Patterns of Residential Segregation Among Mexicans, Puerto Ricans, and Cubans in U.S. Metropolitan Areas

By Dr. Anne M. Santiago
Seton Hall University

Working Paper No. 1
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Abstract

This paper examines 1980 patterns of spatial isolation and interaction between persons of Mexican, Puerto Rican and Cuban descent in selected U.S. metropolitan areas. Each group experiences low to moderate levels of isolation from the rest of the metropolitan population. In addition, contact between these groups is relatively low. The effects of socioeconomic status, size and growth of group population, level of suburbanization, racial composition of group, supply and demand for housing and discriminatory practices in the housing market on residential segregation were explored using regression analysis. Results suggest that overall the model is a good predictor of spatial isolation experienced by these groups. However, the model is not very strong in predicting variations in the degree of interaction between these groups except in the Puerto Rican specifications. These findings underscore the need for further scrutiny of existing theoretical assumptions as adequate explanations for prevailing patterns of interaction between Mexicans, Puerto Ricans and Cubans.

Acknowledgements

This project was partially funded by a University Research Council grant from Seton Hall University, whose support is gratefully acknowledged. Special thanks to Clara Rodriguez and Douglas Massey for their comments on an earlier version of this paper.

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MICHIGAN STATE UNIVERSITY

Michigan State University
East Lansing, Michigan

Julian Samora Research Institute
Refugio I. Rochín, Director
Danny Layne, Layout Editor

SUGGESTED CITATION

Santiago, Anne M. *Patterns of Resdiential Segregation Among Mexicans, Puerto Ricans, and Cubans in U.S. Metropolitan Areas*, JSRI Working Paper #1, The Julian Samora Research Institute, Michigan State University, East Lansing, Michigan, 1989.

RELATED READINGS

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Patterns of Residential Segregation Among Mexicans, Puerto Ricans, and Cubans in U.S. Metropolitan Areas

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During the past decade, a growing number of studies have focused on patterns and trends of Hispanic residential segregation within metropolitan America. Results from these studies suggest that Hispanics are moderately segregated from Anglos and highly segregated from Blacks (e.g. Moore and Mittelbach, 1966; Lopez, 1977; Massey, 1978; Santiago, 1984; Massey and Denton, 1987, 1989a). Hispanic neighborhoods are less likely to experience the complete residential turnover characteristic of many black neighborhoods (Massey and Mullan, 1984).

The underlying framework for much of this research is ecological model of residential succession (see works by Massey and colleagues). A major assumption of this model when applied to Hispanics is that levels of Hispanic-Anglo segregation will diminish over time as the Hispanic population assimilates into mainstream American society. However, it should be noted that the 1970's brought increased levels of segregation between Hispanics and Anglos (Santiago, 1984,1987; Massey and Denton, 1987). Hispanic isolation from Anglos rose markedly in metropolitan areas experiencing sizable gains in the Hispanic population (Massey and Denton, 1987). This pattern of increased isolation from Anglos probably results from a filling-in of Hispanic neighborhoods reminiscent of the patterns observed by Schnare (1977) for Black neighborhoods.

Several recent studies have focused on the dual effects of Spanish Origin and race (Denton and Massey, 1988; White, 1987). These studies underscore the high degree of segregation experienced by Black Hispanics. Black Hispanics were more segregated from Anglos than were White Hispanics. Moreover, Black Hispanics were highly segregated from White Hispanics. As White (1987) underscores, "Hispanic blacks are more likely to share a neighborhood with non-Hispanic blacks than they are with Hispanic whites."

Nonetheless, these overall patterns of segregation vary considerably between different Hispanic subpopulations. Massey's (1981a) analysis of 1970 Census data revealed that Mexicans were the least segregated from Anglos; and Puerto Ricans were the least segregated from Blacks. By 1980, these patterns appeared to have changed. In a study of 25 central cities, Santiago (1984) reported that Mexicans were the most segregated from Anglos and the least segregated from Blacks. Cubans were the least isolated from Anglos but continued to be highly segregated from Blacks. Levels of Puerto Rican segregation from Anglos and Blacks occupied a middle position between the other two groups. In a recent study of 21 metropolitan areas, Massey and Denton (1989a) reveal that in 1980, Mexicans were highly segregated from Blacks and experienced moderate levels of segregation from Anglos. Cubans and Puerto Ricans were highly segregated from both Anglos and Blacks.

The case of Puerto Rican residential segregation provides an anomaly. In contrast to the other Hispanic subgroups, the level of segregation between Puerto Ricans and Blacks is lower than Puerto Rican-Anglo segregation (Massey and Denton, 1989a). Tentative explanations for this aberration in segregation patterns have focused on the African ancestry of Puerto Ricans. Massey and Bitterman (1985) argue that because of this ancestry, Puerto Ricans were less; likely to object to living in close proximity to Blacks. An alternative to this explanation would underscore that as people of color, Puerto Ricans are restricted in their residential choices and are often competing with Blacks for housing in the same or contiguous neighborhoods. Although Anglos may consider Puerto Ricans to be Black, most Puerto Ricans do not identify themselves as Black.

Unfortunately, variations in the degree of segregation between different Hispanic subgroups have been generally overlooked because of the tendency to create a monolithic "Hispanic" or "Spanish Origin" category and cluster all of the groups together as if the differences between them were nonexistent or unimportant. Compounding this problem has been the difficulty in obtaining comparable, detailed information disaggregated by type of Spanish Origin. Findings from Massey (1984), Santiago (1984) and Massey and Denton (1989a) underscore the distinctions between these groups that are not bridged by the sharing of a common language and cultural heritage.

Generally, moderate to high levels of segregation exist between Mexicans, Puerto Ricans and Cubans although these levels are consistently lower than Hispanic-Black segregation. Moreover, these patterns have changed very little since 1970. Massey (1981a) found that Mexicans were more isolated from Cubans and Puerto Ricans than they were from Anglos. Puerto Ricans were less segregated from Mexicans than they were from Anglos, Blacks or Cubans. Cubans were highly segregated from both Mexicans and Puerto

Ricans. By 1980, levels of interethnic segregation were lower although similar patterns were discernable. Noteworthy was the sharp decline in segregation between Mexicans and Puerto Ricans (Santiago, 1984). Massey and Denton (1989a) report that Cubans are highly segregated from both Mexicans and Puerto Ricans while the level of Mexican-Puerto Rican segregation was found to be moderate.

Despite these recent efforts, further analysis is needed in several areas. First, additional research is required in the analysis of patterns and trends in Hispanic segregation for a large sample of urban areas. At the present time, research has been limited to the largest SMSAs. We know very little about what is going on in metropolitan areas with fewer than one million inhabitants. There are some sizable Hispanic communities in these smaller places.

Second, further work needs to be conducted examining variations in segregation patterns by Hispanic subgroup. Current work tends to minimize some of the glaring historical and socioeconomic differences between Mexicans, Puerto Ricans and Cubans which result in distinctive patterns of segregation. Segregation scores that aggregate the various Hispanic subgroups are going to be lower as an artifact of the different migration and settlement patterns for each group. For example Hispanic-Anglo segregation as measured by the Index of Dissimilarity was 63 in 1980. When calculated for individual groups, the scores were 64, 80, and 67 for Mexicans, Puerto Ricans and Cubans, respectively.

Finally, more exhaustive empirical research must be conducted. Despite limited research, scholars have predicted that Hispanics, like their European ethnic predecessors, will become less segregated as function of length of residence and improvement in socioeconomic status. It is well documented that predictions of decreasing segregation with increasing socioeconomic status are problematic in the case of Blacks. At the highest income levels, Blacks are segregated from Anglos (Taueber and Taueber, 1969; Yinger, 1980). As people of color, it is possible that Hispanics may be affected by these same forces promoting high levels of segregation.

Recent research has undermined the role of the demographic and historical context of Spanish settlement. In some places in the United States, persons of Spanish descent were the original urban settlers. In others, Hispanics dominate numerically. Are generalizations made without addressing these issues accurate depictions of the residential experience of Hispanics?

Moreover, the processes of metropolitan growth and change described in the model just do not fit when looking at the development of many urban communities in the United States, especially in the South and West where annexation was widespread and massive urbanization is a relatively recent phenomenon. In the case of Hispanics in these areas, what may look like evidence of spatial integration (i.e. suburbanization) is actually an artifact of annexing rural communities. Hispanic "suburbanization" often reflects the incorporation of former migrant labor camps into the geographic boundaries of the metropolitan area (see Moore and Mittelbach, 1966). However, it is difficult to believe that these colonias are what we would consider as "suburbs." Also, patterns of labor recruitment and subsequent migration to communities in the Northeast and Midwest led many Hispanics to completely forego initial settlement in central city neighborhoods for direct settlement in working class suburbs.

In addition, the theory does not take into account the changes in the U.S. economy. As Lopez (1977) emphasizes, earlier ethnics arrived at a period in American history when labor markets were expanding and jobs were readily available. The continued need for limited-skilled labor provided European ethnics with the means to climb the socioeconomic ladder. However, the postwar American economy no longer has the same demands for labor. The new urban migrants (which includes Hispanics) are caught up in a society offering fewer options.

The present study attempts to address the latter two concerns. Thus, my research interests are twofold: first, to describe existing patterns of spatial isolation and interaction between Cubans, Mexicans and Puerto Ricans; and second, to identify predictors of interethnic segregation. There are several working hypotheses which guide the research. They include:

1. Increases in the socioeconomic status will result in a decline in the level of interaction between Hispanic subgroups.

2. Increases in the proportion Black or foreign born will result in decreased contact between Hispanic subgroups.

3. As each subpopulation grows, the greater the likelihood for increased spatial isolation.

4. As each group experiences increased suburbanization, the greater the likelihood of less interaction between Hispanic subgroups.

5. As housing demand exceeds supply, interaction between Hispanic subgroups will increase.

6. As discriminatory behavior within the metropolitan area increases, the level of interaction between Hispanic groups increases.

Data and Methods

Data on the size distribution and ethnic background of the population were extracted from U.S. Census records. Census tract level data from the 1980 Summary Tape File 1 were used to calculate residential segregation indices for the Cuban, Mexican and Puerto Rican populations in a sample of 37 metropolitan areas in the United States. Included in the sample were metropolitan areas with sizable (>5,000) and heterogeneous Spanish Origin populations (>2,500 in each group). The communities differed in size, proportion Hispanic, growth and settlement and were selected in order to maximize the generalizability of the findings. For the most part, these areas represent the largest Mexican, Puerto Rican and Cuban communities in the United States.

Social/spatial distance was measured using the isolation and interaction indices (P*) described by Lieberson (1980). These indices provide an asymmetrical measure of interaction or contact between groups. P* takes into account the effects of the spatial distribution of subpopulations as well as the population composition of an area. The combined effects of these characteristics allow one to identify what Lieberson (1980) described as the "relative isolation of groups in terms of probability models of contact among themselves and with others." The P* indices are computed as follows:

$$(1) \qquad {}_{x}P^{*}_{y} = \sum_{i=1}^{N} \left(\frac{x_i}{X}\right) \cdot \left(\frac{y_i}{t_i}\right)$$

$$(2) \qquad {}_{x}P^{*}_{x} = \sum_{i=1}^{N} \left(\frac{x_i}{X}\right) \cdot \left(\frac{x_i}{t_i}\right)$$

Where Xi is the number of members from group X in tract i; X is the number of members from group X in the city; Yi is the number of members of group Y in tract i; and ti is the total population in tract i. For the average member of group X in an area, xP*y describes the probability that one would encounter a person from group Y. The measure, xP*x indicates the level of isolation experiences by one group from all others. P* scores may range from 0 to 1.00 and are interpreted as follows: when measuring interaction between groups (xP*y) zero would reflect a situation of no contact while 1.00 would reflect high levels of interaction. Scores between 0 and .300 reflect limited contact, those between .300 and .600 are moderate, and those above .600 are high. When measuring isolation from others (xP*x) a score that approaches 1.00 would indicate a high degree of isolation (see Lieberson, 1980; Lieberson and Carter, 1982a,b). Isolation scores can be interpreted as follows: values between 0 and .300 are low, .300 to .600 are moderate, and .600 and above reflect extreme isolation from the rest of the metropolitan population.

Since P* is a limited range variable (i.e. between 0 and 1), the logit transformation of these variables were used in the analysis in order to conform to OLS assumptions. The logit, is derived as follows:

(3) logit (p) = ln:[p/(l-p)]

Several predictor variables were extracted from the Public Use Microdata Samples (PUMS), U.S. Census published reports, and data from the Wienk et al (1979) Housing Market Practices Survey. Socioeconomic status was measured using median years of schooling and median household income. The racial composition of each group was reflected by the proportion of group members who identified themselves as black. Foreign birth (or island birth for Puerto Ricans) was measured as the proportion of the group which was born outside of the United States.

Metropolitan characteristics include the group size, suburbanization and population change. Group size reflects the percent of the total population who are Mexican, Puerto Rican or Cuban. Level of suburbanization was measured by calculating the proportion of the group residing outside of the central city of the metropolitan area. Population change indicates the relative change of the groups' position within the metropolitan area. It is the percent change in the proportion of the group which occurred between 1970 and 1980.

Housing market variables include the supply and demand for housing as well as a measure of institutionalized discriminatory practices. Housing supply was measured using the vacancy rate for the metropolitan area. The crowding index, our proxy for housing demand, reflects the percent of occupied housing units with 1.01 or more persons per room. Discriminatory practices in the housing market were measured using results reported in the Housing Market Practices Survey (see Wienk et al). The specific item used reflects the percent difference between white favored and black favored tenants. Regional averages were substituted for any cities in this study which were not included in the study. Although this measures black-white differences, it is assumed here that metropolitan areas with a "taste for discrimination" against blacks would also be more likely to use institutionalized practices which would discriminate against Hispanics as well.

The explanatory model described above was tested using logistic regression analysis in order to identify predictors of isolation and contact between Cubans, Mexicans, and Puerto Ricans. Metropolitan areas included in this analysis needed to meet a minimum population threshold of 2,500 for each subgroup. Massey and Denton (1989a) report that in communities with small numbers of these groups, indices measuring spatial interaction may give false readings in regards to the level of segregation. Moreover, indicators derived from PUMS data could not be calculated for places with few Mexicans, Puerto Ricans or Cubans. Therefore, metropolitan areas that did not meet the population criteria were dropped from the analysis.

Patterns of Mexican Interaction

Table 1 provides a summary of the P* interaction and isolation scores computed for Mexicans Puerto Ricans and Cubans residing in 34 metropolitan areas. Together, these centers contain 49.5% of all persons of Mexican descent and 58.3% of all Mexicans living in SMSAs enumerated in the 1980 Census. The size of these Mexican communities range from 2,800 in Lorain-Elyria to 1.6 million in Los Angeles. On average, persons of Mexican descent comprise 6% of the total metropolitan population although this varies considerably by region. In urban communities of the Northeast and South, less than 1% of the 1980 metropolitan population was of Mexican descent. In contrast, nearly one out of every six within metropolitan areas of the West were of Mexican origin. Moreover, nearly one quarter of the residents of greater Los Angeles were Mexican. In San Antonio, approximately 40% of the population was Mexican. The population of E1 Paso was predominantly Mexican: six out of every 10 metropolitan residents were either Chicano or Mejicano.

TABLE 1. - Probability of Mexican Interaction with Puerto Ricans and Cubans in Selected Metropolitan Areas, 1980*

Metropolitan Area	Mexican Population		Probability of Mexican Interaction		
	Size (1,000s)	Percent of SMSA Pop.	Mexicans	Puerto Ricans	Cubans
Anaheim	228.7	.118	.305	.003	.004
Atlanta	7.1	.004	.011	*	.002
Baltimore	5.2	.002	.009	.003	*
Boston	3.9	.002	.006	.029	.004
Chicago	369.0	.054	.312	.060	.004
Cleveland	4.7	.002	.009	.013	*
Dallas	220.8	.074	.240	.001	.001
Detroit	44.3	.010	.053	.012	*
El Paso	282.0	.588	.712	.004	*
Ft. Lauderdale	3.0	.003	.012	.011	.010
Gary	32.1	.051	.195	.049	*
Honolulu	5.4	.007	.021	.020	.001
Houston	372.0	.128	.324	.001	.002
Kileen	13.5	.063	.100	.019	*
Las Vegas	20.2	.042	.070	*	.009
Lorain	2.8	.010	.034	.139	*
Los Angeles	1643.1	.220	.458	.008	.006
Miami	11.1	.007	.057	.039	.167
Milwaukee	19.3	.014	.117	.046	*
Nassau	3.3	.001	.005	.039	.003
New Orleans	7.7	.007	.013	*	.006
New York	26.6	.003	.014	.165	.010
Newark	3.6	.002	.010	.054	.014
Norfolk	4.3	.004	.011	.004	*
Orlando	4.4	.006	.037	.010	.004
Philadelphia	9.0	.002	.023	.244	.011
Riverside	252.3	.162	.301	.003	*
San Antonio	445.8	.416	.637	.002	*
San Diego	227.2	.121	.254	.003	*
San Francisco	187.3	.057	.135	.011	.002
San Jose	174.0	.134	.291	.008	*
Tampa	7.8	.005	.031	.010	.015
Washington, D.C.	14.3	.004	.010	.004	.002
West Palm Beach	6.0	.010	.125	.032	.024
Averages					
Total	126.1	.063	.134	.036	.012
Northeast	6.2	.002	.010	.089	.018
North Central	78.7	.024	.120	.053	.001
South	7.3	.006	.034	.013	.026
West	313.3	.164	.296	.007	.002

* Denotes that population of this group was less than 2,500 therefore score was omitted.

From Table 1 we see that, in general, Mexicans experience low to moderate levels of isolation from the rest of the metropolitan population. The average Mexican lived in a neighborhood where 13% of his neighbors were also of Mexican descent. Intragroup isolation ranges from a low of .005 in Nassau-Suffolk to a high of .712 in E1 Paso. The only other metropolitan area in the study where Mexicans live in predominantly Mexican neighborhoods was San Antonio. Other areas with sizable Mexican enclaves include Anaheim, Chicago, Houston, and Riverside. In each of these SMSAs Mexicans were living in residential areas where 30% of their neighbors were also Mexican. Moreover, in each metropolitan area, Mexicans were living in neighborhoods with higher than average proportions of persons of Mexican descent.

On the other hand, Mexican contact with Puerto Ricans and Cubans is limited except in areas where these groups are numerically dominant. Within the metropolitan areas under study, the typical Mexican would reside in a neighborhood which was 4% Puerto Rican and 1% Cuban. Interaction with Puerto Ricans is highest in Philadelphia where Mexicans live in residential areas that are 24% Puerto Rican. As one might expect, Mexican contact with Cubans is highest in Miami where Mexicans lived in neighborhoods where approximately 17% of the residents were of Cuban descent. Nevertheless, it seems that Mexicans are living on the fringes of both Puerto Rican and Cuban residential areas. Patterns of Puerto Rican Interaction

TABLE 2. - Probability of Puerto Rican Interaction with Mexicans and Cubans in Selected Metropolitan Areas, 1980*

Metropolitan Area	Puerto Rican Population		Probability of Puerto Rican Interaction		
	Size (1,000s)	Percent of SMSA Pop.	Puerto Ricans	Mexicans	Cubans
Anaheim	5.9	.003	.007	.135	.003
Baltimore	4.0	.002	.004	.004	*
Boston	29.5	.011	.139	.004	.009
Chicago	126.7	.018	.231	.169	.009
Cleveland	14.1	.008	.112	.004	.001
Dallas	2.8	.001	.004	.401	.001
Detroit	7.5	.002	.026	.069	*
El Paso	2.8	.006	.017	.395	*
Ft. Lauderdale	8.9	.009	.017	.004	.016
Gary	10.1	.016	.062	.163	*
Honolulu	11.4	.016	.031	.011	.001
Houston	4.0	.001	.004	.131	.003
Jersey City	55.5	.099	.252	*	.079
Kileen	4.2	.020	.045	.067	*
Lorain	8.9	.033	.208	.045	*
Los Angeles	36.9	.005	.011	.290	.010
Miami	44.4	.027	.060	.010	.266
Milwaukee	8.5	.006	.077	.110	*
Nassau	50.6	.019	.085	.002	.003
New Brunswick	20.0	.033	.221	*	.023
New York	877.9	.008	.324	.005	.009
Newark	61.8	.012	.213	.003	.038
Norfolk	2.5	.001	.008	.006	*
Orlando	8.9	.007	.027	.005	.014
Paterson	36.5	.007	.284	*	.117
Philadelphia	78.8	.001	.260	.004	.003
Riverside	4.6	.003	.006	.172	*
San Antonio	3.4	.003	.010	.317	*
San Diego	5.4	.003	.008	.151	*
San Francisco	19.4	.006	.018	.108	.002
San Jose	6.4	.005	.012	.218	*
Tampa	10.8	.007	.004	.179	.001
Washington, D.C.	9.8	.003	.009	.006	.004
West Palm Beach	4.5	.008	.033	.045	.025
Averages					
Total	43.1	.018	.077	.090	.018
Northeast	135.0	.043	.199	.004	.031
North Central	29.3	.014	.119	.093	.002
South	10.4	.008	.019	.030	.037
West	8.4	.006	.014	.189	.003

* Denotes that population of this group was less than 2,500 therefore score was omitted.

As shown in Table 2, Puerto Rican communities are generally much smaller than Mexican communities and are concentrated in the Northeast and North Central regions of the country. Approximately 79% of all Puerto Ricans (and 82% of those living in SMSAs) enumerated in the 1980 Census resided in these 34 metropolitan areas. The size of the Puerto Rican population in these areas ranges from a low of 2,500 in Norfolk-Virginia Beach-Portsmouth to a high of 878,000 in the New York metropolitan area. On the average, Puerto Ricans comprise 2% of the total metropolitan population in these communities. Moreover, Puerto Ricans represent a sizable proportion of the minority population in Jersey City: 10% of the residents in this SMSA are of Puerto Rican descent.

In general, Puerto Rican isolation from other metropolitan residents is low, except in the case of New York where it is moderate (.320). The typical Puerto Rican resident lives in a neighborhood where 8% of the neighbors are Puerto Rican. Regionally this varies from less than 2% in the West and south to 10% in the North Central states to 20% in the Northeast. Nonetheless, Puerto Ricans in Chicago, Jersey City, Lorain, New Brunswick, Newark, Paterson and Philadelphia reside in neighborhoods where 20-30% of the residents are also Puerto Rican. Furthermore, as was the case for Mexicans, Puerto Ricans are living in residential areas with disproportionately high numbers of Puerto Ricans. Indeed, these proportions are more than 10 times the metropolitan average in Boston, Chicago, Cleveland, New York, Newark, Paterson and Philadelphia.

Puerto Rican contact with Mexicans and Cubans is limited. On the average, Puerto Ricans live in neighborhoods that are 9% Mexican and 2% Cuban. Interaction with Mexicans is highest in the North Central and West regions of the country. Moderate levels of Puerto Rican contact with Mexicans occur in Dallas, E1 Paso and San Antonio. Puerto Rican contact with Cubans is highest in Miami, Paterson-Clifton-Passaic and Jersey City. Again, it appears that Puerto Ricans reside on the fringes on Mexican and Cuban neighborhoods in our sample of metropolitan areas.

Patterns of Cuban Interaction

There were 24 metropolitan areas in the country with 2,500 or more Cubans as of 1980 (see Table 3). Approximately 93% of all Cubans and 95% of Cubans living in SMSAs resided in these urban areas. Most of these communities are located in the South and Northeast with Miami being the focal point of Cuban population concentration (425,000). Paterson Clifton-Passaic has the smallest Cuban population among these SMSAs (3,100). Within this sample of metropolitan areas, Cubans represent 2% of the total population although 26% of Miami's population and slightly less than 10% of the population in Jersey City were of Cuban descent.

The average Cuban resided in neighborhoods that were 6% Cuban. However, this ranged from less than 1% in most communities in the West to 31% in Jersey City and 50% in Miami. In Newark and Tampa, Cubans lived in residential areas which were nearly 10% Cuban. Furthermore, Cubans in all of these communities lived in neighborhoods with disproportionately high numbers of Cubans.

Cuban interaction with Mexicans and Puerto Ricans is minimal. Contact with Mexicans is highest in the West where the typical Cuban lives in a neighborhood that is 11% Mexican. It is only in Los Angeles where Cubans live in residential areas which seem to border Mexican barrios. Contact with Puerto Ricans is highest in New York and the New Jersey metropolitan areas. In these areas, the typical Cuban lives in neighborhoods which are approximately 10% Puerto Rican.

These results underscore several factors which have tremendous impact on the level of isolation and interaction between these groups.

1. Mexicans, Puerto Ricans and Cubans are generally not migrating to and settling in the same areas. Historically, Mexicans migrated to the Southwest; Puerto Ricans moved to the Northeast; and Cuban migration centered around Miami.

2. In communities where all of these groups are present, they are generally not residing in the same neighborhoods although there is some overlap. The degree to which this reflects group differences (i.e. socioeconomic status) needs to be explored further.

3. Each group resides in neighborhoods with disproportionate numbers of members from the same ethnic group. The average Mexican lives in a neighborhood with twice the number of Mexicans as the proportion present within the typical SMSA. Puerto Ricans and Cubans live in residential areas that contain approximately three times as many residents of the same ethnicity as the metropolitan average.

4. It is only within a small group of metropolitan areas that we find a high degree of intragroup isolation. Predominantly Mexican neighborhoods are characteristic of E1 Paso and San Antonio. New York is the only SMSA where Puerto Rican neighborhoods are more than 30% Puerto Rican. Distinctive Cuban enclaves are found in Miami and Jersey City.

In terms of the interaction patterns between these groups, national or regional averages seem superfluous given the differing patterns of migration of settlement experienced by Mexicans, Puerto Ricans, and Cubans. Overall patterns underscore that given the population composition of these metropolitan areas,

contact between these groups is similar to what might be expected. Interaction with Cubans is slightly lower than anticipated but contact with Puerto Ricans is higher. Interaction with Mexicans is mixed: for Puerto Ricans, contact with Mexicans is higher than expected; for Cubans, the level of interaction is lower. However, the degree of interaction between these groups is quite low, except in metropolitan areas where the Hispanic population is large and heterogeneous. Furthermore, as the size of these subpopulations grows, the probability of contact between the three groups also appears to increase.

Predictors of Spatial Isolation

From the analyses presented in Tables 4,5 and 6, the data reveal that the variables iD the model are strong predictors of intragroup isolation but weak as predictors of interaction between Mexicans, Puerto Ricans and Cubans with the exception of the Puerto Rican specifications. For all three groups, the model explains between 81 and 89% of the variance in the isolation indices. The results of these analyses are described in greater detail below.

In the Mexican specification presented in Table 4, three variables were found to be statistically significant: the proportion of Black Mexicans, the level of suburbanization, and the change in the size of the Mexican population. The results suggest that increasing Mexican isolation was associated with increases in the metropolitan area Mexican population ($p < .10$). This is consistent with the findings of Schnare (1977) who suggests that as the population gets larger, there is a filling in of residential areas which diminishes the likelihood of contact with other groups.

Increases in the proportion of Black Mexicans within the population as well as increased suburbanization are associated with decreases in the level of Mexican isolation fro- other groups. Ecological theory would predict that as groups moved into suburbs, a reflection of growing spatial integration, they would become less isolated. Previous findings also support the relationship between race and spatial isolation. The findings of Denton and Massey (1989) and White (1987) suggest that Hispanics are highly segregated from each other on the basis of race.

Nonetheless, some caution must be exerted when interpreting this finding. Denton and Massey (1989) argue that Census data overestimates the Black Mexican population. While this may be true in the sense of accurately describing racial identity, I would suggest that race in the United States should also be viewed as a social identity. From an examination of PUMS data, it seems that Mexicans were more likely to identify themselves as blacks when they resided ln communities with large black populations. It would be interesting to explore the effect of our bipolar racial identification system on how Mexicans or any other “visible” minority may begin to utilize this schema for self-identification.

When analyzing Puerto Rican isolation from the rest of the metropolitan area population, we find that socioeconomic status, proportion Puerto Rican and housing market variables are significant predictors. As the socioeconomic status of Puerto Ricans increases, contact with other Puerto Ricans diminishes. Decreasing isolation is associated with a rise in educational attainment ($p < .01$) and higher income ($p < .10$). This finding is consistent with the ecological model which predicts decreasing segregation with increasing social status. Declines in the spatial isolation of Puerto Ricans is also associated with increases in the housing supply. As the supply of housing increases, Puerto Ricans are likely to move away from the barrio ($p < .01$). In contrast, increased Puerto Rican isolation was associated with increases in the metropolitan Puerto Rican population. These findings are summarized in Table 5.

For Cubans, four variables are significant predictors of intragroup isolation: median years of schooling, median household income, proportion Cuban and change in the size of the Cuban population during the 1970’s (see Table 63. Increases in the level of Cuban isolation were associated with increases in the proportion Cuban ($p < .01$). However, growth of the Cuban population during the 1970’s had a negative association with spatial isolation ($p < .05$). What this probably reflects is the decline or lack of growth within the Cuban population in many SMSAs during the 1970’s. Gains in socioeconomic status were associated with a decline in Cuban isolation ($p < .05$). Again, this finding is consistent with previous research which suggests that diminishing social distance between groups there is a corresponding decline in spatial distance.

TABLE 3. - Probability of Cuban Interaction with Mexicans and Puerto Ricans in Selected Metropolitan Areas, 1980*

Metropolitan Area	Cuban Population		Probability of Cuban Interaction		
	Size (1,000s)	Percent of SMSA Pop.	Cubans	Mexicans	Puerto Ricans
Anaheim	5.2	.003	.007	.161	.003
Atlanta	4.0	.002	.013	.004	*
Boston	4.7	.002	.016	.003	.051
Chicago	17.8	.002	.021	.079	.064
Dallas	3.2	.001	.006	.080	.001
Ft. Lauderdale	12.5	.012	.022	.003	.014
Honolulu	3.6	.001	.002	.018	.019
Houston	6.3	.002	.007	.099	.002
Jersey City	46.7	.084	.313	*	.094
Las Vegas	3.5	.008	.019	.056	*
Los Angeles	46.4	.006	.027	.266	.008
Miami	424.8	.261	.504	.004	.030
Nassau	6.8	.003	.009	.002	.025
New Brunswick	3.2	.012	.022	*	.153
New Orleans	5.9	.005	.016	.008	*
New York	68.9	.008	.031	.004	.112
Newark	23.0	.012	.095	.002	.096
Orlando	5.1	.007	.025	.004	.025
Paterson	3.1	.007	.023	*	.139
Philadelphia	4.8	.001	.006	.002	.042
San Francisco	4.4	.001	.006	.080	.010
Tampa	21.5	.014	.090	.006	.002
Washington, D.C.	7.5	.002	.011	.005	.005
West Palm Beach	10.1	.018	.076	.019	.014
Averages					
Total	30.9	.020	.057	.043	.043
Northeast	18.1	.014	.060	.016	.087
North Central	-	-	-	-	-
South	54.7	.036	.095	.006	.013
West	6.1	.004	.013	.108	.007

* Denotes that population of this group was less than 2,500 therefore score was omitted.

Predictors of Spatial Interaction

The explanatory power of the model as a predictor of spatial interaction varies considerably in the equations. From the analyses presented in Tables 4,5, and 6 we find that the model is most successful in explaining patterns of Puerto Rican interaction with Mexicans and Cubans (R2 was 49 and 72%,respectively). However, the model is a weak predictor of Mexican interaction with Puerto Ricans and Cubans, explaining between 25 and 38% of the variance in these specifications. Furthermore, the model is a poor predictor of Cuban interaction with Mexicans and Puerto Ricans, explaining less than 7% of the variance in the interaction scores.

An examination of Table 4 reveals that only one variable was a significant predictor of Mexican interaction with Puerto Ricans: change in the Mexican population. This variable had a significant, negative effect on Mexican-Puerto Rican contact ($p < .05$). Since Mexican population growth is associated with growing spatial isolation, we would expect that contact with other groups would diminish. In contrast, Mexican interaction with Cubans was found to increase with increased Mexican suburbanization ($p < .10$). This would suggest a lessening of social distance between these groups since it is assumed that suburbanization reflects a rise in socioeconomic status. Yet in both specifications, much of the variance in the interaction indices is not explained by the model.

TABLE 4. - Logistic Regression of Selected Sociodemographic and Housing Market Indicators on Mexican Contact with Puerto Ricans and Cubans

Variables	Probability of Mexican Contact (P*) with:		
	Mexicans B (SE)	Puerto Ricans B (SE)	Cubans B (SE)
Socioeconomic Status			
Median Years of Schooling	- 0.131	- 0.016	- 0.281
	(0.082)	(0.152)	(0.205)
Median Household Income	0.000	0.001	0.000
	(0.000)	(0.000)	(0.000)
Race/Foreign Birth			
Proportion Black	- 0.033 **	- 0.021	0.019
	(0.012)	(0.019)	(0.020)
Proportion Foreign Born	- 0.003	0.023	0.037
	(0.015)	(0.036)	(0.033)
Metropolitan Characteristics			
Proportion of Population	0.025	0.017	- 0.176
	(0.024)	(0.035)	(0.423)
Level of Suburbanization	- 0.010 ***	- 0.016	0.021 ***
	(0.006)	(0.009)	(0.010)
1970-80 Population Change	0.267 **	- 0.407 **	0.177
	(0.034)	(0.151)	(0.948)
Housing Market Variables			
Vacancy Rate	0.071	0.006	0.052
	(0.048)	(0.077)	(0.020)
Crowding Index	0.011	- 0.003	0.020
	(0.014)	(0.036)	(0.037)
Discriminatory Practices	0.001	0.000	- 0.005
	(0.003)	(0.006)	(0.006)
Intercept	- 2.183	- 3.648	- 5.112
	(1.320)	(2.242)	(3.302)
Adjusted R^2	.818 *	.248	.376

* p < .01
** p < .05
*** p < .10

In the Puerto Rican specifications, socioeconomic status, proportion island born and crowding were associated with increased Puerto Rican contact with Mexicans (see Table 5). More affluent Puerto Ricans appeared to be moving into neighborhoods in which more affluent Mexicans also reside. In addition, island born Puerto Ricans are more likely to interact with Mexicans ($p < .10$). This probably reflects the migration of professionals from the island to communities outside of the Northeast where exposure to Mexicans would be higher. In metropolitan areas where the demand for housing is high, we find that interaction between the groups also increases ($p < .10$). Thus, areas of Puerto Rican concentration may begin to spill over into residential areas where Mexicans reside.

Of interest, decreasing Puerto Rican contact with Mexicans is associated with increases in the proportion of Black Puerto Ricans, increasing suburbanization of the Puerto Rican population and changes increases in the size of the Puerto Rican population during then 1970's ($p < .05$, respectively). As previously noted, there is considerable segregation of Hispanics on the basis of race. Therefore, Black Puerto Ricans become isolated from not only Mexicans but from the rest of the metropolitan population as well. As Puerto Ricans move into the suburbs, they are not moving to areas with large numbers of Mexicans. In addition, as the Puerto Rican population grew during the 1970's, contact with Mexicans declined considerably.

Increasing contact with Cubans was associated with increases in the island born population, increases in the proportion of the metropolitan Puerto Rican population and increases in Puerto Rican demand for housing. As was the case with Mexicans, island born Puerto Ricans were more likely to interact with Cubans ($p < .01$) probably indicative of a new wave of Puerto Rican migration to communities with higher proportions of Cubans. As the proportion of Puerto Ricans increases, there seems to greater exposure to Cubans. Finally, as Puerto Rican demand for housing increases, they are moving into areas where Cubans also reside. In contrast, decreasing contact with Cubans was associated with a rise in discriminatory practices within the metropolitan area ($p < .05$). It appears that Puerto Ricans who are identified as people of color may be denied access to residential areas where Cubans live (i.e. predominantly white neighborhoods).

TABLE 5. - Logistic Regression of Selected Sociodemographic and Housing Market Indicators on Puerto Rican Contact with Mexicans and Cubans

Variables	Probability of Puerto Rican Contact (P*) with: Puerto Ricans B (SE)	Mexicans B (SE)	Cubans B (SE)
Socioeconomic Status			
Median Years of Schooling	- 0.326 * (0.068)	0.281 *** (0.144)	- 0.095 (0.159)
Median Household Income	- 0.001 *** (0.000)	0.000 * (0.000)	0.000 (0.000)
Race/Foreign Birth			
Proportion Black	- 0.029 (0.048)	- 0.067 ** (0.104)	- 0.045 (0.125)
Proportion Island Born	- 0.011 (0.009)	0.033 *** (0.019)	0.063 * (0.016)
Metropolitan Characteristics			
Proportion of Population	0.235 *** (0.114)	0.503 (0.335)	0.444 ** (0.174)
Level of Suburbanization	- 0.003 (0.005)	- 0.032 ** (0.012)	0.011 (0.010)
1970-80 Population Change	- 0.234 (0.248)	- 3.489 ** (1.434)	- 0.583 (0.411)
Housing Market Variables			
Vacancy Rate	- 0.132 * (0.046)	0.041 (0.092)	- 0.060 (0.066)
Crowding Index	0.059 *** (0.029)	0.125 *** (0.064)	0.152 * (0.045)
Discriminatory Practices	- 0.005 (0.004)	- 0.108 (0.007)	- 0.017 ** (0.006)
Intercept	2.256 (1.486)	-11.124 (3.080)	10.175 (2.400)
Adjusted R^2	.806 *	.488 *	.715 *

* p < .01
** p < .05
*** p < .10

In sharp contrast to the Mexican and Puerto Rican specifications, the model is a dismal predictor of Cuban interaction with these Hispanic subgroups. None of the variables were significant predictors of Cuban interaction with either group (see Table 6). While the model is a good predictor of Cuban isolation from all other groups it fails to explain variations in contact with Mexicans or Puerto Ricans. It would seem that patterns of Cuban interaction may be mitigated by other processes operative within the metropolitan area.

Summary and Discussion

The major findings of this analysis indicate that patterns of interaction between Mexicans, Puerto Ricans and Cubans are shaped by distinct patterns of migration to and settlement in U.S. urban areas. Mexican migration historically focused on locations in the Southwest; Puerto ricans moved to communities in the Northeast and Midwest; and Cuban migration centered around Miami with secondary settlements primarily in the Northeast. As a result, there are relatively few metropolitan areas with populations of more than 2,500 of each group. Nevertheless, in places where the Hispanic population is large and mixed, these groups generally do not reside in the same neighborhoods, forming distinct but sometimes overlapping enclaves. Moreover in communities where one group predominates, identifiable “barrio or barrios” will form but the other Hispanic subgroups will not be totally absorbed into these neighborhoods. Instead, these small Hispanic subpopulations will most likely cluster with other members of the same group if there are sufficient numbers. Otherwise they will most likely reside in non-Hispanic neighborhoods. Thus, differences between Mexicans, Puerto Ricans, and Cubans are not bridged by the sharing of a common language. Their differences are manifested in the metropolitan landscape by the existence of separate residential areas.

In general, the level of spatial isolation for each group is low to moderate. The typical Mexican, Puerto Rican, and Cuban tends to be more isolated from the rest of the metropolitan population than one would expect given the population composition

TABLE 6. - Logistic Regression of Selected Sociodemographic and Housing Market Indicators on Cuban Contact with Mexicans and Puerto Ricans

Variables	Probability of Cuban Contact (P*) with: Cubans B (SE)	Mexicans B (SE)	Puerto Ricans B (SE)
Socioeconomic Status			
Median Years of Schooling	- 0.248 ** (0.097)	0.174 (0.472)	- 0.504 (0.319)
Median Household Income	- 0.001 ** (0.000)	- 0.001 (0.002)	- 0.001 (0.001)
Race/Foreign Birth			
Proportion Black	- 0.055 (0.027)	0.016 (0.124)	0.089 (0.084)
Proportion Foreign Born	- 0.004 (0.016)	- 0.060 (0.081)	0.032 (0.050)
Metropolitan Characteristics			
Proportion of Population	0.739 * (0.204)	- 0.409 (1.337)	- 0.312 (0.792)
Level of Suburbanization	0.006 (0.005)	- 0.015 (0.025)	0.010 (0.022)
1970-80 Population Change	- 1.761 ** (0.599)	0.677 (3.996)	0.861 (2.297)
Housing Market Variables			
Vacancy Rate	0.044 (0.032)	0.118 (0.162)	- 0.125 (0.104)
Crowding Index	0.005 (0.024)	0.373 (0.231)	0.073 (0.073)
Discriminatory Practices	0.001 (0.006)	- 0.089 (0.053)	- 0.019 (0.018)
Intercept	0.313 (2.220)	- 2.251 (11.173)	2.956 (6.848)
Adjusted R^2	.889 *	.000	.079

* p < .01
** p < .05
*** p < .10

of their communities. Yet, this has generally not produced predominantly Mexican, Puerto Rican, or Cuban neighborhoods in more than a handful of metropolitan areas.

The explanatory model tested in this study was found to be a strong predictor of intragroup isolation but a weak predictor of group interaction, except in the Puerto Rican specifications. Metropolitan demographic characteristics were significant predictors in all of the Mexican and Puerto Rican equations and one of the Cuban specifications. Moreover, the relationship between spatial isolation, group interaction and these variables occurred as hypothesized. Population growth was associated with decreasing contact between Mexicans and Puerto Ricans. Increasing suburbanization of Mexicans resulted in greater contact with Cubans and less isolation from the rest of the metropolitan population. Puerto Rican suburbanization was associated with declining interaction with Mexicans. In the case of Cubans, greater isolation from others was linked to increases in the proportion Cuban.

Proportion Black was significant only as a predictor of Mexican isolation. As the number of Black Mexicans increased, their contact with other Mexicans declined which was expected. Proportion foreign or island-born was a significant predictor of increased Puerto Rican interaction with both Mexicans and Cubans. This finding was contrary to what was hypothesized but may be explained in terms of shifts in Puerto Rican migration patterns which has led island born Puerto Ricans to communities in the South and West where Mexicans and Cubans reside.

Housing market variables were significant in all of the Puerto Rican equations but not for any of the other specifications. As Puerto Rican demand for housing increases, contact with Mexicans and Cubans as well as with other Puerto Ricans increases. Increases in the supply of housing resulted in decreases in the level of Puerto Rican isolation from others. Discriminatory behavior in the housing market was associated with decreasing Puerto Rican-Cuban contact, contrary to what was expected. However given the status of Cubans vis a vis Puerto Ricans, this may reflect the inability of Puerto Ricans to move into Anglo neighborhoods.

Increases in the socioeconomic status of Puerto Ricans and Cubans were associated with declines in the level of isolation experienced by both groups. In addition, a rise in Puerto Rican social status was linked to increasing interaction with Mexicans. Again, the relationship between spatial interaction and SES was as predicted. However, it was surprising to note that it was insignificant in most of the interaction models, contrary to previous findings for other ethnic groups.

Nevertheless, these findings underscore the need for further scrutiny of existing theoretical models when applied to the analysis of patterns of interaction between Mexicans, Puerto Ricans and Cubans. While the model is an adequate predictor of Puerto Rican contact with Mexicans and Cubans, it is weak in the Mexican equations and fails to explain patterns of Cuban interaction. Previous research attests to the problems of the ecological model as an appropriate explanation of the residential experience of Blacks in the United States as well as for explaining the persistence of segregation between European ethnic groups (see discussion in Agocs, 1981). Yet, despite these difficulties, current researchers wholeheartedly embrace the assumptions of the model when we are still in an embryonic stage in our knowledge of Hispanic residential segregation and particularly in our knowledge of patterns of interaction between Hispanic subgroups.

What seems to be lacking in existing perspectives is the dimension of time and cultural diversity. First, the structure and growth of metropolitan America in the postwar period is different than what Park and colleagues were attempting to describe and explain in an earlier era. How do these differences affect patterns of social/spatial interaction for the newer waves of urban ethnics? Second, we have failed to take into account ethnic differences in the patterns of migration, settlement and community development. Why should we expect that all ethnic groups follow the same pattern? Third, many scholars continue to accept assimilation theory while minimizing the impact of institutionalized processes which are not under the control of minority populations (i.e. dual housing market, location of public housing for the poor). In any event, more research is needed which will enable us to refine a framework which addresses the distinctions in the residential experience of Hispanics in the United States.

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