Title: *Language Segregation in the United States*

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Abstract

The United States has incredible language diversity. The U.S. Census Bureau tabulates over 300 languages spoken by an estimated 60 million people.[1] The purpose of this research is to achieve three goals: 1) Compare residential segregation patterns between language groups within cities and between cities within language groups. 2) Fill a gap in the literature by analyzing language groups rather than racial and ethnic groups. 3) Use the 2006-2010 American Community Survey to provide the most current data possible about languages spoken in the United States.

Decades of research has looked at segregation patterns in cities particularly with respect to racial segregation[2], but some research has looked at immigration as well. Iceland and Scopilliti[3] found that English-speaking ability and the size of the group studied were significant contributing factors to the relationship between nativity and racial segregation. When language is included in this type of research the analysis uses English-speaking ability as a predictor of segregation by race, ethnicity, or nativity. This research makes language spoken the unit of analysis to allow us to look at specific communities of language speakers like Chinese, Vietnamese, and Korean rather than the Asian race.

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[1] B16001, 2010 ACS 1-year estimates

[2] Kantrowitz, Nathan. 1973. "Ethnic and Racial Segregation in the New York Metropolis: Residential Patterns among White Ethnic Groups, Blacks, and Puerto Ricans." *Praeger Special Studies in U.S. Economic, Social and Political Issues Series.*
Massey, Douglas S. and Nancy Denton. 1988. "The Dimensions of Residential Segregation." *Social Forces* vol. 67 (2) 281-315.
Iceland, John, Daniel H. Weinberg and Erika Steinmetz. 2002. "Racial and Ethnic Residential Segregation in the United States: 1980-2000. *Census 2000 Special Reports*.

[3] Iceland, John and Melissa Scopilliti. 2008. "Immigrant Residential Segregation in U.S. Metropolitan Areas, 1990-2000." Demography. Vol. 45(1), 79-94.

As of 2010, in the principal cities of Metropolitan Statistical Areas (MSA) 29.3% of people age 5 and over spoke a language other than English at home. By contrast only 6.8% of people living outside of metropolitan/micropolitan areas spoke a language other than English.[4]   Census tracts within MSAs are by far the most common level of analysis used in residential segregation research.[5] This level of analysis is ideal because the tracts are small enough to provide location detail, and easily available from the publicly-available summary file. MSAs are meaningful entities, that encompass central cities as well as more rural surrounding areas to provide a full picture of the geographic areas.
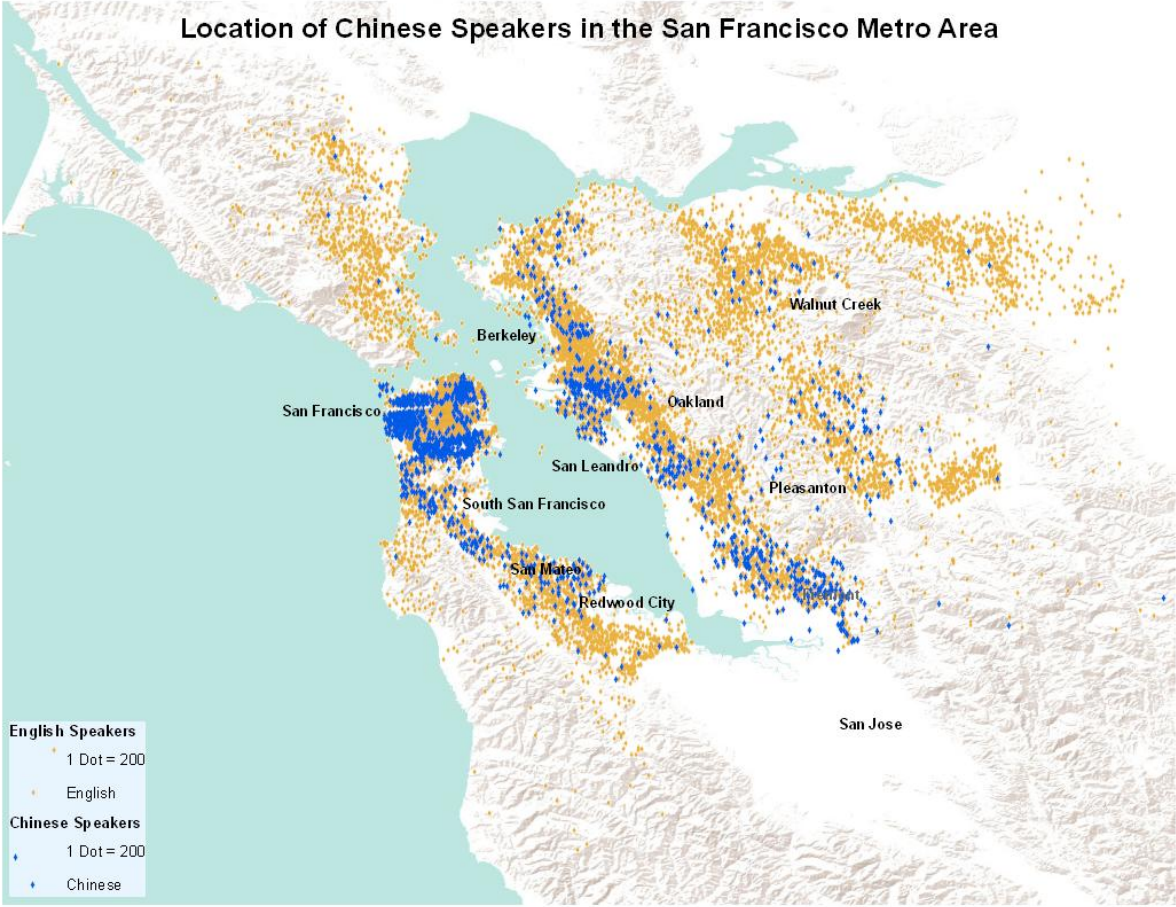
This poster will focus on some of the largest cities in the United States and many of the largest languages spoken here. Not every MSA and detailed language can be considered in the small space afforded to this project. A subset of substantively interesting languages and MSAs will be selected based on total population of the MSA, geographic distribution across Census Regions, the number of large language groups.

Residential segregation will be measured using three indexes of segregation that are related but different. The first is the Dissimilarity Index, which is a measure of how evenly distributed a group is across the tracts. The second is the Isolation index which is a measure of how likely a group is to come into contact with other language groups. The final is Delta, a measure of special density or concentration. These indexes allow us to look at social and spatial distance between language groups in a metropolitan area and to identify unusual language patterns.

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[4] GCT1601, 2010 ACS 1-year estimates
[5] Park, Julie and John Iceland. 2011. "Residential segregation in metropolitan established immigrant gateways and new destinations 1990-2000. *Social Science Research*. Vol. 40 (3), 811-821.

Figure 1. Example of a language of map

Location of Chinese Speakers in the San Francisco Metro Area

Source: Table B 16001, ACS 2006-2010

Table 1: Potential languages and metropolitan areas for study

	United States	New York-Northern New Jersey-Long Island	Los Angeles-Long Beach-Santa Ana	Chicago-Joliet-Naperville	Dallas-Fort Worth-Arlington	Philadelphia-Camden-Wilmington	Houston-Sugar Land-Baytown	Miami-Fort Lauderdale-Pompano Beach	Washington-Arlington-Alexandria	Atlanta-Sandy Springs-Marietta	Boston-Cambridge-Quincy	Detroit-Warren-Livonia	San Francisco-Oakland-Fremont	Riverside-San Bernardino-Ontario	Phoenix-Mesa-Glendale	Seattle-Tacoma-Bellevue	Speakers in selected Metro Areas	Pct in selected Metro Areas
Total pop	283,833,852	17,524,167	11,868,286	8,741,400	5,661,695	5,545,071	5,247,610	5,151,453	5,043,185	4,741,122	4,231,342	4,075,563	3,985,044	3,792,736	3,761,125	3,138,927	92,508,726	33%
Spanish	35,470,765	3,366,533	4,307,547	1,455,306	1,245,799	329,859	1,493,452	2,017,375	571,428	423,029	316,254	114,610	642,952	1,266,105	775,415	189,074	18,514,738	52%
French	1,337,720	136,049	44,210	28,601	17,749	27,591	18,988	50,551	56,276	30,140	50,562	14,222	26,513	8,485	10,771	14,151	534,859	40%
French Creole	655,888	167,679	2,806	4,349	1,140	11,767	2,153	234,650	11,210	13,961	48,309	372	533	744	400	594	500,667	76%
Italian	765,282	242,396	21,049	38,808	3,238	32,651	3,555	21,334	10,760	4,019	37,068	16,688	13,424	3,759	5,894	4,153	458,796	60%
Portuguese	680,429	119,534	14,707	5,398	5,036	11,505	6,334	48,237	12,914	12,152	95,204	1,773	15,654	3,398	2,180	3,143	357,169	52%
German	1,109,367	62,823	35,007	36,081	12,783	20,057	12,645	16,251	22,511	13,740	13,596	18,374	20,092	8,329	14,317	18,841	325,447	29%
Greek	319,333	84,174	9,528	37,256	1,795	10,005	2,973	5,701	8,444	1,728	20,364	6,388	4,988	1,564	2,214	2,427	199,549	62%
Russian	830,456	239,996	52,675	39,034	6,265	25,254	5,667	13,450	16,753	10,449	28,310	7,696	31,602	2,552	5,192	27,260	512,155	62%
Polish	604,371	129,527	8,541	188,268	2,382	15,178	2,821	7,679	4,890	2,973	8,839	19,894	3,643	2,094	5,180	3,840	405,749	67%
Serbo-Croatian	262,265	32,398	8,325	31,245	3,600	2,648	2,444	2,491	2,281	7,666	3,097	9,090	3,371	749	8,403	3,237	121,045	46%
Persian	358,156	29,023	98,219	5,627	9,468	3,513	7,663	3,460	28,142	7,528	4,518	1,737	26,179	6,476	4,164	5,881	241,598	67%
Gujarati	335,210	77,980	16,318	34,993	10,214	17,089	10,944	2,690	7,458	11,717	6,818	7,312	8,534	3,743	2,482	1,793	220,085	66%
Hindi	582,975	99,194	30,248	31,385	18,214	15,896	20,985	6,744	29,180	17,472	13,192	9,881	38,163	4,682	7,198	11,233	353,667	61%
Urdu	363,621	80,848	15,541	39,740	16,232	9,058	28,672	6,877	24,952	8,583	3,679	8,686	7,439	3,841	1,504	2,866	258,518	71%
Chinese	2,656,309	538,512	392,999	75,266	39,413	53,447	61,078	19,166	74,689	30,992	89,222	18,965	328,653	27,911	18,354	64,578	1,833,245	69%
Japanese	466,409	41,390	74,544	10,997	4,976	4,210	3,787	3,139	10,330	6,034	7,733	8,926	23,880	4,780	4,525	18,492	227,743	49%
Korean	1,104,243	165,997	252,511	43,125	24,375	27,161	11,350	4,533	64,989	37,093	13,009	6,662	33,334	17,800	7,103	42,529	751,571	68%
Vietnamese	1,292,672	23,138	225,158	17,019	57,056	26,266	86,583	10,603	49,626	32,632	26,619	5,403	46,776	22,630	14,107	44,553	688,169	53%
Tagalog	1,535,585	137,407	264,963	73,964	14,405	14,354	25,261	12,399	37,219	6,372	6,867	10,168	151,602	53,971	13,960	37,831	860,743	56%
Arabic	765,536	102,770	53,379	43,906	17,937	14,448	18,048	11,338	30,218	8,400	18,523	83,948	18,758	15,626	10,980	6,084	454,363	59%
African languages	765,057	93,371	21,711	24,238	35,220	19,983	24,643	4,232	84,982	38,994	20,075	5,790	13,371	5,696	9,754	29,916	431,976	56%

Source B16001, 2006-2010 American Community Survey

Note: Highlighted cells have language population over 10,000 in the metro area.