UNITED STATES DISTRICT COURT SOUTHERN DISTRICT OF NEW YORKx	
SHAUNA NOEL and EMMANUELLA SENAT,	
Plaintiffs,	
-against-	15-CV-5236 (LTS) (KHP)
CITY OF NEW YORK,	
Defendant.	

# EXPERT REPORT OF PROFESSOR ANDREW A BEVERIDGE

April 1, 2019

Amended October 18, 2019

# A. Qualifications, experience, compensation

- 1. I am a Professor of Sociology at Queens College and the Graduate Center of the City University of New York, and served as Chair of the Queens College Sociology Department from 2006 to 2018. My primary responsibilities at Queens College and the Graduate Center are teaching statistics and research methods at the graduate and undergraduate levels, and conducting quantitative, statistically-based social research. I have a Ph.D. in Sociology and B.A. in Economics from Yale University. I have been a professor since 1973, first at Columbia University until 1981, and then at Queens College and the Graduate Center of the City University of New York.
- 2. My areas of expertise include demography and the statistical and quantitative analysis of social science datasets, most particularly including Census data, survey data and administrative records. I am an expert in the application of Geographical Information Systems (GIS) technology to the analysis of social patterns. I regularly publish results and analyses in professional journals and peer-reviewed books. Some of my analyses have served as the bases for articles in the *New York Times*, where I have served as a demographic consultant since 1993, through an agreement between Social Explorer, Inc. and the *New York Times*.
- 3. I am the co-founder and CEO of Social Explorer Inc., a website that provides demographic and other social data in a visual form. The site and related projects have won six awards and had over one million users in the last year. The site is distributed to libraries by Oxford University Press and is licensed to Pearson Publishing across all of higher education for the development of curricular materials. I have also served as a consultant to a number of public and private entities, where I provide services related to demographic analysis.
  - 4. I have frequently provided expert opinions and testimony in demographic and

statistical analysis. These include the following (and encompass all of the cases in the last four years where I have given testimony at trial or at deposition): Adriann Borum, et al., v. Brentwood Village, LLC, et al., No. 1:16-Cv-01723-Rc (D.C.); Residential Opportunities, Inc. v. Clinton Terrace L.P., No. 7:16-cv-9273; (S.D.N.Y.) (Report, 2017); Akagi v. Turin Housing Development Fund, Co., No. 1:13-cv-5258 (S.D.N.Y.) (Report, Deposition, Rebuttal Report, 2016–present); Aref v. Sessions, No. 1:10-cv-539 (D.D.C.) (Report, Deposition, 2013–present); New York v. Evans Bancorp, Inc., No. 1:14-cv-726 (W.D.N.Y.) (Report, 2014–2015); United States v. City of New Orleans, No. 2:12-cv-1924 (E.D. La.) (Report, Deposition, 2013–2014); City of Joliet v. Mid-City Nat'l Bank of Chicago, No. 1:05-cv-6746 (N.D. III.) (Report, Deposition, Trial Testimony, 2012– 2013); United States v. St. Bernard Parish, No. 2:12-cv-321 (E.D. La.) (Report, 2013–2014); Favors v. Cuomo, No. 1:11-cv-5632 (E.D.N.Y.) (Hearing Testimony, 2012); Rivera v. Incorporated Village of Farmingdale, No. 2:06-cv-2613 (E.D.N.Y.) (Report, Deposition, 2009– 2014); Aguilar v. Immigration and Customs Enforcement Div. of the U.S. Dept. of Homeland Security, No. 1:07-cv-8224 (S.D.N.Y.) (Report, Rebuttal Report, Deposition, 2010–2013). A virtually complete list of cases and other matters in which I have provided opinions, as well as a list of publications, are listed in my curriculum vitae, attached hereto as Exhibit 1.

5. I am being compensated at the rate of \$200/hour for my work in this case; I am also being reimbursed for expenses, including the expenses for payment of members of my team.

# **B.** Prior report

6. I previously submitted a declaration in this matter, dated June 1, 2017. The findings and opinions expressed in that declaration remain pertinent to the issues in this case. That declaration and the exhibits thereto is submitted separately as a supplement to this report.

# C. Introduction and summary of findings

- 7. Defendant has had and continues to have rules (adopted and enforced by HPD, the Department of Housing Preservation and Development, and by HDC, the New York City Housing Development Corporation ("the agencies")) that govern the award of housing units in defendant-administered lotteries for development or preservation projects where some or all of the units are within various levels of what defendant considers "affordable." The eligibility criteria for some units makes them affordable, for example, to households ("HHs") with an annual household income up to 60 or 80 percent of Area Median Income ("AMI"). Other units are "affordable" at a different level: perhaps 130 or even 165 percent of AMI.
- 8. The case and this report have to do with that portion of affordable housing units that are distributed by what is referred to as a housing lottery for initial rent-up. It is not concerned with units that are awarded through means other than the lottery (for example, units that are awarded by agency referral or with units that have been awarded as open market, the latter being a process that is supposed to be activated, on agency approval, only when one or more unit types have not been able to be filled in the lottery). It also puts to the side applicant HHs who, at application, are not New York City residents, and the small number of units awarded through the lottery to non-New York City residents.<sup>1</sup>
- 9. The units in a project anticipated to be "lotteried" off are advertised to the public, including on "Housing Connect," defendant's online portal for advertising lotteries and accepting applications for them. ("Housing Connect" also refers to the database in which information

<sup>&</sup>lt;sup>1</sup> In standard lotteries, New York City applicant HHs have a general preference over non- New York City applicant HHs. Unless otherwise specified, references to "all HHs," "all units" or to "all" of a certain type or category of HH or unit are to be understood as terms that do *not* encompass non- New York City applicant HHs, nor units awarded to non- New York City residents. Residents of places outside of New York City accounted for approximately 1.1 percent of the units awarded through the lottery (mostly higher-AMI units) and 5.5 percent of applications analyzed for this report.

provided by applicant HHs in their applications is stored.)

- 10. Within a project's lottery, there are, in the overwhelming percentage of lotteries, multiple "unit types" that are, at least initially, available to be competed for. Each unit type in a lottery is characterized by a unique combination of number of bedrooms, a monthly rent, a minimum income, and a range of permissible HH sizes, with the maximum permissible HH income generally varying by each permissible HH size. Each unit type is also associated with a particular AMI level of household income.
- 11. As I understand it, there is no "pre-qualification" or "qualification" process at the entrant stage. An applicant HH who wishes to do so is permitted to do so, so long as required information is provided.<sup>2</sup>
- 12. Neither HPD nor HDC make any initial threshold judgment about the qualifications of an applicant HH.<sup>3</sup> In some respects, the process at this point is unremarkable: those who have wanted to apply have applied; once the lottery application process has ended, the agencies assign random sequence numbers to each application to determine the order in which a developer's marketing agent is obliged to review them; and several pieces of data about applicant HHs, including, notably, the applicant HH's self-reported annual HH income and HH-size, are made available to the marketing agent.
- 13. If this were all that there were to the process, there would be no case: each applicant HH would have an equal chance to be considered by the marketing agent in the lottery overall, and

<sup>&</sup>lt;sup>2</sup> I am not opining on the extent to which inhibition effects – including potentially the existence of the preference itself – could have suppressed applications from some households residing in New York City outside of the community district for which preference is given.

<sup>&</sup>lt;sup>3</sup> Notation is made – for later review by a developer's marketing agent – as to whether an applicant HH appears to have submitted duplicate applications or whether a member of an applicant HH is listed on more than one application.

if selected for consideration, in respect to units for which the applicant HH is apparently eligible.

- 14. Imposed on the random, equal-access process, however, are a number of set-aside and preference rules, including rules that provide for priority being given for up to 50 percent of units anticipated to be lotteried<sup>4</sup> off to those applicant HHs who live in the community district where the development is located.<sup>5</sup>
- 15. I was asked for this report to examine data from defendant's affordable housing lotteries to determine whether the community preference policy operates to create discriminatory effects against one or more racial or ethnic groups. I was also asked to determine whether these effects are reflective of a pattern that perpetuates segregation more (and allows integration less) than what would exist without the policy. I was also asked to opine on the extent to which applicant households choose to limit or do not choose to limit themselves to lotteries for affordable housing opportunities within their own community district. Finally, I was asked to opine on the scope of residential segregation in New York City.
- 16. For the purposes of this report and its exhibits, where I use the term African-American or Black, I am referring to the Census group "non-Hispanic Black"; when I use the term White, I am referring to the Census group "non-Hispanic White"; when I use the term Asian, I am referring to the Census group "non-Hispanic Asian"; and when I use the term Latino or Hispanic, I am referring to the Census group "Hispanics of any race."
- 17. The updated universe of projects that I analyzed consists of 168 of the 185 rental lotteries where defendant had "reconciled" the results between and among multiple types of

<sup>&</sup>lt;sup>4</sup> There are some circumstances where the percentage of lotteried units that go to applicant HHs living in the community district can be larger or smaller than 50 percent, but 50 percent is the norm.

<sup>&</sup>lt;sup>5</sup> In a small percentage of cases, the preference is expanded to cover not only those who live in the community district where the project is located, but also those who live in one or more nearby community districts.

defendant's data.<sup>6</sup> These projects are listed by their Housing Connect ("HC") Project Identification Number in Exhibit 2. Lotteries from among this group had application deadlines for applicant households as early as August 2012 and as late as February 2017; full "lease-up" (that is, the moment at which the award of all of a project's lottery units for initial occupancy was completed) occurred between October 2012 and July 31, 2018.

- 18. In the aggregate, the 168 rental lotteries accounted for awards of 10,245 affordable housing units through the lottery ("lotteried units").<sup>7</sup>
- 19. There were, in total, more than 7.2 million lottery applications for these units from more than 700,000 unique applicant HHs.
- 20. The reconciled rental lotteries that I did not analyze come in two categories: (a) 100 percent community preference lotteries; and (b) 15 projects, where only one unit or two units were lotteried off (these 15 lotteries awarded by lottery 25 units in the aggregate). All of these projects are also identified in Exhibit 2. Each project in the 15-lottery group had been advertised as having community preference applicable, even though defendant has described community preference as not being available in projects with fewer than three units; in most of these projects, however, defendant's data show that community preference was not awarded in respect to any unit.
- 21. My analyses included identification of lotteries, units types, unit types awarded, and applicant HHs within seven community district preference area typologies ("CD typologies")

<sup>&</sup>lt;sup>6</sup> In brief, the purpose of reconciliation was to confirm the accuracy of defendant's records as to which applicant HHs were awarded lotteried units. This included attempting, insofar as it was possible, to determine the *first* applicant household to be awarded each unit. Decisions as to how to reconcile and what the reconciliation results should be in each particular case were made by defendant. Further reference to the reconciliation process is made in Section XIII of the Sources and Methodology Appendix submitted herewith.

<sup>&</sup>lt;sup>7</sup> As a reminder, I note that references to units and to applicant HHs (for example, in paragraphs 18 and 19) are always excluding non- New York City applicant HHs and units awarded to non- New York City HHs. Note, also, that defendant did not provide equivalent HH information on those who received units *outside* of the lottery process.

that I based on 2013-17 5-year American Community Survey ("ACS") population data:<sup>8</sup> majority White, majority Black, majority Asian, majority Hispanic, plurality White, plurality Black, and plurality Hispanic.

- 22. A list of the HC Projects, the number of units awarded through the lottery for each such project, the project's CD typology, and the demographic composition of the project's CD preference area, is reported in Exhibit 3. Racial and Hispanic composition for the lotteries in each CD typology, along with the number of lotteries in each typology, is reported in Exhibit 4.9
- 23. As Exhibit 4 shows, while the majority typologies need only include at least 50 percent of a given non-Hispanic race group or Hispanics, the majority Black typology has an African-American majority of nearly 60 percent, and the dominant racial group in the majority White and majority Hispanic CD typologies, respectively, reach or exceed 60 percent. The percentage difference between the dominant group in the CD typology and the next largest group is very substantial in majority typologies, but much less so in plurality typologies. Even so, there are still-substantial differences between the share of the dominant group in a plurality typology and the share of at least one other group in the same plurality typology.
  - 24. Through my analyses, I determined that defendant's community preference policy

<sup>&</sup>lt;sup>8</sup> 2013-17 ACS 5-year data comprises the most recent 5-year data available (data from 2013 to 2017). I was able to aggregate up from the Census block level to the community district level using a map that provided information on the location of every Census block in a community district (CD). The map is available online from the "Bytes of the Big Apple" database from the New York City Department of City Planning at <a href="https://www1.nyc.gov/site/planning/data-maps/open-data/districts-download-metadata.page">https://www1.nyc.gov/site/planning/data-maps/open-data/districts-download-metadata.page</a>. A few blocks (those in parks and other areas with little or no population) were not assigned to a community district. The information from the ACS data was disaggregated to the block level based upon the percent of the block group population in each block, and then aggregated up to the CD. This is simply population weighting of block groups to blocks, and makes it possible to have reasonable estimates of population.

<sup>&</sup>lt;sup>9</sup> To make it possible to have reliable estimate of the composition of each typology based upon the number of units awarded, each CD or CD preference area that had one or more awardees was weighted based upon the total number of awardees in that CD or CD preference area. Thus, the composition of each typology best reflects that experienced by the awardees.

(what plaintiffs refer to as the "outsider-restriction policy") generally operates to the material detriment of members of a racial or ethnic group when members of that group are applying for housing outside of the CD typology in which they are dominant.

- 25. Likewise, I determined that defendant's community preference policy generally operates to the greatest benefit for members of a racial or ethnic group when members of that group are applying *within* the CD typology in which they are dominant. This is, not surprisingly, especially so with regard to the majority typologies, where there is a clear dominant group.
- 26. In other words, defendant's community preference policy imposes a sorting process that would not otherwise exist and does so in a pattern that causes material disparities by race and ethnicity.
- 27. It is not as though the disparities are manifested only at the "entrant" stage of the process (when defendant splits New Yorkers into those who are CP beneficiaries<sup>10</sup> and those who are non-beneficiaries<sup>11</sup>).
- 28. The disparities flow on when one considers the apparently-eligible applicants who depending on the order of processing imposed on the marketing agent by defendant's rules, including community preference are "reached" in line by the marketing agent for review and eligibility determination. (Apparently-eligible HHs are applicant HHs whose HH size and income, as self-reported and stored in the HC database, met the income- and HH-size requirements for at least one unit-type in a lottery, as those requirements are set forth in various of defendant's data.)<sup>12</sup>

 $<sup>^{10}</sup>$  Applicant HHs who are "insiders" (that is, who reside in the CD preference area). There is a small subset of such insiders who, for the purpose of the analyses I have performed, are treated as non-beneficiaries. *See* discussion at 11-12, ¶¶ 37-40.

<sup>&</sup>lt;sup>11</sup> Applicant HHs for a lottery who reside in New York City outside of the community district preference area ("outsiders") and a small subset of insiders who, for the purposes of the analyses I have performed, are treated as non-beneficiaries. *See* discussion at 11-12, ¶¶ 37-40.

<sup>&</sup>lt;sup>12</sup> My testing for apparently eligible HHs included that portion of applicant HHs self-reporting the availability of a housing subsidy who: (a) are not disqualified based on reporting more income than the

- 29. The disparities flow on through to the "bottom line" the comparative demography of those to whom CP-beneficiary and non-beneficiary housing units were actually awarded.
- 30. One can still imagine some saying, "What is the problem? Each racial group is helped somewhere." But the powerful pattern in majority CD typologies, unmistakable at the entrant, the apparently-eligible, and the awarded-unit stages has a *particular* sorting effect: for example, as between Whites and African-Americans, White applicant HHs are helped and African-Americans are hurt by the community preference policy when looking at the aggregate results of lotteries in the White-Majority CD typology. African-American HHs are helped and White (and Latino) applicant HHs are hurt by the community preference policy when looking at the aggregate results of lotteries in the Black-Majority CD typology. And the relative difference between the dominant group and the other group(s) referenced above is large in both cases.
- 31. The result of the operation of the community preference policy is a pattern that perpetuates segregation more (and allows integration less) than what would exist without the policy.
- 32. Any hypothesis that New Yorkers are always or mostly interested in remaining in their existing community district is belied by the evidence of lottery participation for those seeking affordable housing.
- 33. And, finally, as has long been the case, New York City continues to have high levels of segregation, most especially between Black and White New Yorkers.

maximum income permitted for the unit type or types for which they are HH-size eligible; or (b) are not already eligible based on their HH income compared with the relevant unit types' requirements for minimum and maximum income. I made the determination of apparent eligibility for those applicant HHs who have reported the availability of a subsidy and who: (a) have HH income lower than the minimum income for the relevant unit types; and (b) by the operation of subsidy rules, are nonetheless deemed to be able to afford one or more of the relevant unit types (unit types which permit the applicant HH's HH-size).

# **D.** Sources and methodology

- 34. With scant exception, the data I used were defendant's data provided to plaintiffs in discovery. For example, data about applicant HHs, including race, HH income, HH size, claimed disability, address, and defendant-assigned designation of the HH as living in the CD preference area for a lottery, came from defendant's Housing Connect database as provided to plaintiffs on or about March 29, 2017. Housing Connect data, to take another example, that had been made available to developers' marketing in the form of initial logs again, all data that came from defendant (as did final logs with information added to initial logs by marketing agents). Data about which applicants HHs were awarded lotteried units and about the data to determine unit type, were found in documents created and updated by the agencies (in the form of "status sheets" with this information and, in the case of HPD, also in the form of tables from its Access database which performed the same function as status sheets). To track the flow of applicants to awarded units required organizing and linking the information, all of which was available from the agencies.
- 35. Additional information about sources and methodology is contained in the body of this report and in the Sources and Methodology Appendix submitted herewith.

# E. Disparate impact at the lottery entrant stage

36. It is at the lottery entrance stage that the agencies identify applicant HHs as living in the CD preference area or not, and, accordingly, make available to developers an initial log of

<sup>&</sup>lt;sup>13</sup> And as to the few exceptions, the data are publicly available to defendant, as noted where applicable.

<sup>&</sup>lt;sup>14</sup> The Housing Connect data were supplied to plaintiffs' counsel as a "dump" from the Oracle database that is used to manage those who applied for the lottery. The database was an exact copy except that some fields were redacted due to a variety of defendant concerns.

lottery applicants subject to lottery sequencing rules (most pertinently, applicant HHs living in the CD preference area are to be processed before any applicant HH resident in New York City who lives outside of the CD preference area<sup>15</sup> until the 50 percent CD preference has been filled).

- 37. I first explored the extent to which the odds of being awarded a unit differed as between those applicant HHs who could compete for units that were ultimately awarded on the basis of the HH residing in the community district (CP beneficiary units) versus those applicant HHs who could compete for units that were ultimately awarded independent of community district residence (non-beneficiary units).
- 38. In other words, awarded units had to be categorized as CP beneficiary or non-beneficiary units, and applicant HHs had to be categorized as CP beneficiary or non-beneficiary HHs.
- 39. By using status sheets,<sup>16</sup> I determined the number and percentage of units that defendant awarded as CP beneficiary and non-beneficiary units, respectively. The CP beneficiary units were all units where the applicant HH's listing on the status sheet specified that defendant was designating the HH as one filling a preference that could only be met by a HH residing in the community district. I deducted from this total, however, all units where the HH's listing on the status sheet *also* specified that the applicant HH was receiving a disability set-aside unit. (This is because the first priorities in the processing of lottery applicants by a project's marketing agent<sup>17</sup> are for units to be awarded to applicant HHs where a member of the HH has: (a) a mobility

<sup>&</sup>lt;sup>15</sup> And who does not list a HH member with a mobility disability or hearing or visual disability.

<sup>&</sup>lt;sup>16</sup> Except where otherwise specified, reference to "status sheets" means the status sheet as reconciled by the reconciliation process, and encompasses the Access database's equivalent information.

<sup>&</sup>lt;sup>17</sup> A marketing agent, as alluded to earlier, is a representative of, and works for, the project's developer. Applicant HHs only come to the attention of the agencies if: (a) the marketing agent submits them for the agency to approve an award of a unit; (b) the applicant HH is appealing a determination that had been made at the developer level; or (c) the applicant HH files a complaint.

disability; or (b) a hearing or visual disability. As such, applicant HHs who were denoted both as insiders and as recipients of a disability set-aside unit on the status sheets can be said to have been awarded the unit independent of (not benefitting from) community preference.) I treated the net number of units as CP beneficiary units.

- 40. I treated all units awarded by lottery to New York City residents other than CP beneficiary units as non-beneficiary units.
- 41. The next step was to categorize applicants HHs. Here again, I treated all outsider HHs as non-beneficiary HHs. As a general rule, I treated all applicant HHs who could compete for units that were ultimately awarded on the basis of the HH residing in the community district as beneficiary HHs. If was, however, necessary to determine how to treat any applicant HH who, as shown in Housing Connect: (a) listed a HH member as having either a mobility disability or a hearing or visual disability; and also (b) based on the address provided, was determined by defendant to be living in the community district. I looked to the status sheet to find the number of awardee HHs where defendant deemed an awardee HH to receive both disability set-aside and CD preference. (These are non-beneficiary circumstances where it was the fact of the disability and not community district residence that yielded the unit.)
- 42. I then took all of the circumstances where the status sheet showed that an award was based on community district residence but not on disability status and compared that to the

<sup>&</sup>lt;sup>18</sup> As a household resident in a CD has priority in being awarded CP beneficiary units, those units awarded to CP beneficiary HHs are ones for which non-beneficiary HHs could not have been considered under lottery rules.

<sup>&</sup>lt;sup>19</sup> It is true that CP beneficiary HHs can, once the requisite number of community preference units have been filled, continue to compete for units open to non-beneficiary HHs. By not including that additional participation, the analysis errs on the side of understating the odds of a CP beneficiary HH getting an apartment (they can actually compete for more apartments than are accounted for in my analyses) and of overstating the odds of a non-beneficiary HH (they actually can have some more applicants competing against them – CP beneficiary HHs – than are accounted for in my analyses).

Housing Connect data on those applicant HHs to see which listed a HH member as having either a mobility disability or a hearing or visual disability. (These are CP-beneficiary circumstances where it was the fact of the community district residence and not the disability that yielded the unit.)

- 43. Of all the awarded units that went to applicant HHs living in the CD preference area and listing an HH member as having either a mobility disability or a hearing or visual disability, I determined the percentage that yielded their unit because of disability status and the percentage that yielded their unit because of community district residence status.
- 44. Using these percentages, I then randomly assigned *all* of this subset of applicant HHs as either CP beneficiary HHs or non-beneficiary HHs.
- 45. Across each and all of the CD typologies, the odds of a CP beneficiary being awarded a unit were substantially better than that of a non-beneficiary. This ranged from a multiple-of-benefit of more than six in respect to the plurality Black CD typology to a multiple of benefit of more than 30 in lotteries in the majority White CD typology.
- 46. The differences, expressed in chances per 1,000 applicants to get an award (based on the number of units ultimately awarded through the lottery),<sup>20</sup> are shown in Table 1, on the next page.

<sup>&</sup>lt;sup>20</sup> The counts of applicant HHs by typology and CP beneficiary or non-beneficiary status are found in Exhibit 5 hereto. The analogous counts for awarded units are found in Exhibit 7 hereto. Chances were derived by comparing all CP beneficiary entrants with all CP beneficiary units that were awarded, and by comparing all non-beneficiary entrants with all non-beneficiary units that were awarded.

Table 1 – Chances per 1,000 entrants of an award of a lottery unit, by CD typology			
CD typology	Non-beneficiary entrant chances	CP beneficiary entrant chances	Multiple by which CP beneficiary entrant chances exceed non-beneficiary entrant chances
Majority White	0.502	15.163	30.24
Majority Black	0.754	9.315	12.36
Majority Hispanic	1.073	14.416	13.44
Majority Asian	2.089	16.288	7.80
Plurality White	0.734	14.715	20.04
Plurality Black	0.552	3.621	6.55
Plurality Hispanic	1.330	24.954	18.76

- 47. In each case, the multiple shows at least a large difference in the chances of a CP beneficiary entrant to get an award as compared with the chances of a non-beneficiary entrant to get an award, in all cases favoring the CP beneficiary applicants. Given the large number of entrants, it is not surprising that these sizeable multiples as between non-beneficiary entrant chances and CP beneficiary entrant chances are significant at a high level of statistical significance (per any of a variety of tests of significance based upon the difference or proportions).
- 48. The next question, therefore, is to what extent, within each CD typology, are one or more groups taking advantage of CP beneficiary status more than others?
- 49. I examined this question in two ways, each looking at the distribution of applicant HHs as related to non-beneficiary applicant HHs versus CP beneficiary HHs. The first method was to examine separately the total number of applicant HHs from each of the four racial or ethnic groups being analyzed in this report (both CP beneficiary and non-beneficiary) and to see in each

case what percentage of that total was represented by the CP beneficiary applicant HHs. I then examined which group had the highest such CP beneficiary percentage and compared it to the other groups' percentages. In all seven typologies, the group with the highest such percentage turned out to be the group who was the majority or plurality group in the typology, respectively, as shown in Table 2 (with the highest-percentage group highlighted) below.

Table 2 – Comparing each group's CP beneficiary applications as a percentage of that group's total applications against the highest such percentage for any group, by CD typology					
	Group with highest percentage of its	Relative percentage by which highest group exceeds other groups			
CD typology	awardees being CP beneficiary awardees	White	Black	Hispanic	Asian
Majority White	White	Highest Group	691.86%	110.19%	256.54%
Majority Black	Black	211.32%	Highest Group	139.13%	310.79%
Majority Hispanic	Hispanic	262.56%	68.81%	Highest Group	268.00%
Majority Asian	Asian	495.57%	3000.00%	618.22%	Highest Group
Plurality White	White	Highest Group	29.67%	69.95%	28.68%
Plurality Black	Black	107.91%	Highest Group	63.34%	446.24%
Plurality Hispanic	Hispanic	6.29%	48.02%	Highest Group	3.97%

50. The four columns headed by each racial or Hispanic category show the extent to which the specified group had a smaller fraction of its members enjoying the higher odds and consequent benefits of being a CP beneficiary applicant than did the group with the highest such percentage. Thus, for example, in the White Majority CD typology, only 0.86 percent of African-

American applicant HHs were CP beneficiary applicants. In contrast, 6.81 percent of White applicant HHs were CP beneficiary applicants. The White percentage is 691.86 percent relatively larger.

- 51. In every CD typology, there is an impact to the detriment of each of the non-dominant groups in the CD population, including extremely strong impact in all of the majority typologies. Though the majority Asian areas includes only one CD, nevertheless the results are highly significant. Indeed, by this method, it is clear *both* that there is a one-to-one relationship between the group with the highest percentage of its members being CP beneficiary HHs and being the dominant group in the CD typology *AND* that there is a one-to-one relationship between being a non-dominant group and having a relatively smaller share of your group's members being CP beneficiary HHs.
- 52. My second method of assessing CP disparate impact at the entrant level was to examine the demographic distribution of non-beneficiary applicants versus CP beneficiary applicants. The question was the extent to which a group was represented:
  - a. at a higher level among CP beneficiary applicants (those with better chances) than among non-beneficiary applicants (a fact that would show that the group benefitted from community preference in the CD typology being examined); or
  - b. at a lower level among CP beneficiary applicants than among non-beneficiary applicants (a fact that would show that the group suffered a detriment from community preference in the CD typology being examined).
- 53. In the case of benefitting groups, the further question was which group benefitted the most (*i.e.*, had the greatest relative rise in relation to the group's underlying share of non-beneficiary entrants).

- 54. In all cases, I compared the group's share of the non-beneficiary entrants with that group's share of CP beneficiary entrants. An increase (giving the group more access to better odds than it would have enjoyed under an equal-access —no community preference system) is represented by a positive number; a decrease (giving the group less access to better odds than it would have enjoyed under an equal-access (no community preference) system) is represented by a negative number.
- 55. Thus, in majority White CD typology lotteries, the increase from the White share of non-beneficiary entrants (9.86 percent) to the White share of CP beneficiary entrants (26.56 percent) is an increase of 16.70 percent, or, in relative terms, an increase of 169.37 percent. In the same CD typology, the drop of the share of African-Americans from 34.18 percent of non-beneficiary entrants to a share of 10.97 percent of CP beneficiary entrants represents a loss of 23.21 percent, or, in relative terms, a decrease of 67.91 percent. The figure for the dominant group in the CD typology is highlighted in yellow below.

Table 3 – Comparing relative percentage change for each group from share of non- beneficiary entrants to share of CP beneficiary entrants, by CD typology				
CD typology	White	Black	Hispanic	Asian
Majority White	169.37%	-67.91%	23.40%	-28.07%
Majority Black	-55.56%	<mark>48.90%</mark>	-41.48%	-66.59%
Majority Hispanic	-64.18%	-21.32%	36.99%	-64.90%
Majority Asian	-49.40%	-90.78%	-58.50%	343.91%
Plurality White	35.45%	2.72%	-22.64%	3.53%
Plurality Black	-40.03%	36.37%	-21.95%	-78.20%
Plurality Hispanic	10.13%	-22.25%	17.22%	12.52%

- 56. In each CD typology, it was the corresponding majority or plurality group that enjoyed the greatest benefit as reflected by relative size of increase from non-beneficiary entrant share to CP beneficiary entrant share.
- 57. In three of the majority CD typologies as well as the plurality African-American CD typology, the dominant group was the only group to show an increase in share, and *all* of the other groups showed a decrease in share.
- 58. In the majority White, plurality White, and plurality Hispanic CD typologies, the scope of increase in share for the majority / plurality group was larger than for *any* group (*much* larger in the case of majority White typology), and in each case there was at least one group whose share declined (Blacks and Asians in the majority White CD typology; Hispanics in the plurality White CD typology; Blacks in the plurality Hispanic CD typology).
- 59. So, by this method, too, it is clear that the operation of community preference had a strong disparate impact in favor of one group as compared with all of the other groups in every CD typology. And the group that fared best in each CD typology was the group that was dominant in the CD typology. Here, again, the evidence for the existence of disparities exists at a high level of statistical significance.

# F. Disparate impact at the developer review stage

60. When it is time for a developer's marketing agent to review lottery applicant HHs, the developer does not proceed in a straight line from the applicant HH lucky enough to have been randomly assigned the lottery number "1" down to the applicant HH unlucky enough to have been randomly assigned the lottery number "20,000." Instead, the sequencing of processing imposed by defendant on marketing agents means that, unless and until a number of units equal to the

percentage assigned to community preference is filled (the default being 50 percent), applicant HHs who are outsiders are generally skipped in line, while insiders are processed.<sup>21</sup>

- 61. I wanted to examine whether the application of community preference causes not only a disparate impact on the basis of race or ethnicity in respect to all New York City applicant HHs, but also to the subset who are apparently eligible.
- 62. These are HHs who, by the information provided by the applicant HH, would appear to be eligible for one or more unit-types in a lottery they had entered.<sup>22</sup> They are the ones that, *if reached by a marketing agent*, would be able to continue in competition by documenting their eligibility as opposed to being rejected out of hand.<sup>23</sup> Whether the apparently-eligible HHs have a level playing field (equal chances) in competing remains a function of the community preference policy.
- 63. The only information available across all applicants in all lotteries that helps determine eligibility are self-reported data: HH-size, HH-income, subsidy status, and the presence of a "couple" in the HH (the last being a factor that adjusts HH-size eligibility). The combination of HH-size and HH-income eligibility, of course, while not the only ultimate factors in eligibility, are principal ones. My definition of apparent eligibility for a unit-type was an applicant HH who met the HH-size and HH-income eligibility requirements (the latter either by income or with the help of a subsidy) for that unit type, and my definition of apparent eligibility for a lottery was an

<sup>&</sup>lt;sup>21</sup> A small fraction of outsider applicant HHs – those who report a mobility disability or visual or hearing disability – will have already been considered with insider applicant HHs who also report such a disability, until the disability set-asides (normally 5 percent mobility disability and 2 percent hearing and visual disability) have been met.

<sup>&</sup>lt;sup>22</sup> Applicant HHs do not apply for particular unit types; they apply generally to a lottery.

<sup>&</sup>lt;sup>23</sup> It is my understanding that those applicant HHs who are reached by a marketing agent and rejected are able to appeal (including appealing based on updated information as compared with what the applicant HH had reported on the application), first to the marketing agent, then to HPD or HDC, depending on which agency is supervising the particular lottery; it is further my understanding that those applicant HHs who are not reached by a marketing agent have no such rights.

applicant HH who was apparently eligible for at least one unit type in a lottery.

- 64. From defendant's data (in this case principally from lottery advertisements), I was able to identify the different unit types and their HH-size and HH-income requirements for each of the lotteries (there were slightly more than 900 unit-types).<sup>24</sup>
- 65. For each applicant HH, I compared the self-reported data points (which came from defendant's Housing Connect data) and found which unit types in a lottery, if any, for which the applicant HH met the combination of HH-size and HH-income requirements.
- 66. These procedures allowed me to have a universe of apparently eligible HHs.<sup>25</sup> Proceeding as I had with my entrant analysis, I was able to create a sub-universe of apparently-eligible CP beneficiary applicant HHs and a sub-universe of apparently-eligible non-beneficiary applicant HHs.
- 67. At this stage, too, the odds of being awarded a lottery unit were much better if the applicant HH were a CP beneficiary as opposed to non-beneficiary HH, as shown by Table 4 on the next page.

<sup>&</sup>lt;sup>24</sup> See further discussion in Sections VI to XI in the Sources and Methodology Appendix.

<sup>&</sup>lt;sup>25</sup> The counts of apparently-eligible applicant HHs by typology and CP beneficiary or non-beneficiary status are found in Exhibit 6 hereto.

Table 4 – Chances per 1,000 apparently eligible HHs of an award of a lottery unit, by CD			
	ty	pology	
CD typology	Non-beneficiary apparently eligible HH chances	CD beneficiary apparently eligible HH chances	Multiple by which CD beneficiary apparently eligible HH chances exceeds nonbeneficiary apparently eligible HH chances
Majority White	1.142	29.296	25.66
Majority Black	1.782	20.427	11.46
Majority Hispanic	2.646	34.136	12.90
Majority Asian	4.438	30.843	6.95
Plurality White	1.699	26.281	15.47
Plurality Black	1.167	7.770	6.66
Plurality Hispanic	3.105	56.134	18.08

- 68. The difference in chances expressed by the multiples shown in the right-most column are large and material.<sup>26</sup>
- 69. As such, I again undertook to determine relative benefit or detriment to a group from the operation of the community preference policy. I applied the same techniques as I did at the entrant stage. The first of these determines what share of a group is within the CP beneficiary HHs. Table 5 on the next page shows the result, with the highest group per CD typology highlighted in yellow.

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<sup>&</sup>lt;sup>26</sup> It should be noted that for all underlying tables presented in this report a variety of statistical tests were run, including a wide array of associational tests. In most all cases, the results were highly statistically significant. It should be noted that here we are dealing with a universe of entrants and awards, as well as those classified as apparently eligible. Typical statistical tests were developed and are used for conventionally collected samples and are used to test whether a perceived relationship does in fact apply to the universe from which it is drawn.

Table 5 – Comparing each group's CP beneficiary apparently eligible HHs as a percentage of that group's total apparently eligible HHs against the highest such percentage for any group, by CD typology Group with highest Relative percentage by which highest group percentage of its exceeds other groups apparently eligible CD typology HHs being CP White Black Hispanic Asian beneficiary apparently eligible HHs Highest 690.98% Majority White White 99.93% 262.16% **Group Highest** Majority Black Black 215.04% 126.30% 298.01% **Group** Majority **Highest** Hispanic 269.86% 268.67% 51.64% Hispanic **Group Highest** Majority Asian Asian 574.21% 2722.99% 709.25% Group **Highest** 16.07% Plurality White White 76.58% 41.54% **Group Highest** Plurality Black Black 114.43% 65.58% 491.76% Group Plurality **Highest** White 54.58% 7.37% 3.56% Hispanic Group

- 70. Here, the dominant group was benefitted most by the community preference policy (had the highest percentage of its members being CP beneficiaries) in each and every majority CD typology and two of the three plurality CD typologies.<sup>27</sup> The relative percentage differences in the majority typologies are particularly strong.
- 71. Even in the absence of a second method to test for disparate impact, it is clear at the apparent-eligibility stage that many significant impacts exist: for example, Blacks are tremendously disadvantaged as compared to Whites in the White majority CD typology, and, in the majority Black CD typology, Hispanics are among the groups significantly disadvantaged by

<sup>27</sup> Even in the plurality Hispanic CD typology, the lone outlier under this test, Hispanics were still advantaged and Blacks disadvantaged when compared to each other.

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the community preference policy.

- 72. There is, of course, a second test (as there was for entrants), this one looking at the relative difference between a group's share of all non-beneficiary apparently-eligible HHs and that group's share of all CP beneficiary apparently-eligible HHs.
- 73. These results are shown in Table 6, below, with the results for the most-benefitted group highlighted in yellow for each CD typology.

Table 6 – Comparing relative percentage change for each group from share of nonbeneficiary apparently eligible HHs to share of CP beneficiary apparently eligible HHs. by CD typology CD typology White Black Hispanic Asian Majority White 164.66% -68.84% 27.01% -31.14% 47.91% Majority Black -56.54% -38.67% -65.85% Majority Hispanic -66.25% -15.20% 32.08% -66.14% Majority Asian -59.80% -90.80% -66.83% 305.79% Plurality White 29.72% 10.39% -29.28% -10.70% Plurality Black -41.29% 37.92% -22.22% -79.71% 21.37% Plurality Hispanic -23.09% 12.58% 16.97%

74. Here again there are six of seven CD typologies where the most benefit from community preference accrues to the dominant group in the CD typology, and there are significant detriments suffered by one or more other groups in each typology.<sup>28</sup> Note that in the circumstance of the majority White typology (where Blacks again suffer substantially), the gain over non-beneficiary share for Hispanics is dwarfed by the gain over non-beneficiary share for Whites.

<sup>&</sup>lt;sup>28</sup> As with the first test on apparently-eligible HHs, even in the plurality Hispanic CD typology, the lone outlier, Hispanics were still advantaged, and Blacks disadvantaged, when compared to each other.

- 75. In view of the foregoing, my conclusion is that race-based disparities (impacts) are pervasive on apparently-eligible analysis. To summarize, the existence of these material disparities has thus far been demonstrated by both tests of impact examining entrants, and both tests of impact examining the subset of entrants who are apparently-eligible.
  - 76. As will be seen, material impacts continue through to unit awards (the bottom line).

# G. Disparate impact at the awarded stage

77. Table 7 below shows the awarded results in terms of the percentage of each group's awardees that are CP beneficiaries. As previously, relative difference between the group with the highest percentage and each of the other groups is depicted for each CD typology. The group with the highest percentage is identifiable by its being so noted and highlighted in yellow.

Table 7 – Comparing each group's CP beneficiary awardees as a percentage of that group's total awardees against the highest such percentage for any group, by CD					
		typology			
	Group with highest percentage of its	Relative	percentage by exceeds oth	_	st group
CD typology	awardees being CP beneficiary awardees	White	Black	Hispanic	Asian
Majority White	White	Highest Group	178.06%	24.11%	35.46%
Majority Black	Black	57.67%	Highest Group	29.82%	57.67%
Majority Hispanic	Hispanic	105.06%	17.31%	Highest Group	17.75%
Majority Asian	Asian	No Beneficiary Awardees	No Beneficiary Awardees	178.96%	Highest Group
Plurality White	Black	16.15%	Highest Group	18.76%	50.50%
Plurality Black	White	Highest Group	0.79%	15.79%	25.00%
Plurality Hispanic	White	Highest Group	52.17%	6.45%	5.36%

- 78. True to form, there are distinct positive impacts for the dominant group in each of the majority typologies.<sup>29</sup> Along with the positive impacts come significant disparities in each majority CD typology as compared with one or more of the other groups. The disparity between Whites and Blacks in the majority White CD typology (in favor of Whites) is especially noteworthy here.
- 79. In other words, in the third level of comparison, multiple impacts in the same pattern in the majority CD areas add to the evidence of material disparities at the other levels examined.
- 80. The second test at the awardee stage, as with the other stages, is relative percentage change for each group form its share of non-beneficiary awardees to its share of CP beneficiary awardees. These results are shown in Table 8, below, with the group benefitting most in each CD typology highlighted in yellow.

Table 8 – Comparing relative percentage change for each group from share of non- beneficiary awardees to share of CP beneficiary awardees, by CD typology				
CD typology	White	Black	Hispanic	Asian
Majority White	88.34%	-65.94%	16.77%	-0.99%
Majority Black	-45.30%	<mark>21.38%</mark>	-25.47%	-45.39%
Majority Hispanic	-61.11%	-11.59%	17.76%	-11.76%
Majority Asian	-100.00%	-100.00%	-65.21%	157.13%
Plurality White	0.84%	<mark>41.71%</mark>	-3.64%	-37.56%
Plurality Black	15.88%	13.94%	-12.03%	-23.04%
Plurality Hispanic	<mark>25.85%</mark>	-40.15%	10.80%	13.11%

<sup>&</sup>lt;sup>29</sup> The majority typologies account, in the aggregate, for at least 70 percent of the total awarded units, both beneficiary and non-beneficiary.

- 81. In this, the sixth out of six tests run at different stages, the dominant groups in each majority CD typology once again secured the most benefit from the community preference policy, and there were one or more other groups that suffered significant detriment. In the majority White CD typology in this case, a detriment of 65.94 percent for Blacks relative to their share of the non-beneficiary awardees was paired with a benefit of 88.34 percent for Whites relative to their share of the non-beneficiary awardees.
- 82. As would be expected from plurality CD typologies where there is normally less of a gap in the share of the dominant group compared to the next largest group there is not the same pattern of benefit and detriment as between dominant and other groups. There is, however, the familiar pattern of Black benefit and Hispanic detriment in the plurality Black CD typology, and a reversal in the plurality Hispanic CD typology: Black detriment and Hispanic benefit.
- 83. The awarded results reinforce my conclusion about the community preference causing widespread disparate impacts, with those impacts being most profound in the majority CD typologies.
- 84. It remains the case that there are disparate impacts at one or more stages for the plurality CD typologies, too.
- 85. Due to the consistent pattern of differences and the fact that there are no public plans to change the community preference policy under which the lotteries are administered, one can expect the disparate impacts caused by this long-standing policy to continue into the future as affordable housing units continue to be allocated in large numbers in New York City.

# H. Additional observations on impact

86. Thus far, this report has focused on evidence demonstrating the existence of

disparate impacts, not on the consequences. But beyond the obvious consequence of not having a level playing field, there are other ramifications. I am advised that only those who have been reached by a developer have an opportunity to update their household information from what it was on the application; and only those who have been reached, considered, and rejected by a developer have the right to appeal, including appealing with updated information that could demonstrate eligibility.

- 87. Since I believe that, in the normal course, it is virtually inevitable that a greater percentage of CP beneficiaries than non-beneficiaries will be reached (processed in a lottery),<sup>30</sup> that means that a greater percentage of CP beneficiaries are getting the opportunities to update information and/or appeal than the percentage of their non-beneficiary counterparts.
- 88. Moreover, particular unit-types for which an applicant HH may be eligible are in limited supply. Depending on the sequence in which applications are processed, it may be the case that a unit-type for which an applicant HH is eligible will no longer be available by the time that outsiders are reached (that is, the unit type will be closed out).
- 89. Of the 892 unit-types for which there were at least one unit awarded to an applicant HH in a lottery, I examined each unit type that had both of the following characteristics:
  - c. At least *five* applicant HHs listed on defendant's status sheets as having received community preference but not having received a disability set-aside;
     and
  - d. Zero applicant HHs listed on defendant's status sheets to outsiders who were

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<sup>&</sup>lt;sup>30</sup> Given the vast difference in the size of the respective CP-beneficiary and non-beneficiary pools and the much smaller difference between the number of CP-beneficiary units and non-beneficiary units in most lotteries, it is typically and predictably the case that a materially greater percentage of CP-beneficiary applicant HHs (both the subset of apparently-eligible and the broader group of entrants) will be reached and evaluated for eligibility by a developer's marketing agent than the percentage of non-beneficiary applicant HHs so reached and evaluated.

not the recipient of a disability set-aside.

- 90. This subset of unit types, the projects they were associated with, their AMI bands, and the number of lottery units awarded to CP awards of than disability in each unit type are listed in Exhibit 8, hereto.
- 91. As the exhibit shows, there were 61 such unit types across 36 lotteries encompassing 565 units. 86.9 percent of the unit types, and 89.0 percent of the units were unit types at the 60 percent AMI level or below.
- 92. In other words, there are a substantial number of unit types where HHs who are outsiders not eligible for any preference or set-aside (whose processing is sequenced after CP beneficiary HHs) are closed out (effectively have no chance to compete for the unit type), even though the unit type might have been the only one for which they were eligible. This is the direct result of the rules governing the allocation of units based upon community preference.
- 93. Note that this tally does not encompass those unit types where zero outsider awards were paired with four or fewer awards to applicant HHs who received community preference but not a disability set aside, and does not include the circumstance of partial exclusion (where the lion's share of a unit type goes to those with a community preference).

# I. Participation in lotteries outside of an applicant HH's community district or borough

94. In my declaration of June 1, 2017 (the supplement to this report that I am submitted together with this document), I found that there is no evidence for the hypothesis that seekers of affordable housing are determined to stay within their own community district, and wrote further that there were large percentages of lottery participants that apply to affordable housing units

outside of their own community district and outside of their home borough.<sup>31</sup>

95. That analysis was based on a larger number of lotteries of which the 168 lotteries being analyzed elsewhere in this report formed a substantial part. I continue to believe those findings to be true.

# J. Segregation in New York City and its perpetuation

96. Residential segregation has been measured for decades. New York City has long been highly segregated with respect to Blacks and Hispanics ever since they came to live in the City in relatively large numbers. The table below shows two of the most common segregation indexes with the results for the City from 1980 through the present. I computed all of these indexes; those through 2010 were published in a book that I co-authored and co-edited.<sup>32</sup>

	1980	1990	2000	2010	2013-17 ACS
Dissimilarity NHBlack/NHWhite	0.83	0.84	0.84	0.82	0.80
Dissimilarity NHWhite/Hispanic	0.64	0.66	0.67	0.66	0.64
Dissimilarity NHAsian/NHWhite	0.49	0.48	0.50	0.52	0.52
Isolation NHWhite/NHBlack	0.82	0.84	0.85	0.84	0.82
Isolation NHWhite/Asian	0.25	0.34	0.44	0.52	0.54
Isolation NHWhite/Hispanic	0.62	0.69	0.73	0.73	0.75

<sup>&</sup>lt;sup>31</sup> See Section E of that declaration, and the accompanying Exhibit 9.

<sup>&</sup>lt;sup>32</sup> The indexes for 1980 through 2010 are taken from Andrew A. Beveridge, David Halle, Edward Telles, and Beth Leavenworth Dufault, "Residential Diversity and Division" in *New York and Los Angeles: The Uncertain Future*, David Halle and Andrew A. Beveridge (eds.) (New York: Oxford University Press, 2013, p 316). The most recent set of indexes uses the same program as the earlier indexes, based upon more recent data from the 2013-17 ACS. All these indexes are based upon the Census tract data.

- 97. These indexes get at two different dimensions of segregation. The dissimilarity index measures how evenly a population is spread out in a given area. If the population is evenly distributed, then the measure is zero; if completely segregated, the measure is one. The measure gives the proportion of the population that would need to be moved to get to perfect evenness. These figures have shown very little variation since 1980.
- 98. The isolation measures express the average percent of other groups that one would find in a specified region (here census tracts). The isolation measure for Blacks and Hispanics is high, and that for Asians seems to be rising. For all these measures, the contrast category is Whites.
- 99. New York City's level of segregation by these measures was and remains high. Particularly notable is the fact the City has apparently made little or no progress in reducing segregation levels over time, especially as compared with the results of most other large cities.
- 100. New York City's levels of segregation translate quite directly into the highly-concentrated nature of many of the community districts in New York City. Four maps of the distribution of the population groups assessed in this report, overlaid with community district boundaries, are attached hereto as Exhibits 9-12. As is apparent from the maps and from the CD typologies, many of the community districts vary considerably in the extent to which each of the major groups is present. For example, Whites tend to be most concentrated in some areas of Manhattan, Brooklyn, and Staten Island. When compared with the map of the Black population, it is clear how separate the two populations are. The Hispanic population in concentrated in the Bronx and in some parts of Manhattan and Queens. And the Asian population is growing and becoming most concentrated in Queens. The distributions strongly correlate with the racial and Hispanic disparities I have observed based upon the community preference system for allocating affordable housing in New York City.

101. Because of how the community preference policy distorts the operation of the lottery system, that policy means that the allocation of affordable housing units perpetuates segregation more (and allows integration less) than what would be the case without the policy.

# **K.** Conclusion

102. Defendant knew that New York City has long been and continues to be highly residentially segregated, and that segregation existed and continues to exist at the community district level. Nevertheless, defendant initiated, expanded, and continues to maintain a community preference policy that causes multiple, material disparate impacts in the allocation of units based on race and Hispanic status. These impacts have been and will continue to be entirely predictable.

Amended October 18, 2019:

Andrew A. Beveridge

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### **CURRICULUM VITAE**

Updated 2/28/2019

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#### **EDUCATION**

1968-73	Yale University (Sociology), M.Phil.1971; Ph.D. 1973
1967-68	Yale University (Econometrics, Economic Theory)
1964-67	Yale College (Economics), B.A. 1967, with honors in economics
1963-64	California Institute of Technology (Freshmen Year, Math, Science)

# **RECOGNITION AND AWARDS**

2018	Best New End User Product, Charleston Advisor Sixteenth Annual Readers' Choice
	Awards (A Major Reviewer of Digital Products)
2016	The Threat to Representation for Children and Non-Citizens (Evenwel v. Abbott) (Report
	Author and Co-Creator) named Best Law Website by the Webby Awards
2015	Census Explorer (Co-Creator) named Webby Honoree in Government
2015	Social Explorer (Co-Creator) awarded Gold Medal, Modern Library Award
2014	Social Explorer (Co-Creator) named Webby Honoree in Education
2013	Social Explorer (Co-Creator) named Outstanding Achievement, Interactive Media
	Association
2012	Social Explorer (Co-Creator) named Publishing Standard of Excellence, Web Marketing
	Association
2010	Social Explorer (Co-Creator) named Outstanding Reference Source by the Reference
	and Users Services Association of the American Libraries Association
2007	American Sociological Association Public Understanding of Sociology Award
2006-pres.	Marquis Who's Who in the World
2005-pres.	Marquis Who's Who in America
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# **TEACHING EXPERIENCE**

EACHING EAF	ENIENCE
2006-2018	Chair, Queens College, Department of Sociology
2002-pres.	Professor, Queens College and Ph.D. Program in Sociology, Graduate School and University Center, The City University of New York
1981-2001	Associate Professor of Sociology, Queens College, and Ph.D. Program in Sociology Graduate School and University Center, The City University of New York
1981-82	Associate Professor of Sociology, Columbia University
1973-81	Assistant Professor of Sociology, Columbia University
1972-73	Acting Instructor, Department of Sociology, Yale University
1969-70	Assistant in Instruction, Department of Sociology, Yale University

### **RESEARCH APPOINTMENTS**

2008-pres.	Executive Committee Member and Affiliate, CUNY Institute for Demographic Research
1987-88	Visiting Researcher, Center for Studies of Social Change, The New School for Social
	Research
1982-83	Research Associate, Center for the Social Sciences, Columbia University
1980-82	Co-Director, Annual Housing Survey Project, Center for the Social Sciences, Columbia University
1970-72	Research Affiliate, Institute for African Studies (the former Rhodes-Livingstone Institute), Lusaka, Zambia
1965-69	Research Assistant and Programmer, Department of Economics and Economic Growth Center, Yale University

#### OTHER RELATED ACTIVITIES

2006-pres. Co-Founder (with Ahmed Lacevic) and President, *Social Explorer, Inc.* A web-based map and data service, now distributed by Oxford University Press and Pearson Publishing. Assisted Development of over 200 activities to accompany introductory Sociology, Political Science and History Texts.

1997-pres. President of Andrew A. Beveridge, Inc., a Demographic and Social Science Data Consulting Firm that provides consulting in litigation and other settings. (Cases and other engagements listed below.)

1993-pres. Consultant to the Newspaper Division of *the New York Times*. Work with reporters and editors regarding covering social science and demographic trends. Analyses and data cited over 1,000 times in newspaper. (Selected analyses listed below)

2001-pres. Columnist for the *Gotham Gazette*. Write Demographic Topic on recent trends and news related to social and demographic trends. (Topic Columns listed below.)

#### **PUBLICATIONS**

#### **Book**

1979 African Businessmen and Development in Zambia. Andrew A. Beveridge and A. Oberschall.
Princeton N.J. and Guildford, Surrey, United Kingdom: Princeton University Press, 382 pages.

#### **Edited Books**

- 2013 New York and Los Angeles: The Uncertain Future. (David Halle and Andrew A. Beveridge, Co-Editors) New York: Oxford University Press. 624 pages; 38 maps, 35 graphs, 27 photos, and 79 tables.
- 2011 Cities in American Political History, (Associate editor) (Editor. Richardson Dillworth), Sage-CQ Press, 760 pages. Named one of Choice's Outstanding Academic Titles of 2012.

#### **Papers and Chapters**

- 2018 "Relating Economic and Demographic Change in the United States from 1970-2012: A Preliminary Examination Using GIS and Spatial Analysis Techniques with National Data Sources." Andrew A. Beveridge. In lan Gregory, Don Debats, Don Lafreniere (Eds.) The Routledge Companion to Spatial History. Pp. 92-129.
- "The Development and Persistence of Racial Segregation in United States Urban Areas: 1880 to 2010." Andrew A. Beveridge. Pp 35-61. In lan Gregory and Alistair Geddes (eds.) *Towards Spatial Humanities: Historical GIS and Spatial History.* Bloomington, IN: Indiana University Press.
- "New York and Los Angeles: The Uncertain Future." David Halle and Andrew A. Beveridge. Pp. 1-30 in *New York and Los Angeles: The Uncertain Future.*
- 2013 "The Big Picture: Demographic and Other Changes." Andrew A. Beveridge and Sydney J. Beveridge. Pp. 33-78 in *New York and Los Angeles: The Uncertain Future.*
- 2013 "Financial, Economic and Political Crises: From Sub-Prime Loans to Dodd-Frank, Occupy Wall Street and Beyond." David Halle and Andrew A. Beveridge. Pp. 154-93 in New York and Los Angeles: The Uncertain Future.
- 2013 "Residential Diversity and Division: Separation and Segregation among Whites, Blacks, Hispanics, Asians, Affluent and Poor." Andrew A. Beveridge, David Halle, Edward Telles, and Beth Leavenworth Default. Pp. 310-42 in New York and Los Angeles: The Uncertain Future.
- 2011 "Avenue to Wealth or Road to Financial Ruin? Home Ownership and Racial Distribution of Mortgage Foreclosures." Elena Vesselinov and Andrew A. Beveridge. In Christopher Niedt and Marc Silver (eds.) Forging a New Housing Policy: Opportunity in the Wake of Crisis. Hempstead NY: National Center for Suburban Studies, Hofstra University, pp. 45-55.

- 2011 "The Rise and Decline of the L.A. and New York Schools." David Halle and Andrew A. Beveridge. In Dennis R Judd and Dick Simpson (eds.) *The City, Revisited Urban Theory from Chicago, Los Angeles and New York.* Minneapolis, MN: University of Minnesota Press, pp. 137-69.
- "Commonalities and Contrasts in the Development of Major United States Urban Areas: A Spatial and Temporal Analysis from 1910 to 2000." Andrew A. Beveridge. In Myron P. Guttman, Glenn D. Deane, Emily R. Merchant and Kenneth M. Sylvester (eds.) Navigating Time and Space in Population Studies, Springer for the International Union for the Scientific Study of Population, pp. 185-216.
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- "Neighborhood Crime Victimization, Drug Use And Drug Sales: Results From The 'Fighting Back' Evaluation." Julie Ford and Andrew A. Beveridge. *Journal of Drug Issues*, vol. 36:2, pp. 393-416.
- "Scale-Up Methods as Applied to Estimates of Heroin Use." Charles Kadushin, Peter D. Killworth, Russell H. Bernard, Andrew A. Beveridge. Journal of Drug Issues, vol. 36:2, pp 417-40.
- 2004 "Bad' Neighborhoods, Fast Food, 'Sleazy' Businesses and Drug Dealers: Relations between the Location of Licit and Illicit Businesses in the Urban Environment." Julie Ford and Andrew A. Beveridge. *Journal of Drug Issues*, vol. 34:1, pp. 51-76.
- "Race and Class in the Developing New York and Los Angeles Metropolises: 1940 to 2000." Andrew A. Beveridge and Susan Weber. In David Halle (ed.) New York and Los Angeles: Politics, Society and Culture, A Comparative View. University of Chicago Press, pp. 49-78.
- "Residential Separation and Segregation, Racial and Latino Identity, and the Racial Composition of Each City." David Halle, Robert Gedeon and Andrew A. Beveridge. In David Halle (ed.) New York and Los Angeles: Politics, Society and Culture: A Comparative View. University of Chicago Press, pp. 150-90.
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- 2002 "Immigrant Residence and Immigrant Neighborhoods in New York, 1910 and 1990." Andrew A. Beveridge. In Pyong Gap Min (ed.) Classical and Contemporary Mass Migration Periods: Similarities and Differences. Altamira Press, pp.199-231.

- "Immigration, Ethnicity and Race in Metropolitan New York, 1900-2000." Andrew A. Beveridge. In Anne Kelly Knowles (ed.) *Past Time, Past Place: GIS for History.* ESRI Press, pp. 65-78.
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- 2001 "Does Neighborhood Matter? Family, Neighborhood and School Influences on Eighth-Grade Mathematics Achievement." Sophia Catsambis and Andrew A. Beveridge. Sociological Focus, vol. 34, October, pp. 435-57.
- "Simulating Social Research Findings To Aid in Teaching Introductory-Level Sociology Courses." Andrew A. Beveridge, Joanne Miller, Dean Savage, Lauren Seiler and Carmenza Gallo. In Vernon Burton (ed.) *The Renaissance of Social Science Computing.* Champaign: University of Illinois Press.
- "Survey Estimates of Drug Use Trends in Urban Communities: General Principles and Cautionary Examples." Andrew A. Beveridge, Charles Kadushin, Leonard Saxe, David Rindskopf and David Livert. *Substance Use and Misuse*, vol. 35, pp. 85-117.
- "Think Globally Act Locally: Assessing the Impact of Community-Based Substance Abuse Prevention." Leonard Saxe, Emily Reber, Denise Hallfors, Charles Kadushin, Delmos Jones, David Rindskopf and Andrew A. Beveridge. *Evaluation and Program Planning*, vol. 20:3, pp. 357-66.
- 1988 "An Evaluation of 'Public Attitudes toward Science and Technology' in *Science Indicators the 1985 Report.*" Andrew A. Beveridge and Fredrica Rudell. *Public Opinion Quarterly*, vol. 53: Fall, pp. 374-85.
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- "Running Records and the Automated Reconstruction of Historical Narrative." Andrew A. Beveridge and George V. Sweeting. *Historical Social Research* vol. 35: July, pp. 31-44.
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- "Studying Community, Credit and Change by Using 'Running' Records from Historical Sources." Andrew A. Beveridge. *Historical Methods*, vol. 14:4, pp. 153-62.
- "Organizing 'Running' Records to Analyze Historical Social Mobility." Andrew A. Beveridge, George R. Hess and Mark P. Gergen. In Joseph Raben and Gregory Marks (eds.), *Data Bases in the Humanities and Social Sciences*. Amsterdam and New York, North-Holland Publishing Company, pp. 157-64.
- "Social Effects of Credit: Cheshire County, New Hampshire: 1825-1860." Andrew A. Beveridge. Regional Economic History Research Center Working Papers, Autumn, pp. 1-33.
- "Economic Independence, Indigenization and the African Businessman: Some Effects of Zambia's Economic Reforms." Andrew A. Beveridge. African Studies Review, vol. 17:3, pp. 477-92.

#### Maps

2011 "Charles Burnett's Los Angeles, Circa 1970: The City" and "Charles Burnett's Los Angeles, Circa 1970: His Neighborhood." Andrew A. Beveridge. In Robert E. Kapsis

(ed.), Charles Burnett Interviews. Jackson, MS, University of Mississippi Press, in folio between p. 94 and p. 95.

#### **Web Based Materials**

- 2005-- Social Explorer. A system for retrieving, mapping, charting and graphing Census data from 1790 to present and other data. Co-Creator with Ahmed Lacevic and Social Explorer Team.
- 2013-15 Census Explorer. Visualizations of Census Data. People Education and Income Edition, Commuting Edition, Retail Edition, Population Estimates Edition, Young Adults: Then and Now Edition, and 2010 Census Participation Rate Edition. Co-Creator with Ahmed Lacevic and Social Explorer Team and US Census Bureau. Young Adults: Then and Now Edition. Co-Created with Minnesota Population Center and US Census Bureau. Winner Webby Honoree for Government, 2015.

#### **Invited Pieces and Columns**

Gotham Gazette Demographic Topic Columns: January 2001-2013.

"New York's Changing Electorate: What It Means for the Mayoral Candidates" Jun 16, 2013

"New Plan for City Council Districts" (November 16, 2012) (Christian Salazar and Andrew A. Beveridge)

"Proposed City Council District Map Protects Incumbents" (November 15, 2012)

"The Attempt to Kill the ACS" (July, 2012)

"10 Years Later: Enumerating the Loss at Ground Zero" (September 10, 2011)

"Under a Different Name Census Data is Ready for Perusal" (August 11, 2011)

"Failure of Redistricting Reform Could Bring Reprise of 2002's Fiasco" (June 16, 2011)

"Census Wounded City's Pride but Probably Got the Numbers Right" (April 26, 2011)

"Census Brings Unpleasant Surprise for State Politicians" (January 04, 2011)

"Census Likely to Offer Accurate Count of New Yorkers" (September 16, 2010)

"Census Could Set Off Major Redistricting in State" (February 25, 2010)

"New York's Now Beleaguered Financial Workforce" (August 2009)

"New York and the Fight Over the 2010 Census" (February 2009)

"The Senate's Demographic Shift" (November 2008)

"A Shift in Albany Could Avert Higher Rents" (October 2008)

"An Affluent, White Harlem?" (August 2008)

"The School Divide Starts at Kindergarten" (June 2008)

"Housing Squeeze Shows No Sign of Easing" (May 2008)

"A Religious City" (February 2008)

"Will the 2010 Census 'Steal' New Yorkers?" (December 2007)

"The End of 'White Flight'?" (November 2007)

"Feeling the Effects of a Housing Bust" (September 2007)

"No Quick Riches for New York's Twentysomethings" (June, 2007)

"Women of New York City" (March, 2007)

"Stuyvesant Town and Peter Cooper Village, Then and Now" (September, 2006)

"What New Yorkers Are Like Now" – First Results of the American Community Survey" (August 2006)

"Hitting the 9 Million Mark" (June, 2006)

"New York's Asians" (May, 2006)

"Undocumented Immigrants" (April, 2006)

"Transit Workers/Transit Riders; Beginning Lawyers Are Richer; 9 Million New Yorkers?" (March 2006)

"Teachers in NYC's Institutions of Higher Learning" (January, 2006)

"Hispanics and the Ferrer Candidacy" (December, 2005)

"Disabled in New York City; Also: Is The City Still Booming?" (November 2005)

"Who Can Afford to Live in New York City?" (October 2005)

"Can NYC "Profile" Young Muslim Males?" (August 2005)

"Upstate and Downstate – Differing Demographics, Continuing Conflicts" (July, 2005)

"Living at Home after College" (June, 2005)

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"Four Trends That Shape The City's Political Landscape" (May 2005).
        "High School Students" (April, 2005)
       "New York's Responders and Protectors" (March, 2005)
       "Who Got the Death Penalty" (February, 2005)
        "Wall Street Bonus Babies" (January, 2005)
        "New York Lawyers: A Profile" (December, 2004)
       "Bush Does Better and Other Election Results In NYC" (November, 2004)
       "New York's Creative Class" (October, 2004)
       "Portrait of Same-Sex (Married) Couples" (September 2004)
       "New York City Is a Non-Voting Town" (August 2004)
        "New York's Divided Afghans" (July 2004)
        "Flaws in the New School Tests" (June. 2004)
       "Why Is There A Plunge In Crime?" (May 2004)
       "Estimating New York City's Population" (April, 2004)
       "The Passion for Religion Ebbs" (March, 2004)
        "Imprisoned In New York" (February, 2004)
        "Who Are NYC's Republicans?" (January 2004)
        "Five Hidden Facts about Housing--An Analysis of Data from the Housing and Vacancy Survey"
           (December, 2003)
        "Young, Graduated and in New York City" (October, 2003)
        "Back To (Public and Private) School" (September, 2003)
        "The Vanishing Jews" (July, 2003)
        "The Affluent of Manhattan" (June, 2003)
       "How Different Is New York City From The United States?" (May 2003)
       "The Poor in New York City" (April, 2003)
       "Eight Million New Yorkers? Don't Count On It" (March 2003)
       "Does Archie Bunker Still Live in Queens?" (February 2003)
       "Is There Still A New York Metropolis?" (January 2003)
        "City of the Foreign-Born" (December, 2002)
        "Can The US Live Without Race?" (November 2002)
       "New York's Declining Ethnics" (October 2002)
       "A Demographic Portrait of the Victims in 10048" (September, 2002)
       "Manhattan Boom" (August, 2002)
        "GOP Senate Majority Repeals Census 2000" (July, 2002)
        "Changing New York City" (June, 2002)
       "The Census Bureau's Bad Estimates" (May, 2002)
        "The Boom 1990's?" (April 2002)
        "Segregation" (March, 2002)
        "Non-Legal Immigrants" (February, 2002)
        "Counting Muslims" (January, 2002)
        "The Arab Americans in Our Midst" (September, 2001)
       "A White City Council" (August, 2001)
        "Counting Gav New York" (July, 2001)
       "Redistricting" (June, 2001)
       "Politics and the Undercount" (May, 2001)
       "False Facts about Census 2000" (April, 2001)
       "Eight Million New Yorkers!" (March 2001)
       "Redefining Race" (February, 2001)
        "Census Bureau Finds 830,000 'Extra' New Yorkers" (January 2001)
Other:
       2013
                 "The Two Cities of New York: Wealth, Poverty, and Diversity in the Big Apple." ASA
                 Footnotes, February p. 1.
       2007
                 "Four Trends Shaping the Big Apple." ASA Footnotes, February, p. 1.
                 "Sociologists: Eyes Open for Trends in New York City." ASA Footnotes, January, p. 1.
       1996
                 "Stroll the Upper East Side for Lifestyles of the Elite." ASA Footnotes, March, p. 1
       1996
                  "Credit to the Community: American Banking's Tribal Roots." Thesis (Spring), pp. 18-23.
       1988
                 "African Businessmen in Zambia." New Society, 35:702: pp. 599-601.
       1976
Book Reviews
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- 2012 "Social Theory Two Ways: John Levi Martin's Structures and Actions" Review of Social Structures and The Explanation of Social Action. Historical Methods Historical Methods: A Journal of Quantitative and Interdisciplinary History, 45:4, 179-182.
- 1995 The Assassination of New York. Robert Fitch. Contemporary Sociology, vol. 24: March, pp. 233-34.
- 1990 Doing Deals: Investment Banks at Work. Robert G. Eccles and Dwight B. Crane. Contemporary Sociology, vol. 19: May, pp. 186-87.
- 1988 The End of Economic Man? Custom and Competition in Labor Markets. David Marsden. Contemporary Sociology, vol. 17: March, pp. 172-73.
- 1988 Techno crimes: The Computerization of Crime and Terrorism. August Beqaa. Society, vol. 25: May/June, pp. 87-88.
- The Economic Basis of Ethnic Solidarity: Small Business in the Japanese American Community. Edna Bonacis and John Modell. American Journal of Sociology, vol. 90: January, pp. 942-45.
- 1979 Oneida Community Profiles. Constance Noyes Robertson. Business History Review, vol. 53: Autumn, pp. 277-78.
- 1978 Urban Man in Southern Africa. C. Cleff and W.C. Pendleton (eds.) African Studies Association Review of Books, vol. 4, pp. 25-26.
- 1977 Colonialism in Africa, 1870-1960 Volume Four: The Economics of Colonialism. Peter Duignan and L.H. Gann (eds.) Business History Review, vol. 51: Autumn, pp. 382-85.
- The Quality of American Life: Perceptions, Evaluations, and Satisfactions. Angus Campbell, Philip Converse, and Willard L. Rogers (Eds.). Political Science Quarterly, vol. 91: Fall, pp. 529-31.
- 1976 Corporate Power in an African State: The Political Impact of Multinational Mining Companies in Zambia. Richard L. Skylar. African Studies Association Review of New Books, vol. 2, pp. 53-55.

#### Reports

- 2000 Fighting Back Household Survey, Interim Report of 1995-1999 Findings. David Livert, Charles Kadushin, Leonard Saxe, Andrew A. Beveridge, David Rindskopf, Elizabeth Tighe, Jennifer Hoffman, Saul Kellner, Ricardo Barrera's and Julie Ford.
- 1997 Fighting Back Evaluation Interim Report: Wave II General Population. Survey David Livert, Charles Kadushin, Leonard Saxe, Andy A. Beveridge, David Rindskopf, Elizabeth Tighe, Jennifer Hoffman, Saul Kelner, Ricardo Barreras and Julie Ford.
- Monitoring Archival Indicators of Alcohol and Other Drug Harm: A Fighting Back Progress Report. Andrew A. Beveridge, Elizabeth Tighe, Mary Jo Larson, David Rindskopf, David Livert, Susan Weber, Charles Swartz, John McKenna, Charis Ng and Leonard Saxe.
- 1997 Social Trends in North America: Andrew A. Beveridge, Vivian Brachet, Lorne
  Tepperman and Jack Veugelers. Prepared for the State of the Environment Report of
  the Consortium for Environmental Cooperation, Montreal, Quebec.
- 1996 Fighting Back Program Interim Report, Leonard Saxe, Emily Reber, Charles Kadushin, Andrew A. Beveridge, Mary Jo Larson, David Rindskopf, David Livert, Joe Marchese, Michael Stirrat and Susan Weber.
- Black and White Property Tax Rates and Other Homeownership Costs in 30

  Metropolitan Areas: A Preliminary Report. Andrew A. Beveridge and Jeannie D'Amico.

  Queens College of the City University of New York, Department of Sociology, Program for Applied Social Research.
- An Analysis of Black and White Income Differences: Queens County and the United States. Andrew A. Beveridge and Jeannie D'Amico. Queens College of the City University of New York, Department of Sociology, Program for Applied Social Research.
- 1992 Patterns of Residential Segregation in New York City, 1980-1990: A Preliminary Analysis. Andrew A. Beveridge and Hyun Sook Kim. Queens College of the City University of New York, Department of Sociology, Program in Applied Social Research.

- 1988 Integrating Social Science Workstations into Research and Teaching: Final Report to IBM. Andrew A. Beveridge and Lauren Seiler. Queens College of the City University of New York, Department of Sociology.
- 1984 Changing Lifestyles and Newspaper Reading: An Exploratory Study of Younger Adults.
  Andrew A. Beveridge and Albert E. Gollin. Newspaper Readership Project, Newspaper
  Advertising Bureau.
- 1978 Social Effects of Time of Use Pricing of Electric Power: A Sociological Approach.
  Andrew A. Beveridge. Electric Power Research Institute

#### SELECTED RECENT PRESENTATIONS

#### **Presentations of Scholarly Work**

- Andrew A. Beveridge, "Nobel Prize Winners, Immigration, New York City and Foreign Roots." Presented at the Annual Meeting of the American Association for the Advancement of Science, Washington, DC, February, 14-17.
- Andrew A. Beveridge and Shige Song. "Is it Still the Economy Stupid?
   A Spatial Regression Analysis of the 2016 Presidential Election Using the American Community Survey Data and Other Materials." Presented at the 2017 American Community Survey, Users Group Conference, Alexandria, VA, May 11-12
- 2014 Andrew A Beveridge, "Four Mayor, Two Thugs and Governor Moonbeam: New York and Los Angeles Compared" American Sociological Association, Annual Meeting, San Francisco, August 16-19
- 2013 Ahmed. Lacevic, Andrew A. Beveridge, and Sydney. Beveridge. "New Directions in Visualization for Web Based Historical GIS." Presented at the Annual Meeting of the Social Science History Association, November 21-24, Chicago, IL
- 2012 Elena Vesselinov and Andrew A. Beveridge. "Racial/Ethnic Typology, Occupational Structure and Mortgage Foreclosures in Neighborhood Context." Annual Meeting of the American Sociological Association, August, 17 to 20, Denver, CO
- 2012 "Studying Disparate Impact in Housing." National Research Council, Committee for National Statistic. Workshop, June 14 and 15, Washington, DC. Presentation Summarized in Benefits, Burdens, and Prospects of the American Community Survey: Summary of a Workshop. (National Academies Press, Washington, DC. 2013)
- 2012 "The Genesis of Crisis: "looting" by lenders, default by profligate borrowers, or government housing incentives." Annual Meeting, Eastern Sociological Society, February 23 to 26, New York City.
- 2011 Elena Vesselinov and Andrew A. Beveridge. "Foreclosures, Subprime Loans and the Neighborhood Effects of Race and Class in Detroit and Phoenix." Annual Meeting of the American Sociological Association, Las Vegas, NV, August 23.
- 2011 Andrew A. Beveridge and Elena Vesselinov. "From Chicago to Las Vegas? The Housing Bubble, Ethnic Communities, Social Class and the Effects of Mortgage Foreclosures." Annual Meeting of the American Sociological Association, Las Vegas, NV, August 22.
- 2011 "The Demographics of Boom and Bust: New York and LA Metros, 1990 to 2011."
  Annual Meeting of the American Sociological Association, August 20, Las Vegas, NV.
- 2011 "How Do Current Districts Stack-Up." The Redistricting Puzzle: The Shifting Sands of Population and the Electorate: Changes in New York. CUNY Graduate Center. May 5.
- 2011 "Displacing Hope: Hope VI and the Destruction of Housing for Poor Families." Annual Meeting of the Urban Affairs Association. March 16-19. New Orleans, LA.
- 2011 "2010 Census: Research Issues and Opportunities." Panelist. Annual Meeting of the Eastern Sociological Society, Philadelphia, PA, February 26.

2011	"The Effects of Foreclosure on Educational Performance." Annual Conference of the Sociology of Education Association. Asilomar Conference Center Pacific Grove, California. February 18-20, 2011.
2010	"The Origins of the "Bubble" and the Financial Crisis 2008: "Looting" by Lenders or Default by Profligate Borrowers." Andrew A. Beveridge. Annual Meeting of the Social Science History Association, November 18-21, Chicago, IL.
2010	"Success in Cumulative Voting Systems." Andrew A. Beveridge and Robert Smith. Annual Meeting of the Social Science History Association, November 18-21, Chicago, IL.
2010	"Avenues to Wealth or Roads to Financial Ruin? Homeownership and the Distribution of Mortgage Foreclosures. Elena Vesselinov and Andrew A. Beveridge. Annual Meeting of the American Sociological Association, August 15, Atlanta, GA.
2010	"Teacher Effectiveness on High- and Low-Stakes Tests," Corcoran, Sean P., Jennifer L. Jennings, and Andrew A. Beveridge. Presented at the Institute for Research on Poverty Summer Institute, University of Wisconsin – Madison, June.
2010	"Social Effects of Foreclosures in New York and Los Angeles Metros, a Preliminary Analysis. Andrew Beveridge and Elena Vesselinov. Eastern Sociological Society Annual Meeting, Boston, MA. March 18-21.
2010	"Homeowners No More: A First Look at the Foreclosure Crisis's Effects on Neighborhoods and Communities across the United States." Andrew Beveridge and Elena Vesselinov. Eastern Sociological Society Annual Meeting, Boston, MA. March 18-21.
2009	"Foreclosure Patterns and Demographic Trends in the Los Angeles and New York Metros." Presented at the Annual Meeting of the Social Science History Association. Long Beach, CA. November 12-15.
2009	"Cities: What the Classics Can Tell Urbanisms Today." Panel Presentation, Annual Meeting of the Social Science History Association, Long Beach, CA. November 12-15.
2009	"Reflecting on Efforts to Build Communities of Teachers, Learners, and Researchers using Web 2.0 Tools." Panel Presentation at the Annual Meeting of the American Sociological Association, San Francisco. August 8-11.
2009	"Sociologists and the Media: Developing Positive Relationships between Journalists and Academia." Workshop Presentation at the Annual Meeting of the American Sociological Association, San Francisco. August 8-11.
2008	"Religious Adherents and the 2000 Presidential Election: A Spatial Analysis." Presented at the Social Science History Association 2008 Annual Meeting, Miami, Florida, October 24-26.
2008	"Segregation Revisited: The Growth and Dispersal of Black, Latino, Immigrant and Ethnic Populations in United States Metropolitan Areas since 1950" Presented at Historical GIS 2008. University of Essex, UK. August 21-22.
2008	"Teacher Effects on High and Low-Stakes Tests," Jennifer L. Jennings and Andrew A. Beveridge. Annual Meeting of the American Education Research Association, New York, NY, March 25-28.

# Selected Presentations Regarding Social Explorer

2014-19	American Sociological Association, Annual Meetings, Research Poster, Various Venues.
2014	National Science Foundation, March 25, Arlington, VA
2014	US Census Bureau, March 26, Suitland, MD
2014	American Association of Public Opinion Research, June 23, DC Chapter, Washington, DC3

- 2014 Bureau of Labor Statistics, June 23, Washington, DC.
- American Sociological Association, Annual Meeting, Research Poster, Annual Meeting, San Francisco, August 16-19
- 2013 National Science Foundation NSF Course Curriculum and Laboratory Improvement Program/Transforming Undergraduate Education in Science Conference and at NSF Atrium Presentation, January 23-25, Washington, DC.
- American Sociological Association, Annual Meeting, Research Poster, August 17-20, Denver, CO.
- 2011 American Sociological Association, Annual Meeting, Research Poster, August 21, Las Vegas, NV.

American Library Association, Annual Meeting, Oxford University Press, Booth, June 25, New Orleans, LA.

Center for Geographical Analysis, Harvard University, 2011 Conference, May 6 and 7, Cambridge, MA.

CUNY Journalism School, Ethnic Community and Media Census Training, May 5, New York, NY.

American Association of Public Opinion Research, New York Chapter, April 21, New York, NY.

Population Association of America, Pre-Conference Session, March 30, Washington, DC.

National Low Income Housing Coalition, Annual Conference, March 29, Washington, DC.

Census Bureau, Geography Division, January 28, Washington, DC.

National Science Foundation NSF Course Curriculum and Laboratory Improvement Program/Transforming Undergraduate Education in Science Conference and at NSF Atrium Presentation, January 26-28, Washington, DC.

CUNY Journalism School, Making Sense of the Census, January 3, New York, NY.

- Social Science History Association, Annual Meeting, "Exploring Long Term US Change: Research and Teaching with Social Explorer," November 18, Chicago, IL.
   Jewish Community Relations Council, Community Connections Fellowship Orientation, New York, November 9.
   U.S. State Department, Office of International Visitors. "Changing Demographics and Multiculturalism in the United States." Flushing, NY, September 21.
   American Sociological Association, Annual Meeting, Research Funding Opportunities
- American Sociological Association, Annual Meeting, Research and Data Support Poster, August 8-11, San Francisco, CA.
  Eastern Sociological Association, Annual Meeting, Research Workshop, April 2-5.
  Baltimore, MD.

and Data Resources Poster, August 15, Atlanta, GA.

- American Sociological Association, Annual Meeting, Research and Data Support Poster, August 2, Boston, MA.
- New York Chapter of the American Association of Public Opinion Research, October 4, New York, NY.

American Sociological Association, Annual Meeting, Research and Data Support Poster, August 12, New York, NY.

Coalition for the National Science Foundation, U.S. House Office Building Reception, Official Representative of the American Sociological Association, Washington, DC, June 26,.

Pew Research Center, Washington, DC, June 25.

2006 National Center for Supercomputing Applications, Invited Conference on Spatial Thinking in the Social Sciences and Humanities," December 18-19, Urbana, IL. Annual Meeting of the Social Science History Association, "Social Explorer as a Resource for Teaching," November 2-5, Minneapolis, MN.

Annual Meeting of the American Sociological Association, Research Workshop, "Geographical Information Systems (GIS) as a Research Tool for Sociologists," August 11-14, Montreal, Quebec.

Annual Meeting of American Sociological Association, Research and Data Support Poster, August 11-14, Montreal, Quebec...

National Center for Supercomputing Applications, Invited Conference on Spatial Thinking in the Social Sciences and Humanities, December 18-19, Urbana, IL.

#### **GRANTS AND AWARDS**

#### **Grants and Awards in Progress**

"Census Analyses for the New York Metropolitan Area." *New York Times* Newspaper Division and CUNY Center for Advanced Technology, 1993-pres. Renewed 9/2018 to 8/2021 (\$317,563)

#### **Grants and Awards Completed**

- "INSPIRE: Studying and Promoting Quantitative and Spatial Reasoning with Complex Visual Data Across School, Museum, and Web-Media Contexts" Leilah Lyons, Josh Radinsky (University of Illinois Chicago) and Andrew A. Beveridge (Social Explorer, Inc.). National Science Foundation, Tues-Type 2 Project, Information Technology Research, Discovery Research K-12, Cyberlearning: Transforming Undergraduate Education, Inspire Geography and Spatial Sciences. 2012 to 2016, \$795,000 Total, \$242,000 Sub-Contract to Social Explorer.
- "Creating and Disseminating Tools to Teach with Demographic Data Maps and Materials." Andrew A. Beveridge and Josh Radinsky, National Science Foundation, Division of Undergraduate Education, 2009-2013, \$332,896
- "Integrated Public Use Microdata Sample Redesign." Subcontract through University of Minnesota from National Institutes of Health R01, 2006-2013 \$175,000.
- "Collaborative Research—The National Historical Geographic Information System." National Science Foundation, Sociology Program, 2007-2012, \$99,725 (Continuing Award).
- "The Distribution and Social Impact of Mortgage Foreclosures in the United States." Andrew A. Beveridge and Elena Vesselinov, National Science Foundation, Sociology Program, 2009-2010, \$144,995.
- "Collaborative Research—Creating Exemplary Curricula and Supporting Faculty Development in Using Social Explorer to Teach with Demographic Data Maps." Andrew A. Beveridge and Joshua Radinsky, National Science Foundation, Division of Undergraduate Education, CCLI, Phase 1, 2006-2008, \$149,970.
- "Collaborative Research—A Digital Library Collection for Visually Exploring United States Demographic and Social Change." Andrew A. Beveridge and David Halle, 2002-2007, \$706,746.
- "National Historical Geographical Information System." John Adams, Andrew A. Beveridge, et al, Subcontract of National Science Foundation Infrastructure Grant through University of Minnesota, Organize Historical City Based Data, 2001-2006, \$194,000.
- "Using Socio-Economic Characteristics of Residents of Student Neighborhoods as a Proxy for Socio-Economic Characteristics of Students: An Assessment Using ECLS-K." National Center for Education Statistic through Educational and Statistical Services Institute, 2004-2005, \$57.958.
- "Adding Census 2000 Data and Geographic Location to the ECLS-K Data Set" Andrew A. Beveridge and Sophia Catsambis, National Center for Education Statistic through Educational and Statistical Services Institute, 2002-2003, \$59,335.
- "Visualizing and Exploring United States Urban and Rural Social Change, 1790-2000: Interactive Multimedia and Web Based Tools." Andrew A. Beveridge and David Halle, National Science Foundation, Division of Undergraduate Education, Educational Materials Development, 2001-2004, \$418,000.

- "Evaluation of Fighting Back." Leonard Saxe, Charles Kadushin, Andrew A. Beveridge, Robert Wood Johnson Foundation, 1994-2002, \$370,000.
- "Development of a Map and Demographic Data Server," CUNY Software Institute, 2001, \$8,000.
- "Redistricting and Minority Voting Rights in Metropolitan New York." Randolph McLaughlin and Andrew A. Beveridge, 2000-2001, Pace Law School \$90,000 total; Andrew A. Beveridge \$60,000.
- "Mapping and Exploring New York City Change, 1905-2000: A Set of Interactive Web Based Tools." National Science Foundation, 1999-2000, \$78,960.
- "A Laboratory for Integrating Multimedia and World Wide Web Technology into Sociological Instruction." Samuel Heilman, Robert Kapsis, Max Kilger, Dean B. Savage and Andrew A. Beveridge, National Science Foundation, 1996-1998, \$47,846.
- "A Shared Computer Work Station and Storage System for Social Science Research." National Science Foundation, 1996-1997, \$20,964.
- "The Battle for Yonkers and the Dilemma of Desegregation." Presidential Research Award, 1993-1994, One Term Release.
- "Why Do Neighborhoods Change or Stay the Same?" Ford Foundation, Diversity Initiative Grant. 1993, Course Release and Student Stipends.
- "Separate American Dreams Face the Common American Dilemma: The Battle to Segregate Yonkers, New York, 1940-1990." Profession Staff Congress, Research Award Program, 1992-1994, \$6,800.
- "Using the Census for Social Mapping across the Sociology Curriculum." President's Mini-Grant for Innovative Teaching, 1992-1993, \$3,500.
- "Modeling the Results of Union Elections by Developing Standard and Hierarchical Logistical Models." Diane Poland, Andrew A. Beveridge, and Wing-Shing Chan, Probe Program for Grand Challenges in the Social Sciences, National Center for Supercomputing Activities, 1992-1994, Super-Computer Time at National Center.
- "The Introductory Sociology Curriculum Initiative: An Empirical, Scientific Approach." Andrew A. Beveridge, Joanne Miller, Lauren H. Seiler and Dean B. Savage, National Science Foundation, Undergraduate Course and Curriculum Program, 1992-1995, \$160,000.
- "A Computer Laboratory for Quantitative and Scientific Reasoning in Sociology." Andrew A. Beveridge, Joanne Miller, Dean Savage and Lauren H. Seiler, National Science Foundation, Instructional Instrumentation and Laboratory Program, 1991-1994, \$50,825.
- "Socially Mapping the New York Area." Ford Diversity Initiative Grant, 1992, Course Release Time.
- "Development of Research Mentorship and Laboratory in Sociology." CUNY Dean for Research and Academic Affairs, Department Faculty Development Program, 1991-1992, One Course Release Time.
- "Integrating Yonkers." Faculty-In-Residence Award, 1988-1989, One Course Release Time.
- "Credit Allocation and Community Change." Professional Staff Congress CUNY, Faculty Fellowship, 1987, \$6,200.
- "Credit Allocation and Community Change." Professional Staff Congress CUNY, Research Award Program, 1986-1988, \$13,268.
- "A Study of Industrial Development of an Agricultural Community Based Upon Financial Records: Keene and Cheshire County, New Hampshire, 1820-1915." Putnam Foundation, 1985-1988, \$33,000.
- "The Intelligent Work Station in Social Science Research: Development, Evaluation, Instruction and Demonstration." Lauren Seiler and Andrew A. Beveridge, International Business Machines Corporation, Special Study, 1985-1987, \$78,000 of hardware and software, \$17,000 funding.
- "Integrated Software for the Social Research Workstation." Andrew A. Beveridge and Lauren Seiler, Inter-University Consortium for Educational Computing, 1985-1986, \$20,000.

- "A Study of the Industrial Development of an Agricultural Community." National Endowment for the Humanities Grant, Basic Research Program, 1984-1985, \$75,000.
- "Credit Allocation and Community Change." Professional Staff Congress CUNY, Research Award, 1984-1985, \$6,973.
- "Credit Allocation and Community Change." Professional Staff Congress CUNY, Research Award, 1983-1984, \$6,928.
- Andrew A. Beveridge and Phoebus J. Dhrymes, "Longitudinal Transformation and Analysis of the Annual Housing Surveys." Department of Housing and Urban Development, 1980-1982, \$248,000.
- "Credit and Social Change: Cheshire County and Its Provident Institution, 1832-1915." American Council of Learned Societies, Fellowship, 1978-1979 \$13,500.
- "The Context of Credit in Wilmington, Delaware, 1800-1870." Regional Economic History Research Center, Eleutherian Mills Hagley Foundation, Grant and Fellow, 1978-1979, \$12,000.
- "Societal Effects of Credit Allocation." National Science Foundation Sociology Program Research Grant, 1976-1978, \$81,781.
- "Social Structure, Social Change and Credit Allocation: A Case Study." National Endowment for the Humanities Summer Stipend, 1976, \$2,000.
- "Social Structure, Social Change and Credit Allocation: A Case Study." American Philosophical Society, Grant, 1976, \$750.
- "African Businessmen in Zambia: Economic, Social and Governmental Impact." Foreign Area Fellowship Program Fellowship, 1970-1971, \$11,400.
- Pre-Doctoral Research Grant. National Institute of Mental Health, 1969-1972, Stipend and Tuition.

#### OTHER SOCIOLOGICAL RESEARCH ACTIVITIES

#### Selected Analyses Appearing in New York Times and Elsewhere

Since 1992, Professor Beveridge, Queens College Sociology, and Social Explorer have been cited over 1,000 times in the New York Times, and materials have been syndicated or appeared elsewhere. Other media appearances include NPR, WCBS, WABC, WNBC, WNYW, CUNY-TV, CBS Radio, and the Associated Press.

"Chicago's Murder Problem." *The New York Times*, May 27, 2016. By Ford Fessenden and Haeyoun Park.

"How Every New York City Neighborhood Voted in the Democratic Primary?" *The New York Times,* April 19, 2016. By Matthew Bloch and Wilson Andrews.

"In Chelsea, A Great Wealth Divide." The New York Times, October 25, 2015. By Mireya Navarro.

"Move Over Millennials, Here Comes Generation Z." *The New York Times*, September 20, 2015. By Alexis Williams.

"Ten Years After Katrina." *The New York Times,* August 26, 2015. By Campbell Robertson and Richard Fausset

- "We're Making Life Too Hard for Millennials," The New York Times, August 2, 2015. By Steven Rattner.
- "Why the Doorman Is Lonely." The New York Times, January 11, 2015. By Julie Stow
- "Ceding to Florida, New York Falls to No. 4 in Population." *The New York Times*, December 24, 2014. By Jesse McKinley
- "Gap between Manhattan's Rich and Poor Is Greatest in U.S., Census Finds." *The New York Times*, September 18, 2014. By Sam Roberts
- "Mostly White Forces in Mostly Black Towns: Police Struggle for Racial Diversity." *The New York Times*, September 10, 2014. By Shaila Dawan

"No MetroCard Needed." The New York Times, May 25, 2014. By Michelle Higgins

"The Three-Seat Strollers," April 10, 2014 - By Hannah Seligson

"Racial Patterns Are Found in Recent School Budget Elections." *The New York Times*, August 25, 2010, Pg. A19. By Sam Roberts.

"In New York, Black and Hispanic Strongholds Become More White. *The New York Times*, December 15, 2010; Pg. A17, By Sam Roberts. (Maps Pg. A17)

"Immigrants Make Paths To Suburbia, Not Cities. *The New York Times*, December 15, 2010 Pg. A15. By Sabrina Tavernise and Robert Gebeloff. (Maps Pg. A1, A16)

"Economic Boom in Washington Leaves Gaping Income Disparities. *The New York Times*, December 18, 2010, Pg. A11. By Sabrina Tavernise and Robert Gebeloff; Sabrina Tavernise.

"A Slice of Queens Where People Who Arrived in 1977 Are Newcomers." *The New York Times,* January 8, 2011 Pg. A15. By Joseph Berger.

"Black? White? Asian? More Young Americans Choose All of the Above. *The New York Times*, January 30, 2011, Pg. A1. By Susan Saulny.

"Smaller New Orleans After Katrina, Census Shows." *The New York Times,* February 3, 2011. By Campbell Robertson. (Includes maps and graphics.)

"For City Parents, a Waiting List for Nearly Everything." *The New York Times*, February. 22, 2013, By Soni Sangha.

"A Survey of the Flooding in N.Y.C. After the Hurricane." The New York Times, Nov. 21, 2012.

"New York Led Country in Population Growth Since 2010 Census." *The New York Times*, June 28, 2012. By Sam Roberts.

"BIG CITY--Offspring Who Cling To the Nest." The New York Times, June 24, 2012 - By Ginia Bellafante.

"100 Years Of Staying Put." *The New York Times*, April 27, 2012 - By Benjamin Weiser and Noah Rosenberg.

"Born Abroad, Well Off and Using Public Schools." *The New York Times*, February 14, 2012. By Kirk Semple.

"Solo in America" . The New York Times, February 5, 2012 - By Bill Marsh and Amanda Cox.

"Detroit Census Figures Confirm A Grim Desertion Like No Other." *The New York Times*, March 23, 2011 Wednesday, Pg. A1. By Katharine Q. Seelye.

"Non-Hispanic Whites Are Now a Minority in the 23-County New York Region." *The New York Times*, March 28, 2011, Pg. A19. By Sam Roberts.

"Cougars Aren't Mythical." The New York Times, October 15, 2009, Pg. C1. By Sarah Kershaw.

"Five-Year-Olds at the Gate: Why are Manhattan's elementary schools turning away kindergartners? How the Bloomberg administration missed the baby boom it helped create." *New York Magazine*, June 1, 2009. By Jeff Coplon.

#### STUDIES CONNECTED WITH LEGAL CASES

# Legislative Districting and Redistricting (Including Plans for Jurisdictions and for Community Groups)

Center for Law and Social Justice, Medgar Evers College and Newman, Ferrara. *Favors v. Cuomo, et al.*, U.S. District Court for the Eastern District of NY (Hearing Testimony, 2012).

Frederick Brewington and Randolph McClaughlin, *Melvin Boone, et al., vs. Nassau County Board of Legislators, et al.* U.S. District Court for the Eastern District of New York. Produced report and plan and testified in trial regarding redistricting of Nassau County Legislature. 2011

Westchester County Board of Legislators, Plan for Redistricting Westchester County, Adopted May 17, 2011.

City of New Rochelle. Plan for Redistricting City Council Districts. Adopted May 10, 2011.

United States Department of Justice. *United States v. Port Chester.* U.S. District Court for the Southern District of New York. Investigation, Voting Analysis, Analysis of Potential Plans, Reports and Declarations, Testimony, 2002-2009. Cited in Opinion.

Emery, Celli, Curti, Brinkerhoff and Abadi. *Rodriguez v. Pataki.* U.S. District Court for the Southern District of New York. Reports, affidavits, deposition testimony and trial testimony related to claims about the State Senate Redistricting Plan in New York State, 2002-2004. Decided.

Randolph McClaughlin, Esq. *New Rochelle Voter Rights Committee, et al vs. New Rochelle, et al.* U.S. District Court for the Southern District of New York. Plaintiff's redistricting plan, affirmation, report, trial testimony, negotiated redistricting plan, settlement hearing testimony, 2003-2005. Decided and Settled.

Frederick Brewington, Esq., *Montano v. Suffolk County Board of Legislators*. U.S. District Court for the Eastern District of New York. Produced report and plan and testified in trial regarding proposed redistricting of Suffolk County Legislature. Cited in District Court Opinion, 2003. Decided.

City of Yonkers. Plan for the Redistricting the City Council. Adopted June 24, 2003.

Center for Constitutional Rights and Social Justice Center, Pace University Law School. *Goosby v. Town Board of Hempstead.* U.S. District Court for the Eastern District of New York. Designed and presented plaintiff's plan for districting the Town of Hempstead, a community of 720,000. Created single member district plan using census data and boundary files. Submitted plan including maps and data and testified at trial. Court ordered plan; affirmed by 2<sup>nd</sup> Circuit; Supreme Court denied certiorari. Plan and testimony cited in District Court and 2<sup>nd</sup> Circuit opinions. 1995-1997.

Connecticut Civil Liberties Union. *Coalition for Fair Representation, et al v. City of Bridgeport, et al.* U.S. District Court for the District of Connecticut. Analysis of segregation patterns in Bridgeport Connecticut. Affidavit and maps filed. Cited in 2nd Circuit Decision. 1993-1994.

Berger, Poppe, Janiec. *Diaz, et al v. City of Yonkers*. U.S. District Court for the Southern District of New York. Prepared redistricting plan for the Yonkers City Council, met with plaintiffs and defendants and in court. Plan accepted by City Council and District Court. 1992-1993.

#### Housing Discrimination, Affirmative Steering, Rent Stabilization and Affordability, etc.

Covington and Burling and Washington Lawyers' Committee for Civil Rights and Urban Affairs. *Adrian Borum, et al v. Brentwood Village, LLC, et al.*, United States District Court for the District of Columbia. 2016-present (Report, Declaration, and Deposition.)

Anti-Discrimination Center. *Janell Winfield et al v. The City of New York et al.* Case Number 15-cv-5236. United States Court for the Southern District of New York. 2017-- (Preliminary Report, Declaration).

Relman, Dane and Colfax, Westchester Residential Opportunities, Inc., et al v. Clinton Terrace LP, et al.. Case Number 7:16-CV-09273-VB, 2017 (Report).

Bierman and Associates. *Akagi v. Turin HDFC et al*, United States Court for the Southern District of New York. 2016-Present (Report Deposition, Rebuttal Report.)

New York State Attorney General .*Eric T. Schneiderman, As Attorney General of the People of the State of New York v. Evans Bancorp, Inc. et al.* United States District Court for the Western District of New York. 2014-2015 (Report, Settled 2015)

United States Department of Justice. *United States* v. *City of New Orleans*, Case No. 12-cv-2011. United States District Court for the Eastern District of Louisiana. 2013-2014. (Report and Deposition, Settled 2014)

United States Department of Justice. *City of Joliet, v.Mb Financial Bank, N.A, et al, and United States v. City of Joliet* United States District Court for the Northern District of Illinois. Report and Deposition, Trial Testimony, 2012-2013. United States Department of Justice. Settled.

United States Department of Justice. *United States v. St. Bernard Parish.* United States District Court for the Eastern District of Louisiana. Report. Settled.

Disability Rights California. Analysis of Proposed City Council Group Home Zoning Law in Los Angeles. Report and Letter. 2012.

Relman and Dane. *Ex rel. Curtis Lockey, et al v. City of Dallas, et al., 3:11-CV-354-.* United States District Court for the Northern District of Texas. Two Reports. Dismissed. 2012-2013.

Marin Goodman, LLP. Fair Housing Justice Center, Inc., et al, v. Silver Beach Gardens Corporation, et al. United States District Court for the Southern District of New York. Report and Deposition, 2011.

Foley and Lardner and U.S. Department of Justice. MSP Real Estate, Inc., et al., v. City of New Berlin, et al., and United States v. City of New Berlin, U.S. District Court for the Eastern District of Wisconsin; Report, 2011. (Settled 2011.)

Foley and Lardner. Bear Development LLC v. City of Kenosha and Redevelopment Authority of the City of Kenosha, U.S. District Court for the Eastern District of Wisconsin. Report and Deposition Testimony, 2011. (Settled 2011.)

Hofstra University, School of Law, Law Clinic. *Isidoro Rivera, et al v. Incorporated Village of Farmingdale, et al.* U.S. District Court for the Eastern District of New York. Report. 2009-2014. Settled.

Skadden, Arps, Slate, Meagher & Flom. Fair Housing in Huntington Committee, et al v. Town of Huntington, New York, et al. U.S. District Court for the Eastern District of New York. Report and Rebuttal Report. 2010. (Decided 2010.)

South Brooklyn Legal Services. *Barkley v. United Homes LLC. et al.*, U.S. District Court for the Eastern District of New York, Report, Deposition and Trial Testimony. 2009-2011. (Jury Verdict 2011.)

Relman and Dane. *Anti-discrimination Center of Metropolitan New York v. County of Westchester, et al.* U.S. District Court for the Southern District of New York. Report, Rebuttal Report and Deposition Testimony, 2008-2009. (Settled 2009.)

Sullivan & Cromwell. *Vargas*, *et al v. Town of Smithtown*. U.S. District Court for the Eastern District of Long Island. Report. 2008. (Settled 2008.)

Southern New Jersey Legal Services. *Mount Holly Gardens Citizens in Action, Inc., et al v. Township of Mt. Holly, et al.* U.S. District Court for the District of New Jersey. Declaration, 2008 and 2010. (Summary Judgment Reversed by 3<sup>rd</sup> Circuit, Certiorari Pending))

The Advancement Project. *Anderson, et al v. Jackson, et al.* U.S. District Court for the Eastern District of Louisiana. Report and Deposition re: Public Housing Demolition in New Orleans, 2007. (Decided 2007).

Three Rivers Legal Services and Southern Legal. *Helene Henry, et al v. National Housing Partnership.* U.S. District Court for the Northern District of Florida, Gainesville, Division. Three reports and deposition Testimony. 2007-2008. (Settled 2008.)

Legal Services of Southern New Jersey. *Bergen Lanning Residents in Action, et al. vs. Melvin R. "Randy" Primus, et al.* Superior Court of New Jersey, Law Division, Camden County Report re: Bergen Square Redevelopment in Camden, NJ. 2005. (Decided 2005.)

Legal Services of Southern New Jersey. *Cramer Hill Residents Association, et al. vs. Melvin R "Randy" Primus, et al.* Superior Court of New Jersey, Law Division, Camden County. Report re Cramer Hill Redevelopment in Camden, NJ. 2005. (Decided 2005.)

Legal Services of Southern New Jersey. Citizens In Action, et al. vs. Township of Mount Holly, et al. Superior Court of New Jersey, Law Division, Burlington County. Report and Certification re: Redevelopment of the Gardens in Mount Holly. 2005. (Decided 2005.)

Legal Services of Southern New Jersey. *Hispanic Alliance, et al. vs. City of Ventnor, et al.* Superior Court of New Jersey, Law Division, Atlantic County Report and Testimony re: Ventnor Redevelopment. 2005. (Settled 2005.)

Legal Services of New Jersey. *Connie Forest, et al vs. Mel Martinez, et al.* Superior Court of New Jersey, Law Division, Essex County. Report re: Brick Towers Demolition in Newark. 2003-2006. (Decided 2006.)

Legal Services of Southern Florida, *Reese v. Miami-Dade County Housing Authority*, Analysis of Relocation of Public Housing Tenants. U.S. District Court for the Southern District of Florida. Report and Testimony at Trial. Cited in District Court Opinion. 2001-2003, and 2009. (Decided 2003, 2009.)

City of Long Beach, *Walton v. City of Long Beach*. Analyzed the vacancy rate in the City of Long Beach for 1992 through 2000. Filed affidavits in state and federal court. Testified in proceedings. Carried out various studies related to vacancy rate. 1997-2000. (Decided 2000, Reversed by Appellate Court.)

Arnold and Porter. *Witt, et al v. New York State Board of Elections.* Analyzed those who have two or more domiciles where they regularly reside for case involving voting in more than one local election. 2000-2002. (Decided 2002.)

Coral Ortenberg Zeck and Condispoti. *Village of Spring Valley v. Town of Clarkstown.* Analyzed the affordability of housing in Rockland County New York for a case involving the annexation of a parcel to build such housing. Testified at trial. 2000. (Decided 2000.)

United States Justice Department, Civil Rights Division. *United States vs. Tunica Mississippi School District.* Analyzed proposal to build a new school near the Casino development in Tunica Mississippi, which was desegregated by order in 1971. 1999-2000. (Decided 2000).

New York City Environmental Justice Alliance. *New York City Environmental Justice Alliance, et al. v, Rudolph W. Giuliani, et al.* Filed an affidavit that analyzed the racial and Hispanic distribution of the various community gardens for sale and not-for-sale in New York City in 1999. Decided, Cited in the 2<sup>nd</sup> Circuit opinion.

Connecticut Civil Liberties Union, Center for Children's Advocacy, NAACP Legal Defense Fund, and the Puerto Rican Legal Defense and Educational Fund. *Sheff v. O'Neil.* Analyzed the changing patterns of school enrollments in the Hartford area for this landmark case. Supplied a series of exhibits used by plaintiffs. 1998. (Decided.)

Connecticut Civil Liberties Union and National Association for the Advancement of Colored People. *NAACP v. Milford.* Analyzed historical housing and segregation patterns in the Milford region, and provided disparate impact analysis for not providing low-income housing as agreed. 1997-1998. (Settled 1997.)

Connecticut Civil Liberties Union and Puerto Rican Legal Defense Fund. *Pitts v. Hartford*. Analyzed placement of low-income public housing tenants in wake of destruction of public housing. Case settled. 1997.

American Civil Liberties Foundation of Maryland. *Carmen Thompson, et al. vs. U.S. Department of Housing and Urban Development, et al.* Analysis of various proposed plans for the relocation of public housing tenants throughout the Baltimore metropolitan area. Created a series of maps and analyses. Prepared trial testimony. Consent Decree Entered, April 1996.

Gurian and Bixon; Davis, Polk and Wardwell. Open Housing Center, Inc. vs. Kings Highway Realty, a Division of Provenz Realty Corp.; Provenz Realty Corp; Diane Provenz; Evelyn Cannon; and Barbara Noonan. Analyzed real estate "tester" data and apartments that various clients were shown. Imputed racial status of clients by using GIS techniques. Prepared affidavit. Cited in judge's opinion denying summary judgment. 1994-1996. (Settled, 1996.)

Westchester Legal Services and Sullivan and Cromwell. Carol Giddins, et al v. U.S. Department of Housing and Urban Development, et al. Analyzed various proposed plans to end racial steering of Section 8 tenants to South West Yonkers. Maps and analyses incorporated into consent decree, and still in use in placing tenants. 1992-1994 and continuing.

Metropolitan Action Institute. Analysis of Housing Segregation Patterns in Yonkers, New York and Starrett City, Brooklyn, 1983-1984. (Materials Used for Testimony of Paul Davidoff.)

#### Federal Court Jury System Challenges (All Cases Decided.)

Andrea Hirsch, *Martinez v. Kelly.* U.S. Appeals Court for the Second Circuit. Analyzed effects of peremptory challenges for *habeas corpus* petition. 2006-2007.

Stern Shapiro Weissberg & Garin. *United States v. Darryl Green, et al.* U.S. District Court for the Eastern District of Massachusetts. Analyzed jury selection system for using Census data, local lists and other materials. Filed seven declarations and testified twice. 2004-2006.

Federal Public Defender, Eastern District of LA, New Orleans, LA. *United States v. Torres*. Analyzed jury selection system for the Eastern District of Louisiana based upon Census Data and Estimates, as well as filings in the Eastern District. Declaration filed. 2006.

Federal Public Defender, Eastern District of LA, New Orleans, LA. *United States v. Caldwell*. Analyzed jury selection system for the Eastern District of Louisiana based upon Census Data and Estimates, as well as filings in the Eastern District. Declaration filed. 2006.

Federal Public Defender, Western District of PA, Pittsburgh. *United States v. Lawrence Skiba*. Analyzed jury selection system for the Pittsburgh Division of the Western District of Pennsylvania based upon Census Data and Estimates, as well as filings in the Western District. Affidavit filed. 2004.

Federal Public Defender, Western District of PA, Pittsburgh. *United States v. Minerd*. Analyzed jury selection system for the Pittsburgh Division of the Western District of Pennsylvania based upon Census Data and Estimates, as well as filings in the Western District. Affidavit filed. 2002.

Federal Public Defender, Western District of PA, Erie, PA. *United States v. Rudolph Weaver.* Analyzed jury selection system for the Pittsburgh Division of the Western District of Pennsylvania based upon Census Data and Estimates, as well as jury lists and voting. Affidavit Submitted 2001, Testified.

Newman Schwartz and Greenberg. *United States v. Albert J. Pirro, Jr.* Filed affidavit that analyzed representation in master jury wheel for White Plains and Foley Square Court Houses in the Southern District using census data with respect to the dilution of Italian Americans likely to be on a jury, if venue changed from White Plains to Foley Square. Venue change motion was denied. 2000.

Polstein, Ferrara, Dwyer and Speed and Stephen P. Scaring. *United States v. Dennis McCall, Trevor Johnson.* Analyzed representation in master jury wheel for White Plains Court House in the Southern District. Filed affidavit, which was cited in judge's opinion. 1998.

Curtis, Mallet-Prevost, Colt and Mosle, *United States v. Don King and Don King Productions*. Analyzed representation in master jury wheel for New York City Courthouse in the Southern District. Affidavit and Consulting. 1997-1998.

Dominick Porco. *United States v. Kevin Veale*. Analyzed representation in master jury wheel for White Plains Court House in the Southern District. Filed affidavit. 1997.

Diarmuid White, *United States v. Jose Reyes, et al.* Analyzed representation in master jury wheel for New York City Courthouse in the Southern District. Report and testimony in case cited in the judge's opinion. 1996.

#### State Court Jury System Challenges (All Cases Decided.)

Joseph Flood and Steven Malone. State of Arkansas v. Daniel Pedraza Munoz, Declaration. 2013.

Fitch Richardson, *Commonwealth of Virginia v. Prieto.* Fairfax County Virginia Circuit Court. Affidavit and Trial Testimony, 2010.

Capital Defenders Office, Atlanta GA. *State of Georgia vs. Jason McGhee.* Forsyth County Georgia State Court. Trial Testimony, 2010.

Public Defenders Office and Joseph Flood, *Commonwealth of Virginia v. Sanchez*. Prince William County Virginia Circuit Court. Analyzed Jury Selection in Prince William County, VA. Affidavit, 2008.

Ferrell Law, Commonwealth of Virginia v. Alan. Prince William County Virginia Circuit Court. Analyzed Jury Selection in Prince William County, VA. Affidavit, 2008.

New Hampshire Public Defender, *New Hampshire v. Addison.* Hillsborough County, New Hampshire, North Division, Superior Court. Declaration, Deposition and Testimony, 2008.

Public Defenders Office, Commonwealth of Virginia vs. Portilla-Chicas. Stafford County Virginia Circuit Court. Analyzed Jury Selection in Stafford County, VA. Affidavit, 2006.

Virginia Indigent Defense Commission, *Commonwealth of Virginia vs. Rogers*. Stafford County Virginia Circuit Court. Analyzed Jury Selection in Stafford County, VA. Report and Testimony, 2006.

Criminal Legal Clinic of Syracuse University Law School, *People v. Tyisha Taylor.* Syracuse City Court. Analyzed Jury Selection System for Syracuse and Onondaga County, New York. Testimony, 2005.

Capital Defenders Office, *New York State v. Sweat.* Analyzed representation in jury selection in Broome County, New York. Two affidavits filed, one relating to factors likely to lead to underrepresentation of African Americans in Jury Pool, another related to the operation of the allocation of jurors among courts in Broome County. (Capital Murder Case.) 2003

Michael J. Spiegel, *New York State v. Dennis Salvador Alvarez-Hernandez*, Analyzed representation in jury selection in Westchester County, New York. Analysis based upon census data and estimates, and an emulation of the reported jury selection process using voter lists and other sources. Filed affidavit reporting results. (Capital murder case.) 2001--.2003

Capital Defenders Office, *New York State v. Taylor.* Analyzed representation in jury selection in Queens County, New York. Analysis based upon census data and estimates, and an emulation of the reported jury selection process using voter lists and other sources. Filed affidavit reporting results; testified at hearing. Produced demographic analyses by town to assist in jury selection. Testified in 2002. (Capital murder case.) 2000-2002

Mann and Mitchell, *State of Rhode Island vs. David Tremblay.* Analyzed representation in jury selection in Bristol and Providence Counties, Rhode Island. Affidavit filed that includes an analysis of the geographic, racial, and Hispanic representation of jurors in counties in Rhode Island and includes an estimate of the disparities by race and Hispanic status. 1999-2001.

Capital Defenders Office, *New York State v. McCoy.* Analyzed representation in jury selection in Suffolk County, New York. Analysis was based upon census data and estimates, and an emulation of the reported jury selection process using voter lists and other sources. Filed affidavit reporting results. Produced demographic analyses by town to assist in jury selection. (Capital murder case.) 1997-1998.

Reynolds, Caronia and Gianelli. *New York State v. Robert Shulman*. Analyzed representation in jury selection in Suffolk County, New York. Analysis was based upon census data and estimates, and an emulation of the reported jury selection process using voter lists and other sources. Filed affidavit reporting results. (Capital murder case.). 1997. Opinion reproduced in New York *Law Journal*.

Capital Defenders Office, *New York State v. Gordon.* Analyzed representation in jury selection in Queens County, New York. Analysis was based upon census data and estimates, and an emulation of the reported jury selection process using voter lists and other sources. Filed affidavit reporting results. (Capital murder case.) 1997. Opinion reported on and reproduced in New York *Law Journal.* 

Capital Defenders Office, *New York State v. Sam Chinn, III.* Analyzed representation in jury selection in Onondaga County. Affidavit filed that presented an analysis of the geographic, racial, and Hispanic representation of jurors. It includes an estimate of the disparities by race and Hispanic status. Plea bargain offered and accepted. Discussed at presentation at the New York State Defenders Association, Glen Falls, NY. (Capital murder case.) 1997.

Capital Defenders Office, *New York State v. George Bell* Analyzed representation in jury selection in Queens County, New York. Analysis was based upon census data and estimates, and

an emulation of the reported jury selection process using voter lists and other sources. Filed affidavit reporting results. (Capital murder case.) 1996-1997.

Capital Defenders Office, *New York State v. Hale.* Analyzed representation in jury selection in Kings County, New York. Analysis was based upon census data and estimates, and an emulation of the reported jury selection process using voter lists and other sources. (Affidavit reporting results, capital murder case.) 1996-1997.

#### **Employment Discrimination**

Division of Human Rights, *New York State, DHR v. International Longshoremen Association, et al.* Case# 10156672. 2017-present. (Report, testimony, rebuttal report, rebuttal testimony).

Shneyer and Shen. *Grimston vs. Marsh and McLanahan.* Analyzed employment patterns based upon Census data and defendant records. Filed expert report and testified in deposition. Case Settled. 1998-2000.

Shneyer and Shen. *Maglasang vs. Beth Israel Medical Center.* Analyzed employment patterns based upon Census data and defendant records. Filed expert report and testified in deposition. Case Settled. 1999-2000.

Shneyer and Shen. Williams vs. Safesites, Inc. Analyzed employment patterns based upon Census data and defendant records. Filed expert report. 1998. Decided.

Shneyer and Shen. *Lachica vs. Emergency Medical Services*. Analyzed employment patterns based upon Census data and defendant records. Case Settled. Filed expert report. Case Settled. 1996-1997.

#### **Other Legal Projects**

Center for Constitutional Rights, *Aref, et al v. Holder* (now Sessions). (Report, Deposition 2013-present)

Dewey & LeBoeuf (transferred to Winston, Strawn) and Latino Justice (PRLDEF). *Adriana Aguilar, et al., v. Immigration and Customs Enforcement, Division of the United States Department of Homeland Security, et al.* U.S. District Court for the Southern District of New York. Report, Rebuttal Report and Deposition Testimony, 2010-2012. Settled 2013.

Debevoise & Plimpton; *Five Borough Bicycle Club, et al v. City of New York, et al.* U.S. District Court for the Southern District of New York. Summonsing Patterns Regarding Critical Mass Rides in Manhattan. Report, Deposition and Trial Testimony, 2008-2009. Decided.

Rabinowitz, Boudin, Standard and Krinsky, *Garrison v. I.R.S.* U.S. District Court for the District of Columbia. Filed expert report and testified at trial. Analysis based upon a survey of a sample of all synagogues in the United States. 1991-1992. Settled.

#### OTHER MAJOR STUDIES AND ANALYSES

Time-Warner Cable of New York. Analyzed and provided maps with underlying ethnic and racial composition for each of the six cable systems managed by Time-Warner Cable in Manhattan, Queens and Brooklyn, 1998-1999 (Proprietary).

*New York Times.* Analyzed circulation patterns of *the New York Times* in connection with their launch of the Boston and Washington editions, 1996-1997 (Proprietary).

Newspaper Association of America. Analysis of Field Experiment of Full-Color Run of the Press Advertisements in Richmond, Virginia, 1992.

Newspaper Advertising Bureau. Analysis of a Panel Study of Change in Newspaper Readership among Young Adults, 1983-1984.

Friends of Vincenza Restiano. Political Consulting, Polling, and Voting Analysis, Computer Based Voter List Organization, 1983, 1985, 1987, and 1991.

Abt Associates, through Center for the Social Sciences, Columbia University. Transfer of Annual Housing Survey Project to Abt, 1982.

OTHER ACTIVITIES 21

Response Analysis Corporation, Princeton, N.J. Problems in Reliability of Longitudinal Household Surveys. 1982.

#### PROFESSIONAL MEMBERSHIPS AND ACTIVITIES

Future Directions in Spatial Demography Specialist Meeting. Invited participant. Convened by the University of California, Santa Barbara, Penn State University, and NIH Advanced Spatial Analysis Training Program (NICHD 5R-25 HD057002-04) Santa Barbara, CA December 12-13, 2011.

Editorial Board Member, Spatial Demography, 2012-pres.

American Sociological Association: Member, Park Award Committee, 2013; Search Committee, Editor of City and Community; 2008-2009; Organizer, sessions on Applied and Evaluation Research, 1998; Organizer, special session on New York Trends, 1996; Organizer, sessions on Economy and Society, 1984; Organizer, sessions on Social Change, 1979.

#### National Science Foundation

Review Panel Member: Transforming Undergraduate Education in Science, (also Course Curriculum and Laboratory Improvement) 2011, 2010, 2007, 2006, 2005, and other earlier years; Cyber Discovery of Innovation, 2011; Math Science Partnership, 2009. Advisory Board Member: School Attendance Boundary Information System (SABINS), 2009 to present.

Advisory Workshop Member, General Social Survey (GSS): The Next Decade and Beyond, 2007; Future Investments in Large-Scale Survey Data Access and Dissemination, 2010. Occasional Reviewer, NSF Sociology Program.

Occasional Reviewer, American Sociology Review, American Journal of Sociology, Sociological Forum, and other journals

Eastern Sociological Society: Vice President 1997-1998; Program Committee, 1991-1992; Co-Chair, Computer Committee, 1985-1987; President and Discussant, Women's History Session, 1985; Member, Computer Committee, 1984-1985; Coordinator, Computer Workshops, 1984 Annual Meeting; Co-Chair, Membership Committee, 1983-1984; Member, Papers Committee, 1983-1986; President, Historical Sociology Session, 1983; Co-Chair, Papers Committee, 1982-1983; Chair, Membership Committee, 1981-1982; Co-Chair, Conference Committee, 1980-1981.

American Association for Public Opinion Research: Program Committee, 1983-84; Nominating Committee, 1985-1986; Task Force Regarding the Use of Survey-based Evidence in Legal Proceedings, 2010.

New York Chapter, American Association for Public Opinion Research, Associate Program, Chair 2006-07; Program Chair, 2007-08.

International Sociological Association, Research Liaison Committee on Economy and Society American Economic Association
Social Science History Association
Population Association of America

#### **COURSES TAUGHT**

Graduate: (M.A. and Ph.D.) Demography; Computer Applications in the Social Sciences; Advanced Social Statistics; The Sociological Study of Economies; Logic of Social Research; Survey Research Methods; Co-Operative Education Field Placement; Demography; Integrated Social Research; Ph.D. Dissertation and M.A. Thesis Supervision.

Undergraduate: New York City in Your Neighborhood; The Digital Transformation of Everyday Life; Social Change in the City; Methods of Social Research; Sociology of Economic Life; Third World in Social Change; Social Statistics; Sociological Analysis; New York Area Undergraduate Research Program (at Columbia): Housing Crisis in New York City, Equity of the Criminal Justice System, Implementation of No-Fault in New York.

#### UNIVERSITY, COLLEGE AND DEPARTMENTAL ACTIVITIES

CUNY Podcast, 2011, Assessing the Census

CUNY Forum on CUNYTV, October 27, 2009; April 20, 2011, and May 5, 2012,

CUNY Research Foundation, Faculty Advisory Committee, 2006-2017 Board of Directors, 2006-2017.

- CUNY Professional Staff Congress, Legislative Committee, 2000-2001; CUNY, University Committee on Research Awards, 1988-1991; CUNY, University Computer Policy Committee, 1986-1987; CUNY/PSC Sociology Research Award Panel, 1986-1987; Graduate Center Sociology Program, Chair, Search Committee, 1989-1990; Methods Subcommittee, 1986-1987; Computers Committee, 1987-1990.
- Queens College, Committee on Fellowship Leave, 1990-1991; Queens College, Committee on Research and Sponsored Programs, 1982-1986; Ad Hoc Computer Committee, Division of Social Sciences, 1982-1986, 1994-1996, 1998-pres.; Official Representative to the Inter-University Consortium for Political and Social Research (ICPSR), 1983--; Workload Committee, 2007-09; Executive Committee of College Personnel and Budget Committee, 2006-2011
- Queens College, Department of Sociology, Chair 2006-18; Computer Committee, 1981-2005. (Chair most years); Queens College, Departmental M.A. Program Committee, 1981-2005 (Director and Chair, 1982-1987, 2001-2003, 2004-2006).

#### **CIVIC AND COMMUNITY ACTIVITIES**

Yonkers Board of Education, Trustee 1986-1990. President, 1988-1989. Chair, Policy Committee, 1989-1990; Chair, Spelling Bee Committee, 1986-1988.

Yonkers Democratic Party, Second Vice-Chair and District Leader, 1991-1992; District Leader, 1993-1995.

Council of Large City School Districts, 1986-1991. Executive Committee, 1990-1991; Committee on School Choice, 1991; Lobbying Committee, 1989-1990.

New York State School Boards Association, Member Federal Relations Network, 1989-1990.

Long vale Homeowners Association, Board of Directors, 1983-1985. President 1985.

Yonkers Private Industry Council, 1988-1990. Chair, Program and Planning Committee, 1989-1990.

Founding Member and Vice-President, Citizens and Neighbors Organized to Protect Yonkers (CANOPY), 1987-1992.

Volunteer, Friends of Nicholas Wasicsko, 1989 and 1991.

Volunteer, Friends of Vincenza Restiano, 1983, 1985, 1987, and 1991.

Volunteer, Friends of Terence Zaleski, 1991.

Ex. 2 - List of Projects by Housing Connect Project Identification Number

:	168 Rental Pro	oject Universe	2	Excluded 1- & 2- Unit Rental Projects	Excluded 100% Community Preference Projects
1	98	176	248	30	294
2	99	179	250	78	308
4	100	180	251	97	
5	102	181	253	119	
7	105	182	255	122	
8	106	183	256	139	
9	107	185	257	144	
10	108	186	258	174	
11	109	188	260	187	
12	110	189	261	200	
13	111	192	262	203	
14	114	193	263	217	
16	115	194	267	266	
17	116	195	268	288	
18	117	196	269	312	
19	118	198	270		
20	120	199	271		
21	121	201	272		
22	124	202	275		
23	125	206	276		
24	126	208	277		
25	131	210	278		
27	132	211	279		
28	133	212	281		
29	135	215	284		
75	136	216	285		
80	137	218	286		
82	138	219	287		
83	140	220	289		
84	141	222	290		
85	142	223	298		
86	145	224	299		
87	146	225	300		
88	147	226	301		
89	148	229	304		
90	149	230	310	1	
91	150	231	311		
92	170	232	313		
93	171	234	315		
94	172	236	316		
95	173	237	317	1	
96	175	247	320	]	

Ex. 3 - Projects by CD Typology, with CD Typology Demographic Data

		нс	No. of		CD Pre	ference A	rea Popula	ation	
CD Typology	CD Preference Area	Project No.	Lottery Awards	Total Population	% White	% Black	% Asian	% Hispanic	% All Other
Maj hispanic	BK04	28	8	140,999	16.22	20.16	6.15	55.79	1.68
Maj hispanic	BK04	90	17	140,999	16.22	20.16	6.15	55.79	1.68
Maj hispanic	BK04	117	3	140,999	16.22	20.16	6.15	55.79	1.68
Maj hispanic	BK04	132	3	140,999	16.22	20.16	6.15	55.79	1.68
Maj hispanic	BK04	135	3	140,999	16.22	20.16	6.15	55.79	1.68
Maj hispanic	BK04	301	3	140,999	16.22	20.16	6.15	55.79	1.68
Maj hispanic	BX01	85	157	110,923	1.89	28.88	0.62	67.17	1.44
Maj hispanic	BX01	91	125	110,923	1.89	28.88	0.62	67.17	1.44
Maj hispanic	BX01	100	13	110,923	1.89	28.88	0.62	67.17	1.44
Maj hispanic	BX01	253	135	110,923	1.89	28.88	0.62	67.17	1.44
Maj hispanic	BX01	257	133	110,923	1.89	28.88	0.62	67.17	1.44
Maj hispanic	BX01	261	64	110,923	1.89	28.88	0.62	67.17	1.44
Maj hispanic	BX02	5	38	57,278	1.12	25.66	0.78	71.44	0.99
Maj hispanic	BX02	126	140	57,278	1.12	25.66	0.78	71.44	0.99
Maj hispanic	BX03	8	151	64,405	1.20	37.32	0.63	59.80	1.04
Maj hispanic	BX03	23	20	64,405	1.20	37.32	0.63	59.80	1.04
Maj hispanic	BX03	93	17	64,405	1.20	37.32	0.63	59.80	1.04
Maj hispanic	BX03	120	66	64,405	1.20	37.32	0.63	59.80	1.04
Maj hispanic	BX03	147	64	64,405	1.20	37.32	0.63	59.80	1.04
Maj hispanic	BX03	196	209	64,405	1.20	37.32	0.63	59.80	1.04
Maj hispanic	BX03	250	77	64,405	1.20	37.32	0.63	59.80	1.04
Maj hispanic	BX03	275	147	64,405	1.20	37.32	0.63	59.80	1.04
Maj hispanic	BX03	289	5	64,405	1.20	37.32	0.63	59.80	1.04
Maj hispanic	BX03	316	112	64,405	1.20	37.32	0.63	59.80	1.04
Maj hispanic	BX03, BX04	18	45	223,477	1.56	31.65	1.42	63.88	1.49
Maj hispanic	BX04	11	83	159,072	1.71	29.35	1.74	65.53	1.67
Maj hispanic	BX04	22	111	159,072	1.71	29.35	1.74	65.53	1.67
Maj hispanic	BX04	216	15	159,072	1.71	29.35	1.74	65.53	1.67
Maj hispanic	BX04	218	8	159,072	1.71	29.35	1.74	65.53	1.67
Maj hispanic	BX04	219	8	159,072	1.71	29.35	1.74	65.53	1.67
Maj hispanic	BX04	284	56	159,072	1.71	29.35	1.74	65.53	1.67
Maj hispanic	BX04, BX09	247	101	342,200	2.16	29.64	4.38	61.49	2.33
Maj hispanic	BX05	84	19	143,861	1.47	25.24	1.61	70.46	1.22
Maj hispanic	BX05	102	7	143,861	1.47	25.24	1.61	70.46	1.22
Maj hispanic	BX05	107	20	143,861	1.47	25.24	1.61	70.46	1.22
Maj hispanic	BX05	131	14	143,861	1.47	25.24	1.61	70.46	1.22
Maj hispanic	BX05	171	49	143,861	1.47	25.24	1.61	70.46	1.22
Maj hispanic	BX05	320	5	143,861	1.47	25.24	1.61	70.46	1.22
Maj hispanic	BX05, BX09	277	28	326,988	2.08	27.84	4.44	63.47	2.16
Maj hispanic	BX06	20	139	95,483	6.69	26.16	1.16	64.79	1.20
Maj hispanic	BX06	27	20	95,483	6.69	26.16	1.16	64.79	1.20
Maj hispanic	BX06	145	10	95,483	6.69	26.16	1.16	64.79	1.20
Maj hispanic	BX06	181	42	95,483	6.69	26.16	1.16	64.79	1.20
Maj hispanic	BX06	313	7	95,483	6.69	26.16	1.16	64.79	1.20

		нс	No. of		CD Pre	ference A	rea Popula	ation	
CD Typology	CD Preference Area	Project No.		Total Population	% White	% Black	% Asian	% Hispanic	% All Other
Maj hispanic	BX07	114	7	136,568	6.35	16.21	5.22	70.24	1.98
Maj hispanic	BX07	116	18	136,568	6.35	16.21	5.22	70.24	1.98
Maj hispanic	BX07	199	56	136,568	6.35	16.21	5.22	70.24	1.98
Maj hispanic	BX09	118	106	183,128	2.56	29.89	6.67	57.97	2.90
Maj hispanic	BX09	141	95	183,128	2.56	29.89	6.67	57.97	2.90
Maj hispanic	MN12	92	6	220,205	18.30	9.03	2.67	68.34	1.67
Maj hispanic	MN12	110	41	220,205	18.30	9.03	2.67	68.34	1.67
Maj hispanic	QN04	86	6	178,010	6.70	6.30	33.14	52.22	1.64
Maj nh_asian	QN07	16	142	242,159	24.95	2.14	53.04	17.58	2.29
Maj nh_black	BK02, BK03, BK08, BK16	185	51	438,627	23.44	52.35	4.97	16.30	2.94
Maj nh_black	BK03	95	47	135,201	19.43	56.78	3.41	17.96	2.41
Maj nh_black	BK03	148	8	135,201	19.43	56.78	3.41	17.96	2.41
Maj nh_black	BK03	180	7	135,201	19.43	56.78	3.41	17.96	2.41
Maj nh_black	BK03, BK08	99	16	231,813	19.18	58.52	3.67	15.81	2.82
Maj nh_black	BK03, BK08	150	14	231,813	19.18	58.52	3.67	15.81	2.82
Maj nh_black	BK05	24	22	179,274	3.31	55.49	3.74	35.16	2.30
Maj nh_black	BK05	125	143	179,274	3.31	55.49	3.74	35.16	2.30
Maj nh_black	BK05	170	221	179,274	3.31	55.49	3.74	35.16	2.30
Maj nh_black	BK05	272	255	179,274	3.31	55.49	3.74	35.16	2.30
Maj nh_black	BK05	279	189	179,274	3.31	55.49	3.74	35.16	2.30
Maj nh_black	BK08	88	78	96,613	18.83	60.96	4.04	12.79	3.38
Maj nh_black	BK08	258	23	96,613	18.83	60.96	4.04	12.79	3.38
Maj nh_black	BK09	182	5	110,329	23.05	63.33	2.06	9.09	2.47
Maj nh_black	BK16	140	33	83,109	2.94	72.70	1.67	21.33	1.37
Maj nh_black	BK16	186	39	83,109	2.94	72.70	1.67	21.33	1.37
Maj nh_black	BK16	206	71	83,109	2.94	72.70	1.67	21.33	1.37
Maj nh_black	BK16	237	86	83,109	2.94	72.70	1.67	21.33	1.37
Maj nh_black	BX12	124	201	176,849	6.27	61.70	3.45	26.07	2.51
Maj nh_black	BX12	198	61	176,849	6.27	61.70	3.45	26.07	2.51
Maj nh_black	BX12	263	59	176,849	6.27	61.70	3.45	26.07	2.51
Maj nh_black	BX12	286	14	176,849	6.27	61.70	3.45	26.07	2.51
Maj nh_black	MN10	10	51	112,939	14.68	54.86	3.07	24.17	3.22
Maj nh_black	MN10	12	28	112,939	14.68	54.86	3.07	24.17	3.22
Maj nh_black	MN10	89	99	112,939	14.68	54.86	3.07	24.17	3.22
Maj nh_black	MN10	106	18	112,939	14.68	54.86	3.07	24.17	3.22
Maj nh_black	MN10	109	20	112,939	14.68	54.86	3.07	24.17	3.22
Maj nh_black	MN10	137	17	112,939	14.68	54.86	3.07	24.17	3.22
Maj nh_black	MN10	146	10	112,939	14.68	54.86	3.07	24.17	3.22
Maj nh_black	MN10	176	49	112,939	14.68	54.86	3.07	24.17	3.22
Maj nh_black	MN10	201	20	112,939	14.68	54.86	3.07	24.17	3.22
Maj nh_black	MN10	226	34	112,939	14.68	54.86	3.07	24.17	3.22
Maj nh_black	MN10	231	46	112,939	14.68	54.86	3.07	24.17	3.22
Maj nh_black	MN10	260	30	112,939	14.68	54.86	3.07	24.17	3.22

		нс	No. of		CD Pre	ference A	rea Popula	ation	
CD Typology	CD Preference Area	Project No.		Total Population	% White	% Black	% Asian	% Hispanic	% All Other
Maj nh_black	MN10	278	44	112,939	14.68	54.86	3.07	24.17	3.22
Maj nh_black	QN12	82	46	239,955	1.62	64.01	10.64	16.06	7.67
Maj nh_black	QN12	83	100	239,955	1.62	64.01	10.64	16.06	7.67
Maj nh_black	QN12	173	53	239,955	1.62	64.01	10.64	16.06	7.67
Maj nh_White	BK01	4	78	187,804	60.08	5.69	6.74	25.14	2.35
Maj nh_White	BK01	14	45	187,804	60.08	5.69	6.74	25.14	2.35
Maj nh_White	BK01	87	4	187,804	60.08	5.69	6.74	25.14	2.35
Maj nh_White	BK01	94	105	187,804	60.08	5.69	6.74	25.14	2.35
Maj nh_White	BK01	115	38	187,804	60.08	5.69	6.74	25.14	2.35
Maj nh_White	BK01	195	19	187,804	60.08	5.69	6.74	25.14	2.35
Maj nh_White	BK01	211	92	187,804	60.08	5.69	6.74	25.14	2.35
Maj nh_White	BK01	212	7	187,804	60.08	5.69	6.74	25.14	2.35
Maj nh_White	BK01	225	32	187,804	60.08	5.69	6.74	25.14	2.35
Maj nh_White	BK01	230	30	187,804	60.08	5.69	6.74	25.14	2.35
Maj nh_White	BK01	232	95	187,804	60.08	5.69	6.74	25.14	2.35
Maj nh_White	BK01	256	3	187,804	60.08	5.69	6.74	25.14	2.35
Maj nh_White	BK01	267	3	187,804	60.08	5.69	6.74	25.14	2.35
Maj nh_White	BK01	268	7	187,804	60.08	5.69	6.74	25.14	2.35
Maj nh_White	BK01	281	10	187,804	60.08	5.69	6.74	25.14	2.35
Maj nh_White	BK01	304	39	187,804	60.08	5.69	6.74	25.14	2.35
Maj nh_White	BK01	310	102	187,804	60.08	5.69	6.74	25.14	2.35
Maj nh_White	BK06	188	3	131,658	62.60	9.13	6.71	16.77	4.79
Maj nh_White	BK13	9	111	113,667	56.36	11.33	14.39	15.39	2.54
Maj nh_White	MN01	202	22	73,927	63.92	3.55	21.05	7.43	4.04
Maj nh_White	MN02	255	29	80,194	75.91	2.04	12.92	5.96	3.17
Maj nh_White	MN02	270	41	80,194	75.91	2.04	12.92	5.96	3.17
Maj nh_White	MN04	7	40	89,295	56.48	7.92	14.78	18.37	2.45
Maj nh_White	MN04	17	78	89,295	56.48	7.92	14.78	18.37	2.45
Maj nh_White	MN04	19	142	89,295	56.48	7.92	14.78	18.37	2.45
Maj nh_White	MN04	172	117	89,295	56.48	7.92	14.78	18.37	2.45
Maj nh_White	MN04	193	51	89,295	56.48	7.92	14.78	18.37	2.45
Maj nh_White	MN04	251	60	89,295	56.48	7.92	14.78	18.37	2.45
Maj nh_White	MN04	262	17	89,295	56.48	7.92	14.78	18.37	2.45
Maj nh_White	MN04	285	34	89,295	56.48	7.92	14.78	18.37	2.45
Maj nh_White	MN04	287	61	89,295	56.48	7.92	14.78	18.37	2.45
Maj nh_White	MN04	298	85	89,295	56.48	7.92	14.78	18.37	2.45
Maj nh_White	MN05	142	64	106,409	65.32	3.31	19.08	9.16	3.13
Maj nh_White	MN05	224	61	106,409	65.32	3.31	19.08	9.16	3.13
Maj nh_White	MN05	269	43	106,409	65.32	3.31	19.08	9.16	3.13
Maj nh_White	MN06	133	19	109,621	68.51	3.43	14.95	9.83	3.27
Maj nh_White	MN06	189	14	109,621	68.51	3.43	14.95	9.83	3.27
Maj nh_White	MN07	136	55	170,171	65.15	6.25	9.03	16.93	2.63
Maj nh_White	MN07	194	127	170,171	65.15	6.25	9.03	16.93	2.63
Maj nh_White	MN08	208	48	217,906	75.64	2.33	9.88	9.46	2.69

		нс	No. of		CD Pre	ference A	rea Popula	ation	
CD Typology	CD Preference Area	Project No.	Lottery Awards	Total Population	% White	% Black	% Asian	% Hispanic	% All Other
Plur hispanic	BX08	290	7	92,586	38.85	10.07	4.32	44.05	2.70
Plur hispanic	MN09	29	98	102,003	26.47	22.08	8.58	39.43	3.44
Plur hispanic	MN09	179	21	102,003	26.47	22.08	8.58	39.43	3.44
Plur hispanic	MN09	223	77	102,003	26.47	22.08	8.58	39.43	3.44
Plur hispanic	MN09	229	65	102,003	26.47	22.08	8.58	39.43	3.44
Plur hispanic	MN11	2	36	157,002	16.25	33.36	7.44	40.66	2.29
Plur hispanic	MN11	13	170	157,002	16.25	33.36	7.44	40.66	2.29
Plur hispanic	MN11	21	119	157,002	16.25	33.36	7.44	40.66	2.29
Plur hispanic	MN11	96	89	157,002	16.25	33.36	7.44	40.66	2.29
Plur hispanic	MN11	108	87	157,002	16.25	33.36	7.44	40.66	2.29
Plur hispanic	MN11	138	31	157,002	16.25	33.36	7.44	40.66	2.29
Plur hispanic	MN11	215	7	157,002	16.25	33.36	7.44	40.66	2.29
Plur hispanic	MN11	222	16	157,002	16.25	33.36	7.44	40.66	2.29
Plur hispanic	MN11	236	3	157,002	16.25	33.36	7.44	40.66	2.29
Plur hispanic	MN11	248	2	157,002	16.25	33.36	7.44	40.66	2.29
Plur hispanic	QN02	111	911	122,814	29.53	2.01	31.67	34.25	2.54
Plur hispanic	QN02	299	25	122,814	29.53	2.01	31.67	34.25	2.54
Plur hispanic	QN09	1	96	140,472	16.45	5.91	27.13	43.21	7.30
Plur nh_black	BK01, BK03, BK04, BK05, BK16, BK17	210	29	861,514	20.14	45.72	4.17	27.92	2.06
Plur nh_black	BK03, BK04, BK16	192	19	359,308	14.36	46.09	4.08	33.58	1.88
Plur nh_black	BX06, BX12	75	27	272,332	6.42	49.24	2.65	39.65	2.05
Plur nh_black	MN09, MN10	105	22	214,942	20.28	39.30	5.68	31.41	3.32
Plur nh_black	MN10, MN11	121	12	269,941	15.60	42.36	5.61	33.76	2.68
Plur nh_black	MN10, MN11	234	13	269,941	15.60	42.36	5.61	33.76	2.68
Plur nh_black	QN14	311	52	123,012	35.09	35.14	3.46	24.40	1.92
Plur nh_black	QN14	317	100	123,012	35.09	35.14	3.46	24.40	1.92
Plur nh_White	BK02	149	19	123,705	45.20	27.12	9.62	13.84	4.21
Plur nh_White	BK02	183	197	123,705	45.20	27.12	9.62	13.84	4.21
Plur nh_White	BK02	220	220	123,705	45.20	27.12	9.62	13.84	4.21
Plur nh_White	BK02	315	23	123,705	45.20	27.12	9.62	13.84	4.21
Plur nh_White	BK02, BK03, BK06, BK08	276	170	487,176	37.52	37.20	6.01	15.57	3.70
Plur nh_White	BK02, BK06, BK07	98	8	369,694	45.57	13.13	12.37	25.21	3.72
Plur nh_White	MN03	80	30	165,962	35.64	6.87	30.32	24.27	2.88
Plur nh_White	MN03	175	16	165,962	35.64	6.87	30.32	24.27	2.88
Plur nh_White	QN01	25	105	181,668	45.86	8.36	16.12	26.85	2.81
Plur nh_White	QN01	271	5	181,668	45.86	8.36	16.12	26.85	2.81
Plur nh_White	QN01	300	5	181,668	45.86	8.36	16.12	26.85	2.81

Ex. 4 - CD Typologies, with Project Counts and Demographics

CD Typology	No. of	% nh_white	% nh_black	% nh_asian	% Hispanic	% nh_all
	Lotteries					other
All Lotteries	168	23.32	28.58	9.17	36.46	2.48
Maj hispanic	52	2.62	30.24	1.75	63.95	1.45
Maj nh_White	40	60.65	6.34	11.67	18.78	2.56
Maj nh_asian	1	24.95	2.14	53.04	17.58	2.29
Maj nh_black	38	7.66	58.97	3.98	26.44	2.96
Plur hispanic	18	24.46	14.5	20.8	37.41	2.84
Plur nh_White	11	43.11	25.26	11.01	16.8	3.82
Plur nh_black	8	26.27	39.4	3.87	28.33	2.13

# Ex. 5 - Entrant HHs

## **All Entrant HHs**

CD Typology	No. of Entrant HHs	White	Black	Hispanic	Asian	Refused	All Other
Maj hispanic	1570323	58852	614295	675622	51286	76427	93841
Maj nh_White	2285636	235474	767169	811719	162443	139319	169512
Maj nh_asian	38352	1511	11715	12111	8141	2632	2242
Maj nh_black	1719501	96696	732070	598905	75195	96882	119753
Plur hispanic	777131	54741	282471	297057	41819	45533	55510
Plur nh_White	553602	52273	209623	178165	36160	35422	41959
Plur nh_black	301180	19000	123445	106562	14558	16157	21458

# **Entrant CP Beneficiary HHs**

CD Typology	No. of Entrant HHs	White	Black	Hispanic	Asian	Refused	All Other
Maj hispanic	86018	1197	26785	49692	1027	3712	3605
Maj nh_White	60343	16025	6619	26288	3108	4426	3877
Maj nh_asian	4359	92	137	612	2953	286	279
Maj nh_black	118192	3071	72485	24802	1812	7443	8579
Plur hispanic	34985	2700	9987	15556	2106	2105	2531
Plur nh_White	27999	3519	10875	7054	1890	2320	2341
Plur nh_black	35078	1393	18809	9941	406	2077	2452

## **Entrant Non-Beneficiary HHs**

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CD Typology	No. of Entrant HHs	White	Black	Hispanic	Asian	Refused	All Other				
	Littiantinis										
Maj hispanic	1484305	57655	587510	625930	50259	72715	90236				
Maj nh_White	2225293	219449	760550	785431	159335	134893	165635				
Maj nh_asian	33993	1419	11578	11499	5188	2346	1963				
Maj nh_black	1601309	93625	659585	574103	73383	89439	111174				
Plur hispanic	742146	52041	272484	281501	39713	43428	52979				
Plur nh_White	525603	48754	198748	171111	34270	33102	39618				
Plur nh_black	266102	17607	104636	96621	14152	14080	19006				

Non-NYC Excluded

## Ex. 6 - Apparently Eligible HHs

All Apparently Eligible HHs

eligx	CD Typology	No. of	White	Black	Hispanic	Asian	Refused	All Other
		Apparently Eligible HHs						
0	Maj hispanic	932230	34259	369905	401392	29019	43123	54532
0	Maj nh_White	1276921	128809	430682	459804	88592	75617	93417
0	Maj nh_asian	20051	816	6431	6557	3703	1385	1159
0	Maj nh_black	988241	54271	423966	348098	41101	53394	67411
0	Plur hispanic	443671	28906	164372	171982	22622	24798	30991
0	Plur nh_White	310678	26231	120526	103546	19272	18558	22545
0	Plur nh_black	158901	9466	65777	57210	7308	8112	11028
1	Maj hispanic	638093	24593	244390	274230	22267	33304	39309
1	Maj nh_White	1008715	106665	336487	351915	73851	63702	76095
1	Maj nh_asian	18301	695	5284	5554	4438	1247	1083
1	Maj nh_black	731260	42425	308104	250807	34094	43488	52342
1	Plur hispanic	333460	25835	118099	125075	19197	20735	24519
1	Plur nh_White	242924	26042	89097	74619	16888	16864	19414
1	Plur nh_black	142279	9534	57668	49352	7250	8045	10430

Apparently Eligible CP Beneficiary HHs

eligx	CD Typology	No. of	White	Black	Hispanic	Asian	Refused	All Other
		Apparently Eligible HHs						
0	Maj hispanic	49693	706	14884	29442	581	2081	1999
0	Maj nh_White	29110	7708	3302	12563	1518	2131	1888
0	Maj nh_asian	2057	54	68	359	1317	137	122
0	Maj nh_black	64293	1653	40042	13132	910	3884	4672
0	Plur hispanic	19433	1252	5705	9027	1067	1048	1334
0	Plur nh_White	12322	1380	4570	3583	910	905	974
0	Plur nh_black	18734	718	10054	5416	220	1077	1249
1	Maj hispanic	36325	491	11901	20250	446	1631	1606
1	Maj nh_White	31233	8317	3317	13725	1590	2295	1989
1	Maj nh_asian	2302	38	69	253	1636	149	157
1	Maj nh_black	53899	1418	32443	11670	902	3559	3907
1	Plur hispanic	15552	1448	4282	6529	1039	1057	1197
1	Plur nh_White	15677	2139	6305	3471	980	1415	1367
1	Plur nh_black	16344	675	8755	4525	186	1000	1203

Apparently Eligible Non-Beneficiary HHs

eligx	CD Typology	No. of	White	Black	Hispanic	Asian	Refused	All Other
		Apparently						
		Eligible HHs						
0	Maj hispanic	882537	33553	355021	371950	28438	41042	52533
0	Maj nh_White	1247811	121101	427380	447241	87074	73486	91529
0	Maj nh_asian	17994	762	6363	6198	2386	1248	1037
0	Maj nh_black	923948	52618	383924	334966	40191	49510	62739
0	Plur hispanic	424238	27654	158667	162955	21555	23750	29657
0	Plur nh_White	298356	24851	115956	99963	18362	17653	21571
0	Plur nh_black	140167	8748	55723	51794	7088	7035	9779
1	Maj hispanic	601768	24102	232489	253980	21821	31673	37703
1	Maj nh_White	977482	98348	333170	338190	72261	61407	74106
1	Maj nh_asian	15999	657	5215	5301	2802	1098	926
1	Maj nh_black	677361	41007	275661	239137	33192	39929	48435
1	Plur hispanic	317908	24387	113817	118546	18158	19678	23322
1	Plur nh_White	227247	23903	82792	71148	15908	15449	18047
1	Plur nh_black	125935	8859	48913	44827	7064	7045	9227

# Ex. 7 - Awarded HHs

# All Awarded HHs

CD Typology	No.	White	Black	Hispanic	Asian	Refused	All Other
	Awarded						
	HHs						
Maj hispanic	2832	30	1025	1459	32	152	134
Maj nh_White	2031	458	394	689	183	160	147
Maj nh_asian	142	2	19	31	75	7	8
Maj nh_black	2308	54	1218	672	51	159	154
Plur hispanic	1860	355	364	592	220	185	144
Plur nh_White	798	191	196	144	105	92	70
Plur nh_black	274	10	127	88	5	22	22

**Awarded CP Beneficiary HHs** 

			a. a.c.a. c	,			
CD Typology	No. Awarded HHs	White	Black	Hispanic	Asian	Refused	All Other
Maj hispanic	1240	7	418	698	13	54	50
Maj nh_White	915	278	86	337	82	67	65
Maj nh_asian	71	0	0	8	54	4	5
Maj nh_black	1101	18	640	272	17	78	76
Plur hispanic	873	187	126	293	110	86	71
Plur nh_White	412	99	118	73	42	47	33
Plur nh_black	127	5	63	38	2	10	9

**Awarded Non-Beneficiary HHs** 

				neneral y mis			
CD Typology	No.	White	Black	Hispanic	Asian	Refused	All Other
	Awarded						
	HHs						
Maj hispanic	1592	23	607	761	19	98	84
Maj nh_White	1116	180	308	352	101	93	82
Maj nh_asian	71	2	19	23	21	3	3
Maj nh_black	1207	36	578	400	34	81	78
Plur hispanic	987	168	238	299	110	99	73
Plur nh_White	386	92	78	71	63	45	37
Plur nh_black	147	5	64	50	3	12	13

Non-NYC Excluded

Ex. 8 - Lottery Unit Types Closed to Outsiders

HC Project No.	BR Size	Rent	CP awards other than disability	Income AMI
2	1	781	5	60
4	1	659	11	50
4	2	801	5	50
8	1	511	6	40
13	0	474	8	40
13	1	511	8	40
13	2	623	8	40
14	0	814	7	60
16 17	1	655 564	10	40
22	1	659	<u>5</u>	50
22	2	623	6	40
22	2	801	7	50
25	0	1103	7	130
83	1	640	8	50
83	2	1565	6	90
89	1	528	6	40
91	2	648	6	40
94	1	690	14	50
95	0	640	5	50
95	2	835	6	50
111	2	835	39	50
125	0	640	5	50
126	1	533	12	40
149	1	877	5	60
170	0	500	5	40
170	3	972	5	50
181	1	847	6	60
181	2	1024	5	60
183	0	651	11	50
183	1	699	10	50
183	2	849	10	50
198	1	850	7	60
202	1	860	5	60
208	1	769	15	50
211	2	647	6	40
220	1	861	33	60
220	2	1042	17 10	60
232	1	847 1178	5	60 80
253	1	1208	10	100
253	2	1458	9	100
257	2	655	14	40
257	3	749	8	40
263	1	929	6	60
272	1	690	9	50
272	2	836	9	50
275	1	532	5	40
275	1	847	22	60
275	2	647	8	40
275	3	1182	9	60
276	0	865	9	60
276	0	1729	9	145
276	1	589	6	40
276	1	929	21	60
276	1	1320	5	100
276	2	1121	14	60
276	2	1591	11	100
287	2	1183	7	60
310	2	676	7	40
317	2	1047	7	60

Exhibit 9 - Distribution of NYC White Population by Census tract and CD boundaries overlaid (2013-17 ACS)

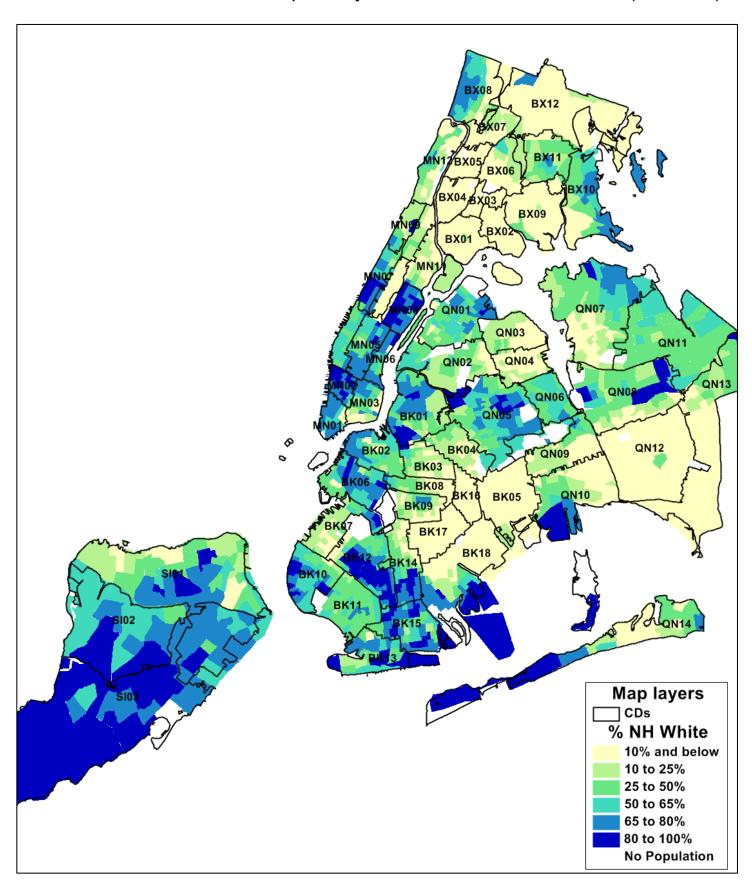


Exhibit 10 – Distribution of NYC Black Population by Census tract and CD boundaries overlaid (2013-17 ACS)

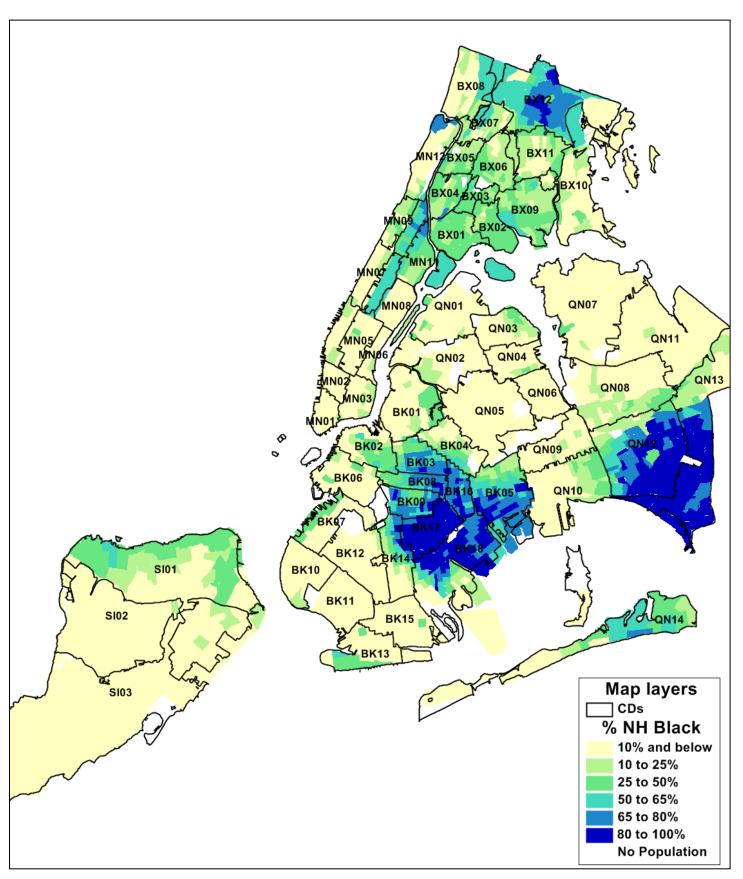


Exhibit 11 – Distribution of NYC Hispanic Population by Census tract and CD boundaries overlaid (2013-17 ACS)

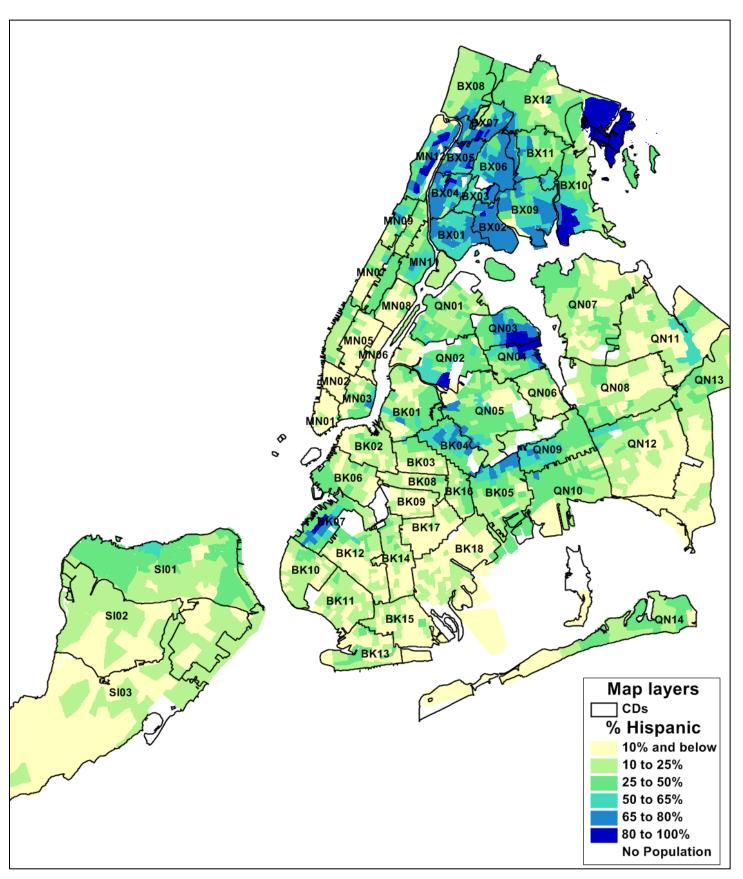


Exhibit 12 – Distribution of NYC Asian Population by Census tract and CD boundaries overlaid (2013-17 ACS)

