

USING ETHNOGRAPHY TO EXPLAIN WHY PEOPLE ARE  
MISSED OR ERRORNEOUSLY INCLUDED BY THE CENSUS:  
EVIDENCE FROM SMALL AREA ETHNOGRAPHIC STUDIES

by

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## ABSTRACT

This article demonstrates how ethnographic research provides much needed insight into the social and cultural processes that contributed to the differential undercount of ethnic and racial minorities in the 1990 Census of Population and Housing. The article summarizes and synthesizes data and findings reported in 29 ethnographic reports sponsored by the U.S. Census Bureau and non-profit organizations throughout the country. These reports are based on ethnographic research conducted by qualified ethnographers in 29 sample areas throughout the continental U.S. and Puerto Rico. The article reports that the reasons for the differential undercount of ethnic and racial minorities are varied and complex. Empirically and in the aggregate, there is no single reason why a disproportionate number of ethnic and racial minorities were not counted by the 1990 census. Rather, there are a constellation of factors that interact and contribute to the differential census undercount. These factors are listed and discussed in the article. The article concludes with recommendations to the Census Bureau for the improvement and conduct of the year 2000 census.

## INTRODUCTION

In order to better understand the reasons behind the net differential undercount and other types of census errors the Census Bureau initiated the Ethnographic Evaluation of the Behavioral Causes of Census Undercount (hereinafter referred to as the Ethnographic Evaluation) under its Research Evaluation and Experimental Programs for the 1990 Census.

The Ethnographic Evaluation took place in 29 ethnographic sample areas throughout the continental U.S. and Puerto Rico. An Alternative Enumeration (AE) was conducted in each of the 29 sample areas by experienced ethnographers working with the Census Bureau under Joint Statistical Agreements. The AE was then compared to the 1990 census count. As a result of this evaluation a total of 29 separate coverage reports (one per ethnographic sample area) have been written by the ethnographers who conducted the field research. These reports contain a wealth of qualitative information concerning causes of the differential net census undercount (and other census errors) among the respective ethnic and racial groups on a site by site basis.

This report assembles and summarizes reasons why census omissions and erroneous inclusions occurred in the 29 sample areas of the Ethnographic Evaluation. This information comes from the coverage reports, one for each sample area.<sup>1</sup> Data analyzed in these reports were collected by experienced ethnographers using participant observation, direct observation, ethnographic interviews and other unobtrusive data collection methods.<sup>2</sup>

Census omission is one type of census error. Other kinds of errors that occur during the conduct of a census include misgeocoding, erroneous inclusion of persons or housing units and duplication, that is, counting persons or housing units more than once. While these mistakes often result in missed individuals, other errors have different negative impacts on the census count. These negative or unwanted impacts can result in net undercount or net overcount. Both outcomes are undesirable because they diminish the accuracy of the census count. In the Ethnographic Evaluation we witnessed both net overcounts and net undercounts across all 29 sample areas.

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<sup>1</sup> Some net undercount/overcount rates come from CSMR tabulations and Brownrigg and de la Puente (1993).

<sup>2</sup> For more information on the data collection methods used in the Ethnographic Evaluation see Brownrigg and de la Puente (1992 and 1993) and de la Puente (1991).

## CAUSES OF CENSUS OMISSIONS AND ERRONEOUS INCLUSIONS

Brownrigg and Martin (1989) in their proposed study plan for the Ethnographic Evaluation identified five hypothesized causes of coverage error. These were:

- "1. Mobility
2. Language and illiteracy barriers
3. Concealment to protect resources (e.g., illicit income) combined with disbelief in census confidentiality
4. Irregular housing and household arrangements
5. Resistance, passive or active, as a strategy for dealing with outsiders, especially government." (Brownrigg and Martin, 1989: 1).

The ethnographers used these hypothesized causes as a starting point and systematically examined these hypotheses (and other related hypotheses) using unobtrusive ethnographic methods. In general, they found that reasons why individuals were missed or erroneously enumerated by the 1990 census are varied and complex. In almost all sample areas no single cause for census omission or erroneous inclusion was noted by the ethnographers. Rather, ethnographers listed a constellation of factors that interact and contribute to the differential net census undercount/overcount. These include irregular household arrangements, irregular housing, little or no knowledge of English (and in some cases illiteracy in any language), fear of government on the part of sample area residents (leading to concealment of information), and missed or erroneously censused housing units.

It is important to keep in mind that it is often difficult to separate the relative influence of competing causes for why people are missed or erroneously included by the census. For example, irregular and complex household structure is one of the chief causes of within household omission. (Interestingly, single person households were also missed in a number of sample areas even though the housing unit was counted by the census.)<sup>3</sup> However, in many situations other confounding influences are at play such as concealment of information by household members, residential mobility, household members who have little or no knowledge of English or cultural practices and beliefs that define "household" differently from the Census Bureau's definition of household. Ethnographers were often not able to specify which one of these causes prevailed or was most important in their sample area.

Another case in point is irregular housing. This cause of census error can interact with other causes such as concealment of information on the part of sample area residents. As I shall discuss and illustrate below, in at least two sample areas, landlords or property managers of buildings with illegally converted housing units kept this information from the Census Bureau. This resulted in missed housing units. However, irregular housing can also be a cause of

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<sup>3</sup> For example see Hamid (1992).

erroneous census enumerations. In fact, this occurred in a number of sample areas and resulted in net census overcounts.

### Irregular and Complex Household Arrangements

One key reason why individuals are missed or are erroneously included by the census in households (within household omission or within household error) is irregular and complex household structure.<sup>4</sup> In irregular and complex households, members cannot be easily related to person 1 on the census form and may not be listed on the census roster. Alternatively, household members that should be included may be excluded resulting in an enumeration error. Still another possibility is the inclusion of all household members but because the household item on the census form requires that household members be listed in relation to person 1, the complexity of unconventional households is not fully captured on the census form. Although, technically speaking, this is not an erroneous enumeration it, does distort the actual household structure and the interrelationships among its members.

The above mentioned situations arise when one or more of the following conditions apply. Household members do not understand census rules of residence. This can happen when household members have little or no knowledge of English or they are semi literate or illiterate. Another reason is the disjunction between how "household" is defined by the Census Bureau and how "household" is defined by respondents.

In general, irregular and complex households have one or more of the following features: (a) unrelated individuals, (b) mobile or ambiguous household members, (c) households formed for the sole purpose of sharing the rent and/or other living expenses or (d) households that contain two or more "nuclear" families.

Irregular and complex households as a contributing cause of census omission or other census error were noted, to a greater or lesser extent, in virtually all coverage reports. However, the reasons why some households were complex, with erratic or irregular membership, were varied.

Complex households were common in sample areas populated with recent immigrants<sup>5</sup>,

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<sup>4</sup> Other reasons for within household omission include concealment of information, residential mobility and a misunderstanding of the Census Bureau's definition of household and Census Bureau residence rules. These reasons for within household omission will be discussed in later sections.

<sup>5</sup> Sample areas with recent Hispanic immigrants include: Houston, TX (Rodriguez and Hagan 1991), rural Santa Barbara County, CA (Garcia 1992), Santurce, PR (Duany 1992), San Francisco, CA (Romero 1992), San Diego, CA (Velasco 1992), rural Marion County, OR

especially Hispanic immigrants. Martin Dale Montoya, the ethnographer who conducted the field work in rural Marion County, OR coined the term "Ad Hoc Household" to describe the complex households that he encountered among Mexican migrant workers. Montoya defines Ad Hoc Household as a household arrangement that generates and maintains:

"...relationships which can only be described as loosely tied, ephemeral, and alienated (no responsibility to household) because each slot in the household is allocated by money and not necessarily kinship. Housemembers come and go as they please with little concern for the housing unit itself, individual household members or groups." (Montoya 1992: 7).

Montoya argues that Ad Hoc Households are formed as a response to poverty. Household members come together not out of familial sense but rather as a practical response to poverty and a lack of affordable housing. Ad Hoc Households are very difficult to enumerate. Montoya notes:

" In the Ad Hoc household, if all members are not present, the likelihood of obtaining the data pertaining to persons outside, asleep, at work, or temporarily absent is virtually impossible. It is as if those persons do not exist. However, even when the number of housemates is determined or provided, the personal data for those other persons is still unattainable. This is because Ad Hoc households protect their identity. This means that coverage of the Ad Hoc household will be determined, to a great extent, by coincidence (who is actually present during the visit) and/or the perseverance of the enumerator." (Montoya 1992: 7).

This type of household was also reported by other ethnographers in sample areas populated by predominately Hispanic immigrants. For example, in the San Diego sample area, populated mainly by Mexican immigrants, Alfredo Velasco notes:

"A total of eleven men, all undocumented Mexican immigrants lived in this [one] unit. These men were all employed and worked different shifts, thus not all of them were in the housing unit at the same time. Their work schedule permitted them to sleep in shifts." (Velasco 1992: 11).

Similar observations regarding unrelated males sharing the same housing unit were made in other sample areas with sizeable numbers of recent immigrants. One such sample area was located in the south Bronx in New York City. Boanerges Dominguez conducted his research in

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(Montoya 1992), Long Island, NY (Mahler 1993) and Bronx, NY (Dominguez 1993). Sample areas with recent Haitian immigrants are: Fort Lauderdale, FL (Wingerd 1992) and Miami, FL (Stepick 1992). And sample areas with Asian immigrants are: Chicago, IL (Straus 1991), Koreatown, CA (Kim 1991), Chinatown, NY (Sung 1991), Long Beach, CA (Bunte 1992), North Beach, CA (Shaw and Guthrie 1992), South St. Louis, MO (Rynearson 1992) and Queens, NY (Kang 1992).

this sample area. The population in this sample area consisted of immigrants from Mexico and the Dominican Republic. Dominguez also noted that Mexican immigrants tended to reside in overcrowded apartments with beds lining the living room walls. He found that the interaction among the unrelated household members was minimal. Since the men worked different shifts it was difficult to catch all of them in the apartment at one time. According to Dominguez, getting one household member to divulge information about other members of the household was close to impossible (Dominguez 1992: 9).

Sarah Mahler reports findings from the Long Island, NY sample area that are very similar to those of Montoya and Dominguez. Largely undocumented Salvadoran immigrants in the Long Island, NY sample area lived in crowded converted apartments. As was the case in the other sample areas noted above, lack of affordable housing prompted low income individuals, in this case Salvadoran immigrants, to share living quarters with unrelated persons. In her coverage report Sarah Mahler describes a subleasing system in which the lease holder of an apartment rents out rooms (or parts of rooms) to unrelated individuals. The result is a household structure that is unstable and impersonal. In describing these households Mahler states:

"....activities normally associated with households such as cooking and cleaning together, pooling income and sharing meals, for instance, are not exhibited in these households. Rather, individuals fend for themselves or perform these activities in small subgroups apart from the entire group of co-residents. Thus, co-residence is not a proxy here for household in the normal sense." (Mahler 1992: 10).

Mahler adds that the leaseholder in these households holds the key to the mailbox and controls the distribution of mail. He or she is also likely to be listed as person 1 on the census form. Mahler argues that it is often not in the best interest of the leaseholder to report of all his or her household members for fear that the apartment building owner will discover the subleasing arrangement (Mahler 1992: 10-11).

Mary Romero, the ethnographer who conducted the field work in the San Francisco, CA sample area, provides several examples of complex households that echo the findings reported above. For example, Romero describes the household of Alejandro and his wife and their two children. Alejandro and his wife were Salvadoran immigrants employed in low wage service jobs. In order to meet the relatively high rent in the sample area Alejandro and his family rented a three bedroom apartment and took in nine other Salvadoran immigrants to help with the rent.<sup>6</sup> As was the case in the rural Marion County, OR, Long Island, NY, the North Bronx, NY and San Diego,

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<sup>6</sup> Alejandro, his wife and two children shared one of the three bedrooms. The other bedroom was occupied by a woman in her 30s with her twenty-one year old partner, their six month old child, two children from the women's previous marriage and the nineteen year old brother of her partner. Three recent Salvadoran immigrants occupied the remaining bedroom. Two were in their twenties and unrelated and the third was a man in his forties who was the father of Alejandro's partner.

CA sample areas the interaction among these household members was minimal and impersonal. Romero notes that each bedroom had a lock and the bathroom and kitchen were shared. The refrigerator was divided into different sections and dry and canned goods were kept in the bedrooms. Of the thirteen persons living in this household only six were enumerated by the census (Romero 1992: 7).

Nestor Rodriguez and Jacqueline Hagan identified fifteen types of household arrangements in their Houston, TX sample area. This sample area consisted of an entire apartment building that housed mostly Central American and Mexican undocumented immigrants. In addition to these immigrant groups the Houston, TX sample area also contained Mexican Americans, non-Hispanic Whites and Blacks. Rodriguez and Hagan found that the most complex households (i.e., large, containing more than one generation, having unrelated individuals) were found only among Central American and Mexican immigrants.

Through participant observation and ethnographic interviews, Rodriguez and Hagan found that unrelated individuals in complex households were not included as household members on the census form. The authors argue that these omissions occurred because heads of households did not view boarders and other unrelated individuals as part of the core household and therefore were not listed on the census form. Rodriguez and Hagan maintain that for recent immigrants from Central America and Mexico, household and family are viewed as the same. Boarders and unrelated individuals are not part of the family and thus not part of the household. They are not given equal household standing with family members (Rodriguez and Hagan 1991: 11).

Complex households was also characteristic the two Haitian sample areas. However, the ethnographers in these sample areas do not characterize these households as Ad Hoc Households as was the case in the largely Hispanic sample areas discussed above.

Judy Wingerd describes Haitian households in the Fort Lauderdale, FL sample area as densely packed and fluid with a nuclear core (Wingerd 1992: 5). In other words, there is usually a core family group with other individuals in the periphery who come in and out of the household depending on their life circumstances. Some of these complex households are formed in order to share living expenses. But there are other reasons as well. Wingerd notes that non-nuclear household members in Haitian households include weekday or weekend residents, boarders who are in a state of transition (perhaps looking for a mate with whom to establish a separate household), recent immigrants or fellow villagers who need a place to stay until they can save enough money to establish their own household and family and non-family members that are "just passing through." (Wingerd 1992: 5-6).<sup>7</sup>

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<sup>7</sup> It should be noted that Wingerd asserts that no Haitian in her sample area was missed by the census solely because of complex household structure. Wingerd attributes this success by the census to a female Haitian enumerator who spoke Creole and was culturally sensitive to the living situation of recent Haitian immigrants (Wingerd 1992: 16).

Although some household members are described as "temporary residents" or "just passing through" their stay can be anywhere between two weeks to four years. Alex Stepick points this out in his coverage report on "Little Haiti" in the Miami, FL sample area (Stepick 1992: 4). Stepick goes on to discuss cultural practices among Haitians that can contribute to census omission. Several of these issues are related to household structure. New arrivals from Haiti are referred to as "just comes." Stepick notes:

"...'just comes' is usually in the home of a relative and may last for a couple of weeks or a couple of years. A 'just come' is the community's term for someone literally just off the boat who has entered the U.S. undetected, someone just off the airplane who has arrived typically with a tourist or student visa, or someone just released from detention. When there is no relative to stay with a 'just come' will typically be taken in as a boarder by a friend of a friend." (Stepick 1992: 4).

Stepick (1992: 4-5) also notes that it is a common practice for a Haitian household to take in children from other family members when the child's family is unable to care for the child. Stepick states that children are "adopted" by aunts or uncles, grandmothers, cousins, godmother/godfather and other fictive kin. These children are often referred to as an "adopted" child. Other cultural practices which Stepick views as potentially contributing to census omission include cousins that are raised together in one household, common law marriages known as "placage" and it is not unusual for immigrants (both men and women) to enter a common law relationship while having a husband or wife in Haiti. Stepick points out that: "...relationships within the Haitian households are commonly more complicated and different from that permitted on Census forms or identified to the Census Bureau." (Stepick 1992: 5).

There were also reports of complex households in sample areas where the population was predominately Asian, although the treatment of such households in the coverage reports was less extensive than in the coverage reports of the Hispanic, and to some extent, the Haitian sample areas.

Tai Kang conducted his research in Queens, NY. He reports that a number of Asian households were overcrowded. Kang noted that elderly parents often share a room with their grandchildren or sleep in the living room (Kang 1992: 6). Kang reports that in the greater Queens community recent Asian immigrants who work in the city reside in rooming houses where multiple beds are positioned in small rooms. In some cases living rooms are partitioned with screens to accommodate several beds (Kang 1992: 7). Kang observed that in four studio apartments occupied by Chinese the average number of residents per housing unit was slightly over four. Further, he also observed that in one bedroom apartments occupied by Chinese the average number of person per unit was four and a half. Kang cites one Vietnamese family of six who lived in a one bedroom apartment (Kang 1992: 19).

In her Chinatown, NY sample area, Betty Lee Sung found that a number of elderly Chinese residents reported their grown children on their census form even though their adult children had been living in their own home for sometime (Sung 1991: 19). Apparently these

children stayed with their elderly parents from time to time but were not residents of the sample area. A similar observation was made by Tom Shaw and Patricia Guthrie, the ethnographers who conducted their field work in the North Beach, CA sample area. Shaw and Guthrie attribute the erroneous inclusion of adult children by their Chinese parents on the census form to the cultural meaning "family" among Chinese. The authors state:

"In Chinese culture, family members can be dispersed geographically but still be thought of as constituting a household as long as they contribute all or part of their income to get managed by the family head." (Shaw and Guthrie 1992: 9).

Culturally defined notions of family and residence that were difficult (and often not possible) to capture on the census form also occurred in predominately Black sample areas.

Patricia Bell conducted her field work in a predominately Black rural town in Okfuskee County, OK. Bell discovered that "address" and "residence" have several meanings and seemingly simple questions such as "What is your address?" and "Where do you live?" can result in different responses. Bell characterizes this situation as follows:

"Consider the situation where the following conditions exists: (1) residence does not necessarily indicate where one lives or receives mail; (2) where address does not necessarily indicate where one receives mail or where one lives; (3) where one lives may not have an address which coincides with where one receives mail; and (4) where some addresses may not be properly assigned....Circumstances are further complicated by the fact that this situation tends to varies [sic] by age of individual and by household composition." (Bell 1991: 9).

Bell quickly adds that this seemingly complex situation does not pose a problem for sample area residents nor the mail man. However, outsiders do run into difficulties.

Bell reports that residence has several meanings depending on the circumstances. In formal situations "residence" is where one receives mail. This response would be given to creditors, for example. In informal situations, individuals tend to give the place where they live most of the time as their residence. And Bell notes that "For long-term contact purposes, residence refers to a place which can best be characterized as 'Somebody here knows where I can be found and they won't be moving anytime soon'." (Bell 1991: 9).

In the racially mixed sample area in North St. Louis, MO (about 60 percent Black) Joyce Aschenbrenner notes that both the census and the Alternative Enumeration missed different persons within the same household (Aschenbrenner 1991: 6). Aschenbrenner argues that the cause of these omissions were the flexible nature of the households. She also reports that, regardless of socioeconomic status, more persons were missed in Black households than in counterpart White households. Aschenbrenner argues that this variation is due to the different concept of "household" and "family" held by Blacks and Whites in her sample area (Aschenbrenner 1991: 13).

In her coverage report Aschenbrenner provides numerous accounts that illustrate how flexibility of household membership resulted in census omissions. Aschenbrenner and her research team encountered considerable resistance from sample area residents. While interviewing one household she observed:

"He initially left out some of the grandchildren, but I saw some there and we persisted in our observations and questions until we got them all. We counted four more people here than were listed on the census." (Aschenbrenner 1991: 9).

Concerning another household, Aschenbrenner states:

"This is a very large family on welfare, who have received emergency assistance from the agency. The male householder failed to report two daughters and three grandchildren in the census. His stepdaughter lived across the street...with other relatives and non-relatives." (Aschenbrenner 1991: 10).

Perhaps the most intriguing description of complex households was provided by Ansley Hamid. Hamid's sample area was located in Harlem, NY where drug dealing and drug use was commonplace. In his coverage report Hamid explains how and why "freak houses" are formed. "Freak houses" are households that are formed on the basis of crack use and sexual services. Hamid provides the following account:

"The salient characteristic of these households was contained in the 'freak' part of the word: they appealed to male crack users who wanted to 'freak,' or to enjoy the sexual services of many women in an ensemble. Crack using women flocked to them to receive cash or crack, and their proprietors received crack and cash for mediating the exchange." (Hamid 1992: 15).

However, some single person households were missed by the census even though the housing unit did make it to the census count (an example of an erroneous enumeration of a housing unit). Clearly, complex household structure was not the cause of such census omissions. A closer look at these cases is required in order to identify the circumstances under which such omissions occurs.

In this section I have discussed how complex households contribute to within household census omissions. In the next section I discuss irregular housing, one of the chief reason why the Census Bureau misses whole households.

### Irregular Housing

Irregular housing was a dominant characteristic in many of the 29 sample areas<sup>8</sup> and the major reason why entire households were omitted from the census.<sup>9</sup> We estimate that across all 29 sample areas as much as 40 percent of persons who should have been enumerated by the census were not because the housing unit was missed or erroneously identified (Brownrigg 1991).

Irregular housing refers to housing units that have one or more of the following characteristics: (a) hidden from public view, usually in back yards or down rural roads, (b) illegally built usually in single family homes or garages, (c) do not have clear unit designators such as apartment number or any other clear marker such as house number in rural areas, or (d) are in areas where the condition and number of units in buildings vary inconsistently.

In the urban sample areas in Long Island, NY and San Diego, CA, irregular housing was a common feature mainly because of the high demand for affordable housing (or in many cases a high demand for any type of housing). In almost all sample areas irregular housing goes hand in hand with complex or irregular households. That is, in sample areas where there is a shortage of affordable housing, families and unrelated individuals are likely to double up in single housing units. Similarly, in these areas, illegally converted housing units are likely to appear in basements, homes that, from the outside, appear to be single family dwellings, garages and even back yards.

In rural some sample areas irregular addresses and housing units hidden away on back roads and the inability of census enumerators to handle these irregularities were the major reasons why households were missed by the census. Below I discuss the situation in urban sample areas and then turn to the conditions that resulted in whole household omissions in rural sample areas.

Possibly the most dramatic example of how irregular housing can result in census omission occurred in the Harlem, NY sample area. According to Ansley Hamid the census enumerated 80 housing units and 72 persons in his sample area. On the other hand, Hamid counted 132 housing units and 143 persons in his Alternative Enumeration of the same sample area. Thus the census missed 52 housing units and 71 persons (Hamid 1992: 1).

The Harlem, NY sample area was a dangerous place because of drug dealing and drug use

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<sup>8</sup> Irregular housing played a minor role (or no role at all) in the census undercount in sample areas that consisted of a single apartment building, a group of apartment buildings or, in the case of rural sample areas, a consistent arrangement of housing units with clearly marked address. Urban sample areas where housing units were well identified are the Houston, TX; Bronx, NY; Queens, NY; Koreatown, CA and New Orleans, LA sample areas. The two rural sample areas where housing units were arranged in a uniformed fashion and addresses were clear and consistent are the rural Santa Barbara, CA and the Isleta Pueblo, NM sample areas.

<sup>9</sup> Irregular housing also causes vacant housing units to be omitted from the census. Since my focus is on persons not enumerated by the census my discussion will concentrate on whole household omissions.

and the inevitable other crimes associated with these activities. Hamid believes that this hostile environment, run down buildings that appeared abandoned but were not and brownstones that seemed to be one family dwelling but instead contained numerous housing units explains why the census missed so many households. Hamid argues that he was able to overcome these barriers because of his prior research in the area and his relationship with sample area residents (Hamid 1992: 2). He states:

"In conducting an Alternative Enumeration, my strategy was to begin with the crack misusers and distributors I knew, and to obtain through them information about housing units and occupants in their buildings. Thus, I received immediately detailed dispositions of three brownstones, in which my informants had assigned persons to housing units." (Hamid 1992: 3).

Buildings that seemed abandoned, but were not, presented problems for the census. Hamid observes the following regarding one building that was formally abandoned in 1988:

"...eight apartments remained occupied. Residents continued to have electricity, but fetched water from the fire hydrant at the curb. They were principally women, as many as six to each apartment, which they maintained as a locale for using crack. Many workmen were seen entering the building, apparently undeterred by the hazards of the stairway." (Hamid 1992: 11).

Hamid argues that "enumerator fear" was an important reason for the undercount in the Harlem, NY sample area. Hamid observed census enumerators in his sample area. Based on his observations he noted the following concerning a census enumerator:

"One questionnaire was mailed out to the address, and an enumerator, walking past it (he could not have gone in!) listed it as one housing unit, containing three individuals. The reality, of course, is quite different. In 1984, a minister of a nearby Baptist church bought the property...He divided the brownstone into ten housing units, and rented each apartment at \$350-\$375 a month." (Hamid 1992: 5).

Census enumerators had good reason to be cautious. Hamid provides the following description of a building in his sample area:

"Visitors got upstairs by negotiating sharp-edged ruins of concrete by the light of a dim naked bulb, and passed by landings where psychiatric homeless men would rear up suddenly from beneath shelters made of cardboard boxes, muttering curses and offering fierce gestures." (Hamid 1992: 11).

The Flint, MI sample area was another urban Black site that, like the Harlem, NY sample area, was plagued with crime. According to Joe Darden the Flint, MI sample area contained a number of boarded up buildings and illegally converted housing units. Over half of the persons missed by the census in this sample area were missed because the housing unit was not counted

(Darden forthcoming).

Housing units were also missed by the census in sample areas where drug trafficking and other crimes were not cited as a problem by the ethnographers. For example, Tom Durant's sample area in Orleans Parish, LA was a Black sample area where residents had low incomes and, according to Durant, 42 percent of the household heads were unemployed. Irregular housing was noted as a contributing factor to census omission, although not the only factor. Durant describes duplex housing with ambiguous housing unit designators. In other duplexes it was difficult to determine if both housing units were occupied or vacant (Durant forthcoming).

In the Miami, FL urban Haitian sample area Judy Wingerd reports that although most of the addresses and housing unit designators in her sample area were straightforward, there were a number of obscure housing units. Wingerd notes:

"There is a big house carved into five separate units, a feat which, from the outside, appears totally unlikely. There are doors without numbers but people come and go through them and have trash and myriad odors about them. There are units not obvious from the street, hidden behind fences and other buildings. It took a while to gain access to these units, even to realize that they were there at all, and then to recognize their mail box situations - sharing with a more major unit."  
(Wingerd 1992: 7).

In all, the census missed 10 occupied housing units accounting for 20 persons over half of whom were Haitians (Wingerd 1992: 9). On the other hand, even though the census missed housing units, this sample area registered a net overcount of 5.1 percent because the census enumerated a number of households and individuals more than once (Wingerd 1992: 11).

In the other Haitian sample area in Miami, FL, Stepick reports that the bulk of persons missed by the census were missed because the census was not able to identify the housing unit. For example, in one census block alone, Stepick reports that forty six persons were missed because their housing unit was missed compared to twenty five persons who were omitted from the census in housing units that were partially censused (Stepick 1992: 13).

There were also a number of erroneous enumerations in the census count in the Miami, FL sample area. It is difficult to identify a single cause for these census errors. Both, behavior of sample area residents and glitches in census procedures account for the erroneous census enumerations. Stepick describes the situation as follows:

"In one case of duplication a census worker visited a household that had already returned a mailed form. In another, the same residence was visited by a census worker in May, again in June and again in July. The residents patiently cooperated with each census worker visit. But, they told us that because they wanted to cooperate and be courteous, they did not insist that they had already participated in the census. In the cases of duplication on the part of the census, addresses of

housing units were clearly marked and correctly reported. The Census Bureau is in a better position than we are to determine the cause of such double work and duplication of data." (Stepick 1992: 13).

There were three predominately Hispanic sample areas where the ethnographers cite missed housing units as one of the key reasons why people were missed by the census. One sample area was located on the east coast and the remaining two on the west coast. These three sample areas had the following characteristics in common. First, all had a shortage of affordable housing and were located in urbanized areas. Second, undocumented immigrants comprised a sizeable portion of the sample areas population. And third, all three sample areas were situated in low income neighborhoods.

In the Long Island, NY sample area the Hispanics were mostly undocumented Salvadoran immigrants. Its scarcity of affordable housing and sizeable low income population created necessary conditions for irregular housing. Of the 118 persons missed by the census in this sample area, 96 or 81 percent were missed because the census could not find their housing unit (Mahler 1993: 6).

In her coverage report Mahler vividly describes the complex features of buildings in her sample area. She describes the situation in one building as follows:

"One specific case of unusual housing which was not detected by the census is that of 4 apartments located above an old factory which now serves as a small clothing store. The entrance to the apartments (one of which is an attic studio), is from the rear of the building and, as such, conceals their existence. The census housing list did not include these apartments which is why they were missed." (Mahler 1993: 9).

Mahler points out that these illegal housing units do not make it to the Census Bureau's address list precisely because they are illegal and hidden from public view, especially from persons outside the community.

The same situation was reported in two other predominately Hispanic sample areas on the opposite side of the country. In the San Diego, CA sample area Alfredo Velasco provides numerous examples of irregular housing and the negative effect that this had on censusing. In one example, Velasco points to a historic mansion built in 1890 that used to be a single family home but is now subdivided into 22 apartments covering four different floors. According to Velasco the layout of this building was very confusing. Moreover, the mail boxes did not have the same numbering system as the housing units. It took Velasco and his research assistants over ten visits to identify all housing units in this building. The census missed four housing units and a total of eight individuals (Velasco 1992: 9-10).

Other examples of irregular housing leading to whole household omissions cited by Velasco include a two story building that was at one time a single family home but now has 10

separate housing units. Velasco (1992: 10) reports that the census list of the housing units and households in this building did not coincide with his Alternative Enumeration. Moreover, the census missed two of the ten households resulting in the exclusion of six persons from the census. In another example Velasco (1992: 10) describes four owner occupied California style bungalows with a building containing eight housing units in the rear. The bungalows look like single family homes but have rental units on the second floor. It took Velasco and his research assistants five visits to obtain an accurate layout of the housing units. The census missed three housing units with a total of thirteen persons.

In Velasco's sample area, irregular housing was responsible not only for the omission of households from the census but it was also a factor that contributed to multiple enumeration of households (and other erroneous enumerations) by the census.<sup>10</sup> In fact, the San Diego, CA sample area had a net overcount of 25 percent. This paradox illustrates that the confusion that irregular housing poses for the census can result in both missed and erroneously enumerated housing units. Additional analyses are needed, using demographic and other data supplied by the ethnographers, to identify the similarities and differences of the conditions that result in net undercount and those that lead to net overcount across all sample areas.

In the San Francisco, CA sample area Hispanics were recent immigrants from El Salvador, Nicaragua, Mexico and Guatemala. Members of these Hispanic national origin groups held low wage service jobs thus the relatively high housing cost in the area was a problem (Romero 1992: 2).

Mary Romero conducted the field work in the San Francisco, CA sample area. In her coverage report she uses examples to describe the complex layout of the housing units in her sample area. One particular example refers to a building that was once a hotel but was later transformed into an apartment building with nineteen separate housing units. Romero states:

"The two story building has nineteen apartments and three different addresses. One apartment on the first floor has its own entrance and address number. Fourteen apartments on the second floor have another entrance and share the same street address. Four apartments....have yet another separate entrance and a separate street address...There are no individual mail boxes." (Romero 1992: 7).

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<sup>10</sup> A number of other sample areas where irregular housing was identified as a contributing factor in census omission in the coverage report also showed a net overcount, although of a lesser magnitude than that registered by the San Diego, CA sample area. The other sample areas and the corresponding net overcount are: San Francisco, CA (+7.5 percent); Long Beach, CA (+5.9 percent); Fort Lauderdale, FL (+5.1 percent); Chicago, IL (+6.9 percent); and Hartford, CT (+19.0 percent). The highest net overcount (+53.0 percent) occurred in the rural Marion County, OR sample area because the census erroneously enumerated a complex housing migrant workers as a migrant worker camp.

Romero adds that she and her research team had been in the field for two weeks before they were able to identify all nineteen housing units in this building.

Terry Straus notes that in the racially mixed Chicago, IL sample area, one of the primary sources of census undercount was missed housing units (Straus 1991: 14). The other source of undercount was inaccurate or incomplete demographic information.<sup>11</sup>

The conditions that give rise to irregular housing in rural areas differ from the conditions that bring about irregular housing in urban areas (see above). In rural areas, unlike in urban areas, unmarked and/or hidden roads and mismatches between the mail delivery address of housing units and the actual physical location of the housing unit are conditions associated with the omission of housing units from the census. These obstacles presented the census with difficulty and in many cases the census was unable to overcome these barriers.

John Moore conducted the field work in the rural Okfuskee County sample area located in east central Oklahoma. The Indians in Moore's sample area were Creek (Muskoke). According to Moore the Census Bureau had difficulty enumerating this sample area mainly because of the intricate nature of the roads and an inadequate knowledge of the community on the part of Census Bureau enumerators.<sup>12</sup> Moore states:

"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." (Moore 1992: 3).

The second sample area with a predominately Indian population<sup>13</sup> was located in rural

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<sup>11</sup> Other sample areas in urbanized settings that, according to the coverage reports, found irregular housing to be a problem include: Long Beach, CA (Bunte 1991), South St. Louis, MO (Rynearson 1992), Miami, FL (Stepick 1992) and Santurce, PR (Duany 1992).

<sup>12</sup> For example, Moore notes that housing units in an Indian church camp were censused as vacant (Moore 1992: 2-3), several households were enumerated twice by the Census Bureau because of a language problem (Moore 1992: 3) and a Census Bureau counted as housing units trailers that were in the area just for the weekend (Moore 1992: 4).

<sup>13</sup> The Indians in this sample area live in the Little Branch area. This population is recognized by the State of North Carolina as the Waccamaw Siouan Indian tribe. However, this population

North Carolina. In her coverage report Patricia Lerch documents that in its prelist procedure the Census Bureau omitted address characteristics that later resulted in census errors, including missed housing units (Lerch 1992: 14 and 17). Lerch contends that, in part, these errors occurred because the census enumerators assigned to do the prelisting to one of the three census blocks that comprised the sample area were not familiar with the community. The census block assigned to the census enumerators had the most errors while the two remaining census blocks assigned to community members had the least number of errors (Lerch 1992: 15). Lerch states:

"The two enumerators assigned Block 18 were outsiders to the community. They asked for and were given the address list used by the WSDA [Waccamaw Siouan Development Association] during their visit to the community in August of 1989. The task of developing an Address Register for Blocks 53 and 54 was assigned to a Census Bureau enumerator who was an Indian member of the community." (Lerch 1992: 14).

Lerch also observed that there was not a one to one correspondence between rural mail box number and housing units. One or two mail boxes served a cluster of housing units. Lerch also reports that the numbering on the rural mail boxes have not been revised in twenty years despite the fact that more housing units have been added to the area (Lerch 1992: 13-14).

Patricia Bell (1991) conducted her field research in a predominately Black area in rural Logan County, OK. Her observations regarding mailing addresses and the physical location of housing units echo the observations made by Lerch in her rural sample area in North Carolina. Bell also provides examples of hidden and unnumbered housing units. For instance she notes that two trailers (with no regular address) were hidden behind an apartment building that had a identifiable address (Bell 1991: 14).

### Residential Mobility

Residential mobility is one of the key features of irregular and complex households. Thus many examples of residential mobility cited in the coverage reports also illustrate how and why persons residing in complex households are omitted from the census. The discussion that follows provides specific examples, cited in the coverage reports, of how residential mobility can result in census omission.

Overall, the coverage reports of sample areas with immigrant populations give residential mobility a prominent role in their explanations of why persons are missed by the census. Although this is generally the case, mobility was also reported in coverage reports from sample areas with a high proportion of Blacks. However, according to these coverage reports residential mobility did not necessarily result in census omissions.

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does not have federal recognition as an Indian tribe (Lerch 1992: 1).

For example, mobility was a chief feature of a predominately Black sample area located near a university in Carbondale, IL. In his coverage report Fred Isberner states:

"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." (Isberner 1992: 3).

Isberner adds that one third of all housing units turned over between Census Day and the completion of the Alternative Enumeration (Isberner 1992: 4).<sup>14</sup> Isberner reports that many persons listed on the census did not match the persons listed in the Alternative Enumeration (Isberner 1992: 6). Nonetheless, Isberner was able to resolve these discrepancies by relying on secondary sources of information such as student registration records, student telephone directories and roster of residents from a local trailer camp. After completing this work Isberner found that despite their mobility the college students in this sample area censused very well. Isberner concludes:

"...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." (Isberner 1992: 10).

The situation in the rural Logan County, OK sample area, an area that is approximately 90 percent Black, was quite different. Patricia Bell divides the population in her sample into three categories: in-migrants employed at the local university, students at the local university and permanent residents (Bell 1991: 3). Of these three groups the students were the most mobile. Bell found lower match rates between the census count and the Alternative Enumeration among the young, particularly young Black males. She argues that the census tended to miss these Black college students because they were more mobile (Bell 1991: 15).

Perhaps the findings from the Carbondale, IL sample area differ from those of the rural Logan County, OK sample area because of differences in the physical layout and in the addresses between the two sample areas. The site in Logan County, OK was rural and, as noted above, had irregular housing units and addresses. In contrast, the Carbondale sample area did not have this problem. Isberner notes that housing in his sample area had clearly marked addresses and mail boxes were also clearly marked and located on a post by the curb. Even the trailer court had a uniform numbering system (Isberner 1992: 2). This suggests that residential mobility interacts with other factors such as the physical layout of the community to produce an inaccurate census

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<sup>14</sup> Census Day was on April 1, 1990. The Alternative Enumeration was conducted from mid June to late August 1990 (Isberner 1992: 4).

count.

Relatively high residential mobility was also detected in the Fort Lauderdale, FL sample area. Judy Wingerd observes that Haitian households are highly mobile. She notes that recent immigrants are on the move until they get a steady job and can afford their own place. Wingerd states that even Haitian households that have been in the U.S. for some time have a nuclear core with a fluid periphery because these households host newcomers from Haiti, both relatives and non-relatives, who come to the U.S. just to visit or to check out the area for potential settlement. Moreover, Wingerd argues that Haitians are perpetually trying to improve their living conditions thus they often move out of crime ridden areas to a better living environment. Additionally, members of Haitian households visit Haiti on a regular basis and can be away for weeks or months at a time (Wingerd 1992: 7). Wingerd concludes that residential mobility was a better predictor of erroneous census enumerations than of census omissions (Wingerd 1992: 11 and 17).

Alex Stepick also found residential mobility in his mostly Haitian Miami, FL sample area. Stepick and his colleagues have been studying the Haitian population in Miami since 1983 and they report the following:

"...we have conducted two large scale longitudinal surveys which included the sample site. In each, over a two year period 40 to 50 percent of our sample had moved at least once with many households moving twice or more." (Stepick 1992: 3).

However, in his coverage report Stepick does not make a direct link between residential mobility with census omission. Similarly, Alfredo Velasco observed residential mobility in his predominately Hispanic sample area in San Diego, CA but did not directly link residential mobility with census omissions or other census errors.

The Houston, TX sample area contained a concentration of undocumented immigrants from Central America and Mexico. In their coverage report Rodriguez and Hagan note that residential mobility in their sample area can be attributed to the following factors: the continual arrival of new immigrants, return migration, settlement patterns associated with immigration, rent increases in the apartment building that constituted the sample area and the economic climate of the Houston metropolitan area (Rodriguez and Hagan 1991: 12). Rodriguez and Hagan report that fully 109 persons on the Alternative Enumeration were not on the census. Of these almost 70 percent were immigrants (Rodriguez and Hagan 1991: 12). The reason for the non matches, according to Rodriguez and Hagan, was residential mobility. That is, many of unmatched individuals had moved into the sample area after Census Day and before the start of the Alternative Enumeration.<sup>15</sup>

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<sup>15</sup> The exact numbers of persons who were enumerated by the Alternative Enumeration but not the census and who were missed by the census because of residential mobility is not provided in the coverage report.

Another sample area with a sizeable immigrant population is located in the north Bronx in New York. This sample area contained immigrants from the Dominican Republic and Mexico. In his coverage report, Dominguez notes that residential mobility made the conduct of the Alternative Enumeration and the follow up field work difficult. In addition to movement from and to the sample area there was also residential mobility within the sample area.<sup>16</sup> Dominguez observed the following:

"Many boarders would move from apartment to apartment on a near-monthly basis. For example, one family which had been evicted from their apartment in another area lived with a sister's family for one month in one of the buildings that comprise the AE site. This family then moved to another apartment and, shortly thereafter, moved out of the building completely. All this occurred during the six weeks of the AE." (Dominguez 1993: 8)

Dominguez adds that this was not typical for families but was typical of boarders and some "other" relatives. Dominguez also states that the apartment of the building's superintendent was used as a "way station" for recent immigrants. Some of whom would only stay for a few weeks until they found permanent housing (Dominguez 1993: 8).

Sarah Mahler has been studying Salvadorans and undocumented immigrants for several years. In her coverage report she states that many of these immigrants move as often as three times per year in search of cheaper housing or jobs or because they are reunited with family members (Mahler 1993: 8). As mentioned earlier, most of the census omissions in this sample area occurred because the housing unit was not found by the census. Thus, although mobility was hypothesized to correlate with census undercount, Mahler was not able to fully test this hypothesis. However, she maintains that Salvadoran immigrants would probably have been missed by the census even if their housing units had been identified by the census. In her words:

"...it is not too difficult to speculate that many would have been missed anyway, even if their units had been identified. They would have been missed precisely because they are so mobile and difficult to find attached to a given housing unit." (Mahler 1993: 8).

### Fear of Government and Outsiders on the Part of Community Residents

Fear and apprehension on the part of sample area residents inevitably led to concealment of information from the Census Bureau and in some instances from the ethnographers. In general, the ethnographers do not cite a single source of fear or apprehension on the part of sample area residents in their coverage reports. Rather, the ethnographers identified several sources which, in

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<sup>16</sup> This was also observed in the following sample areas: rural Okfuskee County, OK; Chicago, IL; South St. Louis, MO; rural North Carolina; and Isleta Pueblo, NM.

many cases, interacted and produced a poor census count. These sources are: drug dealing and drug use, violent crimes including gang wars<sup>17</sup> and distrust in government. The latter, distrust in government, is rooted in the false belief that census data are not confidential. Thus, to a considerable extent, this last source of apprehension can be addressed by the Census Bureau via education and outreach. However, drug dealing and other crimes are societal realities for which the Census Bureau has little control. Nonetheless, some ethnographers have proposed initiatives that, if enacted, can help ensure a complete census count in high crime areas (see below).

Betty Lee Sung states that in the past the sample area of Chinatown, NY was relatively crime free. According to Sung, when the law was broken it was usually a gambling or immigration violation. Today, however, the situation is quite different. Sung states:

"Today, Chinatown is plagued with youth gangs who extort merchants, so that it has become almost an accepted part of doing business to pay them off." (Sung 1991: 5-6).

Sung then observes that teenagers shoot each other as a result of gang wars and people who are passing by often get hit in the crossfire. In the sample area itself however, Sung notes that extortion and gang violence is not a problem because businesses are located elsewhere (Sung 1991: 5-6). Nonetheless, the crime and violence in the surrounding area has placed sample area residents on guard. Consequently, the buildings in the sample area were locked and hard to access (Sung 1991: 10). If it were not for the mailman who helped Sung conduct her fieldwork it is doubtful that she would have been able to successfully conduct the Alternative Enumeration.

Boanerges Dominguez also reported that crime in the Bronx, NY sample area made access to sample area residents difficult. In his coverage report he notes that the biggest obstacle that he encountered in the conduct of his field work was getting sample area residents to open their apartment doors (Dominguez 1993: 4). Dominguez states the following regarding the situation in his sample area:

"The environment nearly made our task impossible and on two instances apartments known to be crack dens were not censused because I was warned to stay away. I obtained a head count of the individuals residing in these two apartments from neighbors. The individuals residing in these two apartments were not enumerated by the census." (Dominguez 1993: 7)

Dominguez also states that drug raids, a murder and several stabbings occurred in his sample area during the conduct of the Alternative Enumeration. In fact, Dominguez reports that he

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<sup>17</sup> It is worth noting that drug dealing and other crimes are not only a source of apprehension for sample area residents but also for census enumerators. For example see Hamid (1992: 15-16) and Dominguez (1993: 7). As noted in the section on irregular housing, this fear affected the ability of census enumerators to identify all housing units.

was approached and threatened by a sample area resident who is known to be a contact killer (Dominguez 1993: 1).

Like Sung did in Chinatown, NY, Dominguez enlisted the help of a trusted community member, in this case the superintendent<sup>18</sup> of the buildings that comprised the sample area. He recruited the superintendent to help him win over the trust of sample area residents. Dominguez did not get the complete trust of everyone, but he was able to get the support he needed to complete his work.

The environment in the Harlem, NY sample area was extremely hostile. Ansley Hamid provides the following account:

"...the shooting by the police of a young crack distributor; a week-long feud between the police and friends of the deceased; several fires; the discovery of a murder victim; the removal by the police of attack dogs; the looting and burning two months after it was opened of an Arab-owned grocery store; and the presence of psychiatrically disturbed or potentially violent homeless persons. These incidents are associated with the one building only, and are but a few of those recorded for the sample area as a whole." (Hamid 1992: 16).

Unlike Sung and Dominguez, Hamid, because of his prior research with crack users in the area, knew the crack dealers and users who conducted business and lived in his sample area. Through these individuals Hamid was able to identify persons that the census was not able to enumerate. In his coverage report, Hamid includes a section on "enumerator fear" and contends that this was one of the key factors that accounted for the census undercount in his sample area.<sup>19</sup>

Alfredo Velasco also reported that drug activity had a negative impact on the census count in his sample area. Velasco noted:

"...great numbers of intravenous drug users frequent this complex of buildings in order to buy their 'stuff.' This criminal activity greatly complicated the process of counting people by the Census Bureau. The principal factor complicating the count here was fear of outsiders (especially government officials) by site residents." (Velasco 1992: 11).

Fortunately a research assistant in Velasco's research team was also an outreach worker

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<sup>18</sup> Both Boanerges Dominguez and the superintendent are from the Dominican Republic. Dominguez maintains that this helped him obtain the cooperation of the superintendent (Dominguez 1993: 4).

<sup>19</sup> The other factors noted by Hamid were housing units missed by the census (Hamid 1992: 4-8) and unusual household arrangements (Hamid 1992: 8-15).

for a project on intravenous drug users. Thus the research assistant knew some of the drug users and drug dealers. According to Velasco this situation allowed him enumerate persons that never made it into the census count (Velasco 1992: 11).

Velasco also reported that prostitution and gang violence were common activities in his sample area. In fact, in his coverage report, Velasco cites figures from the San Diego police department which show that the rates of murder, rape, armed robbery, aggravated assaults and residential and non-residential burglary were higher in his sample area than in the city of San Diego as a whole (Velasco 1992: 5).

Nawal Ammar also reported drug use and drug trafficking in her sample area in Hartford, CT. She also notes the presence of gangs and public alcohol consumption. Ammar maintains that despite the regular presence of police, sample area residents were apprehensive and cautious (Ammar 1992: 3).

According to Joe Darden the Flint, MI sample area had one of the worst reputation in the area because of drug dealing and use and other types of illegal activities such as gang violence (Darden forthcoming). Darden notes that during the Alternative Enumeration his research team was informed that a sample area resident had murdered his brother. Additionally, during the follow up field work the research team discovered that two persons had been murdered in a vacant apartment that had been used as a point of distribution for drugs (Darden forthcoming).

Drug activities was even reported in the rural Okfuskee County, OK sample area. John Moore notes that marijuana related arrests were made in his sample area. This increased the anxiety level of sample area residents. Moore speculates that some housing units may have been missed because of this incident (Moore 1992: 3).

The distribution and use of illegal drugs and other crimes associated with these activities were also reported in the Hispanic and Asian sample area in Long Beach, CA (Bunte 1992), in the predominately Puerto Rican and Dominican sample areas in Santurce, PR (Duany 1992), in the predominately Korean sample area in Koreatown, CA (Kim 1991) and in the largely Haitian sample areas in Miami and Fort Lauderdale, FL. (Stepick 1992 and Wingerd 1992, respectively).

A third and last source of fear and apprehension that interacted with drug dealing, drug use and other illegal activities to produce a poor census count was distrust in government by sample area residents. This distrust was rooted in the false belief that census data are not confidential. Thus, a number of coverage reports document the withholding of information from the Census Bureau by sample area residents who were: receiving public assistance,<sup>20</sup>

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<sup>20</sup> Santurce, PR sample area (Duany 1992), San Francisco, CA sample area (Romero 1992), Bronx, NY sample area (Dominguez 1992), Flint, MI sample area (Darden forthcoming).

undocumented immigrants,<sup>21</sup> exceeding the occupancy limit set by the management of their apartments<sup>22</sup>, participating in the underground economy<sup>23</sup> and owned or managed buildings that housed illegally constructed housing units.<sup>24</sup> The examples below, taken from the coverage reports, illustrate these points.

In the Santurce, PR sample area Jorge Duany found that there were three major reasons why sample area residents concealed information from the Census Bureau: to hide undocumented Dominican immigrants, to protect the receipt of public assistance and to conceal participation in the local underground economy (Duany 1992: 11). Duany maintains that individuals in his sample area successfully avoided the census for these reasons. He provides documentation for these census omissions in his coverage report but gives no exact number of how many persons were missed for these reasons respectively.

Mary Romero estimates that in her sample area in San Francisco, CA only 14 percent of the census omissions occurred because sample area residents were protecting the receipt of public assistance or were concealing household members such as unmarried partners, sons and daughters (Romero 1992: 6). Romero also asserts that undocumented immigrants and others in the sample area avoided the census for fear that the Census Bureau would share information with other government agencies. However, Romero does not specify the proportion of persons that avoided the census for this specific reason (Romero 1992: 9).

Sarah Mahler asserts that the illegal subdivision of buildings into separate housing units was commonplace in her Long Island, NY sample area as well as in the surrounding neighborhoods (Mahler 1993: 9). In her coverage report Mahler documents instances where building owners conceal the fact that they have illegal housing units which they rent mainly to undocumented immigrants. Mahler contends that as a result of this practice some households and its occupants were not listed by the census (Mahler 1993: 11).<sup>25</sup>

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<sup>21</sup> Santurce, PR sample area (Duany 1992), San Diego, CA sample area (Velasco 1992), Bronx, NY sample area (Dominguez and Mahler 1993), Miami, FL sample area (Stepick 1992), Fort Lauderdale, FL sample area (Wingerd 1992), Long Island, NY sample area (Mahler 1993) and San Francisco, CA sample area (Romero 1992).

<sup>22</sup> See Romero (1992: 8), Rodriguez and Hagan (1991: 7-8), Shaw and Guthrie (1992), Stepick (1992: 14).

<sup>23</sup> Santurce PR sample area (Duany 1992) and San Francisco, CA sample area (Romero 1992), Long Beach, CA sample area (Bunte 1992: 13-14).

<sup>24</sup> See Mahler (1993) and Romero (1992).

<sup>25</sup> Romero also observed that landlords and property managers of buildings with illegal housing units concealed this fact from the Census Bureau (Romero 1992: 9).

Alfredo Velasco maintains that undocumented immigrants (among others) in his sample area in San Diego, CA avoided contact with government (Velasco 1992: 8). He argues that this avoidance was one of the important contributing factors to census omission and estimates that over half of the sample area residents were undocumented immigrants (Velasco 1992: 11-12). Similar situations were also reported in the Miami, FL sample area (Stepick 1992:3-4)<sup>26</sup> and in the rural Marion County, OR sample area (Montoya 1992: 5)

A surprising finding was reported by Rodriguez and Hagan in the Houston, TX sample area. The authors report that undocumented immigrants from Central America and Mexico in their sample area were not concerned about the government finding out about their immigration status. Rather they were concerned that the information provided to the census would be shared with the management office of the apartment building that comprised the sample area ( Rodriguez and Hagan 1991: 7-8). Most immigrant households in the apartment complex contained more members than allowed by the building's management. The authors point out that one undocumented immigrant household had eight persons in a one bedroom apartment where according to the rental policy the maximum number of individuals in a two bedroom apartment could not exceed two. Rodriguez and Hagan note that their unexpected finding can be partially explained by the fact that most immigrants in the sample area were working with immigration officials to gain legal status through the Immigration Reform and Control Act of 1986 (Rodriguez and Hagan 1991: 8).

#### Little or no Knowledge of English

According to the coverage reports, the language barrier was overcome in the Haitian sample area in Fort Lauderdale, FL but viewed as problematic in the other Haitian sample area in Miami, FL.

Wingerd reports that the Haitians in the Fort Lauderdale, FL sample area had minimal or no education, were monolingual (or had minimum competency in English), had low level employment skills and some were illiterate (Wingerd 1992: 5). Despite these obstacles the Haitians in Wingerd's sample area censused relatively well and language was not noted in the coverage report as a problem. Wingerd attributes this success to excellent outreach from the Haitian community and a Haitian female enumerator who was culturally sensitive and spoke Haitian Creole (Wingerd 1992: 9).

As noted earlier, Stepick reports that the single most important reason why residents of the Miami, FL sample area were not included in the census was because the Census Bureau

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<sup>26</sup> Although Wingerd notes that the Haitians in her sample area have good reason to be leery of the U.S. government (Wingerd 1992: 6), she reports that the census outreach efforts by the Haitian community was successful in dispelling fear of deportation among the residents of her sample area (Wingerd 1992: 15).

missed housing units. However, other reasons are noted by Stepick in his coverage report including little or no knowledge of English by Haitians in the sample area. Stepick contends that some Haitians were missed by the census because they had difficulty in understanding the census forms (Stepick 1992: 14). The coverage report does not provide a specific number of persons that did not respond to the census for this reason. Like Wingerd, Stepick points out that census awareness efforts by the Haitian community was very good, but unlike Wingerd, Stepick implies that census enumerators were inadequate thereby recommending that the Census Bureau use native speakers of Haitian Creole (Stepick 1992: 16).

Among the predominately Asian sample areas Eun-Young Kim reports that in the Koreatown, CA sample area census awareness and outreach to the Korean community was excellent (Kim 1991). Most of the Koreans in this sample area had resided in the U.S. for at least five years. Kim reports that the average length of residence in the U.S. was 10.7 years. Moreover, almost 60 percent of Korean sample area residents were 60 years or older (Kim 1991: 12). Although many did not speak English well, census enumeration was not a problem because of the Korean Community's outreach efforts. In fact, Kim states that only one Korean household did not respond to the census because little or no knowledge of English was a problem (Kim 1991: 22).

In the Chinatown, NY sample area Sung reports that most sample area residents spoke little or no English. Sung also observed that many census forms were trashed during Census week (Sung 1991: 16). Among the Asian sample areas, the highest net undercount of Asians occurred in the Chinatown, NY sample area. Most of those missed in this sample area spoke little or no English. Sung recommends that the Census Bureau use enumerators that speak the language of the target population.

In the largely Hispanic and Asian Long Beach, CA sample area Bunte observed that Khmer or Lao and Spanish were the dominant languages in the Asian and Hispanic households, respectively (Bunte 1992: 6). Bunte attributes errors in both the mail returned and enumerator returned forms from Cambodian sample area residents to the fact that Cambodians had no or very little knowledge of English (Bunte 1992: 10). With respect to Hispanics, Bunte acknowledges that language was a problem among this population. She observed that nearly all mail returned forms were from well established intergenerational Hispanics households with U.S. born children of school age (Bunte 1992: 15 and 18).

Kang found in his predominately Asian Queens, NY sample area that proficiency in English was positively related to cooperation with the Alternative Enumeration. He adds that those who did not know English were less cooperative (Kang 1992: 15). He also notes stances where individuals could have been left off the census because of their lack of English speaking ability (Kang 1992: 22). However, Kang does not provide the exact number of persons that were missed because they were non-English speakers.

Rynearson reports that in the South St. Louis, MO sample area, more Laotians were

missed by the census in 1990 than during the 1988 test census.<sup>27</sup> She attributes this finding partly to the decline in support to the Laotians from local community groups including a local church who helped the Laotians respond to the census in 1988 (Rynearson 1992: 6).

Virtually all coverage reports from Hispanic sample areas cited little or no knowledge of English on the part of sample area residents as a contributing factor to census omission. In some cases, illiteracy in the native language was also a problem. Moreover, problems in obtaining Spanish language census forms were widespread. The following are examples that illustrate these points.

Rodriguez and Hagan report that in their Houston, TX sample area Hispanic residents who did not return their census forms did not do so because they only open mail that is addressed to them personally or not in Spanish. It was also reported that a number of Hispanic households tried to obtain Spanish language census forms but were discouraged after several unsuccessful attempts (Rodriguez and Hagan 1991: 8). Additionally, the authors report that apartment maintenance crews found unopened census mail in the trash cans during the month of April 1990 (Rodriguez and Hagan 1991: 8). Illiteracy in any language was also cited as a problem and was associated with census non response.

Like Rodriguez and Hagan, Mahler also reported that Salvadorans in the Long Island, NY sample area do not respond to mail that is not addressed to them personally or addressed in Spanish. Mahler also notes that those who tried to obtain Spanish language census forms were unsuccessful. Similarly, in the other New York sample area in the South Bronx, Dominguez notes that some residents reported not filling out the census form because it was too difficult to fill out. Dominguez adds that the census forms that were filled by the least literate Mexican immigrants had the poorest data quality.

Victor Garcia reports that in the predominately Mexican sample area in rural Santa Barbara County, CA, no or little knowledge of English did not explain any cases of census omission.<sup>28</sup> Similarly, on the opposite side of the country, in the New Orleans, LA sample area, Bracken states that the barrier of language was overcome largely because of the census outreach efforts to the Hispanic community in that area.

## RECOMMENDATIONS TO THE CENSUS BUREAU NOTED IN THE COVERAGE REPORTS

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<sup>27</sup> Ann Rynearson and her colleague conducted an Alternative Enumeration in the same sample area in 1988 in conjunction with the 1988 Dress Rehearsal Census. See Rynearson and Gosebrink (1989) for the results of the 1988 enumeration.

<sup>28</sup> However, Garcia does note that little or no knowledge of English did have a negative effect on the quality of the data reported to the census.

The following is a summary of the recommendations that appeared in the coverage reports. These recommendations are based on ethnographers' experience during the conduct of the Alternative Enumeration and follow up field work. Recommendations are also based on the successful procedures or approaches that the Census Bureau used in some sample areas. And finally, recommendations also have a basis on the individual ethnographer's expertise as a social scientist and past research experience with ethnic and racial populations.

The recommendations noted in the coverage reports can be classified into three major categories. In the first category the ethnographers specify steps that the Census Bureau should take at the local community level in order to achieve a more accurate count in future censuses. The Census Bureau followed a number of these steps in the preparation and conduct of the 1990 census but the ethnographers feel that more can be done in these areas.

In the second recommendation category the ethnographers offer suggestions to the Census Bureau regarding enumerator training and revision of census procedures. In the last and third set of recommendations the ethnographers point to areas where basic research is needed before designing plans for implementation.

#### Steps that the Census Bureau Should Take at the Local Level

The call for more involvement of community based organizations (CBOs) in the planning and conduct of the next census came through loud and clear in virtually all coverage reports. The type of the involvement recommended can be characterized as a partnership between the Census Bureau and key grass roots organizations and institutions that are an integral part of the community. There is a significant body of evidence in the coverage reports that show that a good census is a census that enlists the cooperation of the local organizations and the people that they serve. This holds true across sample areas and across racial and ethnic lines.

The rural Santa Barbara, CA sample area illustrates this relationship. In his coverage report Victor Garcia attributes much of the success of the census in his sample area to outreach conducted by the local community.<sup>29</sup> Garcia states:

"The analysis of this report reveals that the Census Bureau was successful in enumerating the majority of the residents eligible for enumeration in the ethnographic site...The success can be attributed to the efforts of various community based, non-profit organizations...These organizations began their

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<sup>29</sup> It is worth noting that this sample area censused relatively well despite the fact that census enumerators did not speak Spanish. Garcia states that census enumerators had difficulty communicating with sample area residents (Garcia 1992: 10). Apparently good outreach by the local community and uniform layout of the housing units were able to overcome the language difficulties in this sample area.

awareness campaign a couple of months before Census Day 1990. Local residents were informed on the pending enumeration at community meetings and local events. In addition, the organizations placed Census posters in key areas of the community...Whenever people congregated, English and Spanish language posters conveying the importance of 'Being Counted' could be found. A few weeks before and after Census Day, an array of public announcements on Census participation were aired in Spanish language radio and television. Local leaders from the surrounding area, people known and trusted in the community, would convey this message in the public announcement." (Garcia 1992: 18-19).

Similar accounts were provided by ethnographers in the following sample areas: Queens, NY (Kang 1992), New Orleans, LA (Bracken 1992), Isleta Pueblo, NM (Jojola 1992), Fort Lauderdale, FL (Wingerd 1992) and Koreatown, CA (Kim 1991). It is telling that these sample areas censused relatively well.

At least five ethnographers called for a greater involvement of the local media, that is, local newspapers, radio and television stations.<sup>30</sup> In ethnic communities these information sources are in the language of the target population and therefore accessible to large numbers. Kim notes that the census outreach by the Korean media in Koreatown, CA was excellent (Kim 1991: 22). Similarly, Bracken indicates that the local Hispanic media in the New Orleans, LA metropolitan area did a very good job in census outreach. The net undercount in these sample areas was less than 1.0 percent.<sup>31</sup>

Three coverage reports stated that the Census Bureau should use local community leaders who are widely known and respected in the local community to promote the census.<sup>32</sup> For example, this strategy was a very successful in the Haitian sample areas. Wingerd notes the success of a well known Haitian singer, community worker and TV anchor in promoting the 1990 census to the Haitian community (Wingerd 1992: 15). Stepick also acknowledges that the local Haitian media was key in making Haitians aware of the census (Stepick 1992).

At least five ethnographers explicitly recommended that census enumerators reflect the racial, ethnic and cultural composition of the target population and should preferably be residents

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<sup>30</sup> See Kim (1991: 22), Kang (1992: 25), Bracken (1992: 10), Duany (1992: 12-13) and Romero (1992: 11).

<sup>31</sup> Since both sample areas are subsamples of buildings with well defined housing units, it is difficult to separate out the influence of good outreach from the influence of well defined housing unit configuration. This situation illustrates the confounding influences that are at work in many of the sample areas.

<sup>32</sup> Sung (1991: 22-23), Wingerd (1992: 15 and 17) and Darden (forthcoming).

of the community that they census.<sup>33</sup> The basis for this recommendation lies in the experiences that the ethnographers had in the conduct of the Alternative Enumeration as well as on observations of census activity that proved effective. For example, in explaining why the census did well in his sample area, Jojola states the following which encapsulates a number of key recommendations that relate to local level involvement:

"The hiring of Indian enumerators who are from the reservation is probably the most important [factor]. Their knowledge of the area compensated for a problem which may have otherwise arisen because of unnamed streets and lack of visible house address. Similarly, their familiarity with individuals families appears to served [sic] as a cross-check for the enumeration of residents in certain housing units. Lastly, their facility with the native language was of enormous assistance in clarifying questions among elderly respondents." (Jojola 1992: 25).

#### Strategies that the Census Bureau Should Consider in Training Enumerators and Developing Procedures for the Conduct of the Year 2000 Census

A major reason why persons were omitted from the census count was missed housing units. The census did a relatively poor job in identifying housing units in some sample areas. At least eight ethnographers recommend that the Census Bureau train census enumerators to seek out hidden housing units.<sup>34</sup> A corollary recommendation was that the Census Bureau produce a more accurate address list. This latter recommendation was popular among ethnographers who conducted their field work in rural areas.<sup>35</sup>

Regarding enumerator training Terry Straus states:

"They [enumerators] need to be aware of the incongruity between housing units and mailboxes; they need to learn to expect the unexpected in terms of building plan; they need to be aware of the potential for unusual residences such as cars and the likelihood of squatters in apparently abandoned buildings." (Straus 1991: 14).

With respect to the Census Bureau's address list the ethnographers recommended that the Census Bureau use local residents to assist in the development and/or verification of address

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<sup>33</sup> See Straus (1991: 16), Stepick (1992: 16), Bunte (1992: 17), Ammar (1992: 11) and Darden (forthcoming).

<sup>34</sup> Bell (1991), Sung (1991), Duany (1992), Lerch (1992), Ammar (1992), Moore (1992), Straus (1991) and Hamid (1992).

<sup>35</sup> Lerch (1992), Moore (1992) and Bell (1991).

lists.<sup>36</sup> Others suggested that the Census Bureau enlist the help of local mail carriers.<sup>37</sup> Several cautioned against using information from rental offices and landlords. Ethnographers who used this information found that it was almost always inaccurate.<sup>38</sup>

The importance of having culturally sensitive enumerators was specifically noted by at least seven ethnographers.<sup>39</sup> In the words of Alex Stepick:

"We believe census coverage could be easily and significantly improved by better training and supervision of census field enumerators....enumerators, if they are to be successful, must be of Haitian decent, native speakers of Haitian Creole, and they must be dedicated, persistent, and specially trained. The results of the enumeration indicate that these conditions were not fulfilled." (Stepick 1992: 16).

Similar recommendations were made by ethnographers from the other predominantly immigrant populated sample areas.<sup>40</sup> And the evidence show that the potential pay off of having culturally sensitive, and if needed, bilingual census enumerators can be impressive. The evidence shows that, in general, the census did well in sample areas where census enumerators shared the cultural background and language of the target population.<sup>41</sup> The potential for success may be even better if in addition to these qualities census enumerators were also local area residents.

For example, Wingerd noted that the Haitians in her sample area were "ecstatic" when a bilingual Haitian female enumerator showed up in the sample area during follow up enumeration (Wingerd 1992: 9).

The importance of speaking the language of the target population was stressed by five

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<sup>36</sup> See Bell (1991: 16) and Lerch (1992: 22).

<sup>37</sup> See Sung (1991) and Mahler (1993).

<sup>38</sup> See Straus (1991: 15), Rodriguez and Hagan (1991: 15), Romero (1992: 12) and Dominguez (1993: 11).

<sup>39</sup> Rodriguez and Hagan (1992), Sung (1991), Wingerd (1992), Stepick (1992), Bunte (1992), Garcia (1992) and Bracken (1992).

<sup>40</sup> See Rodriguez and Hagan (1992: 14), Sung (1991: 23), Wingerd (1992), Bunte (1992: 17), Garcia (1992: 17) and Bracken (1992: 8-9).

<sup>41</sup> Lerch (1992), Wingerd (1992) and Jojola (1992).

ethnographers<sup>42</sup> and two called for bilingual census forms.<sup>43</sup> For example, Bunte points out the following:

"In the opinion of Hispanic residents, census forms printed in Spanish as well as English would increase the recipients' comprehension, thereby improving the likelihood that the forms will be returned by mail. We found that mailed reports omitted fewer household members than did enumerator interviews. At the same time, all of the mailed forms came from established intergenerational households in which most adult members are bilingual and have participated in the census at least once before." (Bunte 1992: 18).

Several ethnographers called for greater accessibility to Spanish language census forms. At least four ethnographers reported that Spanish speaking sample area residents were frustrated because they either, could not get through the toll free number to request a Spanish language form, or if they were lucky and got through, the Spanish language form never arrived.<sup>44</sup>

Based on their experience in the conduct of the Alternative Enumeration, a number of ethnographers recommended that the Census Bureau use racially, ethnically and gender mixed enumeration teams. For example, Bunte reported that she found it effective to deploy one Cambodian and one non-Cambodian researcher to interview Cambodian households (Bunte 1992: 17). In the Bronx, NY sample area Dominguez suggested that census enumerators work in teams of two, one male and one female of the same race and ethnic background of the target population (Dominguez 1993: 11). Indeed this was the mix who conducted the Alternative Enumeration in this sample area.

Another recommendation related to census procedures, concerns stationing census enumerators in public places such as shopping malls to distribute census forms and provide assistance.<sup>45</sup> A related recommendation calls for census enumerators to conduct visits not in the middle of the day when most people are at work, but rather on evenings and weekends where the likelihood of contact is enhanced.<sup>46</sup> Two ethnographers called for a change in Census Day.<sup>47</sup> They

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<sup>42</sup> Sung (1991: 22), Rodriguez and Hagan (1992: 14), Wingerd (1992: 17), Bunte (1992: 17) and Romero (1992: 12).

<sup>43</sup> Sung (1991: 22) and Bunte (1992: 18).

<sup>44</sup> Bracken (1992: 8), Romero (1992: 12, 10 & 9), Rodriguez and Hagan (1992: 8) and Mahler (1993: 12).

<sup>45</sup> Sung (1991: 22-23).

<sup>46</sup> Rodriguez and Hagan (1992), Montoya (1992) and Stepick (1992).

<sup>47</sup> Montoya (1992: 10) and Mahler (1993: 13).

argued that the likelihood of residential mobility is higher at the beginning and end of the month.

### Recommendations that Require Research Before the Year 2000 Census

Some recommendations stated thus far may require testing or research in order to determine the best implementation strategy, or indeed, determine if implementation is feasible. For example, testing would help determine the best "enumerator mix" for a given area. Modification in the Census Bureau's address listing procedures would require testing before full implementation. Unlike in the previous sections, in this last section I report recommendations that require basic research by the Census Bureau.

At least four ethnographers called for change in the Census Bureau's definition of household or modification of the current census form item which lists household members.<sup>48</sup> Based on ethnographic data, at least three major factors which influence household complexity can be identified. These are: culturally based definition of "household" and "family", economic need and conditions encountered by immigrants of any national origin.<sup>49</sup> It is possible to conceptually separate these influences, but empirically, these forces interact to produce households that contain members who are (a) unrelated to other household members, (b) mobile and with ambiguous status within the household or (c) related to a single family unit in households that contain two or more family units.

The following statement by Mary Romero exemplifies the difficulties encountered by sample area residents with the Census Bureau's definition of household:

"...the major problems were understanding the census definitions and intent. Many of the households we interviewed treated friends and family members that were recently arrived immigrants as 'visitors' rather than permanent members of the household. However, these visitors had no plans for returning to their homeland and would be living in the household for six to twelve months. Visitors only moved out after they found employment, saved some money and located a less crowded living arrangement, a plan that usually took at least six months to execute."  
(Romero 1992: 10).

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<sup>48</sup> Aschenbrenner 1991: 13), Straus (1991: 15), Bell (1991: 16) and Bunte (1992: 17).

<sup>49</sup> For example, Aschenbrenner (1991) among Blacks, Lerch (1992) among American Indians and Straus (1991) among American Indians and Cambodians reported cultural factors that help explain why complex households are formed. The formation of Ad Hoc Households described by Montoya (1992) is based largely on economic need. Lastly, complex households described by Rodriguez and Hagan (1992), Romero (1992) and Dominguez (1993) among others, show how complex households serve as a link in the immigration network.

Difficulties with the Census Bureau's concept of household were not limited to Hispanic immigrants. For example, Aschenbrenner points out that, in her racially mixed sample area, relatively more within household misses occurred among Black households than among White households. She attributes this to a different concept of "household" and "family" held by Blacks and Whites (Aschenbrenner 1991: 13).

Research is needed to determine if, and, what type of changes in the Census Bureau's rules of residence will capture the complexity of households. This line of inquiry should entail in-depth interviews, focus groups and other qualitative modes of data collection and analysis in order to determine why complex households are formed and how they function. This information should then be used to test alternative questions intended to enumerate all persons in a given household.

Another recommendation that would require basic research before it can be fully addressed, concerns the race and Hispanic origin questions. Several ethnographers with a sizeable Hispanic population in their sample areas noted that Hispanics, regardless of national origin, had difficulty with the race and Hispanic origin questions.<sup>50</sup> Generally speaking, Hispanics, especially recent immigrants, do not view race as a dichotomous variable. Rather, race is a continuum which reflects the racial mixing that exists in Central and South American countries. The following statement by Karen Bracken reflects this point of view:

"There should be a refinement of the question for self reporting of race. Many of the Hispanics in our sample felt confused by the limited number of options for they recognize themselves as the products of racial mixing. If everyone of mixed racial background feels forced to choose a single category or refer to themselves as "other", our data will not capture the rich panorama which actually and increasingly exists in the population." (Bracken 1992: 8-9).

Difficulties with the race question were not unique to Hispanics. Terry Straus, in the racially mixed sample area in Chicago, IL, found that out of 20 American Indian residents only 13 were classified as such and the remaining seven were not (Straus 1991: 10). Judy Wingerd pointed out that Haitians in the Fort Lauderdale, FL sample area did not identify with the American Black population. She reports that Haitians tended to check "other" race or leave the race item blank (Wingerd 1992: 17).<sup>51</sup> Wingerd recommends that an ethnicity or ancestry question be included on all census forms, not just the long forms. In the racially mixed Long Beach, CA sample area, Pamela Bunte pointed out that Cambodians had problems with the race question

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<sup>50</sup> For example, Romero (1992), Rodriguez and Hagan (1992) and Bracken (1992).

<sup>51</sup> Wingerd notes that it is ironic that Haitians, who wanted to be counted by the census (primarily because of the excellent census outreach efforts of the local Haitian community), were not enumerated as Haitians but rather as Blacks or "other" race (Wingerd 1992: 17).

because they were not explicitly listed in the Asian and Pacific Islander list (Bunte 1992:10-11).<sup>52</sup>

The way people view their own ethnic or racial identity and the way they perceive the identity of others is a complex psychological and sociological phenomenon that needs to be better understood before modifications are made to the race, Hispanic origin and ancestry questions on the census form. The need for research in these areas is obvious and the Census Bureau is well advised to proceed in this direction.

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<sup>52</sup> Errors in racial classification such as those reported by Straus, Wingerd and Bunte can result in what we call "undercount within category." This occurs when individuals make it to the census count but are not able to fully express their racial or ethnic identity either because the census categories are limited or because they misunderstand the census race item.

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