THE BICENTENNIAL CENSUS OF A MIXED NEIGHBORHOOD IN CARBONDALE, ILLINOIS

by
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INTRODUCTION

This Alternative Enumeration was conducted to (1) assess the accuracy of the 1990 Census in a mixed neighborhood, (2) identify underlying causes of any Census under or over counts, and (3) suggest strategies to prevent Census errors in neighborhoods with characteristics similar to this site.

Carbondale is a small rural college town where Southern Illinois University at Carbondale (SIUC) is located. The site was selected as an example of a racially mixed neighborhood where people who identify as White and Black races reside. The local population in 1990 was 27,033 and the university student enrollment attending the Carbondale campus was an additional 20,747.

Site Profile

This site consists of eight census blocks in Carbondale, Illinois, code numbered as 90, 91, 92, 94, 95, 96, 98 and 99. The site is a residential area located in the north central section of town where light industries are located. There are no parks or recreation areas near the site. Due to the railroad tracks and industrial area that border the site on two sides, there is very little automotive or pedestrian traffic through the site.

The site includes 108 units consisting of 79 single family houses, 1 house divided into 2 apartments, 20 trailers, 2 duplexes, and 3 efficiency apartments, one of which appears to be a converted garage. Fourteen trailers were grouped in a trailer court, with one additional trailer that is boarded-up and reported to be a storage building by the manager of the trailer court, who lives in one of the trailers. A fifteenth trailer was added in July 1990. There are no other units in the site that are boarded-up. One house has not been lived in for over two years. Many of the houses and most of the trailers are rental units. There are at least 12 vacant lots, however city plats were not obtained to provide an accurate count.

Mail addresses were very clearly marked on either the unit or the unit's rural delivery mail box, which was located on a post at the curb. Each unit in the 15 unit trailer court within the site was clearly numbered on the trailer and, the street address for the trailer court was identified at the entrance to the court along with a numbered mail box for each unit.

The housing in the site is comprised mostly of modest middle income single family homes built over 35 years ago. Most units that appear to owner occupied are well maintained. At least a third of the houses are run down and poorly maintained. These units appear to be rental property as multiple cars parked in their driveways often have student parking stickers on them, suggesting that several students are renting the unit.

The site is a low crime area and appears to be a quiet neighborhood, unlike other areas of Carbondale which are known for parties and areas where students frequently gather to socialize. One home owner complained that students living in the site tended to drive too fast and parked their cars "anywhere and everywhere" so that it was often difficult to find parking on the street.

The site is part of a predominantly White neighborhood. According to Census data, the racial composition of the site is 60.2% White, 37.0% Black and 2.8% other minorities. The site is populated by a mixture of young adults with and without young children, older retirees and university students. The other minorities are mostly students and few Black retirees were observed living in the site. During any day or evening visits to the site, not one university staff or faculty parking sticker was observed on any of the cars parked in the site, which leads the investigator to believe that the site is probably not populated by many, if any, professionals.

The site is zoned residential by the City. The precise zoning permits owners to rent, but limits them to renting to a maximum of two unrelated individuals in each unit. A family with members living in and neighboring the site collectively owns and manages over 100 rental houses, many of which are located in site. Three members of the family were interviewed and reported that the majority of homes in the site were rental property and the majority of tenants were students. They also identified at least six other landlords who own units in the site strictly as rental property. Thus the site has a relatively high number of rental units, most of which are rented to the student population.

As most students attending SIUC live in Carbondale, they account for a large percentage of the total population of Carbondale. Most students reside in Carbondale during the nine month academic year in accordance with the university calendar, which includes two 15 week sessions during the fall and spring semesters. Most students arrive in Carbondale in late August for the beginning of fall semester and leave Carbondale in mid-May at the end of the spring semester. Most students attending the eight week summer session at the Carbondale campus return in June to begin classes. Most students live off-campus and rent apartments, trailers and houses scattered through out the community. Therefore, student residential patterns and mobility must be considered when reviewing the Census and Alternative Enumeration of this site.

Due to the large number of students identified, there is considerable mobility in the site. Students usually change residence each academic year and many change residence during the school year, often due to roommate conflicts. Mobility was especially high during the Census and the AE as the spring semester ended May 11, followed by a four week break before the summer session began on June 11. Even students who might not be moving, could have been gone on vacation at the time of AE. Breaks between semesters are high mobility and vacation times. Even a family permanently residing in the site with one adult attending classes part-time is limited to breaks for a vacation. The large percentage of rental units and student population in this site are critical site characteristics as the peak rental property turnover time period for students overlapped both the Census and the AE time periods.

Methodology

The original Principal Investigator (PI), Christina Brinkley-Carter, was the Chair of the African American Studies Department. The first site Dr. Brinkley-Carter selected did not meet the criteria specified in the sample design for a mixed neighborhood where 20-50% of the residents were Black. Consequently, a second site had to be selected and this change delayed the start of the Alternative Enumeration (AE). Dr. Brinkley-Carter trained three graduate students as research assistants to help her conduct the face-to-face enumeration by observation in July and August, 1990. However, no systematic observations of the neighborhood, housing units or households or specific individuals were made at the time of the AE. The University de-obligated the behavioral log project. In 1991, the original PI left the university, however Dr. Brinkley-Carter arranged for the enumeration assistants to review the report of matches between the Census and the AE. She submitted their coding worksheets and their notes on the circumstances of the unmatched households to the Census Bureau.

Although almost all the housing units could be linked easily due to the clarity of addresses, there was a large number of unmatched households. Based on the draft coding, it appeared that fully a third of all the housing units had changed from occupied to vacant or were inhabited by completely different people. Between the time of the Census enumeration (mail returns sent in March and April, follow up enumeration in May and June) and the Alternative Enumeration in July and August, the cycle of this college town did in fact experience population changes.

Turnover and mobility at the site required some independent confirmation of the situation as of Census Day 1990. This was necessary to confirm or disconfirm the accuracy of the unmatched Census records that referred to people who, potentially, had all moved out of the site before the AE ever began. Independent evidence was also needed to confirm or disconfirm as Census Day residents the unmatched people enumerated in July and August.

In other words, at this site, even if the Census and the Alternative Enumeration had been perfect in coverage, there would be issues to resolve given the mobile character of college students. The original PI and enumeration assistants researched and explained the majority of the minor discrepancies between the census and AE. However, a number of unmatched households remained unresolved and a draft coverage report had not been prepared.

In April of 1992 Southern Illinois University at Carbondale replaced the original PI of this ethnographic evaluation project. The original PI and two of the three enumeration assistants were not available for consultation to review their notes or offer suggestions to complete the final coverage report.

One assistant was located and interviewed to discuss the enumeration methodology, observations about the residents in the site, and suggestions for improving the Census. Basically, the PI divided the site into three sections and assigned one section to each enumeration assistant. The assistants conducted the AE from mid-June to late August. The site was enumerated at various times of the day in attempt to catch residents at home. AE assistants were instructed to make every attempt to actually see each resident they enumerated. Most residents were cooperative, however, the assistant did recall one resident who never answered the door, even when the assistant observed that someone was at home.

The assistant recalled the large number of rental units in one block and the contrast of all owner occupied units with a mixture of older retirees and young families directly across the street. The strongest memories of the AE process that this assistant recalled was the high level of suspicion that lower income residents held towards the Government and residents overall lack of any appreciation for the importance of accurate Census data. The assistant thought residents tended to hide and withhold information, except for a few incidents where the assistant and resident could quickly establish a comfortable level of rapport.

The most frequent response to the AE was, "We’ve already done that," indicating that the resident had already completed the mail return. Once the purpose of the AE was explained, many residents who had mailed the Census were cooperative.

Consequently, a limited account the original PI’s alternative enumeration methodology is not available to present in this report. Also, insights from the original PI or assistants regarding the cause of census miscounts or recommendations to prevent future miscounts in a site of this nature were not recorded ar recalled.

Therefore, this report reflects an investigation initiated two years after the Census and AE and addresses the major discrepancies between the two population counts. The report is based on information the replacement PI was able to ascertain from existing project and administrative documents, site visits, and limited field interviews and one enumeration assistant.

Data reported here were gathered during 15 visits to the site each lasting two to three hours at various times of the day in April, May and June 1992. Descriptive site data were gathered by observation of the site and conversations with homeowners and renters in site as well as landlords owning rental property in the site. The first task was to become acquainted with the site and to sketch and submit a map that located with map spot numbers each housing unit listed in the original AE.

Administrative records used to clarify unmatched household records included the local and university phone directories, university student registration records, and limited access to landlord rental records. Both telephone directories and university registration records have serious limitations in verifying residence. Phone directories are published annually and do not reflect changes in residence during the year. Students are encouraged to inform the university of address changes and registration records are updated throughout the year. However, students do not reliably inform the university of a change of address.

One landlord was cooperative about verifying which tenants were resident on Census Day 1990, two others requested written consent to release tenant information and would only verify whether or not a unit was a rental property of theirs or if another landlord owned it as rental property. As one landlord indicated he was always looking to acquire additional rental properties, he was very knowledgeable about what units in the site were rental property, who owned them, and what property was available for sale.

QUALITATIVE ANALYSIS

Due to the large number of discrepancies between the Census and AE data, the focus of this analysis was to clarify those discrepancies. The site included 108 units. According to the match report, eight units were unlinked; one was misgeocoded, four were empty lots at Census Day, one trailer was missed by the AE, and two were address errors which were subsequently linked. One address error involved a unit that was linked by the household, however, the Census Day address was not in the site. In this last case, the unit was erroneously enumerated as vacant and correctly enumerated as occupied on Census Day by the AE. The second address error appeared to be a simple clerical error.

Two unlinked vacant lots straddle a trailer and both have gas meters and rural mail boxes at the street. According to a resident who asked if I was lost after driving around

the block several times, a trailer burned on one lot about five years ago and he did not remember a trailer ever being on the second lot.
A third unlinked vacant lot has not had a house for over five years and the forth was an empty lot as of Census Day in the trailer court.

After adjustments for address link errors, the match report indicated a total of 50 units with some kind of discrepancies in the match between the Census and the AE. Of the 50, 16 were unmatched households, 14 were partially matched households, 12 units were occupied at Census Day but vacant at the time of the AE, three were vacant on Census Day but occupied during the AE, and four were vacant on Census Day and vacant during the AE. Administrative records and interviews with landlords confirmed the Census as correct for 36 of these 50 discrepancies. Seven census errors were identified in these 36 Census and AE discrepancies.

The accuracy of the Census for the remaining 14 discrepancies could not be verified. Of these 14 units, 5 had occupants as of Census Day that were verified as having been registered university students in the spring semester of 1990, however their addresses could not be confirmed. These discrepancies were coded based on the limited information available with a tendency to believe the Census.

Census errors in enumerating seven housing units resulted in the omission of eight people and the erroneous inclusion of four people thus a net resolved undercount of only four residents. Men and women were equally omiited and erroneously enumerated as were people of the White race. The net four people omitted and thus undercounted were all minorities: three were Black and one was Asian.

Numerous units were visited to clarify partial or completely unmatched households. In several instances the same residents who were enumerated by the Census and/or AE were still present in the spring of 1992 and clarified who lived in the unit on Census Day 1990. However, most units were vacant or were occupied by new residents who did not know residents in the unit on Census Day. Neighbors of several units were contacted with some being more cooperative than others. Landlords were contacted, although not all were helpful. Landlords reported that the majority of their rental houses were vacant by May 15th or rented to new tenants.

The published university student telephone directory and confidential student registration records were checked to identify residents enumerated in the Census and the AE who were students. About half of the unmatched census records were verified as correct based on these public and confidential university records. Additional unmatched Census records were identified as students during the 1990 spring term, however, addresses were not available or did not match. These administrative records are accurate in identifying residents who are registered students, however, students are known to move around and not consistently inform the university of an address change.

The Census on April 1st was taken during the academic year when the university's spring semester was in session and the student population was present. The Census follow-up overlapped the end of the academic year. The Alternative Enumeration was conducted after the academic year had ended, when the majority of students have left Carbondale. The Census follow-up enumeration and AE took place during the break between spring semester and summer session when students may have been on vacation or moving in and out of the site to change residence for any number of reasons, such as lower summer rental rates or a better place to live.

The majority of students attend the university during the nine month academic year. As most housing contracts and leases are for nine months, students commonly change residence each academic year. It is also common for students to change residence from one semester to another as a common student complaint is "getting along with roommates." Most students live with their parents for the summer break.

Consequently, it is easy to see that the Census follow up and the AE were conducted at a highly mobile time for the population residing in this site. Therefore, the high number of discrepancies in the match between the census and the AE is understandable.

For example, there were several discrepancies in the records for the trailer court residents. The manager was contacted by phone and later visited at the trailer court. He lives in one of the trailers. I observed that a trailer was present that was included in the Census as vacant and not included in the AE. The manager verified that the trailer was moved to the site in July 1990. Upon request to verify residents of the trailer court as of April 1, 1990, the manager quickly and easily produced a complete listing of tenants as of Census Day from his files. He verified the accuracy of the Census records. One household enumerated by the AE was in complete error, another was vacant but the residents enumerated in the Census source were still living in the trailer and one trailer was never enumerated by the AE.

According to notes of the original PI, the names of an elderly White couple were erroneously recorded on their mail return by a neighbor because the couple was on vacation. The couple had returned and were correctly enumerated by the AE. The unit was linked by address and although the names were only similar, the households were correctly matched.

In another case, a Black man was enumerated on the Census and not the AE as living with his family. A teenage daughter interviewed at the site verified the Census version of the household. She reported that her father was living with the family two years ago on Census Day and still is living with the family.

In one unmatched single household record, the homeowner was enumerated by mail return and the AE indicated the house was vacant. The house did not appear to be lived in at this time. A landlord living in the site verified the person enumerated by mail was the house owner but he reported that this homeowner had left the area well over two years ago. The house has been for sale since the owner left and it had never been rented because major repairs were needed. Consequently, the Census erroneously enumerated one White resident.

A White couple with one child living in a trailer was enumerated in the Census follow-up and a single Black man was enumerated by the AE at the same address. Upon visiting the unit two years later, the same Black man as indicated on the AE was living in the unit and he claimed to have been living there in 1990 on Census Day. In this situation, the Census erroneously included three White residents and omitted one Black middle aged male resident.

Reasons noted by the original PI why two adolescent females in two separate households were not included on the Census mail return were very similar. In one situation a Black female was a boarder in a Black single parent family. In the other situation a White female was under guardianship of a White family.
According to the original PI, the reason neither person was reported on the respective family's Census mail return was because neither family considered the adolescent a part of the basic family unit and therefore were not someone to include on their form. Records could not be verified as both houses are currently vacant and the landlord refused to verify residents as of Census Day. The result was the omission of two female adolescent residents, one White and one Black.

The circumstances of a White family at one unit were perplexing. According to the Census mail return, a single parent with a daughter resided at the house. According notes made by the original PI, the single parent adamantly stated that only she and her daughter resided at the house. However, the original PI and her assistant noted they personally observed two other children and a man present on several observational visits to the site. The man was observed present both when the woman was home and when she was not home. One child reported to the enumerator that the man was there several days a week and acted in a parental role towards all the children. According to the phone directory, this man had a phone listed in his name at that house; since the phone records supported their direct observations and inquiries, the AE recorded the man and additional children, despite the woman's view of the household. The original PI thought the AE was correct and commented in her notes that she did not know why the woman denied that the man and two additional children resided with her. If the AE is believed, this situation resulted in an omission of three White residents: an adult male and children.

A newborn to a Black family was reported in the AE and coded as an addition to the Census by the original PI. The PI did not have any notes regarding this family and as the family no longer lives at the unit, they were not available to confirm the date of birth of the child. This situation was considered an omission of one --very young-- Black resident.

Another unit's circumstances were also confusing and involved two Black females and an Asian male. A match report link was established between a Census household outside the site and an AE household in the site. The addresses were clearly different, yet one census follow-up enumeration record of two people enumerated was matched with one of three AE records. The census file listed an orphaned record (a record without any housing linked to it) corresponding to the address of the AE household in the site and indicated the unit was vacant on Census Day. The original PI's notes indicated that the two Black females were ambiguous residents of the unit in the site and that an Asian male was the resident in the unit in the site on Census Day. The resolution was that the Asian male had been omitted.

CONCLUSIONS

Census errors were verified in seven units involving twelve individual records which resulted in a net undercount of four people (Blacks and Asian) in this site. Additional Census and AE unmatched individual records could not be clarified to determine their accuracy due to the lapse of time since the Census and AE. The identified errors indicate an estimated 1.7% minority undercount at this site.

Although the times when students are the most mobile overlapped the timing of the Census, the Census follow-up and the AE and this site was highly populated by students, not one Census omission or erroneous inclusion identified involved a registered university student. Therefore, it appears that the Census of students at this site was accurate and that student mobility was not a serious threat to Census accuracy.

Mail returns and follow-up enumeration appear to be equally accurate in this site.

RECOMMENDATIONS

According to the enumeration assistant at this site, many residents did not comprehend the impact of and accurate census on their personal lives. This observation of the assistant confirmed my impression of this site two years later. The landlords I interviewed showed no apparent appreciation for the importance of verifying the

Census. The one landlord who was cooperative wanted to get the interview over as soon as possible. The apparent low motivation to provide or confirm information poses a serious threat to the accuracy of the Census in areas with similar attitudes as those encountered in this site.

Therefore, to improve public knowledge, attitudes and behavior regarding the Census, schools should teach more about it. The history, purpose and methods of the Census should be mandated in primary and secondary civic education as the foundation for determining representation in a representative government. A secondary outcome could be more well prepared and motivated Census enumerators.

Scheduling of the Census should consider the educational calendar. In addition, the Census should recognize that student rental property may be available on a nine month or 12 month contract, which could influence student mobility. Emphasis on education will continue to increase and more working adults will return to college to upgrade their skills or retrain. Consequently, accuracy could be an issue if Census follow-up visits overlap with periods of high student mobility. Alternative Enumerations to verify the Census are clearly jeopardized by their timing and overlapping of the academic calendar.

DISCLAIMER:
This research was supported by a Joint Statistical Agreement with the Bureau of the Census. The views, opinions, and findings contained in this report are those of the author and should not be construed as an official Bureau of the Census position, policy, or decision, unless so designated by other official documentation.

This is the final report for one of the 29 independent Joint Statistical Agreement projects which conducted an ethnographic evaluation of the behavioral causes of undercount. All 29 studies followed common methodological guidelines. This report is based on an analysis of the results of a match between the author(s)' Alternative Enumeration to data from the 1990 Decennial Census forms for the same site. Each ethnographic site contained about 100 housing units. Information was compiled from census forms that were recovered through October 10, 1990. The data on which this report is based should be considered preliminary for several reasons: Between October 10, 1990 and December 31, 1990, additional census forms MAY have been added to or deleted from the official enumeration of the site as a result of coverage improvement operations, local review, or other late census operations. Differences between October 10, 1990 and final census results as reported on the Unedited Detail File were incorporated in later analyses of data from this site. The consistency of the authors' coding of data has not been fully verified. Hypothesis tests and other analyses are original to the author. Therefore, the quantitative results contained in this final JSA report may differ from later reports issued by Census Bureau Staff referring to the same site.

The exact location of the study area and the names of persons and addresses enumerated by the independent researchers and in the 1990 Decennial Census are Census confidential and cannot be revealed until the year 2062. The researchers who participated in this study were Special Sworn Employees (SSE) or staff of the Census Bureau.

To request copies of this report, contact Statistical Research Division, Room 3133-4, Bureau of the Census, Washington, D.C. 20033.