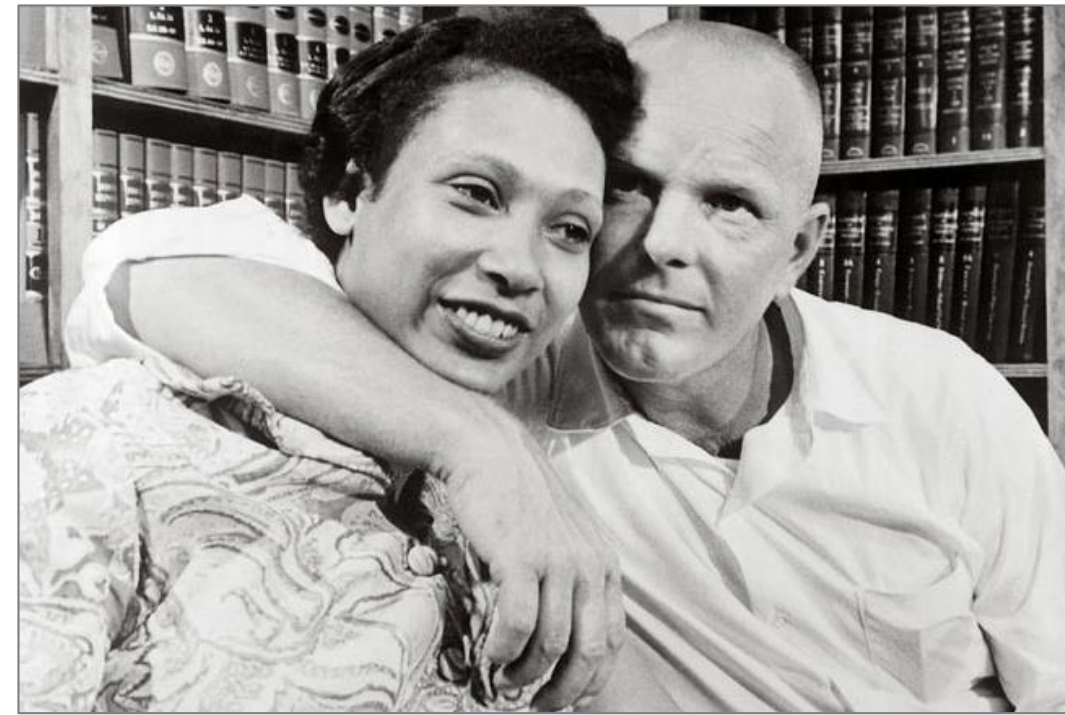


The Geography of Interracial Marriage in the US and Potential Correlative Factors

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Background: For many years anti-miscegenation laws reinforced segregation by criminalizing interracial relationships. It was not until 1967 that interracial marriage was legal in all of the United States thanks to the Loving v. Virginia court case.

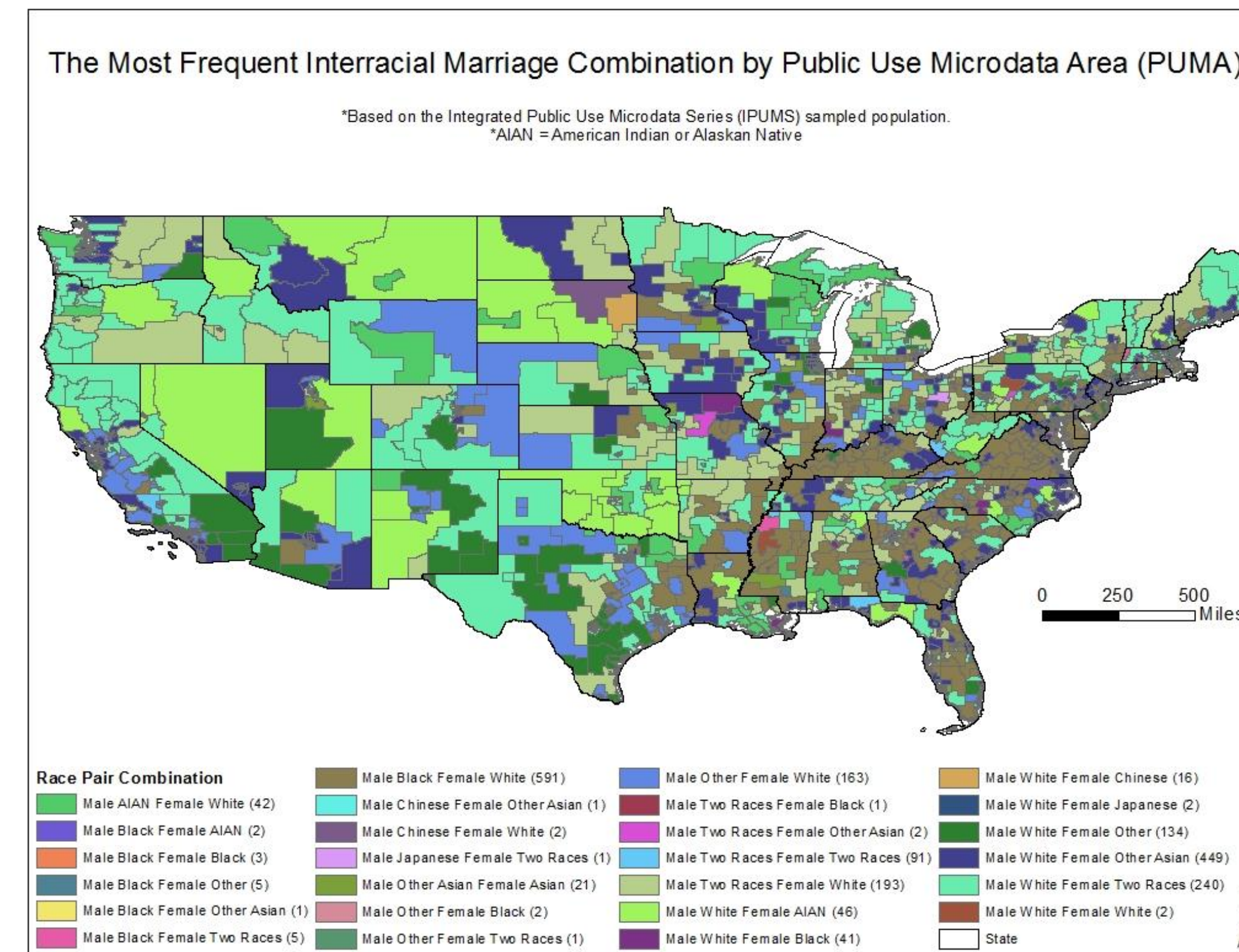
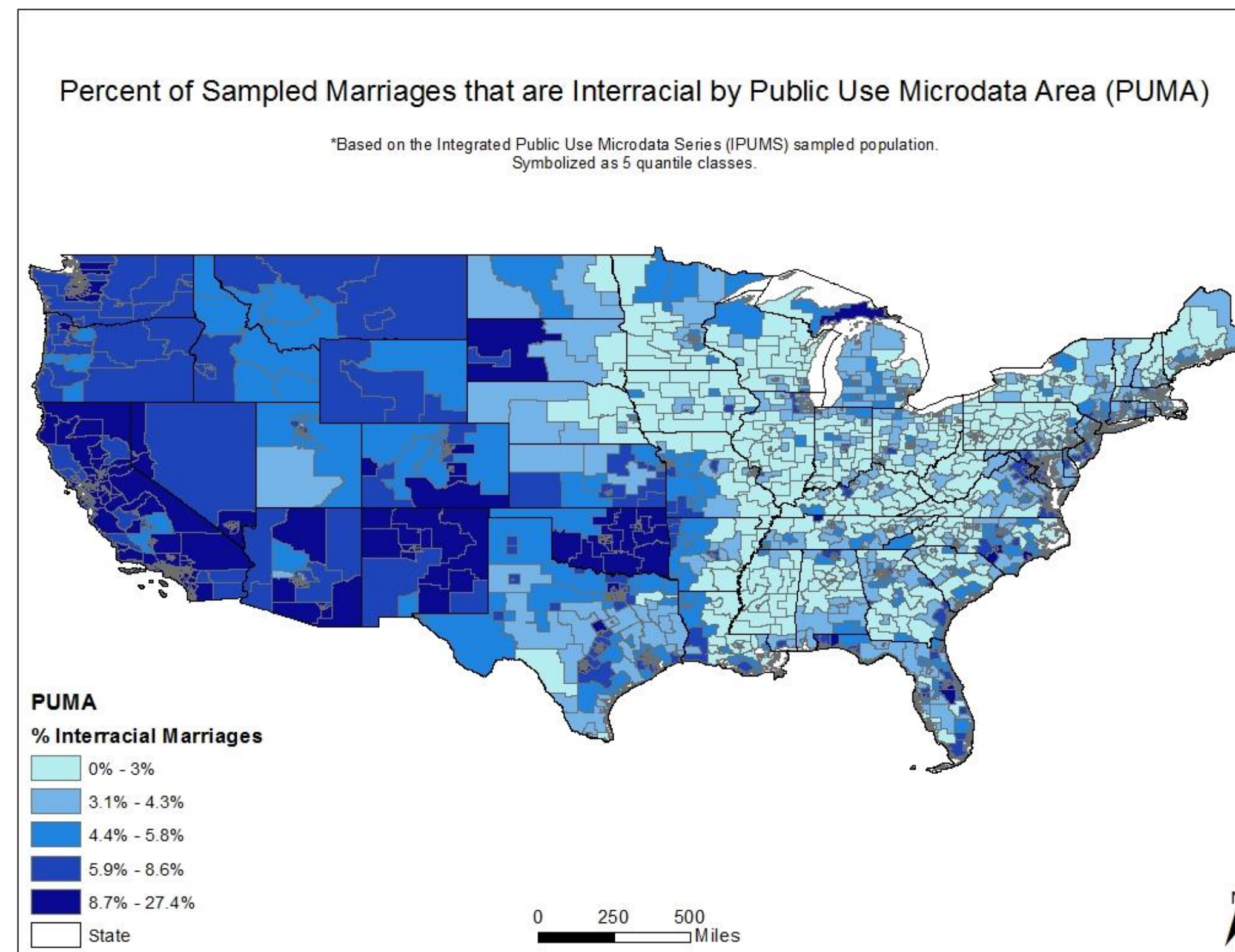


Richard Loving and Mildred Jeter. June 12th, 1967.

Since then people have been pushing the envelope to freely choose their partners. There has been research already conducted by the Census Bureau on the spatial distribution of interethnic married couples. This particular study uses a different dataset to evaluate spatial patterns and test various factors for any correlation to interracial marriages through regression analysis.

Objectives: This study aims to determine where in the US are interracial marriages most and least prevalent, if there is a distribution pattern, and if rates of interracial marriage are correlated with other factors.

Approach: Data for individual's marital status, race, educational attainment, schooling type, total income, wage and salary income, welfare income and poverty status were obtained from the Integrated Public Use Microdata Series (IPUMS) for 2011. The data represent only those included in the IPUMS sample. New tabulations were created in STATA to determine the total number of people in an interracial marriage by Public Use Microdata Area (PUMA) and the frequency of each possible race pairing combination. The data were then symbolized and analyzed in ArcMap. Spatial autocorrelation was assessed by Moran's I and LISA statistics, and the relationship between interracial marriages and other variables was examined through Logistic, OLS and Spatial Lag/Error regression analysis. The Lieberson Diversity Index will also be calculated.

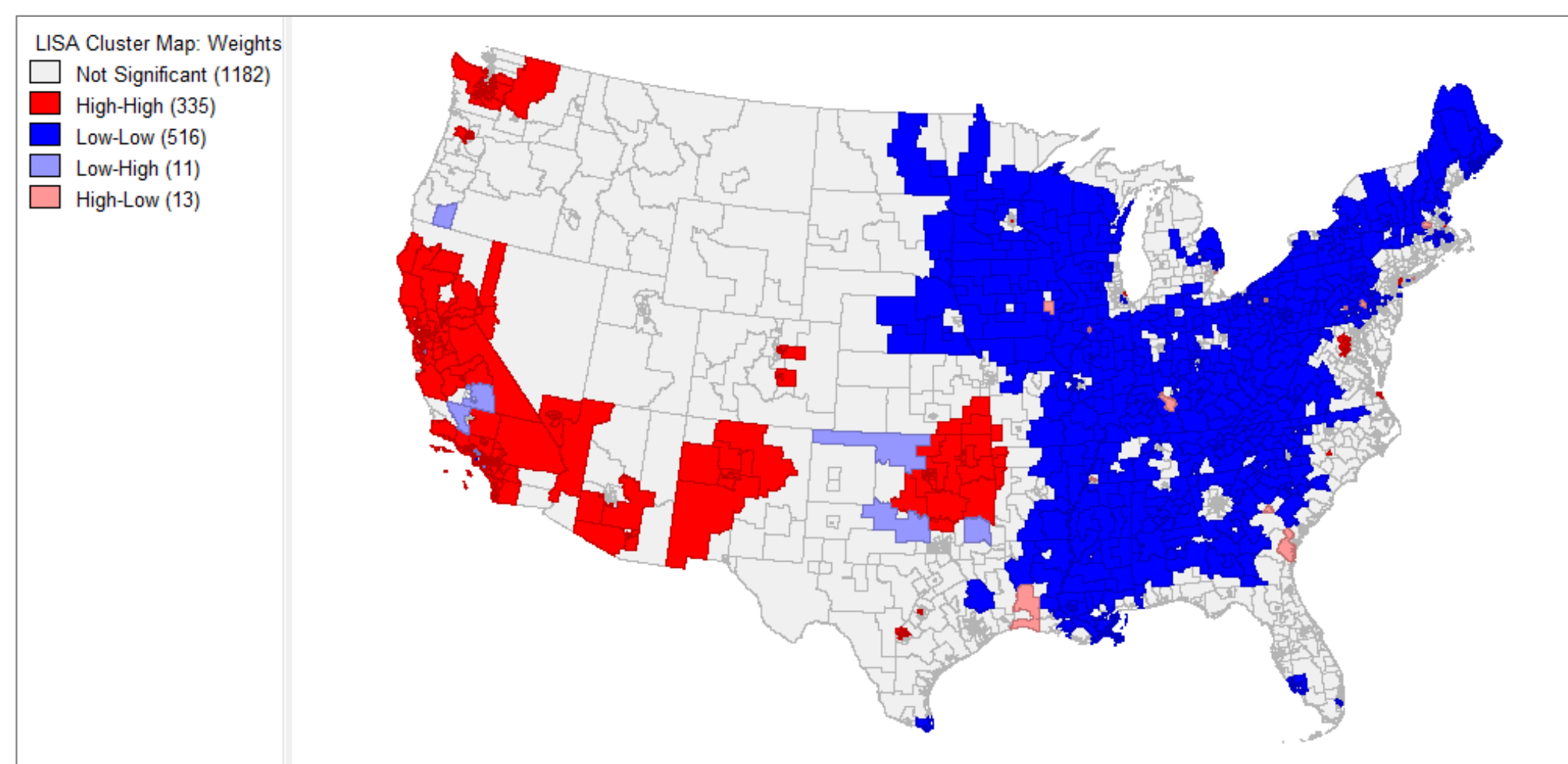


5 Most Prevalent Combinations Based on # Sampled People

1. Male White Female Other Asian
2. Male White Female Two Races
3. Male Two Races Female White
4. Male Black Female White
5. Male White Female Other

5 Least Prevalent Combinations Based on # Sampled People

1. Male Chinese Female AIAN
2. Male Japanese Female Black
3. Male Three or More Races Female AIAN
4. Male AIAN Female Three or More Races
5. Male Chinese Female Three or More Races

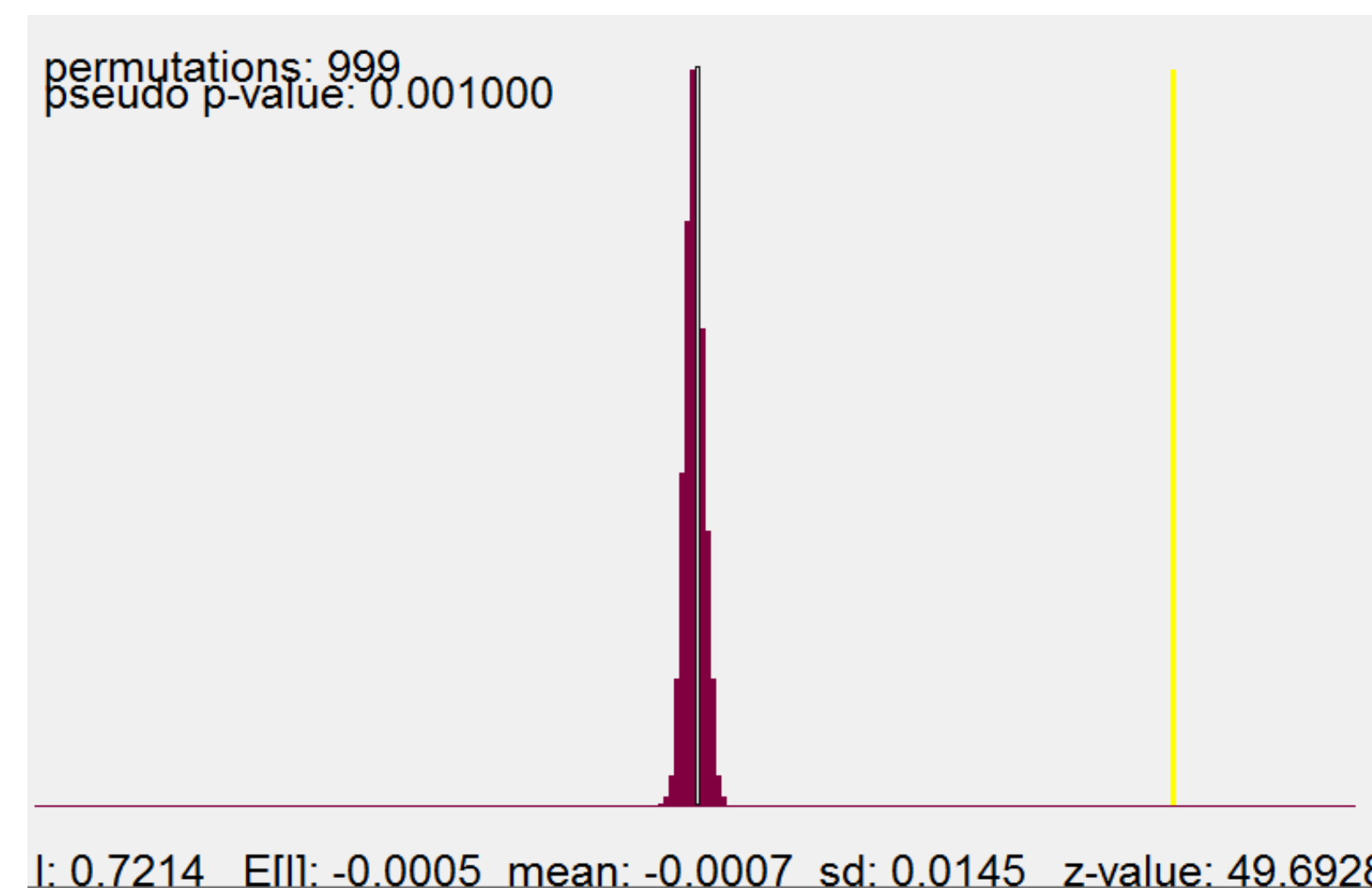


There is a clear visual difference between the West and the East! The LISA Statistic map further exemplifies local clustering of high/high and low/low PUMAs.

Logistic regression						Number of obs =	6330768
Log likelihood = -1373505						LR chi2 (4) =	5255.62
						Prob > chi2 =	0.0000
						Pseudo R2 =	0.0019
	inter	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]	
	educd	.0054423	.0000795	68.43	0.000	.0052864 .0055982	
	inctot	1.03e-07	3.16e-08	3.27	0.001	4.12e-08 1.65e-07	
	poverty	-.00036	.0000139	-25.84	0.000	-.0003873 -.0003327	
	incwelfr	.0000397	2.46e-06	16.14	0.000	.0000349 .0000445	
	_cons	-3.108666	.0064376	-482.89	0.000	-3.121284 -3.096049	

Logistic regression at the person level.

Dependent variable = Interracial Marriage Status (Y/N).



A Moran's I value of 0.72 calculated using a queen weight matrix is significant and indicates interracial marriage percentages are clustered across the US.

	OLS			Standard Error		
	Beta	SE	p-value	Beta	SE	p-value
Intercept	-0.4131113	0.1731505	0.0171304	0.9370021	0.115462	0.0000000
LN(Tot Bachelor's Degree or Higher)	0.1361504	0.02213687	0.0000000	0.1471676	0.0172038	0.0000000
Percent Below Poverty Level	0.00971151	0.00193754	0.0000006	0.0138166	0.0014007	0.0000000
LN(Med House Value)	0.132264	0.0134858	0.0000000	0.0209278	0.0078856	0.0079562
R-Squared (or Pseudo R-Squared)	0.07027			0.691705		
Adjusted R-Squared	0.068911			N/A		
F-Statistic	3.18E-32			N/A		
Moran's I of residuals	0.685852			-0.0215822		
Akaike Info Criterion	3490.01			1605.67		
Schwarz Criterion	3512.53			1628.19		
Log Likelihood	-1741.01			-798.837		
Breusch-Pagan Test	0.0000000			0.0000000		

Regressions at the PUMA level.

Dependent Variable = Natural Log of % of Marriages that are Interracial

The Logistic and Spatial Regression predictors are all significant at $p < 0.05$. Standard Error (SE) is a much better model than OLS and also explains 69% of the variance versus 6%. All the predictors from SE correspond to a marginal increase in % interracial marriages: a 1% increase in people with a bachelor's degree or higher and median house value correspond to a 0.14% and 0.02% increase in interracial marriages, respectively. The percent of interracial marriage increases by 1.3% for a 1% increase in people below the poverty level. Comparing these results to the regression conducted at the person level makes a case for ecological fallacy. The similar education variables are positive. On the other hand, the poverty coefficient is positive for SE analysis but negative for logistic.