

**DETERMINE EXTENT OF CENSUS UNDERCOUNTING
AMONG CERTAIN RURAL CREEK INDIANS OF OKLAHOMA:
COVERAGE EVALUATION REPORT FOR THE U.S. CENSUS BUREAU**

by John H. Moore

The area covered in this Alternative Enumeration is in rural east central Oklahoma. It was selected because it contains a relatively high density of American Indians who were expected to exhibit some classic and recurring field problems encountered by census enumerators. Our Alternative Enumeration was conducted from May to August of 1990.

The topography of the site is largely rolling hills cut by gullies which expose deep layers of sandstone. Underlying the area is one of the largest oil fields in the history of oil exploration, the Glenpool. The original Indian owners of the land, however, historically have received very little benefit from the oil, as they were cheated of their land and lease rights and forced to retreat to the rugged and rocky hilltops, while non-Indians acquired the lowlands and also mineral rights to the hilltops (See Angie Debo, And Still the Waters Run). Although the lowlands area was originally farmed, it now mostly comprises large cattle ranches owned by Anglo-American families. The marginal area between the ranches and the hilltops is now occupied by poor non-Indian farmers, some of whom are Freedmen--African-Americans who accompanied Indians to Oklahoma from the southeastern U. S. in the 1830's.

One of the motivations for selecting this area for determining possible undercount among Native Americans was that it is "typical" of a large part of eastern Oklahoma now occupied by the "Five Civilized Tribes". The Cherokees, Creeks, Seminoles, Choctaws and Chickasaws number altogether about 171,000 persons, according to the official 1990 Decennial Census. So presumably any difficulties encountered in this study area might also be expected to occur in the other rural areas of Oklahoma where American Indians live. This area is also typical in being difficult to access, and comprising an Indian population which speaks the native language and exhibits culturally distinctive forms of social and political organization.

Our Alternative Enumeration was made possible by the long-term relationship between the Indian community at the site and researchers from the University of Oklahoma. The non-Indian researchers who undertook the enumeration are well known in the community. In addition, bi-lingual interviewers from the community who had been trained in previous projects were available for the Alternative Enumeration: they are lifelong residents of the community who knew who lived where.

The extent of our enumeration area was determined by the number of housing units. Originally, we anticipated that we would find about 150 housing units in our area, of which about half would be occupied by Creek Indians. After some initial fieldwork among non-Indians, however, we discovered that many of the housing units in the northern part of the area were occupied only seasonally or on weekends. And so of our final total of 70 occupied housing units in the area, 33 (47.1%) were occupied by Whites, 31 (44.3%) by Creek Indians, and 6 (8.6%) by Blacks. In addition, we discovered that a large number of houses were not permanently occupied, a total of 58, or 45.3% of the total of 128 housing units. We understand that this is an unusually high vacancy rate in the experience of the Census Bureau.

For Appendix 2 of the "1990 Guidelines for the Alternative Enumeration," prepared in advance of the fieldwork, we presented three hypotheses concerning possible causes of undercount which we thought would be significant in our area:

- 1) irregular household composition,
- 2) the enumerator's failure to find housing units and
- 3) language difficulties between Creek-speaking households and monolingual English-speaking enumerators.

In addition to these hypotheses, we also predicted, in letters to the Census Bureau Technical Representative, Dr. Brownrigg, and discussed during her field visit, that several other specific problems would occur. We predicted confusion about identifying the differences between proper roads, cattle trails and oil service driveways, and we predicted that a naive outsider would count the "camp houses" at traditional Indian churches as permanently occupied residences.

When the Alternative Enumeration was completed and we began to construct our resolved enumeration, we were able to evaluate our predictions. As expected, the fact that many Creek Indians work during the week in urban areas and return on weekends caused confusion about household composition, contributing to the total undercount of 30 Indian people at our site. Also, the regular enumerator failed to find 18 of the 128 housing units we identified, about 14 %, although 13 of these were vacant. Concerning language, we attributed to language problems several households where significant differences in personal names and relationships among members appeared between our Alternative Enumeration and the Census version; other problems are mentioned below. And so all three of our predictions in Appendix 2 were borne out.

Our other two predictions were also realized. Not only the field enumerator, but also apparently the cartographers who prepared the preliminary "TIGER Maps," were confused by the myriad roads and trails in the area. Several oil rigs with out-buildings were designated as census blocks on the official census maps. The loop road used to service these rigs were taken as block boundaries. A triangle of gravel between three intersecting roads, with no structures, was also designated as a block. The Census Bureau's field enumerator was so perplexed by the roads and trails, and perhaps by the

TIGER Maps, that we discovered we could not by any means reconstruct the route taken by the Census Bureau's enumerator to create the address register. Also as predicted, the Census Bureau's enumerator did not know what to make of the Indian church camp houses. These fully furnished houses used only on weekends were designated as vacant housing units in the census.

Several census phenomena, however, were not predicted, and were surprising to us, although perhaps not to the staff of the Census Bureau. For one thing, we discovered that language problems apparently caused duplication of households in several cases, when Indian households both mailed in census forms and answered personal interviews. Apparently they did not understand, when we asked them on the telephone, that they were not supposed both to mail in the questionnaire and respond to interview questions. Trying to be polite and helpful, conforming to the Indian ideal of hospitality, they duplicated households comprising a total of 18 persons. It is also possible that the Census Bureau's enumerator, in looking for another specific house, inadvertently duplicated households already enumerated by mail.

Also, we had little idea, before the enumeration began, about how many vacant units there were in our area, and how these would confound our attempts, and the Census Bureau enumerator's attempts, to sequence the units prior to the census for the address register. The plethora of vacant houses, and the problems in defining them as to type, made it difficult to match the Alternative Enumeration list to records keyed from census forms and to the address listing originally made prior to the census. That is, an occasional vacant house could not be used to get the two lists back into synchrony, as would have been the case if there were only a few vacant houses.

Another difficulty in matching came from the nature of the roads in this area, a problem we anticipated, but not in the context of matching. The Census Bureau enumerator apparently regarded some of the many trails and paths as roads, while we mapped some other trails and paths as roads. We only considered as roads those paths which we knew led to houses, information which the Census Bureau enumerator did not have, for the most part. Also, in matching Alternative Enumeration and Census, since the roads were unnamed, the houses unnumbered and most mail boxes unidentified as to resident, we could not use these address features to synchronize our list with that keyed from census forms.

One special problem with roads occurred on the hill in the left central part of our area. This is an Indian area cross-hatched with unpaved and ungravelled "rut roads." Some of these lead to houses, while others are for feeding cattle, tending oil wells or simply lead to favorite fishing spots. By following the "right-hand rule," the Census Bureau enumerator just missed several houses which were not visible from an intersection. From comments in the community, it seems the Census Bureau enumerator was lost several times and is said to have gone by one house five times in one day, approaching it from three directions at different times.

We also did not anticipate that significant marijuana arrests would be made in our area in the summer of 1990, so that the normal guarded reserve of local White people would turn into outright hostility. Since the local newspaper reported that several plots of marijuana were discovered to be guarded by dogs and booby traps, we did not persist in our efforts to find what was at the end of roads on the property of non-Indians. Neither did the regular enumerator, so it is possible that some housing units are missing from both lists.

From the beginning, we realized that since our social relationships were mostly with local Indians, we would have to work harder to find appropriate information about non-Indians. We did not anticipate, however, that our non-Indian field-worker would have to spend roughly three times the amount of time in the field as originally estimated. Most of this was due to the increased suspicion in the non-Indian community caused by the marijuana raids. We spent a lot of time in country stores, at fishing sites and talking informally to neighbors, trying to find out who lived in the non-Indian housing units.

A large recreational lake is included in our area. Until we began inquiring, we didn't know that a large number of houses around the lake were occupied only in the summer or on weekends. Significant discrepancies in the listing of housing between our Alternative Enumeration and on census forms and address listing pages were caused by concern for whether a particular cabin or trailer was a permanent residence or not. The Census Bureau enumerator apparently counted as housing units some trailers parked one weekend which we did not see.

A problem which emerged that we find interesting, ethnographically, is the lack of fit between who was considered to be an Indian by the person interviewed by the census enumerator, and by the general community as represented by our informants. We expected that some Indians of low blood quantum might be ambiguous, but we did not expect that some Whites and Blacks who reported no Indian ancestry to the census enumerator would be considered "Indian" or "Creek" by the Indian community. That is, the community apparently feels that social relations are more important than ancestry in determining who is an Indian.

One remarkable problem seems worth mentioning to us, although it may be commonplace in the larger view of Census Bureau personnel--a fictitious enumeration involving the substitution of a one family for another in the census enumeration. In this case, a family formerly living outside the sample area and since disappeared, was said to be living in a housing unit instead of the family which lives and has lived in that house for some years. We believe this to be a fictitious enumeration and cannot think of any way this mistake might have happened in the field. Possibly, this might also be a clerical error of some sort. In another case, a household from one side of our area was erroneously included in the census enumeration in a different part of the area, thus duplicating the household. Here again, we suspect that this was a clerical and not a field problem, and thus we could not resolve it to our satisfaction.

The balance of our results are attached as tables and graphs. We have included in our denominator **all** persons who we know, ethnographically, were in the area on Census Day, April 1, 1990. By the test of reality, we count 152 Indians within the site on Census Day, 79 Whites and 11 Blacks, a total of 242 persons. Table 1 summarizes the household misses according to the racial categories they reported to the census, which may be different from our ethnographic appraisals. Clearly, although our sample is small, it seems that American Indian people were much more likely to be missed than Whites, as predicted. Table 2 is a summary of individual persons matched between the Alternative Enumeration and census and missed on one of these enumerations, also categorized by race group. Here again, it was the Indian people who were missed at a higher rate than either Black or White residents.

Graph 1 shows the distribution of household size for the three ethnic groups in our study area. There are so few Black households in the site that we consider those results to be insignificant. The means and standard deviations, not shown on the graph, are as follows: Indians--mn 4.88, sd 3.73; Whites--mn 2.44, sd 1.26; and Blacks--mn 1.57, 1.18. The age/sex structures for the three populations are shown on the final three graphs: Graph 2 for Indians, Graph 3 for Whites and Graph 4 for Blacks. From these results it seems clear that while the rural White population is mostly older couples, the Indian families contain children, although they are unevenly distributed among the households. Two of the Indian households, in particular, with 14 and 19 persons, include grandparents who care for grandchildren while the parents are at work. Although the sample is small, one might infer a pattern that when active grandparents are available for child care, all of their adult children can work and leave the grandchildren in the grandparental household. That is, from the standpoint of the grandparents, it is not much more trouble to care for eight grandchildren than for two or three.

Determine Extent of Census Undercounting
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Table 1. Missed Households and Individuals

Missed by Census Enumeration

	Missed Persons (including those in missed households)	Missed Households	Partially Matched Households
Indians	30/152	3/31	7/31
Whites	11/79	2/33	1/33
Blacks	4/11	1/6	0/6

Missed by Alternative Enumeration

Whites	10/79	3/33
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Table 2. Types of Errors

Indians

110	matched between Alternative Enumeration and Census lists
5	counted as Indians by AE, as Blacks by census (resolved as Indians) 1 person duplicated by census, once with baby and once without, in different households (not counted in total of 152)
30	missed by census
0	missed by AE
2	counted as Indians by AE, as Whites by census (resolved as Indians)
4	in-movers
1	counted as Indian by census, as White by AE (resolved as Indian)

Total = 152 American Indians resolved as residents in sample area on Census Day 1990

Whites

62	matched between Alternative Enumeration and Census lists
7	missed by census
6	missed by AE
4	missed by both AE and census

Total = 79 Whites resolved as residents in sample area on Census Day 1990

Blacks

7	matched between Alternative Enumeration and Census list 5 counted as Blacks by census, as Indians by AE (resolved as Indians and counted as Indians) 1 man matched but reported by entirely different names to AE and census (not counted in this total)
4	missed by census

Total = 11 Blacks resolved as resident in sample area on Census Day 1990

Disclaimer: 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.