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Mapping Adult Migration in Cleveland, Ohio

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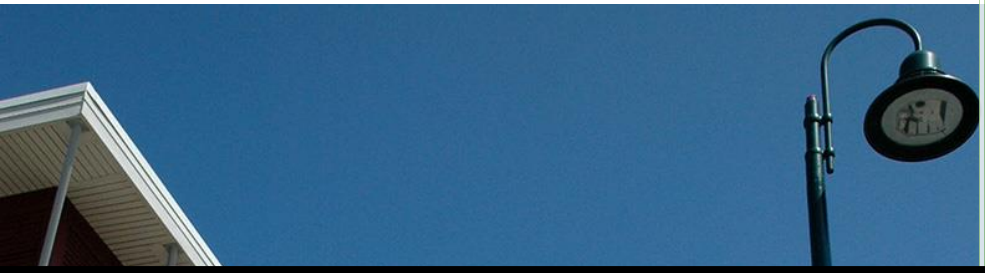

2015

Mapping Adult Migration in Cleveland, Ohio

Prepared for Cleveland Neighborhood Progress

Cleveland State University
The Center for Population Dynamics

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Introduction

"It is evident that each great movement of population, in sum, presents a new opportunity and a new task, and wisdom consists in taking advantage of the movement while it is still fluid."—Lewis Mumford.

If a city's geography is "the body", migration is "the blood". Where people migrate (or don't) affects not only the demographics and economics of a city, but also a city's "network"—described here as the extent individuals and communities are either integrated (into) or isolated (from) forces of globalization that are reshaping the American landscape, particularly the nation's urban cores.

No doubt, America's urban cores are places of increasing in-migration and reinvestment. This infill into the core has recently been termed the "fifth migration" by urban scholars[1]. To put this in context, the "first migration" was the pioneers that settled North America; the "second migration" from farms to the factory towns; the "third migration" to the great metropolitan centers like Cleveland; and the "fourth migration" to the suburbs of these centers. The "fifth migration"—which will significantly affect the City of Cleveland's landscape going forward—is a 'reurbanizing" countermovement to decentralization, particularly for younger, college-educated adults.

Details of this "fifth migration" will be discussed in the current report, "Mapping Adult Migration in Cleveland, Ohio". In all, the subsequent mapping of demographics and migration will prove informative to local policy, with ramifications in housing, transportation, education, and economics. Consider this analysis a first foray into further analyses focusing on how Cleveland's migration patterns affects each of these domains.

Section 1: A Demographic Understanding—Beyond Population Loss

A 17% decline in population from 2000 to 2010. It is the data point most cited in reference to the vitality of the City of Cleveland. But what does this number tell us? Very little, actually. *That's because population totals are an effect—not a cause—of macroeconomic forces.* The remainder of this section will explain why.

Figure 1: Population in Cleveland, Boston, and Pittsburgh (City) 1840 to 2013
Source: Census

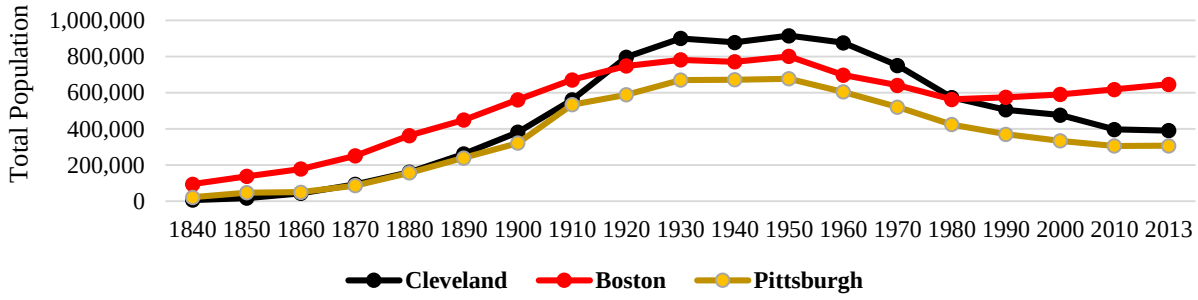


Figure 1 shows the population trajectories for Cleveland, Boston, and Pittsburgh—three cities with rich manufacturing histories. Note the gains occurred during the Industrial Revolution, or the era of the "third migration", with population peaking in 1950. Then, the economic era shifted from "brawn" to "brain", leading to job losses in manufacturing. Population decline followed. Part of this population loss was due to migration patterns pivoting from inner cities in the East Coast and Midwest to the sprawling

[1] See: http://www.tandfonline.com/doi/pdf/10.1080/01944360508976706

"boomtowns" of the Sunbelt, where factory and service work shifted. The other part was due to "fourth migration" patterns of suburbanization. Here, blue-collar industries built a middle class that would chase the "American dream" outside the city limits. Pittsburgh and Cleveland are still experiencing population losses as they continue economic restructuring into the knowledge economy. Boston, however, is experiencing population growth. That's because Boston economically restructured into the knowledge economy some 30 years prior, and so the city's globalizing "fifth migration" is well underway.

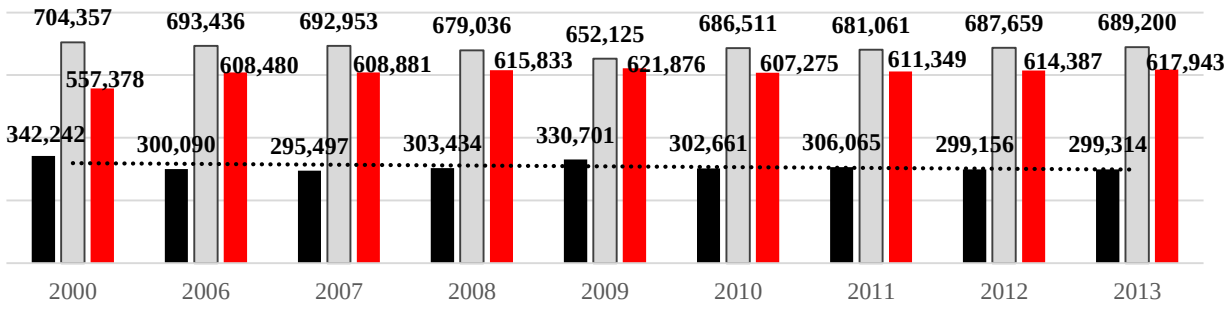
That said, Boston's rebirth is unlike its rise during the early 20th century, according to Harvard economist Ed Glaeser[2]. The growth is not to be found in population totals per se, but in income and real estate appreciation. That is, Beantown is smaller, but more educated and wealthier, which is a reflection of its economic positioning from a city of masses and manpower to one of productivity and innovation. In its rebirth, such will be the likely course for Cleveland as well.

Demographically, this transformation has already begun, particularly at the regional level. The Cleveland Metropolitan Statistical Area (MSA)[3] lost over 83,000 people from 2000 to 2013. "Metro Cleveland is 3rd nationally in population loss," reads the headline, predictably[4]. Still, the metro gained over 87,000 people with a 4-year degree over that same time period, raising its educational attainment rate to 29.8%, which is higher than the nation as a whole (29.6%)[5].

With higher education levels comes a more productive workforce, and hence higher wages. Over the last three years the Cleveland metro's per capita income, when adjusted for inflation and cost of living, increased from $44,109 to $47,631: the fifth biggest increase in the nation, behind Silicon Valley, Houston, Oklahoma City, and Nashville[6].

Though far more nascent, the shift is beginning in Cleveland's city proper also. Figure 2 charts the adult population totals of three geographies from 2000 to 2013: the City of Cleveland, the suburbs of Cuyahoga County, and the Cleveland MSA minus Cuyahoga County. Note Cleveland proper's adult population decreased primarily from 2000 to 2006, yet the totals have remained stable from 2006 to 2013, a decrease of only 0.3%. To understand why, another slice of the data is needed.

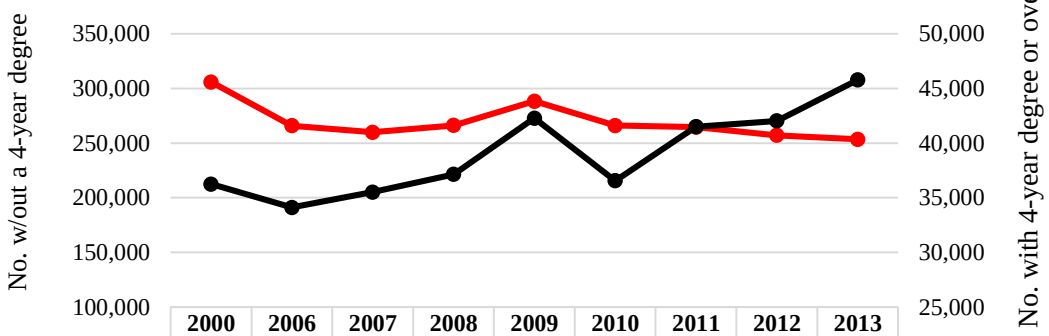
Figure 2: Total Population 18 and Over, 2000 to 2013
Source: ACS 1-Year, 2000 Census



[2] See: http://www.nber.org/papers/w10166
[3] Source: Census 2000, ACS 1-Year, 2006 to 2013
[4] See: http://www.cleveland.com/datacentral/index.ssf/2009/03/metro_cleveland_is_third_natio.html
[5] Source: ACS 1-Year 2013
[6] http://www.thedailybeast.com/articles/2014/12/07/the-rustbelt-roars-back-from-the-dead.html

Figure 3 shows the City of Cleveland's adult population totals from 2000 to 2013 by educational attainment. The number of Clevelanders without a 4-year degree decreased by 52,472 from 2000 to 2013, with 12,465 of that decrease occurring since 2006. Conversely, the number inner-city residents with a 4-year degree increased by 11,689 since 2006, or by 34%, after a "brain drain" between 2000 and 2006. *The takeaway, here, is that Cleveland's adult population totals have remained stable since 2006 due to an increase in college-educated adults*. As will be detailed in the next section, this increase is the city's "fifth migration".

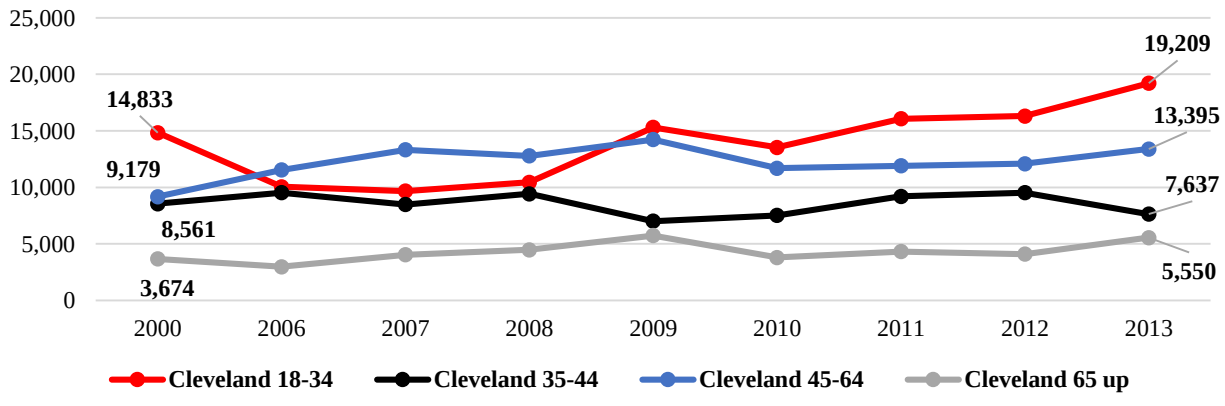
Figure 3: City of Cleveland, Population and Educational Attainment (18 and over), 2000 to 2013. Source: ACS 1-Year, 2000 Census



	2000	2006	2007	2008	2009	2010	2011	2012	2013
Cleveland (no degree)	305,995	265,988	259,987	266,296	288,419	266,110	264,554	257,125	253,523
Cleveland (total ba plus)	36,247	34,102	35,510	37,138	42,282	36,551	41,511	42,031	45,791

For now, it is enough to point out that Cleveland's increase in college-educated adults has been driven by the young, or those aged 18 to 34 (See Figure 4). The group has had a "brain gain" of over 9,000 since 2006, an increase of 91.2%. *This young adult cohort comprises 42% of all inner-city adults with a bachelor's degree or higher.* Note, however, the plateauing of adults aged 35 to 44 with a college degree (minus 924 from 2000 to 2013), which points to the issue of whether or not Cleveland can get young adults to "age in place" as they enter the family-rearing age cohort.

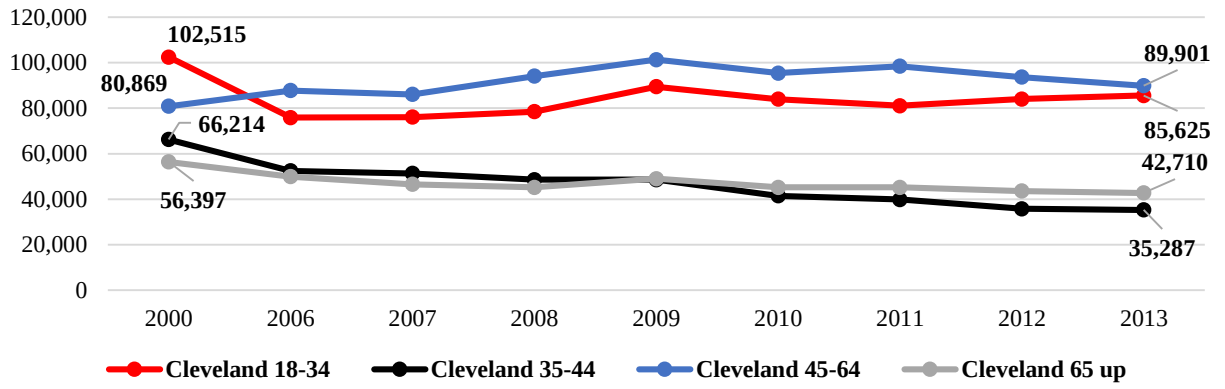
Figure 4: City of Cleveland Bachelor's or Higher by Age, 2000 to 2013 Source: ACS 1-Year, Census 2000



Lastly, Figure 5 charts the population gain and loss for Cleveland residents without a 4-year degree. Only one age cohort in this category (45 to 64) have increased their numbers since 2000. Resident totals for adults aged 35- to 44-years-old, however, have decreased by nearly 31,000, or by 46.7%. This dramatic

decline best represents Cleveland's current "fourth migration" patterns of suburbanization, particularly for minority families seeking aspirational geographies outside of the urban core. This will be further detailed in Section 3 below.

Figure 5: City of Cleveland, No Bachelor's or Higher by Age, 2000 to 2013
Source: ACS 1-Year, 2000 Census



Section 2: A Fifth Migration—From the Urban Crisis to the Urban Core

In 1971, two local Seattle businessmen put up a billboard near the city's airport that read "Will the last person leaving Seattle turn out the lights"[7]. Though tongue-in-cheek, the billboard was meant to capture the mood in Seattle at the time: an ethos of urban crisis sparked by corporate disinvestment (see Boeing) and out-migration. No doubt, this crisis affected cities nationwide. New York City's population bled 800,000 people in the 70s—an era epitomized by the moniker "the Bronx is burning"[8]—whereas Chicago's inner-city totals decreased by 360,000. DC's population dropped by more than 200,000 since its peak. Put simply, urban cores everywhere were "Rust Belt".

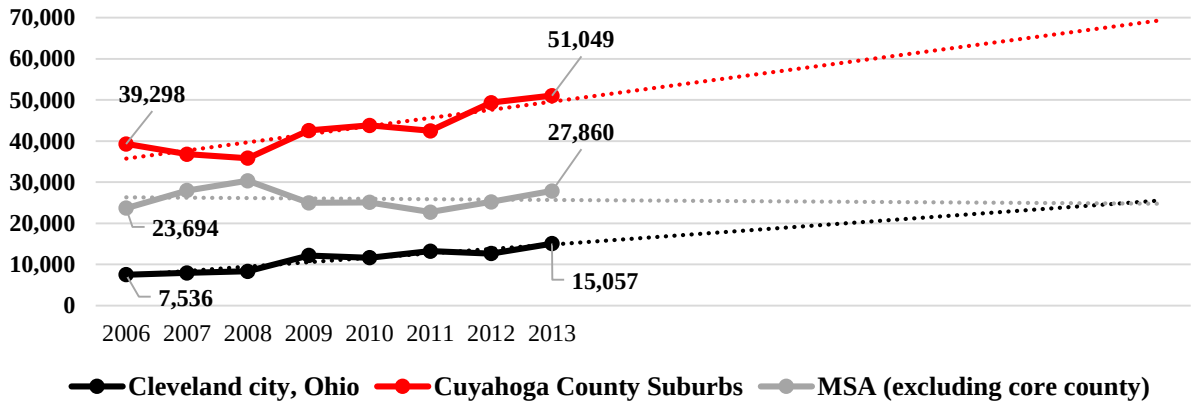
Since the 1990s, however, the crisis has abated. "Clearly something important has changed from the worst days of the urban crisis," writes the author the article "The Fifth Migration"[9], before citing a study which showed that out of the 36 cities that experienced the worst depopulation, 17 have grown in population by 2000, whereas the remainder have a "rate of loss has slowed dramatically since the 1970s".

While the conventional wisdom behind this reversal of fortune in cities is generational—i.e., "it's what Millennials want"—the truth is more complex. In an analysis comparing where young adults lived in 2000 to where they live in 2013, the results showed that "25- to 34-year-olds [today] are slightly less likely to live in urban neighborhoods than 25- to 34-year-olds in 2000"[10]. However, college-educated Millennials, which make up 32% of the group, are more likely to live in the inner city compared to their counterparts in 2000. This is particularly the case for high-density urban neighborhoods. Here, the number of college-educated Millennials living in high-density neighborhoods increased by 17%.

How does this "fifth migration" profile play out in Cleveland? In what neighborhoods is it occurring, or will likely to occur?

[7] See: http://mynorthwest.com/11/2396874/Turn-out-the-lights-Remembering-the-Boeing-bust-billboard
[8] See: http://nypost.com/2010/05/16/why-the-bronx-burned/
[9] See: http://www.tandfonline.com/doi/pdf/10.1080/01944360508976706
[10] See: http://fivethirtyeight.com/features/why-millennials-are-less-urban-than-you-think/

Figure 5: No. of College-Educated 25- to 34-Year Olds, 2006 to 2013 (with Projection to 2023). Source: ACS 1-Year



Since 2006, the number of college-educated 25- to 34-year-olds living in Cleveland proper has increased by 99.8%, compared to a 29.9% increase for Cuyahoga County suburbs, and a 17.6% increase for the Cleveland metro counties of Lorain, Geauga, Medina, and Lake (see Figure 5). *During that time, the percentage of young adults with a bachelor's or higher in Cleveland has gone from 15.4% to 26.2%.* If the current growth rates remain, the number of college-educated 25- to 34-year-olds in Cleveland would surpass the totals in the region's "sprawl" counties within 10 years (see dotted line in Figure 5). Such a paradigm shift is significantly altering Cleveland's landscape as we know it.

"Home prices up across most of Cleveland, strongest in Edgewater, Tremont, Central, Kamm's Corners," reads a recent analysis charting median home sale prices in Cleveland[11]. Here exist the echoes of Boston, in which growth is less a reflection of total population, but rather of real estate appreciation arriving with college-educated households. That said, note the majority of the region's college-educated young adults remain in the suburbs of Cuyahoga County (See Figure 5), suggesting that the "death" of Cleveland's inner-ring suburbs has been prematurely proclaimed.

Now, where are these young and educated adults residing in the City of Cleveland? Answering this question involves two components. The first component entails measuring the gain or loss of college-educated adults at the neighborhood level from 2000 to 2013. Such an analysis will show where the inner-city's "brain gain" is happening, regardless of age group.

The second component requires measuring the gain or loss of 25- to 34-year-olds at the neighborhood level from 2000 to 2013. To do this, a technique called a simplified cohort analysis was employed[12]. The methodology entails comparing the number of people in an age cohort in 2000 (e.g., 15- to 24-year-olds) with the number in an age cohort that is 10 years older (e.g., 25- to 34-year-olds). For those areas experiencing a positive difference, there's empirical support of an inflow of new residents.

[11] See: http://www.cleveland.com/datacentral/index.ssf/2015/03/home_prices_up_across_most_of.html

[12] Note: If there are 100 people in a given area in the 15 to 24 age range in 2000, we would expect 100 people in the 25 to 34 age range in 2010, as they have aged 10 years. If, however, there are 500 people in the 25 to 34 age range in 2010, a positive difference of 400 would lend support that a number of young adults moved into a given neighborhood.

With both data points in hand, knowledge of where Cleveland's "fifth migration" is clustering can be *tentatively* ascertained.

Before assessing where young educated adults are migrating into Cleveland, it is useful to identity the city's "brainy" geographies, regardless of growth. Table 1 details Cleveland neighborhoods with the most adults age 18 and over with a bachelor's degree or higher[13]. The list comprises several neighborhood typologies: established periphery neighborhoods (Kamm's, Old Brooklyn, Edgewater, North Shore Collinwood), urban core neighborhoods (Downtown, Cuyahoga Valley, and Detroit Shoreway), and "eds and meds" neighborhoods (University and Buckeye-Shaker Square). Jefferson, a neighborhood adjacent to Kamm's, is also on the list, indicative of either developing or overlooked middle-class reinvestment.

Table 1: Cleveland Neighborhoods with Highest Totals in Adults 18 and Over with a Bachelor's or Higher. Source 2013 5-Year ACS

Community	Total College Graduates (BA or plus), 2013
Kamm's	5,657
Old Brooklyn	3,782
Downtown	3,357
Buckeye-Shaker Square	2,412
Edgewater	1,945
University	1,797
North Shore Collinwood	1,725
Jefferson	1,683
Cuyahoga Valley	1,437
Detroit Shoreway	1,355

Next, Table 2 shows Cleveland's neighborhoods that have had the highest percent gain of college-educated adults from 2000 to 2013 (See Appendix B for total list including suburbs) (See Map 1, page 9). Downtown is the top gainer in the City of Cleveland, and it also has the largest "brain gain" in Cuyahoga County. Reinvested neighborhoods adjacent to Downtown, particularly Ohio City, Tremont, Cuyahoga Valley, and Detroit Shoreway are also gaining in college graduates, reflective of rapid changes "on the ground" in terms of real estate construction and rehabilitation.

Table 2: Cleveland Neighborhoods with Highest Percent Gain in Adults 18 and Over with a Bachelor's or Higher. Source 2000 Census, 2013 5-Year ACS

Community	Total College Graduates (BA or plus), 2000	Total College Graduates (BA or plus), 2013	College Graduates, 2000 to 2013	% Change in College Graduates, 2000 to 2013
Downtown	1407	3357	1,950	138.6%
Cuyahoga Valley	719	1437	718	99.9%
Goodrich-Kirtland Pk	368	735	366	99.5%
Hopkins	129	258	128	98.9%
Ohio City	646	1155	509	78.8%
Tremont	779	1344	565	72.5%
Central	233	327	94	40.4%
Detroit Shoreway	978	1355	377	38.6%
Kinsman	212	288	76	35.9%
Union-Miles	815	1052	237	29.1%
Kamm's	4442	5657	1,214	27.3%
Jefferson	1382	1683	301	21.8%
West Boulevard	1054	1272	218	20.7%
Hough	579	687	108	18.7%

Also note the nascent "brain gain" in neighborhoods running east of Downtown, including Goodrich-Kirtland Park (Asia Town), Hough, and Central—all areas adjacent to the Health Tech Corridor.

[13] Note: For 2013, the analysis uses education and population data at the 5-year census tract-level from the American Community Survey. Data for both suburban municipalities and city neighborhoods were estimated from census tract aggregation, and thus subject to margins of error. That said, totals are estimates as opposed to finite levels, which is important to keep in mind when interpreting the results. Nonetheless, the data is informative when used in an interpretive fashion that emphasizes patterns (i.e., mapping) and trends across time.

These embryonic "fifth migration" geographies are paid less heed than the gentrifying areas of the West Side. From a regional economic standpoint, this is a mistake, particularly when it comes to regional economic development. This will be discussed in Section 4.

Table 3 shows the results of the simplified cohort analysis, or those Cleveland neighborhoods that have seen growth of adults aged 25 to 34 from 2000 to 2013. The table breaks down the components of growth by race. Together, those neighborhoods that experienced both a gain in young adults and in college-educated adults comprise a *tentative* list of "fifth migration" geographies in the City of Cleveland (See Map 2, page 9).

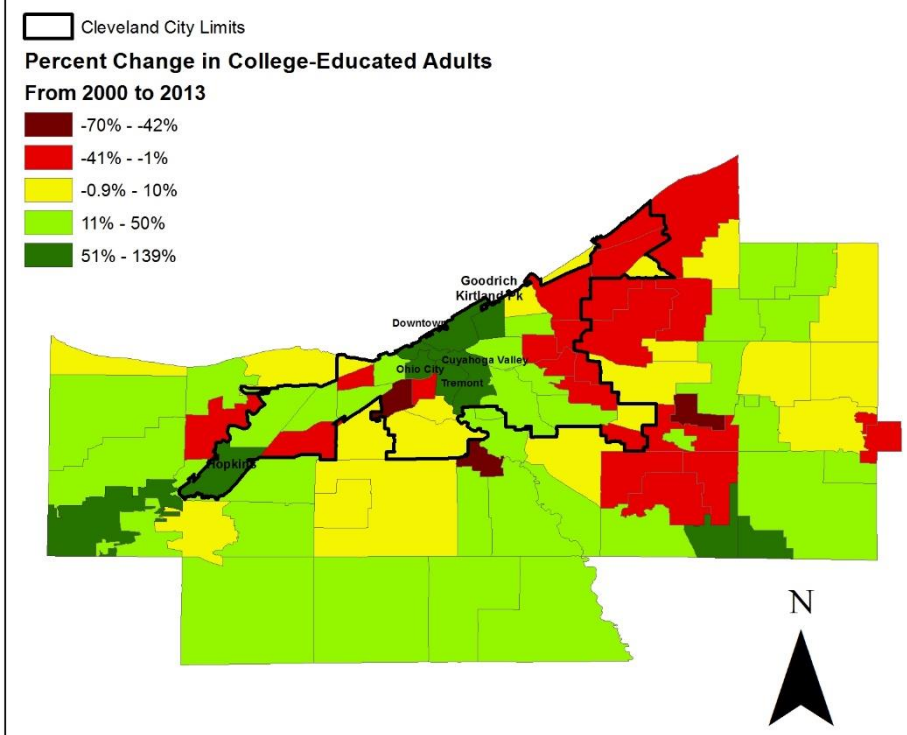
Table 3: Fifth Migration Geographies[1] for the City of Cleveland. Source: 2000 Census, 2013 ACS 5-Year

Community	**25 to 34 Total**	25 to 34 White	25 to 34 Hispanic	25 to 34 Black	25 to 34 Asian	Total Change in College Graduates, 2000 to 2013
Downtown	1,628	1,376	23	-186	415	3,357
Kamm's	1,604	1,314	93	123	74	1,214
Old Brooklyn	1,337	320	478	495	44	139
Edgewater	1,076	893	5	178	0	85
Tremont	718	731	-69	40	16	565
Cuyahoga Valley	519	401	9	72	37	718
Bellaire-Puritas	401	106	245	-3	53	-87
Ohio City	396	363	-78	91	21	509
Jefferson	340	47	23	244	26	301
Goodrich-Kirtland Pk	292	268	48	-20	-4	366
North Shore Collinwood	246	-140	45	316	24	-297
Hopkins	156	104	-6	42	16	128
Brooklyn Centre	100	86	27	-18	5	12
West Boulevard	74	-491	-44	590	19	218
Detroit Shoreway	17	345	-180	-167	19	377

Again, Downtown tops the list, with an influx of whites and Asian Americans driving the growth, offsetting an out-migration of African Americans. The same profile of an influx of whites, and a limited influx of minorities, is also found in other "fifth migration" geographies, particularly Tremont, Ohio City, Goodrich-Kirtland Park, Cuyahoga Valley, and Detroit Shoreway. All of these neighborhoods are within 2 miles of the urban core. Spatially, this is classic globalization.

A different pattern emerges for the outer-urban neighborhoods of Edgewater, Kamm's, Old Brooklyn, Hopkins, Jefferson, and West Boulevard. Here, the in-migration is diversifying the neighborhood, indicating that there are a number of periphery, Cleveland neighborhoods that are aspirational geographies for minority populations. This is also the case for the traditionally blue-collar neighborhood of North Shore Collinwood which—despite having experienced a slight decrease in college-educated adults—is experiencing young adult growth, particularly through minority in-migration. That said, a further delineation of these settlement patterns is important, if only so investment and planning strategies can be effectively created so as to facilitate and leverage a variety of urban flows.

Map 1: Percent Change in Adults with Bachelor's or Higher for Cleveland, Ohio (2000 to 2013)



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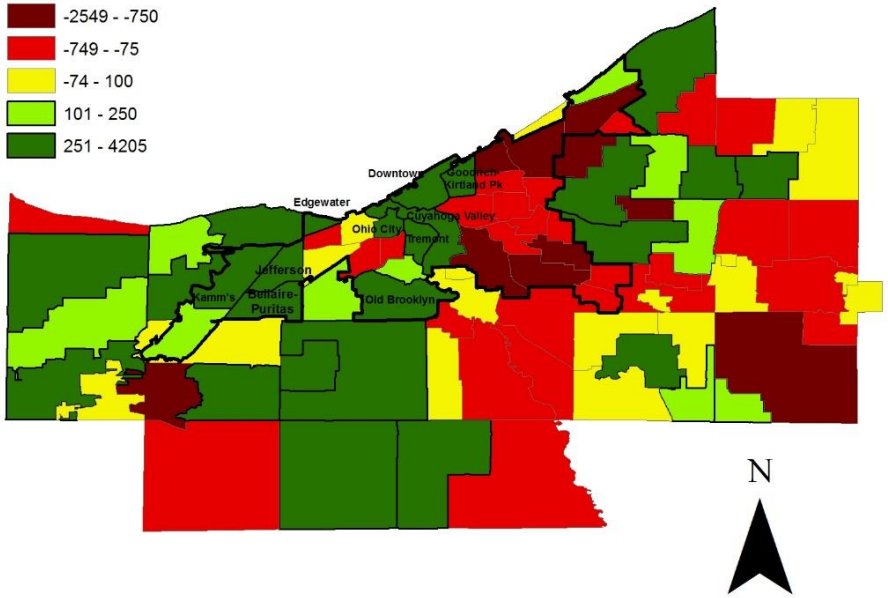
The Center for Population Dynamics

Source: 2000 Census, 2013 5-Year ACS
Created by The Center for Population Dynamics

Map 2: Migration Analysis for 25- to 34-Year-Olds for Cleveland, Ohio (2000 to 2013)



Cleveland State University
The Center for Population Dynamics

Source: 2000 Census, 2013 5-Year ACS
Created by The Center for Population Dynamics

Section 3: Drivers of Migration in Cleveland, Ohio—"Consumer City" Migration

Psychogeography—"the study of the precise laws and specific effects of the geographical environment, consciously organized or not, on the emotions and behavior of individuals."— Guy Debord, writer and philosopher.

In a recent *Cleveland Magazine* piece called "River Crossings", writer Afi-Odelia Scruggs interviews a young African American woman from Euclid who is reversing the course of suburbanization with a move to the Edgewater neighborhood on Cleveland's West Side[14]. Scruggs discusses the "energy that's humming throughout the Detroit Avenue-Clifton Boulevard corridor", and how it's acting as a draw for young migrants.

"I have not discovered any place…that's booming like that," the young woman notes. "The neighbors are out, walking by the patio, speaking. Everyone has a dog," she continues. "That's another requirement: I have to get a dog to live there. I have to run. I have to cycle. I have to do all that."

Simply, the main draw for the young migrant is one of amenities. In academic parlance, this is called "consumer city" migration, which in its most basic sense entails moving into a neighborhood primarily to consume amenities, be it walkability, social connectivity, proximity to retail and nightlife, or more generally a preferred lifestyle. Lifestyle consumption plays a significant role not only for Millennials, but for people of all ages when it comes to reurbanization. It is hypothesized to be a significant driver of urban infill for many of Cleveland's "fifth migration" neighborhoods, particularly Ohio City, Tremont, Detroit Shoreway, and Downtown.

To a certain extent, the fuel for this infill rides on the new "psychogeography" young adults have for the inner city. It is an emotion of place far removed from the institutional memory of the urban crisis, or that Cleveland of the burning river. The likes of Ohio City are, then, new aspirational geographies, particularly for those "fifth migration" migrants reared in the suburbs.

"I remember coming back and driving on the 77 toward Cleveland, and taking a big breath of fresh air," noted a recent Detroit-Shoreway resident and Ohio City bartender on his arrival into the city. The young man was being interviewed for a recent *City Lab* article entitled "The Passion of Young Cleveland", in which the author noted how young Clevelanders "fervent city pride" is palpable[15]. It is a pride rooted in a "love and attachment" to not only "aid in [Cleveland's] change, but to stave off its suffering".

Still, while consumer city migration can have a major impact on the local neighborhood economy (think real estate appreciation in parts of Ohio City), amenity-driven migration is less global than parochial. People who move for amenities are usually making intra-county or intra-regional moves, according to a Census report entitled "Reasons for Moving: 2012 to 2013"[16]—hence the move from Euclid to Edgewater in the example above. This is not to discount consumer city migration flow, for it has the potential to "shake up" longstanding patterns of segregation and concentrated urban poverty, both of which are strongly related to regional economic growth, particularly income mobility.

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[14] Scruggs, A. 2014, October. "River Crossings". *Cleveland Magazine*.
[15] See: http://www.citylab.com/design/2013/11/passion-young-cleveland/7486/
[16] See: https://www.census.gov/prod/2014pubs/p20-574.pdf

"I wish I can pick up Cuyahoga County and shake it", said an official from the Federal Reserve Bank of Cleveland recently, referring to the effect demographic "churn" has on a geography's network.

Increasingly, such wishful thinking is being played out. "Upwardly mobile millennials and Gen-Xers see the Cuyahoga River for what it really is: just a body of water," continues Scruggs in *Cleveland Magazine*. This psychogeographic "freedom" is slowly breaking down Cleveland's historical divides, be it East/West or suburban/urban.

This is evident in the data. Specifically, Table 3 charts the highest growth neighborhoods by race and ethnicity for the City of Cleveland from 2000 to 2013. The results were compiled from the simplified cohort analysis by summing the gains by age cohort for those aged 15 to 64. The results are surprising, indicative of migration shifts that are counter to historical settlement patterns.

For instance, the highest white growth areas (in addition to Downtown) are largely on the East Side of Cleveland, including University Circle, Central, Glenville, Hough, Goodrich-Kirtland Park (see Map 3, page 14); whereas the highest black growth areas are on the West Side of Cleveland, including Old Brooklyn, West Boulevard, Jefferson, Cudell, Edgewater, Kamm's, Bellaire-Puritas, and Stockyards (see Map 4). Asian American migration in the inner city is clustered in the city's "eds and meds" geographies (Downtown, University Circle, Shaker Square, Hough) and in periphery neighborhoods (Kamm's, Collinwood, Old Brooklyn, and West Boulevard) (See Map 5, page 15), while Hispanic growth areas are largely in periphery neighborhoods on the City's southern and southwestern edge (See Map 6).

Table 3: Highest Growth Neighborhood by Race (Age 15 to 64). Source: Census 2000 and 5-Year ACS 2013

Neighborhood	**White**	Neighborhood	**Black**	Neighborhood	**Asian**	Neighborhood	**Hispanic**
Downtown	2,665	Old Brooklyn	1,993	Downtown	473	Old Brooklyn	1,527
University	808	Boulevard	1,756	Kamm's	389	Jefferson	662
Hopkins	650	North Shore Collinwood	703	University	369	Kamm's	622
Kamm's	630	Jefferson	598	North Shore Collinwood	203	Bellaire-Puritas	507
Central	568	Cudell	574	Old Brooklyn	201	University	302
Tremont	467	Edgewater	477	West Boulevard	197	Central	229
Glenville	316	Kamm's	394	Buckeye-Shaker Square	128	Buckeye-Shaker Square	213
Union-Miles	233	Bellaire-Puritas	289	Jefferson	124	Downtown	204
Hough	206	Stockyards	215	Clark-Fulton	85	Kinsman	164
Goodrich-Kirtland Pk	185	Goodrich-Kirtland Pk	198	Hough	82	North Shore Collinwood	155

Also, when examining the maps of minority migration, the patterns of suburbanization, or "fourth migration", are evident. For instance, the highest rates of depopulation are in the historic, urban core neighborhoods, particularly Ohio City, Tremont, Clark-Fulton, and Stockyards for Hispanics, and the East Side of Cleveland for African Americans. Note, though, the growth areas are clustered in "upward mobility" routes going south and southwest for Hispanics, and southeast and west for blacks. In all, these "fourth migration" patterns are another type of "consumer city" migration, though instead of lifestyle consumption, the draw is more family-oriented, related to bigger housing and better schools.

The rapid suburbanization of minorities is national according to a new study that charted the migration patterns of Americans from 1950 to 2010[17]. "We find evidence of continuing Hispanic deconcentration towards more rural (and predominantly white) Suburban, Small Metro, and Nonmetro counties from the 1990s to the 2000s coupled with increasing population deconcentration among Blacks," the authors conclude. The study goes on to state the minority outmigration is driven primarily by families with children, before concluding that the "combination of increased minority migration to predominately White areas and a slower net outflow of Whites from Cores with large minority populations is likely to reduce segregation".

This "outward" and "upward" pattern is starkly evident when examining the migrations for Clevelanders aged 35 to 44. Migration into Cleveland proper for middle-aged adults is stalled, with the high growth areas all clustered in the outer-ring Cuyahoga County suburbs, particularly Solon, Strongsville, Olmsted Township, Westlake, and Independence: the county's top "fourth migration" geographies (See Table 4 and Map 7, page 16). Past research has shown these "fourth migration" patterns are significant in the exurban counties as well, particularly Medina and Lorain[18]. As was discussed in Section 1, it is the out-migration of this family-rearing cohort—with children in tow—that are driving the population losses in Cleveland.

Again, Cleveland is not alone. Inner cities across the nation struggle at either

Table 4: Fourth Migration Geographies for Cuyahoga County. Source Census 2000 and 5-Year ACS 2013

Community	**35 to 44 Total**	35 to 44 White	35 to 44 Hispanic	35 to 44 Black	35 to 44 Asian
Solon	1,494	783	87	166	458
Strongsville	1,221	658	240	131	192
Olmsted Township	1,080	949	10	72	49
Westlake	984	708	96	71	109
Independence	615	615	0	0	0
Brecksville	608	576	9	-3	26
Beachwood	503	195	13	55	239
Bay Village	472	447	13	12	0
Highland Heights	444	311	84	-1	51
Rocky River	443	280	69	94	70
Neighborhoods with fastest rate of outmigration for 35- to 44-year olds.					
Downtown	-802	-287	44	-519	-39
Detroit Shoreway	-894	-622	-223	-77	28
Old Brooklyn	-1,040	-1,817	410	347	19
Collinwood-Nottingham	-1,077	-437	0	-662	23
University	-1,238	-707	13	-120	-325
Union-Miles	-1,368	71	24	-1,264	1
Euclid	-1,319	-2,301	79	835	68
Buckeye-Shaker Square	-1,364	-375	17	-959	-47
Parma	-1,377	-1,895	400	165	-47
East Cleveland	-1,415	14	52	-1,481	0
Mount Pleasant	-1,469	10	0	-1,479	0
Glenville	-1,705	17	12	-1,744	10
Broadway-Slavic Village	-2,162	-1,889	-68	-209	3
Cleveland Heights	-2,606	-2,309	95	-371	-21
Lakewood	-4,496	-4,842	155	497	-6

[17] See: http://www.demographic-research.org/volumes/vol32/38/
[18] See: http://blog.case.edu/msass/2013/02/14/Briefly_Stated_No_13-02_Mapping_Human_Capital.pdf

attracting or retaining middle-aged residents, be they existing residents or "fifth migration" migrants[19]. Naturally, schooling is the top concern. Notes a recent *Philadelphia* magazine feature[20]:

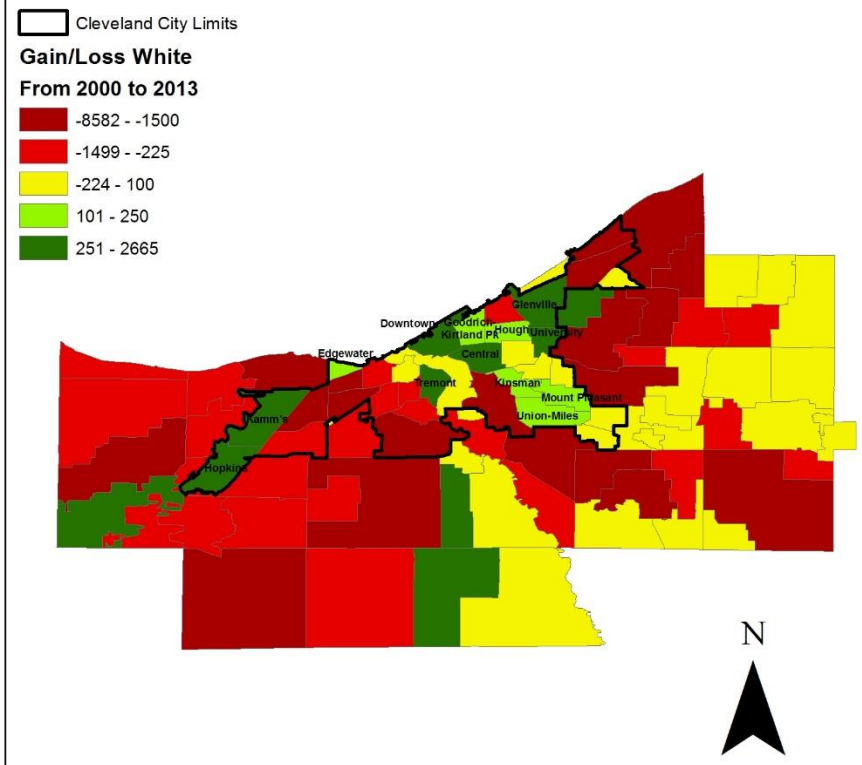
"When the whole of Philadelphia was in decline, low-quality schools were part of a bleak panorama of urban misery, just one more failed institution in a patchwork of violence and blight and poverty. But now—with the city growing, with the murder rate plummeting, with eds and meds booming—the schools stand out as probably the single biggest obstacle to further redevelopment and recovery. At best, underperforming schools will sabotage and slow Philadelphia's tenuous resurgence. At worst, the school system could stop Philadelphia's revival in its tracks, or even hurl the city back toward the abyss."

To some extent, the rebuilding of Cleveland's public school system is a "chicken and egg" process; that is, continued middle class growth in the city is dependent on quality schools, but quality schools are a product of the city, especially its politics and socioeconomics. This, then, is another byproduct of migration, for it brings with it a subset of "newness" that has the capacity to disrupt longstanding patterns of inertia that have affected Cleveland's public institutions. Rust Belt scholar Alan Mallach has referred to these organizational leanings as "path dependency", noting that it is particularly virulent in cities like Cleveland that have lacked robust in-migration found in other regions of the country[21].

As was discussed in Section 1, however, this in-migration is a result of macroeconomic forces, dependent on the extent to which emerging industries are growing and thus attracting a high-skilled workforce. Enter the concept of "producer city" migration. It is the "juice" that makes Cleveland's economy "run".

[19] See: http://www.demographic-research.org/volumes/vol32/38/
[20] See: http://www.phillymag.com/articles/philadelphia-school-crisis-city-brink/#LzgVjEuUKywKyhMS.99
[21] See: http://www.lincolninst.edu/pubs/2215_Regenerating-America-s-Legacy-Cities

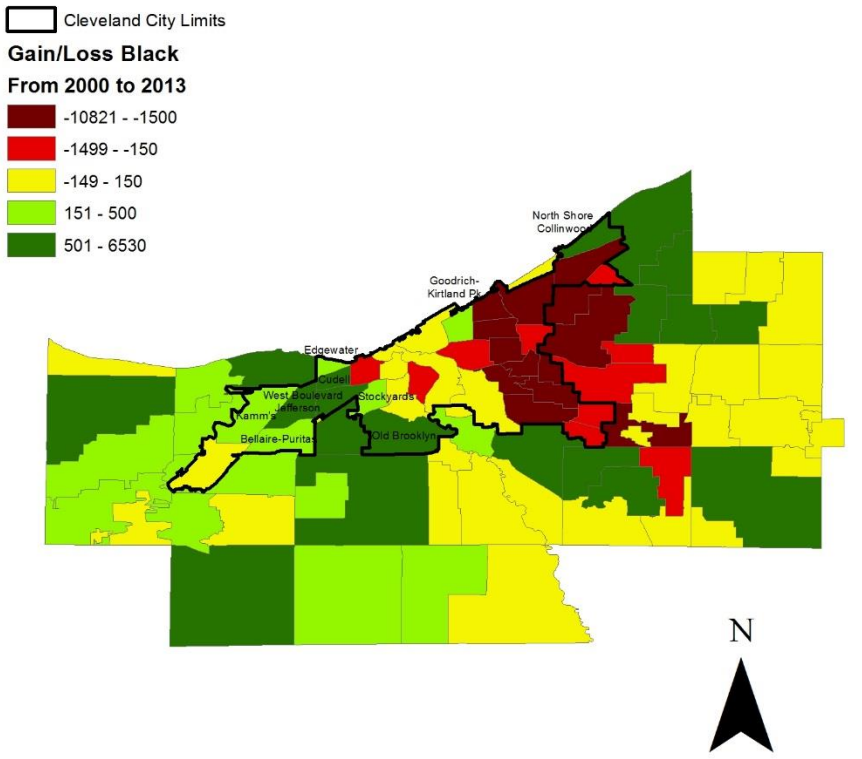
Map 3: Migration Analysis for Whites (Aged 15 to 64) for Cleveland, Ohio (2000 to 2013)



Source: 2000 Census, 2013 5-Year ACS
Created by The Center for Population Dynamics

Cleveland State University
The Center for Population Dynamics

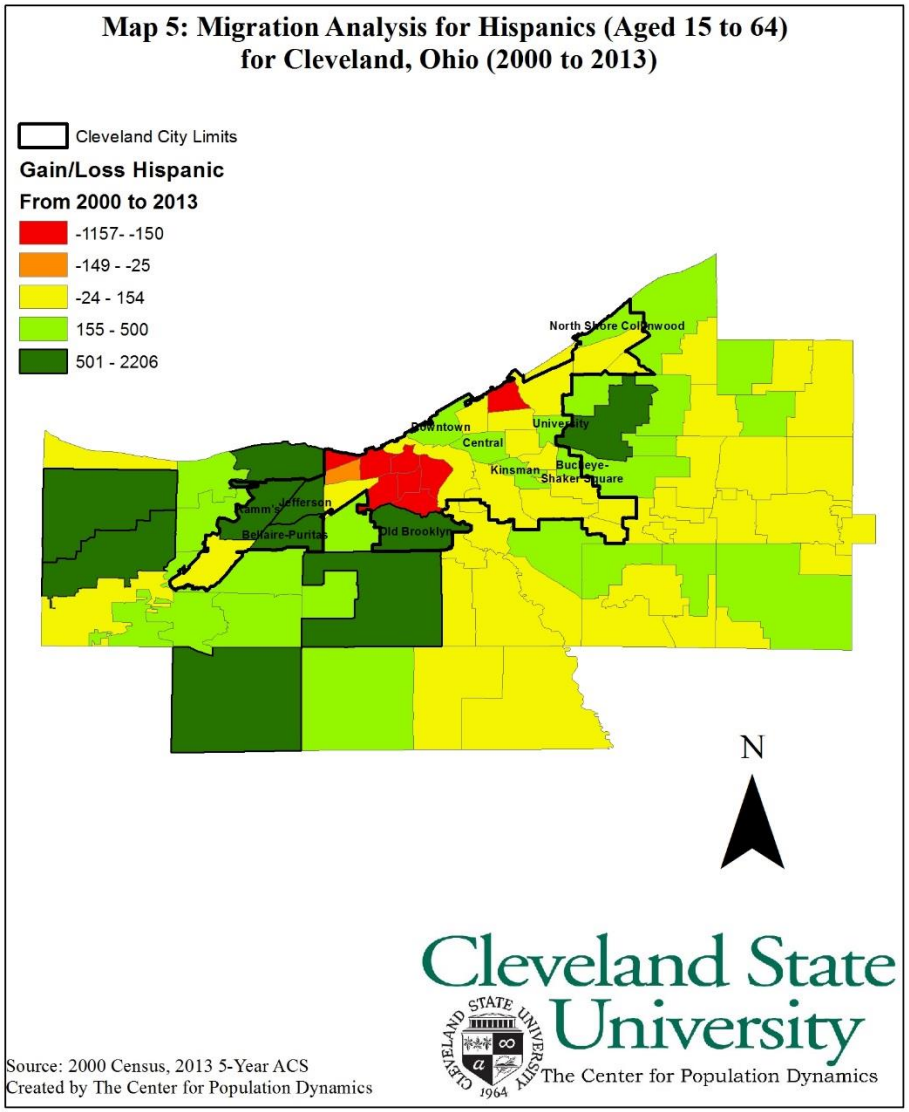
Map 4: Migration Analysis for Blacks (Aged 15 to 64) for Cleveland, Ohio (2000 to 2013)



Source: 2000 Census, 2013 5-Year ACS
Created by The Center for Population Dynamics

Cleveland State University
The Center for Population Dynamics

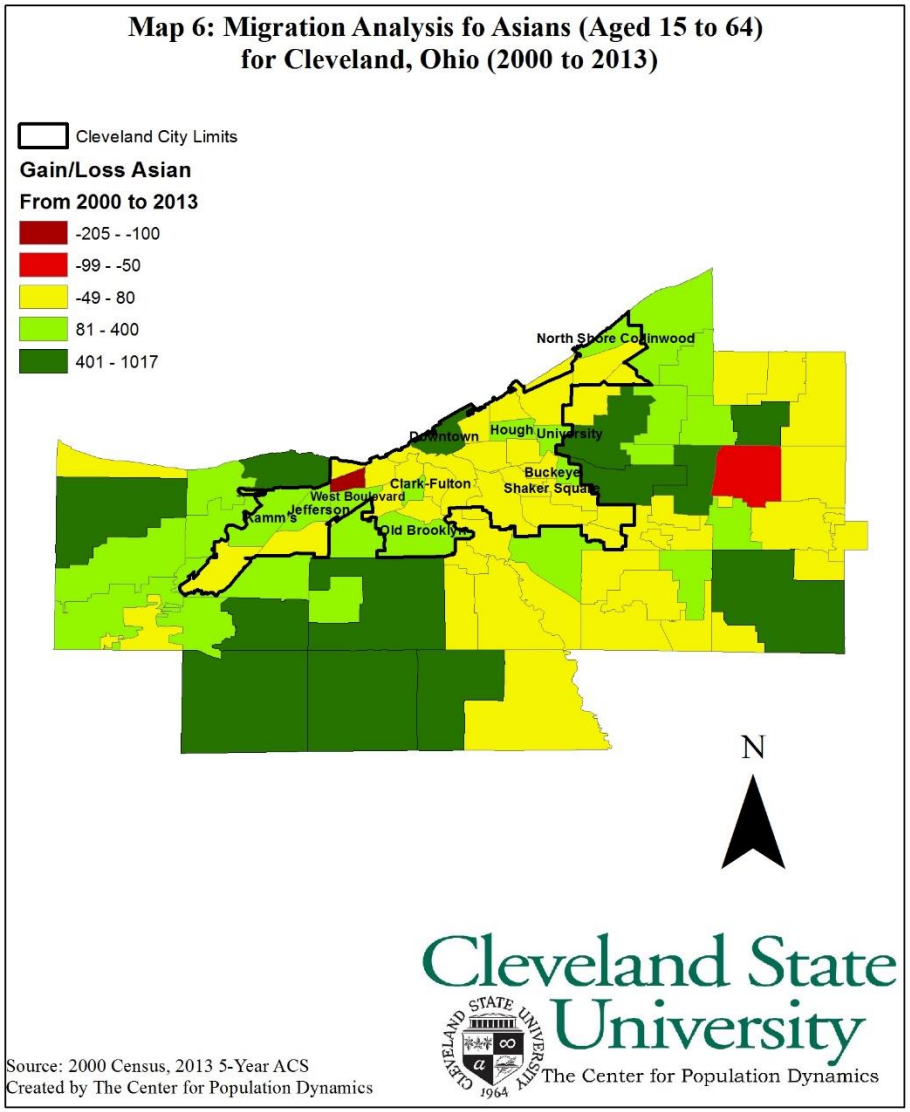
Map 5: Migration Analysis for Hispanics (Aged 15 to 64) for Cleveland, Ohio (2000 to 2013)



Source: 2000 Census, 2013 5-Year ACS
Created by The Center for Population Dynamics

Cleveland State University
The Center for Population Dynamics

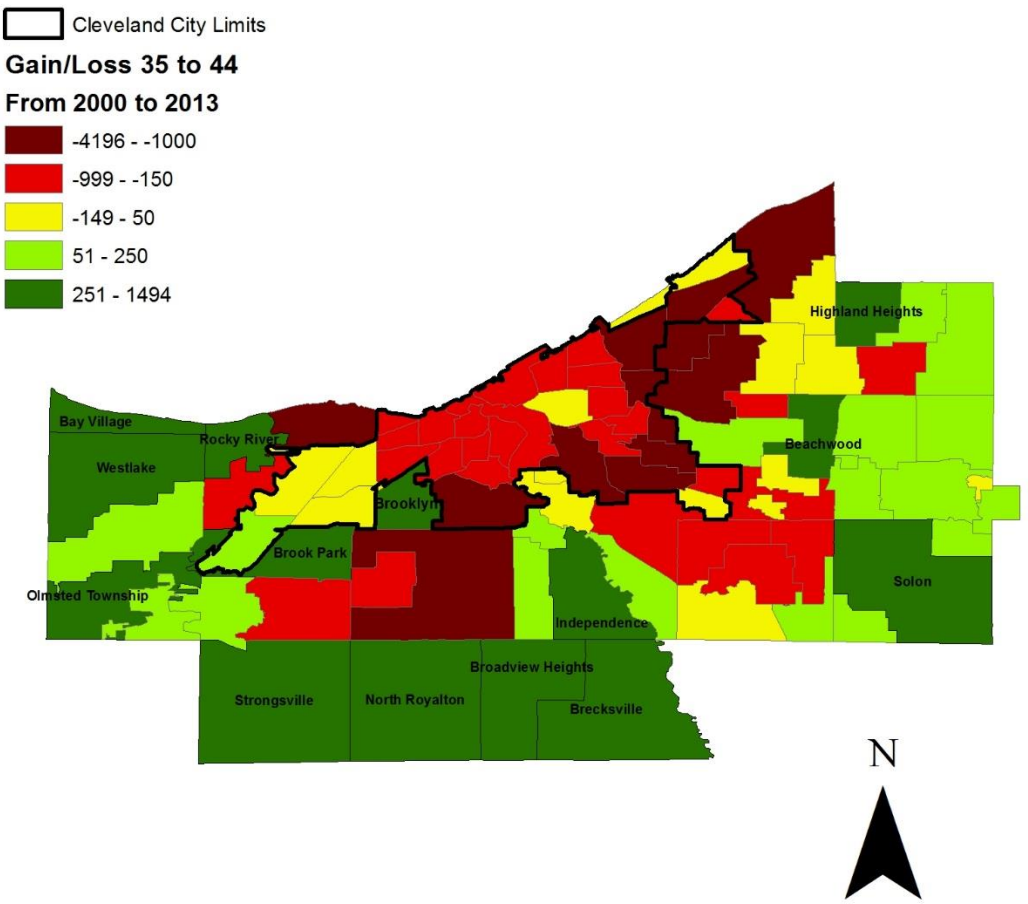
Map 6: Migration Analysis fo Asians (Aged 15 to 64) for Cleveland, Ohio (2000 to 2013)



Source: 2000 Census, 2013 5-Year ACS
Created by The Center for Population Dynamics

Cleveland State University
The Center for Population Dynamics

Map 7: Migration Analysis fo 35- to 44-Year-Olds for Cleveland, Ohio (2000 to 2013)



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The Center for Population Dynamics

Source: 2000 Census, 2013 5-Year ACS
Created by The Center for Population Dynamics

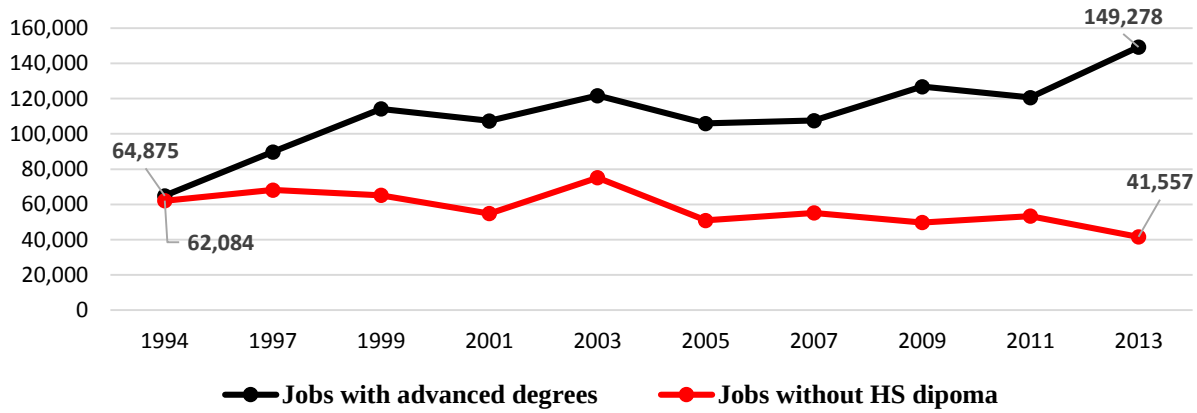
Section 4: Drivers of Migration in Cleveland, Ohio—"Producer City" Migration

If amenity migration is one of short distances, the move for a job, or "producer city" migration, is one of long distances. "Job-related reasons were most common among long distance moves," notes the Census[22]. That's particularly true for people with a professional or graduate degree, with 35.2 percent reporting job-related reasons for moving.

Why are educated people more likely to move longer distances? Simply, the more expertise a job requires, the higher likelihood the demand cannot be met locally. This is evident in Cleveland's healthcare sector. "This is something you see very readily in the corridors of the Cleveland Clinic," said Giovanni Piedimonte, the Sicily-born chief of the Cleveland Clinic Children's Hospital[23]. "There's people from all over the world in white coats."

Increasingly, Cleveland's emergence as a global player in healthcare innovation, education, and delivery is creating a cluster economy that is catalyzing "producer city" migration into the region, particularly for individuals with advanced degrees. Figure 6 details this job growth. In 1994, the metro had approximately the same number of jobs for those without high school diplomas and those with advanced degrees. Then, the regional job profile becomes more skilled, reflective of Cleveland's repositioning in the knowledge economy. In fact, the Cleveland metro is 10th in the nation in the percentage of the workforce (17%) with a graduate or professional degree, up from 22nd place in 2005[24]. The region ranks 8th in the nation in the percentage of 25- to 34-year-olds with an advanced degree[25]. Too, 21.2% of the metro's immigrants have a graduate or professional degree, trailing only Pittsburgh, Silicon Valley, Baltimore, and St. Louis[26]. Half of Greater Clevelanders with graduate or professional degrees are employed in the "eds and meds"[27].

Figure 6: High- Versus Low-Skilled Job Growth in Cleveland Metro. Source: Current Population Survey (1994 to 2013)



Where are Cleveland's "producer city" migrants living? Why does it matter?

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[22] See: https://www.census.gov/prod/2014pubs/p20-574.pdf
[23] See: http://www.cleveland.com/business/index.ssf/2015/01/clevelands_immigrant_advantage.html
[24] See: http://engagedscholarship.csuohio.edu/urban_facpub/1190/
[25] See: http://engagedscholarship.csuohio.edu/urban_facpub/1177/
[26] See: http://engagedscholarship.csuohio.edu/urban_facpub/1264/
[27] See: http://engagedscholarship.csuohio.edu/urban_facpub/1279/

Where high-skilled migrants are clustering will be explored below. Why this information matters is due to the fact that "producer city" geographies are centers of globalization. They are the "tip of the spear" in Cleveland's economic restructuring and should be strategically addressed. Specifically, just as the field of "placemaking" is continuously used to grow "consumer city" migration into select neighborhoods (think arts as revitalization tool in the Gordon Square Arts District), a parallel intervention of "people-making" can be done in "producer city" neighborhoods, with the intent to leverage knowledge migrants beyond their purchasing power, but rather through networking components that can "ripen" the region for internationalization, knowledge transference, and industry innovation.

There is some research that illustrates long-distance migrants disproportionately locate in a metro's core county, indicative of "fifth migration"-type patterns. In a migration analysis of the Atlanta metro, the author found that DeKalb County—the county seat of Atlanta—had an interstate migration flow that was 60% larger than the region's "sprawl" counties[28]. This tells us something interesting," the author writes, "out-of-state people are moving into the core, and core residents are moving to the [exurban] suburbs."

This is what is occurring in Cleveland. Table 5 details the census tracts (and corresponding neighborhoods) that have gained the most out-of-state migrants from 2008 to 2012. Downtown and University Circle had the most "producer city" migrants in Cleveland proper, while Cleveland Hts. saw the highest in-migration of out-of-state movers in the suburbs. Importantly, Map 8 illustrates the densities for these producer city migrations cluster within—and in proximity to—Cleveland's Health Tech Corridor, suggestive of knowledge worker settlement around Cleveland's anchor institutions.

Table 5: Top Areas Receiving Out-of-State Migrants 2008-2012. Source 2012 5-Year ACS

Census Tract	Neighborhood/City	Total
39035107802	Downtown	569
39035118800	University Circle	536
39035118700	University Circle	517
39035173106	Middleburgh Hts.	450
39035141300	Cleveland Hts.	422
39035140800	Cleveland Hts.	366
39035184108	Solon	348
39035131104	Beachwood	337
39035141100	Cleveland Hts.	335
39035160601	Lakewood	291
39035178204	Parma Hts.	291
39035183100	Shaker Hts.	289
39035107101	Downtown	283
39035187105	University Hts.	282
39035178102	Parma Hts.	242
39035107701	Downtown	237
39035172103	Mayfield Hts.	235
39035187106	Univeristy Hts.	232
39035105400	Brooklyn Centre	231
39035186106	Strongsville	230

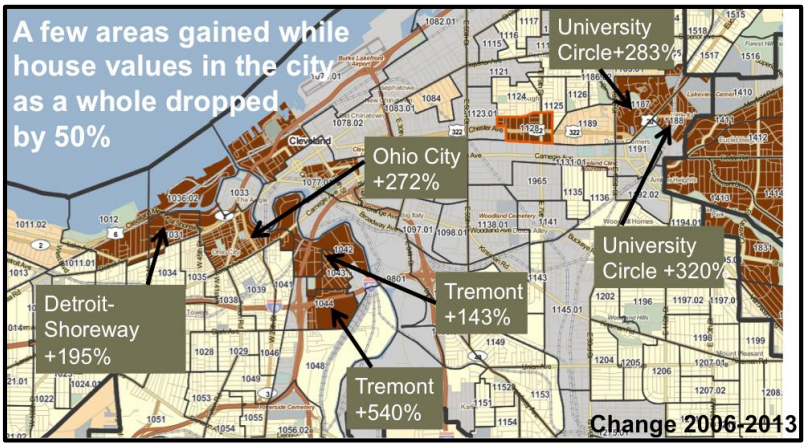
This same "producer city" geography is prevalent when examining what neighborhoods are experiencing the fastest rate of growth in the number of residents with advanced degrees. Not surprisingly, Cleveland's urban core is seeing the largest growth of the most highly-educated, particularly Goodrich-Kirtland Park, Downtown, Cuyahoga Valley, Tremont, and Ohio City (see Table 6). Also of interest is the East Side neighborhood of Hough. Known mainly as community of "black flight", Hough is situated in an increasingly key geography in the heart of the Health Tech Corridor: the region's central innovation district (see Map 9, page 20). One can argue that Hough—along with Glenville, Fairfax, and Central—will be key geographies in Cleveland's economic restructuring, primarily due the proximity to Cleveland's "eds and meds" economy.

[28] See: https://medium.com/migration-issues/mapping-migration-in-atlanta-4632a4c6ff6e

At its most basic level, then, what is occurring is select isolate communities are becoming spatially integrated into global networks. The "lifeblood" of global networks is migration, particularly "producer city" migration which is providing the labor supply for emerging industries (e.g., healthcare innovation and health knowledge production). Again, however, community strategies should be implemented in these geographies so that intellectual capital can be networked, multiplied, and thus leveraged to spur even more emerging industry demand.

Table 6: Neighborhoods with Fastest Rate of Growth for Residents with Advanced Degrees, Source: 2000, Census and 2013 5-Year ACS

Community	Advanced Degree Population 2013	Total Change in Advanced Degree, 2000 to 2013	Percent Change in Advanced Degree, 2000 to 2013
Goodrich-Kirtland Pk	458	309	207.0%
Downtown	1317	828	169.2%
Cuyahoga Valley	616	379	159.3%
Jefferson	626	364	138.7%
Tremont	591	331	127.6%
Lee-Seville	155	78	100.4%
Ohio City	456	228	100.0%
Hough	331	146	79.0%
Euclid-Green	195	79	68.3%
Kamm's	1782	633	55.1%



Source: Alan Mallach

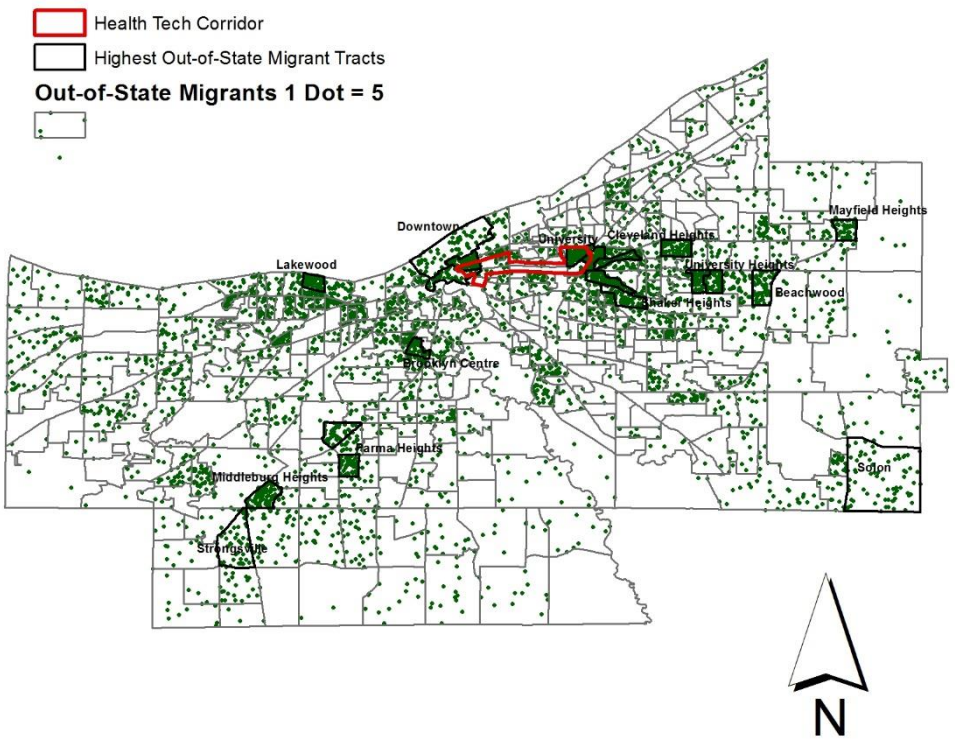
To that end, the academic literature on the importance of networks in "neighborhoods of knowledge" is robust. "Knowledge, once created, spills over within geographically-bounded regions vis-à-vis localized networks," notes the author of a recent study examining the effects of social networks on economic growth. "Spillovers, in turn, provide the seed corn for entrepreneurs and innovators who often have few formalized R&D resources of their own. This localized 'knowledge production' function has long been used to explain the sustained entrepreneurial cultures of California's Silicon Valley and Boston's Route 128".

Now, whether existing residents will reap the rewards of various "fifth migration" reinvestment is an open—and complicated—question. It is a question, though, that can be boiled down to a few factors, primarily affordable housing policies that need to be put in place **before** the forces of "eds and meds" gentrification are less embryonic. In fact, as noted by Brookings scholar Alan Mallach, areas of Cleveland are already experiencing rapid home value appreciation in various "producer city" geographies, particularly Tremont and University Circle, where increases range from 143% to 540%[29]. Also needed is a "recoupling" of neighborhood residents that have become untethered to global manufacturing and not yet reattached to emerging knowledge markets. Put simply, those with local economy wages will not have the means to pay global neighborhood prices.

Taken together, the increasing challenges that the City of Cleveland will face are in fact the shadows of evolving opportunities. As is evident in the current analysis, a "fifth migration" carrying people, ideas, and investment into the inner city is approaching. The issues are to what extent this infill can be hastened, and whether or not the shadows of inequality are cleared.

[29] See: http://www.cleveland.com/architecture/index.ssf/2015/05/rising_inequality_in_cleveland.html#incart_river

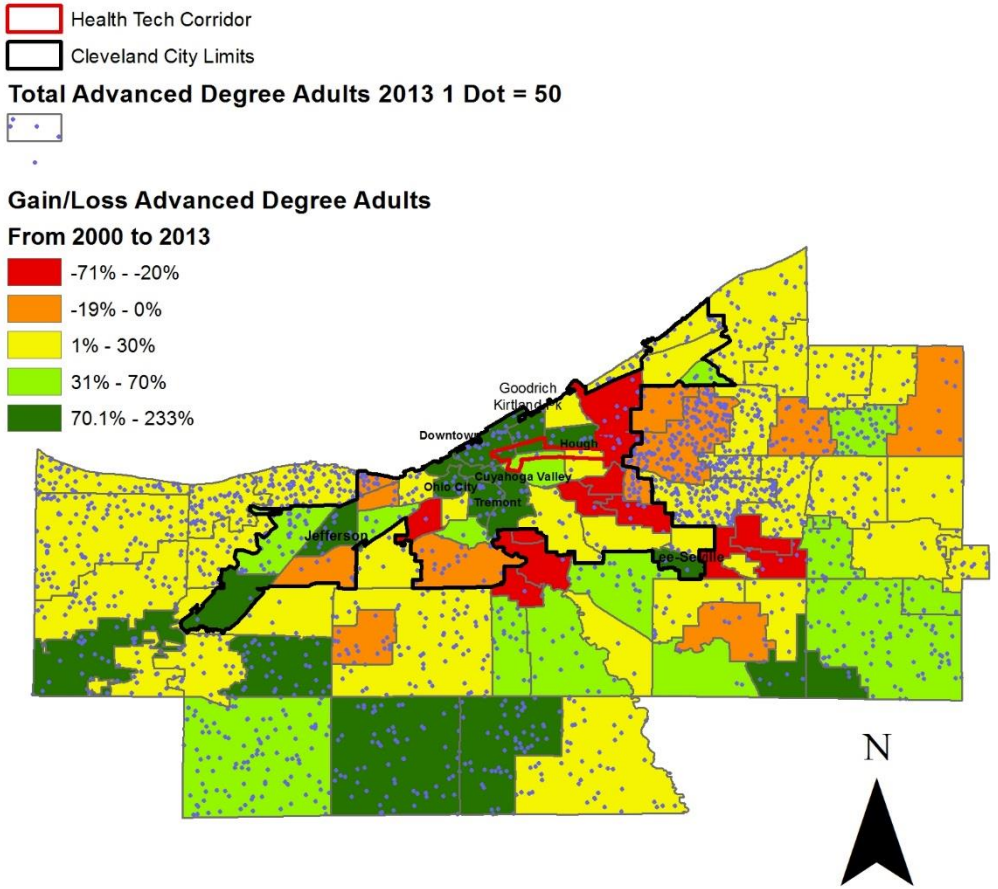
Map 8: Migration Map for Out-of-State Migrants into Cuyahoga County (2008 to 2012)



Source: 2012 5-Year ACS
Created by The Center for Population Dynamics

Cleveland State University
The Center for Population Dynamics

Map 9: Percent Change in Adults with Advanced Degrees for Cleveland, Ohio (2000 to 2013)



Source: 2000 Census, 2013 5-Year ACS
Created by The Center for Population Dynamics

Cleveland State University
The Center for Population Dynamics

Appendix A: Age Cohort Gain or Loss from 2000 to 2013 by City of Cleveland Neighborhood and Cuyahoga County Suburb. Source: 2000 Census, 2013 ACS 5-Year

Community	**15-24 Total**	15-24 White	15-24 Hispanic	15-24 Black	15-24 Asian	**25-34 Total**	25-34 White	25-34 Hispanic	25-34 Black	25-34 Asian	**35-44 Total**	35-44 White	35-44 Hispanic	35-44 Black	35-44 Asian	**45-54 Total**	45-54 White	45-54 Hispanic	45-54 Black	45-54 Asian	**55-64 Total**	55-64 White	55-64 Hispanic	55-64 Black	55-64 Asian
Bay Village	**-1,015**	-1,035	0	9	11	**-89**	-156	43	0	24	**472**	447	13	12	0	**81**	11	0	53	17	**-573**	-613	30	10	0
Beachwood	**-566**	-450	6	-86	-36	**164**	45	0	-54	173	**503**	195	13	55	239	**73**	-45	72	-4	50	**106**	81	19	27	-21
Bedford	**-125**	-653	101	427	0	**406**	-510	11	905	0	**-555**	-897	10	328	4	**-176**	-620	30	385	29	**5**	-352	0	310	46
Bedford Heights	**-84**	-58	25	-65	14	**43**	-43	119	-60	27	**-253**	-230	12	-54	18	**-336**	-119	2	-245	26	**166**	-41	0	189	18
Bellaire-Puritas	**-92**	-204	128	21	-37	**401**	106	245	-3	53	**-60**	-244	108	102	-27	**-3**	-198	6	145	44	**-17**	-103	20	25	40
Bentleyville	**-156**	-172	3	22	-9	**-91**	-105	1	21	-8	**129**	98	5	-6	32	**-13**	-44	6	26	-2	**-10**	-29	0	9	10
Berea	**1,782**	1,241	134	243	163	**-1,354**	-1,401	108	-61	0	**103**	-131	24	154	57	**-1**	-33	28	-15	19	**130**	-53	73	100	10
Bratenahl	**-40**	-34	4	-10	0	**-16**	-16	0	-11	11	**18**	-36	0	40	14	**3**	-1	0	1	3	**34**	27	0	1	6
Brecksville	**-417**	-416	21	5	-27	**-161**	-154	0	11	-18	**608**	576	9	-3	26	**278**	179	30	52	17	**-254**	-266	8	-11	15
Broadview Heights	**193**	6	59	34	94	**586**	338	0	101	147	**315**	5	42	77	191	**490**	320	20	52	98	**410**	364	29	16	1
Broadway-Slavic Village	**-2,375**	-1,797	20	-612	14	**-983**	-1,268	114	170	1	**-2,162**	-1,889	-68	-209	3	**-1,691**	-1,760	12	57	0	**-403**	-870	7	460	0
Brook Park	**184**	-66	106	81	62	**4**	-339	185	132	26	**268**	9	113	91	55	**-132**	-246	38	2	74	**-128**	-200	14	41	18
Brooklyn	**105**	-82	122	12	53	**218**	-291	152	216	141	**407**	32	99	184	92	**-220**	-367	48	86	13	**-78**	-190	4	53	55
Brooklyn Centre	**-304**	-189	-184	45	24	**100**	86	27	-18	5	**-586**	-478	-143	35	0	**-84**	-106	-56	73	5	**-298**	-241	-55	-9	6
Brooklyn Heights	**-4**	-15	11	0	0	**-76**	-80	4	0	0	**74**	72	0	2	0	**8**	7	0	1	0	**-13**	-13	0	0	0
Buckeye-Shaker Square	**-546**	244	80	-887	17	**-159**	74	38	-440	169	**-1,364**	-375	17	-959	-47	**-456**	-61	23	-392	-26	**-537**	-29	55	-578	15
Buckeye-Woodhill	**-848**	7	23	-878	0	**-355**	18	48	-421	0	**-550**	13	27	-590	0	**-293**	7	0	-303	3	**65**	-8	0	73	0
Central	**-135**	327	71	-533	0	**-467**	24	94	-585	0	**-38**	79	33	-162	12	**-113**	77	16	-216	11	**73**	61	14	-2	0
Chagrin Falls Township	**-46**	-48	2	0	0	**-12**	-12	0	0	0	**18**	16	2	0	0	**11**	11	0	0	0	**-15**	-16	0	1	0
Chagrin Falls Village	**-197**	-205	8	0	0	**-49**	-50	0	1	0	**75**	69	6	0	0	**49**	49	0	0	0	**-66**	-69	0	3	0
Clark-Fulton	**-747**	-334	-455	24	18	**-136**	-50	-149	63	0	**-469**	-219	-256	-12	18	**-363**	-208	-180	10	15	**-195**	-136	-117	24	34
Cleveland Heights	**708**	850	223	-833	468	**598**	617	147	-711	545	**-2,606**	-2,309	95	-371	-21	**-1,793**	-1,172	60	-675	-6	**-1,276**	-803	126	-630	31

Community	**15-24 Total**	15-24 White	15-24 Hispanic	15-24 Black	15-24 Asian	**25-34 Total**	25-34 White	25-34 Hispanic	25-34 Black	25-34 Asian	**35-44 Total**	35-44 White	35-44 Hispanic	35-44 Black	35-44 Asian	**45-54 Total**	45-54 White	45-54 Hispanic	45-54 Black	45-54 Asian	**55-64 Total**	55-64 White	55-64 Hispanic	55-64 Black	55-64 Asian
Collinwood-Nottingham	**-1,080**	-173	101	-1,033	25	**-863**	-240	25	-650	2	**-1,077**	-437	0	-662	23	**-778**	-481	2	-300	0	**-560**	-213	1	-359	11
Cudell	**-262**	-414	60	129	-38	**-187**	-232	-41	126	-41	**-487**	-539	-22	111	-38	**-262**	-306	-52	131	-35	**-183**	-222	17	75	-54
Cuyahoga Heights	**-11**	-101	9	79	2	**45**	-8	0	54	0	**-121**	-168	13	18	15	**-1**	-82	6	63	12	**-77**	-82	0	5	0
Cuyahoga Valley	**24**	22	56	-68	14	**519**	401	9	72	37	**-351**	-318	-32	-7	6	**-58**	-122	26	24	14	**-163**	-180	-1	17	1
Detroit Shoreway	**-594**	-407	-229	44	-2	**17**	345	-180	-167	19	**-894**	-622	-223	-77	28	**-389**	-268	-123	-22	24	**-417**	-184	-139	-104	10
Downtown	**2,375**	1,423	114	737	101	**1,628**	1,376	23	-186	415	**-802**	-287	44	-519	-39	**-93**	109	22	-205	-19	**161**	44	2	99	15
East Cleveland	**-2,527**	37	35	-2,602	3	**-1,636**	-25	65	-1,676	0	**-1,415**	14	52	-1,481	0	**-1,293**	85	3	-1,381	0	**-661**	182	27	-879	10
Edgewater	**232**	94	-18	156	0	**1,076**	893	5	178	0	**-453**	-422	-82	48	3	**-382**	-439	-27	79	5	**-2**	5	-35	16	13
Euclid	**-19**	-1,969	116	1,814	19	**447**	-1,264	158	1,531	22	**-1,319**	-2,301	79	835	68	**-81**	-1,940	45	1,776	37	**-409**	-1,109	52	574	74
Euclid-Green	**-375**	1	4	-380	0	**-114**	14	0	-128	0	**-214**	-20	1	-195	0	**-265**	-11	0	-254	0	**-276**	-18	0	-258	0
Fairfax	**-436**	12	7	-458	3	**-467**	12	11	-504	14	**-160**	24	12	-214	18	**-326**	22	6	-354	0	**-71**	18	0	-92	3
Fairview Park	**-136**	-248	104	0	8	**684**	485	146	40	13	**-159**	-277	82	29	7	**-185**	-390	53	89	63	**-181**	-275	61	16	17
Garfield Heights	**-87**	-1,147	82	931	47	**-165**	-911	63	637	46	**-444**	-1,441	60	921	15	**-212**	-1,202	93	851	45	**-339**	-605	40	164	62
Gates Mills	**-162**	-165	0	3	0	**-22**	-28	6	0	0	**54**	17	0	31	6	**126**	91	20	0	15	**-2**	-11	0	0	9
Glenville	**-3,038**	131	45	-3,242	28	**-2,550**	55	-2	-2,622	20	**-1,705**	17	12	-1,744	10	**-1,724**	80	29	-1,833	0	**-1,322**	33	18	-1,379	8
Glenwillow	**3**	-15	29	-15	4	**139**	101	42	-6	2	**64**	-30	0	78	16	**34**	-31	14	40	10	**15**	8	0	5	2
Goodrich-Kirtland Pk	**243**	56	1	146	40	**292**	268	48	-20	-4	**-248**	-112	-31	-10	-96	**170**	-44	53	50	111	**-6**	17	-10	33	-46
Highland Hts	**-78**	-142	70	11	-16	**-300**	-308	13	9	-13	**444**	311	84	-1	51	**145**	107	28	0	10	**42**	3	23	6	9
Highland Hills	**221**	66	11	144	0	**-287**	-117	7	-179	1	**-61**	-12	3	-51	0	**-65**	-48	6	-22	0	**-72**	-35	0	-38	1
Hopkins	**60**	89	32	-74	13	**156**	104	-6	42	16	**184**	173	31	-15	-5	**170**	137	10	10	13	**182**	147	14	19	3
Hough	**-1,005**	11	7	-1,029	6	**-548**	54	26	-649	22	**-245**	83	15	-383	40	**-212**	25	18	-255	0	**157**	34	15	93	14
Hunting Valley	**-49**	-72	25	-8	5	**-129**	-120	0	-8	-1	**152**	120	11	0	21	**91**	54	19	-5	23	**-6**	4	0	-8	-2
Independence	**-323**	-330	0	7	0	**-323**	-340	17	0	0	**615**	615	0	0	0	**-90**	-109	5	14	0	**0**	-2	0	2	0
Jefferson	**-548**	-794	185	3	57	**340**	47	23	244	26	**-115**	-606	289	200	4	**-634**	-951	94	173	51	**-373**	-409	71	-20	-14
Kamm's	**-53**	-218	91	-37	111	**1,604**	1,314	93	123	74	**-147**	-443	195	104	-3	**-18**	-379	164	45	153	**648**	356	79	160	53

Community	**15-24 Total**	15-24 White	15-24 Hispanic	15-24 Black	15-24 Asian	**25-34 Total**	25-34 White	25-34 Hispanic	25-34 Black	25-34 Asian	**35-44 Total**	35-44 White	35-44 Hispanic	35-44 Black	35-44 Asian	**45-54 Total**	45-54 White	45-54 Hispanic	45-54 Black	45-54 Asian	**55-64 Total**	55-64 White	55-64 Hispanic	55-64 Black	55-64 Asian
Kinsman	**-1,086**	43	42	-1,171	0	**-629**	89	87	-805	0	**-613**	6	34	-654	0	**-360**	32	0	-392	0	**-133**	11	0	-148	4
Lakewood	**329**	-537	235	538	93	**4,205**	2,931	369	689	216	**-4,196**	-4,842	155	497	-6	**-1,797**	-2,480	177	457	49	**-1,126**	-1,574	111	221	116
Lee-Harvard	**-274**	7	13	-294	0	**-400**	24	2	-426	0	**-168**	1	1	-170	0	**48**	26	27	-4	0	**82**	10	0	72	0
Lee-Seville	**-76**	7	38	-129	8	**-202**	5	0	-208	0	**-61**	-4	0	-57	0	**21**	-7	0	15	13	**-178**	9	0	-187	0
Linndale	**-31**	1	-1	-31	0	**0**	10	4	-13	0	**-6**	19	3	-28	0	**-6**	-5	1	-2	0	**-2**	9	3	-13	0
Lyndhurst	**-364**	-527	1	134	28	**591**	462	14	88	27	**-91**	-335	23	179	42	**-169**	-447	1	224	53	**-76**	-165	0	80	9
Maple Heights	**-499**	-782	60	202	20	**-58**	-461	72	359	-29	**-593**	-1,116	30	496	-3	**-798**	-754	32	-93	16	**77**	-610	0	684	3
Mayfield Heights	**73**	-104	38	111	28	**1,523**	422	133	491	477	**-629**	-674	37	66	-58	**-339**	-607	23	227	18	**-36**	-192	23	130	3
Mayfield Village	**-114**	-99	0	0	-15	**21**	0	0	0	21	**79**	40	0	0	39	**-23**	-60	0	42	-5	**142**	125	0	12	5
Middleburg Heights	**-14**	-74	63	7	-10	**610**	-10	85	-14	549	**-165**	-354	27	3	159	**-203**	-213	15	5	-10	**338**	215	40	5	78
Moreland Hills	**-51**	-73	25	-8	6	**-132**	-122	0	-9	-1	**155**	122	12	0	21	**94**	56	19	-5	24	**-6**	5	0	-9	-2
Mount Pleasant	**-1,527**	69	17	-1,635	23	**-1,579**	28	42	-1,657	8	**-1,469**	10	0	-1,479	0	**-1,275**	11	5	-1,291	0	**-312**	56	0	-383	14
Newburgh Heights	**-2**	-18	2	14	0	**8**	-1	0	10	0	**-22**	-30	2	3	3	**0**	-15	1	11	2	**-14**	-15	0	1	0
North Olmsted	**-1,100**	-1,347	114	80	53	**180**	-199	186	113	81	**237**	-133	215	147	8	**-177**	-452	66	62	147	**189**	-126	163	58	94
North Randall	**65**	14	0	51	0	**6**	-23	4	25	0	**-40**	-16	0	-24	0	**28**	-15	0	43	0	**3**	-6	0	9	0
North Royalton	**-645**	-741	92	2	2	**434**	158	78	85	113	**390**	106	77	78	129	**371**	71	85	101	114	**-438**	-570	6	56	70
North Shore Collinwood	**-341**	-363	51	-101	72	**246**	-140	45	316	24	**-135**	-515	23	258	98	**-427**	-566	30	109	0	**-182**	-318	6	120	9
Oakwood	**4**	-19	37	-19	5	**173**	125	53	-7	3	**79**	-37	0	97	19	**42**	-38	17	50	13	**18**	10	0	6	3
Ohio City	**-284**	-82	-253	40	12	**396**	363	-78	91	21	**-351**	-174	-145	-32	0	**-180**	-65	-126	0	11	**-152**	-110	-87	38	7
Old Brooklyn	**-198**	-1,022	285	511	28	**1,337**	320	478	495	44	**-1,040**	-1,817	410	347	19	**-86**	-688	198	356	48	**673**	172	156	283	62
Olmsted Falls	**-86**	-192	100	6	0	**98**	81	11	2	4	**137**	81	30	23	3	**-37**	-90	32	15	6	**-92**	-194	11	80	10
Olmsted Township	**-158**	-214	27	30	0	**280**	198	-5	20	67	**1,080**	949	10	72	49	**926**	834	66	33	-7	**-57**	-93	-4	53	-13
Orange	**-330**	-307	9	-59	26	**-21**	-52	0	27	4	**231**	189	19	-8	31	**10**	-11	4	-49	66	**-112**	-122	2	-5	13
Parma	**866**	-627	877	513	102	**1,214**	354	442	215	203	**-1,377**	-1,895	400	165	-47	**-812**	-1,375	277	201	85	**192**	-268	209	73	177

Community	**15-24 Total**	15-24 White	15-24 Hispanic	15-24 Black	15-24 Asian	**25-34 Total**	25-34 White	25-34 Hispanic	25-34 Black	25-34 Asian	**35-44 Total**	35-44 White	35-44 Hispanic	35-44 Black	35-44 Asian	**45-54 Total**	45-54 White	45-54 Hispanic	45-54 Black	45-54 Asian	**55-64 Total**	55-64 White	55-64 Hispanic	55-64 Black	55-64 Asian
Parma Heights	**-232**	-347	69	-8	54	**988**	747	112	36	93	**-489**	-623	35	90	9	**-275**	-358	52	30	1	**400**	208	84	65	43
Pepper Pike	**-254**	-289	14	26	-5	**-204**	-208	0	26	-22	**198**	173	16	-2	11	**331**	302	66	-30	-7	**9**	-48	14	75	-32
Richmond Heights	**304**	-378	32	467	183	**-304**	-359	1	30	24	**-100**	-590	11	560	-80	**15**	-327	35	253	54	**-93**	-150	37	2	17
Rocky River	**-461**	-547	43	36	7	**244**	114	87	18	25	**443**	210	69	94	70	**95**	-3	33	32	33	**-251**	-290	23	14	2
Seven Hills	**-112**	-201	41	28	20	**21**	10	9	3	0	**72**	51	0	9	12	**153**	133	20	0	-1	**288**	280	0	9	0
Shaker Heights	**-1,360**	-1,107	83	-305	-31	**560**	204	82	-145	419	**219**	22	74	-30	153	**-485**	-427	108	-194	28	**-652**	-733	77	-21	25
Solon	**-1,541**	-1,769	43	185	1	**-771**	-923	31	78	43	**1,494**	783	87	166	458	**275**	-165	41	253	146	**-522**	-674	45	44	62
South Euclid	**824**	-242	93	954	19	**223**	-319	91	368	84	**-144**	-1,329	50	1,005	130	**-570**	-705	8	107	20	**-509**	-746	100	82	55
St.Clair-Superior	**-1,373**	-103	-9	-1,260	0	**-844**	-77	-72	-727	32	**-719**	-114	-46	-560	1	**-526**	-100	-18	-407	0	**-501**	-127	-21	-353	0
Stockyards	**-634**	-498	-212	60	15	**-313**	-252	-218	157	0	**-470**	-313	-207	-3	53	**-152**	1	-73	-80	0	**-415**	-430	-66	80	1
Strongsville	**-1,661**	-1,925	105	156	3	**-120**	-628	236	145	127	**1,221**	658	240	131	192	**-176**	-606	154	203	73	**-594**	-1,050	83	271	102
Tremont	**-202**	44	-157	-90	2	**718**	731	-69	40	16	**-365**	-190	-122	-57	4	**-161**	-41	-86	-35	1	**-78**	-77	40	-45	5
Union-Miles	**-2,110**	85	8	-2,203	0	**-1,142**	32	28	-1,203	1	**-1,168**	71	24	-1,264	1	**-1,213**	3	20	-1,236	0	**-285**	42	13	-365	24
University	**2,951**	2,144	131	46	631	**-302**	-441	107	-48	81	**-1,138**	-707	13	-120	-325	**-215**	-114	19	-77	-43	**-124**	-73	32	-108	26
University Heights	**1,727**	1,415	126	60	125	**-960**	-922	41	-107	28	**-306**	-404	102	-48	44	**-657**	-373	50	-361	27	**-158**	-173	0	-12	27
Valley View	**-48**	-82	0	34	0	**-175**	-175	0	0	0	**118**	97	11	10	0	**42**	31	11	0	0	**-116**	-116	0	0	0
Walton Hills	**-25**	-38	0	13	0	**-73**	-72	0	0	0	**4**	-1	0	6	0	**79**	30	0	49	0	**162**	127	0	35	0
Warrensville Heights	**-350**	-10	1	-341	0	**-221**	-37	1	-201	16	**-329**	-28	8	-338	28	**-320**	12	5	-347	10	**-339**	6	0	-355	10
West Boulevard	**24**	-476	51	419	31	**74**	-491	-44	590	19	**-424**	-794	46	312	12	**264**	-161	81	255	90	**-169**	-364	-31	181	46
Westlake	**-905**	-1,052	130	61	-44	**267**	-320	142	146	299	**984**	708	96	71	109	**559**	96	249	81	133	**-243**	-460	55	183	-21
Woodmere	**-35**	-16	0	-28	9	**43**	-25	3	47	18	**75**	-6	13	57	11	**7**	-35	3	39	0	**-1**	-26	0	14	11

Appendix B: Cleveland Neighborhoods and Cuyahoga County Suburbs Ranked by Total Residents 18 and Over with at least a Bachelor's Degree and an Advanced Degree, 2013. Source: 2000 Census, 2013 5-Year ACS. (Note: City neighborhoods in bold).								
Community	Total College Graduates (BA or plus), 2013	Total Change in College Graduates, 2000 to 2013	Percent Change in College Graduates, 2000 to 2013		Community	Advanced Degree Population 2013	Total Change Advanced Degree, 2000 to 2013	Percent Change in Advanced Degree, 2000 to 2013
Cleveland Heights	16,917	-1,322	-7.3%		Cleveland Heights	8055	-431	-5.1%
Lakewood	15,985	829	5.5%		Shaker Heights	7377	168	2.3%
Strongsville	14,295	2,980	26.3%		Lakewood	5116	323	6.7%
Westlake	12,834	2,063	19.2%		Strongsville	5088	1261	32.9%
Shaker Heights	12,819	9	0.1%		Westlake	4990	903	22.1%
Parma	12,012	660	5.8%		Solon	4057	1072	35.9%
Solon	8,654	1,734	25.1%		Parma	3403	266	8.5%
Rocky River	8,274	867	11.7%		Rocky River	3055	296	10.7%
North Royalton	7,964	1,791	29.0%		North Royalton	3007	1367	83.3%
North Olmsted	7,662	1,035	15.6%		Beachwood	2778	288	11.6%
Euclid	6,682	-862	-11.4%		University Heights	2611	289	12.5%
Bay Village	6,227	100	1.6%		Broadview Heights	2560	1125	78.4%
Broadview Heights	6,219	2,063	49.6%		Bay Village	2393	366	18.0%
South Euclid	5,954	-116	-1.9%		North Olmsted	2335	183	8.5%
Mayfield Heights	5,657	1,225	27.6%		South Euclid	2323	236	11.3%
Kamm's	5,657	1,214	27.3%		Brecksville	2282	128	6.0%
Beachwood	5,335	467	9.6%		Euclid	2187	32	1.5%
Brecksville	5,273	558	11.8%		Mayfield Heights	2164	587	37.2%

Community	Total College Graduates (BA or plus), 2013	Total Change in College Graduates, 2000 to 2013	Percent Change in College Graduates, 2000 to 2013		Community	Advanced Degree Population 2013	Total Change Advanced Degree, 2000 to 2013	Percent Change in Advanced Degree, 2000 to 2013
University Heights	5,070	118	2.4%		Pepper Pike	1820	166	10.0%
Lyndhurst	5,000	497	11.0%		**Kamm's**	1782	633	55.1%
Fairview Park	4,629	-208	-4.3%		Middleburg Heights	1643	808	96.7%
Middleburg Heights	3,953	943	31.3%		Lyndhurst	1601	0	0.0%
Berea	3,920	89	2.3%		Fairview Park	1599	100	6.7%
Old Brooklyn	3,782	139	3.8%		Olmsted Township	1357	847	165.9%
Olmsted Township	3,459	1,722	99.2%		**Downtown**	1317	828	169.2%
Downtown	3,357	1,950	138.6%		Berea	1313	138	11.8%
Parma Heights	3,260	131	4.2%		Highland Heights	1301	279	27.3%
Highland Heights	3,255	974	42.7%		Richmond Heights	1159	199	20.7%
Pepper Pike	3,232	100	3.2%		**Buckeye-Shaker Square**	1001	-53	-5.0%
Seven Hills	3,204	1,036	47.8%		Seven Hills	971	275	39.5%
Richmond Heights	3,170	186	6.2%		Garfield Heights	960	268	38.7%
Garfield Heights	2,862	181	6.7%		Orange	882	279	46.3%
Buckeye-Shaker Square	2,412	-124	-4.9%		Parma Heights	858	-50	-5.5%
Maple Heights	2,272	-98	-4.1%		**Old Brooklyn**	839	-29	-3.4%

Community	Total College Graduates (BA or plus), 2013	Total Change in College Graduates, 2000 to 2013	Percent Change in College Graduates, 2000 to 2013		Community	Advanced Degree Population 2013	Total Change Advanced Degree, 2000 to 2013	Percent Change in Advanced Degree, 2000 to 2013
Olmsted Falls	2,117	234	12.4%		**North Shore Collinwood**	764	140	22.4%
Edgewater	1,945	85	4.6%		Independence	722	177	32.4%
Bedford	1,892	-152	-7.5%		Olmsted Falls	717	137	23.7%
Independence	1,863	301	19.3%		**Edgewater**	688	-87	-11.3%
Orange	1,802	514	39.9%		Chagrin Falls Village	665	76	12.9%
University	1,797	-285	-13.7%		Maple Heights	645	117	22.1%
North Shore Collinwood	1,725	-297	-14.7%		**University**	629	-260	-29.2%
Brook Park	1,721	277	19.2%		**Jefferson**	626	364	138.7%
Jefferson	1,683	301	21.8%		**Cuyahoga Valley**	616	379	159.3%
Warrensville Heights	1,518	-216	-12.5%		**Tremont**	591	331	127.6%
Mayfield Village	1,512	299	24.6%		Gates Mills	568	-81	-12.5%
Chagrin Falls Village	1,443	-122	-7.8%		East Cleveland	545	-41	-7.0%
Cuyahoga Valley	1,437	718	99.9%		Mayfield Village	544	80	17.3%
East Cleveland	1,406	-157	-10.1%		Bedford	501	-70	-12.2%
Detroit Shoreway	1,355	377	38.6%		**Detroit Shoreway**	481	66	15.9%
Tremont	1,344	565	72.5%		Moreland Hills	479	23	5.1%
Bedford Heights	1,327	-67	-4.8%		Bentleyville	476	155	48.2%

Community	Total College Graduates (BA or plus), 2013	Total Change in College Graduates, 2000 to 2013	Percent Change in College Graduates, 2000 to 2013		Community	Advanced Degree Population 2013	Total Change Advanced Degree, 2000 to 2013	Percent Change in Advanced Degree, 2000 to 2013
Brooklyn	1,308	50	4.0%		Hunting Valley	468	23	5.1%
Glenville	1,289	-466	-26.5%		Bedford Heights	460	55	13.6%
West Boulevard	1,272	218	20.7%		**Goodrich-Kirtland Pk.**	458	309	207.0%
Gates Mills	1,217	18	1.5%		**Ohio City**	456	228	100.0%
Broadway-Slavic Village	1,198	171	16.6%		Bratenahl	454	45	10.9%
Ohio City	1,155	509	78.8%		**Glenville**	442	-134	-23.2%
Moreland Hills	1,074	86	8.7%		**Broadway-Slavic Village**	418	51	14.0%
Union-Miles	1,052	237	29.1%		Brooklyn	396	56	16.3%
Hunting Valley	1,050	84	8.7%		Warrensville Heights	384	-119	-23.7%
Mount Pleasant	986	-70	-6.6%		Brook Park	379	50	15.1%
Lee-Harvard	956	24	2.6%		**West Boulevard**	354	103	41.0%
Bentleyville	910	135	17.4%		**Hough**	331	146	79.0%
Bellaire-Puritas	790	-87	-9.9%		**Lee-Harvard**	284	12	4.2%
Bratenahl	763	24	3.2%		**Union-Miles**	255	6	2.4%
Goodrich-Kirtland Pk	735	366	99.5%		**Mount Pleasant**	240	-95	-28.4%
Hough	687	108	18.7%		**Bellaire-Puritas**	234	-21	-8.1%
Cudell	650	-69	-9.6%		Oakwood	219	133	154.0%
Collinwood-Nottingham	628	-174	-21.7%		Euclid-Green	195	79	68.3%

Community	Total College Graduates (BA or plus), 2013	Total Change in College Graduates, 2000 to 2013	Percent Change in College Graduates, 2000 to 2013		Community	Advanced Degree Population 2013	Total Change Advanced Degree, 2000 to 2013	Percent Change in Advanced Degree, 2000 to 2013
Brooklyn Centre	488	12	2.5%		**Collinwood-Nottingham**	192	23	13.8%
Oakwood	479	211	78.4%		**Brooklyn Centre**	179	47	36.2%
Walton Hills	436	53	13.9%		**Cudell**	177	-39	-18.0%
Valley View	436	94	27.6%		Glenwillow	177	107	154.0%
Euclid-Green	410	17	4.4%		Chagrin Falls Township	156	18	12.9%
Glenwillow	387	170	78.4%		**Lee-Seville**	155	78	100.4%
Chagrin Falls Township	339	-29	-7.8%		**Fairfax**	135	2	1.6%
Clark-Fulton	337	-2	-0.7%		Walton Hills	131	37	39.1%
Fairfax	333	-32	-8.7%		**Central**	129	35	37.2%
Central	327	94	40.4%		Valley View	116	1	1.2%
Lee-Seville	305	-30	-8.8%		Woodmere	107	42	63.9%
Kinsman	288	76	35.9%		**Clark-Fulton**	107	13	14.5%
Woodmere	265	67	33.6%		**Hopkins**	78	55	232.7%
Buckeye-Woodhill	261	-77	-22.8%		**Buckeye-Woodhill**	66	-53	-44.5%
Hopkins	258	128	98.9%		Brooklyn Heights	61	-29	-32.0%
St.Clair-Superior	249	2	0.8%		**Kinsman**	51	-14	-21.2%
Cuyahoga Heights	234	42	21.9%		**St.Clair-Superior**	49	4	8.6%
Brooklyn Heights	207	-149	-41.9%		Cuyahoga Heights	32	-24	-42.9%
Stockyards	159	-122	-43.3%		**Stockyards**	29	-65	-69.2%
North Randall	92	13	15.9%		North Randall	25	1	3.4%

Community	Total College Graduates (BA or plus), 2013	Total Change in College Graduates, 2000 to 2013	Percent Change in College Graduates, 2000 to 2013		Community	Advanced Degree Population 2013	Total Change Advanced Degree, 2000 to 2013	Percent Change in Advanced Degree, 2000 to 2013
Highland Hills	71	-167	-70.3%		Highland Hills	22	-55	-71.5%
Newburgh Heights	43	8	21.9%		Linndale	7	3	75.4%
Linndale	22	-2	-9.9%		Newburgh Heights	6	-4	-42.9%