FLORIDA CENTRAL CITY SIZE AND TOPONYMIC DEPENDENCY[1]

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The analysis of place names continues to intrigue those whose task it is to explain human use of space, and toponymic investigations are evident in the geographic literature. A sample of recent articles illustrates this. David Sopher (1978) claims "an old tradition" in his analysis of the "cosmic structuring of space" from a toponymic point of view. Guest and Lee (1983) examine the acceptance factor of locality names which had no political or municipal recognition. The influence of politics on recent place-names changes is evident in analyses of nations as far apart as Iran and Vanuatu (Rodman and Rodman 1985; Lewis 1982). Less recently, customary usage of both generic and specific names has been investigated by Zelinsky (1976) with regard to cemeteries, and also by Zelinsky (1962) with regard to landforms, towns, stores, and streets. Further, each issue of *Canadian Geographic* magazine includes a column on Canadian place names and their origins.

Toponymic dependence may be considered as the degree to which the names of satellite towns are derived from and therefore dependent upon the name of a dominant town. For example, Miami Beach derives its name from the more prominent settlement Miami, so can be said to be a toponymic dependency of Miami. The present analysis examines the influence of Florida SMSA central city names on the names of their surrounding metropolitan municipalities. Specifically, the investigation seeks to determine whether or not there is a relationship between the population of the central cities and the number of smaller municipalities which include the name of the central city in their specific names. These subsidiary municipalities are termed toponymic dependencies.

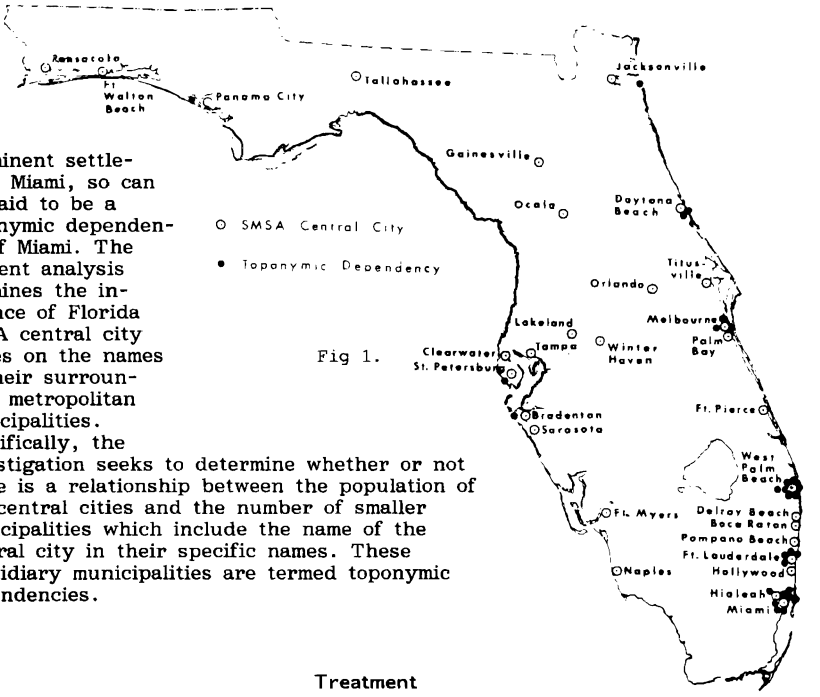

Fig 1.

Treatment

Population and toponymic data are given in Table 1 and mapped in Figure 1. In this investigation, the toponymic dependencies for each central city SMSA

were counted, using the 1986 edition of the *Florida Statistical Abstract*.

Four correlations were designed for analysis. First, the number of toponymic dependencies was correlated with the populations of the central cities. The correlation coefficients were then tested for significance, using a standard t-test. A major difficulty arose from the fact that Jacksonville and Duval County have a unified government. Jacksonville's population, over one-half million, is significantly larger than second-ranked Miami (380,446). It was felt that this might significantly skew the investigation. As a second step, therefore, the correlation was carried out eliminating Jacksonville and its one toponymic dependency from the analysis. A third line of investigation eliminated cities with no toponymic dependencies -- that is, only those cities which in fact evidence toponymic dependencies were considered. For these ten cities, central city size was analyzed to determine if it correlate significantly with the number of dependencies. Fourth, a similar analysis was done also eliminating Jacksonville from consideration.

Results

Analysis of the data of Table 1 and city size data established the following correlations:

1. For all central cities..... r = .306
2. For central cities, excluding Jacksonville..... r = .447
3. For central cities with toponymic dependencies..... r = .029
4. For central cities with toponymic dependencies, excluding Jacksonville..... r = .400

A number of observations may be made from these data. First, the correlations between city size and number of dependencies increase when Jacksonville is eliminated from the analyses. Especially is this the case when only those cities with dependencies are considered; the correlation increases from .029 to .400. Thus, the elimination from consideration of Jacksonville's great comparative size, coupled with its one toponymic dependency, establishes a much higher correlation coefficient -- and, it should be noted, a higher variance.

The inclusion of the smaller cities, with a high number of zero dependencies, produces higher correlation than is evident without them. This is not unexpected from the working hypothesis. For all cities below West Palm Beach in population, only 22 percent have any dependencies. For West Palm Beach and larger towns, half evidenced dependencies. In fact, were it not for Melbourne and its three dependencies, the correlation would be even greater.

In terms of significance, only one correlation was found to be significant at the .05 level, the correlation using all cities with Jacksonville excluded. Thus, the only significance statement which may be made is that there is a significant correlation between central city size and number of toponymic dependencies for non-unified cities in Florida, that is, all SMSA central cities less Jacksonville.

Discussion

Why do some cities have large numbers of toponymic dependencies while others do not? No easy answers are forthcoming. In the present analyses, only one case (all cities excluding Jacksonville) showed a variance above the .10 level, so forceful pronouncements of causation cannot be made. Indeed, we see

TABLE 1

Florida SMSA Central Cities and Toponymic Dependencies

Central City	Operant Terms	Population	Toponymic Dependencies	
			#	Name(s)
Jacksonville	Jacksonville	588,863	1	Jacksonville Beach
Miami	Miami	380,446	7	Miami Beach Miami Shores Miami Springs North Miami North Miami Beach South Miami West Miami
Tampa	NA	276,444	0	(None)
St. Petersburg	St. Petersburg	243,002	1	St. Petersburg Beach
Hialeah	Hialeah	158,796	1	Hialeah Gardens
Ft. Lauderdale	Lauderdale Lauder-	151,796	4	Lauderdale-by-the-Sea Lauderdale Lakes Lauderhill North Lauderdale
Orlando	NA	143,320	0	(None)
Hollywood	NA	124,025	0	(None)
Tallahassee	NA	116,239	0	(None)
Clearwater	NA	95,330	0	(None)
Gainesville	NA	82,882	0	(None)
West Palm Beach	Palm Palm Beach	67,083	7	North Palm Beach Palm Beach* Palm Beach Gardens Palm Beach Shores Palm Springs Royal Palm Beach South Palm Beach
Pompano Beach	NA	67,068	0	(None)
Pensacola	NA	60,819	0	(None)

TABLE 1 (Continued)

Florida SMSA Central Cities and Toponymic Dependencies

Central City	Operant Terms	Population	Toponymic Dependencies #	Toponymic Dependencies Name(s)
Lakeland	NA	57,324	0	(None)
Daytona Beach	Daytona	56,978	2	Daytona Beach Shores South Daytona
Boca Raton	NA	54,491	0	(None)
Melbourne	Melbourne	52,664	3	Melbourne Beach Melbourne Village West Melbourne
Sarasota	NA	50,782	0	(None)
Delray Beach	NA	41,802	0	(None)
Ocala	NA	41,120	0	(None)
Ft. Myers	NA	38,371	0	(None)
Titusville	NA	37,981	0	(None)
Fort Pierce	NA	37,478	0	(None)
Palm Bay	NA	36,647	0	(None)
Bradenton	Bradenton	36,374	1	Bradenton Beach
Panama City	Panama City	34,623	1	Panama City Beach
Winter Haven	NA	23,804	0	(None)
Ft. Walton Beach	NA	22,308	0	(None)
Naples	NA	18,678	0	(None)

*In the case of Palm Beach/West Palm Beach, the central city is obviously the toponymic dependency of its older, smaller namesake. The fact of dependency, however, is still present, and it was necessary to treat West Palm Beach as the central city in this case.

here that the size of central city population offers little to explain the number of toponymic dependencies.

Inspection of the data does provide some interesting observations, however. For example, Orlando and Tampa have no formalized toponymic dependencies, although they are certainly major Florida cities with high name recognition. Melbourne, on the other hand, has three dependencies, ranking only behind Miami, West Palm Beach, and Ft. Lauderdale (seven, seven, and four dependencies respectively). Why so many dependencies for Melbourne; why none for Tampa and Orlando?

Linguistic affinity may relate to causation and merits consideration. Linguistic affinity examines the actual words of the root toponym with regard to its "nicety" or "pleasantness." A number of indices have been produced by linguists to measure the pleasantness of English words. By this analysis it might be found that "Lauderdale" is, after all, more pleasant-sounding than "Gainesville," so would therefore have more dependencies. Another possible factor may be age of cities: perhaps older cities have generated more toponymic dependencies than recent cities. An attractive suggestion is a town's perceived positive association: towns with positive images generate toponymic dependencies. For example, the large number of dependencies with "Palm Beach" or "Miami" may be the result of the positive image of the central cities.

These are speculations. More work on causation will be necessary to reach firm conclusions in this area of toponymy. For those with a love of the geography of words and of the character of urban places, the work will be worthwhile.

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