standard Metropolitan Statistical Area, Washington, D.C., U.S. Government Printing Office.
- Winsberg, Morton D. (1979). "Housing Segregation of a Predominantly Middle-Class Population: Residential Patterns Developed by the Cuban Immigration Into Miami, 1950-74," *The American Journal of Economics and Sociology*, Vol. 38, pp. 403-418.
- Winsberg, Morton D. (1983). "Ethnic Competition for Residential Space in Miami, Florida, 1970-1980," *The American Journal of Economics and Sociology*, Vol. 42, pp. 305-314.

Book Reviews

● Arthur S. Evans and David Lee, *Pearl City: A Black Community Remembers* (Boca Raton: Florida Atlantic University Press, 1990).

● Reviewed by Eugene F. Provenzo, Jr., University of Miami

The history of blacks in Southern Florida—particularly urban blacks—has been a largely neglected subject. Rich archival sources often found in other parts of the country tend not to be preserved in Southern Florida. Several explanations for this situation can be found, including the relatively recent settlement of the region, poor preservation methods exacerbated by a harsh climate, and discriminatory practices, that have placed a low priority on the collection and preservation of Afro-American historical material.

Oral histories provide an important means by which to begin to fill this incomplete historical record. Arthur Evans, Professor of Sociology and Chair of the Department of Sociology and Social Psychology at Florida Atlantic University and David Lee, a Professor of Geography at Florida Atlantic University, in *Pearl City: A Black Community Remembers* provide a useful historical and geographical study of Pearl City, a black community in Boca Raton, as it existed in the early part of this century.

Evans and Lee's book is based primarily on 27 interviews conducted during 1984-85 with current or former community residents. The first eight chapters focus on recollections of members of the Pearl City community, dealing with topics such as migration, work, food and recreation, religion and education, medicine and health, relations with the white community, housing, and community traditions. The book's two final chapters are largely interpretive, focusing on the historical, sociological and geographical foundations of the black experience in South Florida.

The information recovered by Evans and Lee from the interviews is often fascinating. In Chapter 2, "Making a Living," for example, detailed descriptions of working as a bean picker are provided, including how work crews were organized, paid and treated by various local farmers. Chapter 3 provides descriptions of people hunting and living off the land. A detailed description of turtle hunting, for example, makes clear how important a food source turtles (while their numbers were still abundant)

were to many black Floridians. Recreational activities are described, such as box parties, (where women would make box suppers for men to buy that included a date with the cook) or necktie and apron parties (where a man would buy a tie that would match an apron worn by women to a community dinner). "Whoever got on a apron that match your tie, that's the person you had dinner with" (p. 45). In recovering this type of information, Evans and Lee have performed an important service, bringing to light work patterns, customs, and traditions that would otherwise be forgotten.

Subsequent chapters provide explorations of a similar nature. Of particular value is the fact that the data provided by the study are from the perspective of the individuals who experienced the history being recreated. The study does have a number of problems. *Pearl City* as a research study is unfortunately limited by its lack of specificity concerning who was actually interviewed, what period their recollections described, and how various individuals interviewed were connected to one another. The researchers, by collapsing the interviews to create individual topical areas, in many respects, have destroyed the individual voices of the interviewees. Often, in reading a passage, I did not know if it was a man or woman interviewee, or whether they were children in the 1920s, 1930s or 1940s. A footnote and coding system identifying individual quotes could have been used even if anonymity of those being interviewed was seen as important.

What is created that is useful for the reader is a gestalt, a general feeling or sense of the black community in Boca Raton. In providing this, the authors afford the reader a set of experiences and insights that are particularly valuable. It is here that the book makes its most valuable contribution.

The overview essays at the conclusion are thorough and provide important insights applicable to other urban settings in both the South and Southern Florida. Particularly useful are discussions of black migratory patterns in Southeastern Florida, and many of the causal factors and events that led to black settlement patterns in the region. A useful bibliography is also provided.

Pearl City is a valuable source for individuals interested in gaining a clearer sense of the development of an important black community in Southern Florida. It suggests the importance of undertaking comparative studies in other Florida urban centers such as Miami, Jacksonville and Tampa—ones that should be undertaken considering the limitations and insights provided by this work.

● Morton D. Winsberg. *Florida Weather*. (Orlando, FL: University of Central Florida Press, 1990).

● Reviewed by Donald Brandes, University of South Florida.

Florida Weather is written primarily for the general reader, with no prior background in climatology, but includes enough detail to provide points of interest even for seasoned geographers. Although this book is packed with information, it is presented in an easy to read and understandable style and holds the reader's attention.

The volume begins with many of the principles taught in the weather and climate part of an introductory physical geography course. This prepares the reader to understand better the many details that follow. Chapter 1 defines climate and differentiates it from weather. It then provides a brief lesson in basic climatology and meteorology. The major climate controls and causes of weather are discussed with particular reference to how they affect Florida. These include such topics as latitude, wind and pressure belts, sun angle, land and water distribution, ocean currents, air masses, cloud formation, and fronts. Illustrative comparisons are made between conditions in Florida and those of other states and countries.

The four remaining chapters each summarize prevailing conditions during one season of the year. Climatic factors and specific types of weather associated with each season are discussed. These include temperature, precipitation, humidity, fog, frost, freezes, snow, drought, floods, land-sea breezes, cooling and heating degree days, thunderstorms, lightning, tornadoes, waterspouts, and hurricanes.

Although temperature and precipitation are discussed for all seasons, other climatic factors and types of weather events are assigned to specific seasons. This causes some misleading impressions if the event is common in more than one season. Sometimes, the matching of season with weather event also seems less than optimal. Placement of hurricanes into the Fall season chapter is noticeable in this regard, although it did help make chapter lengths more even. It might have been more advantageous to treat some of these topics in separate chapters.

Beyond the prose of the main text, copious tables provide extensive numerical data. These include mean temperature and precipitation for thirty stations, selected hurricanes, dates of first and last freeze, heating and cooling degree days, humidity, sky conditions, wind, fog, and thunderstorms. The information appearing in these tables, and in the book's many maps, was tabulated from raw data specifically for this volume, using a thorough network of reporting stations.

Although *Florida Weather* provides a wealth of information about the state's prevailing atmospheric conditions, it should not be viewed as just a book about the physical world. Dr. Winsberg is more than a weatherman. He is a broadly-based geographer. His wide knowledge of geography and history are often evident in his discussions of weather and climate. He frequently connects historical events, human geography, and economic development to the climatological context in which they occurred. This meshing of human activities with their environmental context provides many insights which further pique the reader's interest.