

PEOPLE WITH DISABILITIES AND LIMITATIONS

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Introduction

Governments are being pressured to meet the needs of persons with disabilities. It is a growing human rights issue around the world and in the Pacific (Fitzgerald and Armstrong, 1992). The issue on Guam, as elsewhere, is the equalization of opportunity and its demand for improved accessibility. It is the call for social responsibility to assist individuals with limitations so they can function and contribute in society, and have satisfying life experiences (Gartner and Joe, 1987).

Guam has a wide array of programs to assist persons with disabilities, including both private and public organizations. The Governor's Commission of Disabilities, and the Developmental Disabilities Council act as umbrella networks linking these groups and agencies together. Even so, public awareness of people with disabilities on Guam is minimal. Their needs are overshadowed by other headline topics. People do take notice when persons with disabilities are made the focus of a "human interest" media story, but for many people that is their only contact. People with disabilities must attend to their own needs, a concern shared with their families and service programs.

A criticism for this limited awareness is the lack of research data and insufficient agency record counts. The 1990 Census will help correct this situation. For the first time the U.S. Census included questions identifying persons with disabling conditions. Articles using 1990 census data, like this one, can stimulate public awareness, and encourage improved social responsibility.

Our awareness and understanding is very dependent on our definitions of "who are individuals with limitations." The census definitions were designed to be broad and inclusive for public policy decisions. Thus they are more general than specific ideas held by many people. Yoichi Rengiil and Jane Jarrow from Guam explain differences in cultural definitions of disability in their paper "Culture and Disability in Palau" (Fitzgerald and Armstrong, 1992). These different meanings, they argue, must be addressed in presentations and reports. Not just for interpretation of findings, but for clarity when explaining such findings. How Pacific Island readers understand and re-state these data in public discourse will be critical in furthering the acceptance and integration of persons with disabilities in this region. Following their discussion, the definitions by the World Health Organization (WHO) will be the meanings implied by terms used in this chapter:

"Impairment: Any loss or abnormality of psychological, physiological, or anatomical structure or function.

"Disability: Any restriction or lack (resulting from an impairment) of an ability to perform an activity in the manner or within the range considered normal for a human being.

"Handicap: A disadvantage for a given individual, resulting from an impairment or disability, that limits or prevents the fulfillment of a role that is normal (depending on age, sex, and social and cultural factors for that individual).

"Equalization of opportunities: The process through which the general system of society, such as the physical and cultural environment, housing and transportation, social and health services, educational and work opportunities, cultural and social life, including sports and recreational facilities, are made accessible to all."
(WHO, 1980)

This chapter focused on three items in the 1990 Census. These asked if a person had a health condition that had lasted 6 or more months and which made it difficult to perform one of several activities. The term "health condition" referred to both physical and mental conditions. A temporary health problem, such as a broken bone that was expected to heal normally, was not considered an impairment restricting the normal range of human activity; therefore, it would not have been recorded.

It is meaningful to note the conceptual perception being defined. Public ideas of "handicapped" and "the disabled" often include judgements of stigma, or contrasts of abnormal from normal people. The census definition focused perceptions on people with a self-recognized condition which had resulted in a specified consequence, restriction, or difficulty. This chapter, therefore, will refer to "people with a limitation" or "people reporting an impairment" to emphasize a status category in the general population - that is, persons effected by a disabling condition.

Mobility Limitation status was defined by item 19a which asked if persons had a health condition that had lasted 6 or more months and which made it difficult to go outside the home alone. Examples of outside activities on the questionnaire included shopping and visiting a doctor's office. *Self-care Limitation* status derived from item 19b which asked if persons had a health condition that had lasted 6 or more months and which made it difficult to take care of their own personal needs, such as dressing, bathing, or getting around inside the home. Data on *Work Disability* status were obtained from item 18 which asked persons if they had a health condition lasting 6 or more months and which limited the kind or amount of work they could do at a job or business. This included persons with a health condition that restricted their choice of jobs, or limited the amount of work if he or she was not able to work full-time. Persons reporting a work disability were further divided into those "Prevented from working," or if not prevented from working, then as either "In The Labor Force" or "Not Working".

These three items were asked to all persons 15 years of age and older. Reported tabulations restricted to those aged 16 years and over. Unfortunately, this leaves policy questions about children with disabilities unanswered. It also meant that this chapter needed to pay special attention to differences between young and elderly adults. Aging increases the health susceptibility of even the most athletic persons. Our analyses separated elderly (*manamko*)

adults aged 65 years or older from those younger (*manhoben*) age 16 to 64 years.

This study began its investigation examining age differentials which can influence observed differences in other social traits. For example, certain ethnic communities may have higher percentages due to greater concentrations of older persons. Because concerns with mobility and self-care limitations transcend all ages, this study examined differences by age, ethnicity and education first, and then addressed the more age-specific concern with work related disabilities.

Adults With Mobility and Self-Care Limitations

Persons with disabilities constitute a true minority in Guam's society. Only about 5 percent of adults, 3,727 persons, reported health conditions making it difficult to either "go outside the home" (i.e., mobility limitation) or to "care for personal needs" (i.e., self-care limitation). Table 11.1 displays percentage calculations for comparison across age and gender groupings, while Table 11.2 presents the actual numerical counts.

Examining across the upper panel of Table 11.1, the incidence of either a mobility or self-care limitation increased with age. Just 3.2 percent of young adults age 16 to 34 years reported a limitation. In contrast about one of every seven elderly over the age of 64 years, or 15 percent reported such limitations. Some human impairments are minor inconveniences for younger persons but more debilitating for older persons, and some impairments result from the aging process, affecting people as they get older. The incidence of disability limitations among Guam's *manamko*, elderly age 65 or more years (14.9%), is over twice that found in the next younger age group, those age 50 to 64 years (6.4%), and triple that of persons age 35 to 49 years (4.1%).

No difference appeared between males and females who had near equal levels of incidence. Among the younger and middle age adults males reported rates slightly higher than females. The fact that women live longer than men, however, may account for the shift among the elderly where women reported rates notably higher than men (17.3 versus 12.4 percent respectively).

Place Tables 1 and 2 about here

Although the elderly had higher rates of incidence, the largest numbers of persons with limitations were among persons under age 50 (see Table 11.2). Over half (57% or 2,154) of people reporting a limitation were age 16 to 49 years, and in fact one-third (1,254) were in the youngest group age 16 to 34 years. The numbers reveal, however, that the types of limitation differ between the younger and older age cohorts. The ratio of "self-care" cases per 100 "mobility" cases illustrates this point. Among those aged 16 to 34 years, this ratio is 474.0 cases of self-care limitation per 100 mobility cases (i.e., 1,166 to 246). This ratio steadily declined to only 93.3 cases of self-care limitation per 100 mobility cases among *manamko* age

65 years or older.

In other words, among younger adults, impairments causing self-care disability were found to be four times as prevalent as impairments causing mobility limitations. The types of impairments and resulting nature of disabilities change in successively older age cohorts. This is evidenced by the steady shift across age cohorts to the point where impairments causing self-care and mobility limitations have nearly equal, one to one prevalence among the *manamko* over age 65. Moreover, serious conditions resulting in both self-care and mobility limitations increase in number across the age cohorts. Only 13 percent of young adults with disability (158 of 1,254) have impairments causing both mobility and self care disability. Among the elderly almost half of those with disabilities (45 percent; 350 of 781) were affected with such impairments.

These data mark out general parameters of how health conditions, problems, and needs differ between younger and elderly adults with disabilities on Guam. These patterns are not unusual, and the data provide insight to the magnitude or number of adults in need of program services. Yet a question arises as to how Guam's situation compares to other places. Even if bodily impairments are human constants, "perception of disability and handicap are not (Rengiil and Jarrow, 1992:12)."

Turning to Table 11.3, we assessed Guam's situation by comparison to other selected U.S. Census areas in the Pacific Basin region. It is obvious that these locations had varying levels of reported disabilities, but in general the percentages fall in reasonable ranges. This gives confidence that Guam's data are trustworthy and as reliable as measures obtained elsewhere.

Place Table 3 about here

Among those age 16 to 64 years (Table 11.3; top panel) Guam's measures of incidence were similar to those found in Hawaii. This placed Guam's levels slightly above those for Belau, the Northern Marianas and Alaska. California displays relatively higher levels of reported disability than the other areas for each of these measures. In contrast, Guam's elderly (see center panel) reported less incidence of mobility handicaps (11.2 percent) than other areas. Belau and the Northern Marianas stand out as Pacific areas with relatively high incidence of impairments among their elderly simultaneously causing both mobility and self-care disability (9.1 and 9.8 percent).

Guam's need for services to persons with mobility limitations matches that found in other areas of Micronesia. But its need to address handicaps resulting from self care disabilities is greater. Examining the bottom panel for the total adult population, Guam's measure of self-care disability in the adult population (4.0 percent) is about double the comparable measures for Belau (1.9 percent), Northern Marianas (2.1 percent), and Alaska (2.2 percent). Thus Guam is more comparable to Hawaii (4.4 percent) and California (4.9 percent). Guam's incidence of mobility

limitations (1.9 percent), however, is similar to levels found in Alaska (2.0 percent) and Belau (2.2 percent), and slightly lower than percentages in Hawaii (3.3) and California (3.8).

Profiles of Adults With Disabilities

This initial exploration of Guam's 1990 Census data looked to see if differences exist in the rates of disabling impairments across Guam's ethnic communities. Attention was then given to see the extent to which adults with disabilities are concentrated within lower educational levels, a trait which may be associated with greater dependency. Percentage rates and numerical counts of disability measures for each of Guam's major ethnic groups are presented separately for Guam's *manhoben* (adults age 16 to 64 years) and its *manamko* (adults age 65 years or older).

Tables 11.4 and 11.5 present data for Guam's major ethnic groupings among its young and middle aged adults -- the *manhoben*. Examining Table 11.4, we found the Filipino community reported notably higher incidence of impairments causing self care limitations (top panel, 5.1 percent). Rates tended to be higher also for the Micronesian (3.8 percent) and Asian communities (4.3 percent). Male Filipinos, with 6.0 percent reporting such impairments, constitute the majority of these. Even so, the percentage among Filipinas (4.3 percent) was also among the highest along with Micronesian (4.2 percent) and Asian women (4.2 percent).

Place Table 4 about here

The indigenous Chamorro population reported impairments causing mobility disability twice as frequently as any of the other ethnic communities (1.9 percent compared to 0.9 percent or less). They were also twice as likely to have reported impairments causing the more serious condition of having both mobility and self care limitations (1.1 percent compared to 0.6 percent or less).

Differences between males and females varied across the ethnic communities, and these findings mark out a subject needing further research on the nature of disabilities and handicaps on Guam. The implication is that there may be cultural factors effecting the perception and reporting of disabling limitations. No differences appear in levels for men and women, within those ethnic categories having lower incidence rates (e.g., Statesider and Chamorro). The Asian community also displayed no difference between males and females. Within the Filipino community, however, the incidence of self-care limitations among males (6.0 percent) was higher than among females (4.3 percent). In contrast, within the Micronesian community, the incidence of self-care limitations among women (4.2 percent) was higher than among males (3.5 percent).

Turning to the numerical counts in Table 11.5, it is important to note that the greatest numbers of persons with limitations and in need of services are within the Filipino and Chamorro communities. The Asian community has a relatively high incidence, and thus their number (379 persons) is about three-times greater than numbers for the remaining ethnic groups.

Place Table 5 about here

The data strongly suggest these ethnic communities differ in the nature of impairments and types of disability that were reported. Consequently, although Filipinos constitute just over one-fourth of the population, they compose 38.5 percent of persons reporting self-care limitations, and Filipino men make-up 42.1 percent of males with this condition. Chamorros, on the other hand, constitute about 40 percent of the population, but compose 61.5 percent or nearly two-thirds of persons with a mobility limitation. The future development of service programs and how they are delivered will need to take these ethnic profiles into consideration.

Tables 11.6 and 11.7 display the same measures for the *manamko* or elders over age 65 years in Guam's ethnic communities. Even so, the data reveal patterns very different from those found among the younger and middle-aged adults. This is further evidence that the nature of impairments and types of disabling conditions greatly differ by age.

Within this segment of the population, Chamorros more frequently reported disabling conditions than other ethnic communities. The exception was for the ethnic category labeled as "multiple", or mixed ethnicity, who reported equally high incidence levels. The authors feel that nothing is gained by speculating any distinction between the Chamorro and Mixed (i.e., largely Chamorro) ethnic groupings. This category was composed of persons listing two or more ethnic heritages. In the census tabulations where counts for "Chamorro and other" were given, they comprise about 60 percent or 3 out of every 5 persons in the mixed ethnic category (see Bureau of the Census, 1992: page B-6 and Table 11).

Place Table 6 about here

Percentages of disabling impairments were found to be moderate to low among the Filipino elderly. In contrast to their younger and middle-age counterparts, Filipinos and Asians over age 64 years had the lowest percentages of reported impairments causing both mobility limitations (7 percent or less), and the more severe case of combined mobility and self-care disability (3 percent or less).

Consequently, the weight of service need among elderly persons is disproportionately composed of Chamorros. Turning to Table 11.7 it can be seen that the numbers of Chamorros and Filipino/Asians make-up near equal proportions of Guam's elderly population. Yet, whereas Filipinos (228) comprise less than one-third of persons with mobility or self-care disabilities (i.e., 29.2 percent), Chamorros (299) represent over half of these persons (i.e., 55.8 percent). This pattern is even greater for the more serious condition of impairments resulting in both mobility and self-care disabilities. Here, Filipinos comprise less than one-in-five persons so affected (19 percent or 65 of 350). Chamorros (238 of 350) represent two-thirds (68 percent)

of persons potentially in need of services.

Place Table 7 about here

We do not want to obviate the facts of migration or related opportunities for social services and resources as determining factors affecting the composition of Guam's populations with disabilities. These forces may be key factors to understanding the patterns found among Guam's elderly. They may also play a role in the patterns found among younger and middle-aged adults as well as difference between U.S. locations in the Pacific Basin.

Having or not having education is a social resource effecting a person's capacity to hold certain types of jobs where physical impairments are not handicapping. For example, being wheelchair bound causes no performance restriction for a computer programmer or business accountant. Education can also provide a person with an edge in understanding and obtaining alternative services in a manner that more successfully solves problems which would otherwise handicap their pursuit of well-being. For these reasons this chapter examined the distribution of adults with defined disabilities across various levels of education attainment.

Educational attainment was categorized as (a) Elementary Schooling: 1-8 years, (b) Some High School: 9-11 years, and (c) High School Diploma: 12 or more years of schooling. Not all adults on Guam have had the opportunity to even attend high school let alone complete more than eight years of schooling. This is the case for Guam's elderly, and many Filipino, Asian, or Micronesian immigrants. Even so, for most persons born after 1950 in Micronesia and Asia (e.g., age 40 years or younger) the majority have had the opportunity with high school training being more widely available. Therefore, it is important that readers interpret this data by comparing percentage distributions against the general pattern found within the total population. That is, to the extent distributions are the same, conclusions must be limited to assume that persons with disabilities have the same educational resource capacity as persons without disabling impairments. To the extent distributions differ, the data would suggest that educational resource capacity differs.

This concern with interpretation was controlled, or accounted for, by separate analyses of those under age 64 years from those age 65 years and older. Very few of the general adult population age 16 to 64 years have not had a chance to attend high school (see Table 8). Over 90 percent have at least been in or had some high school education. In contrast to the *manhoben* (younger adults) a much greater portion of the elderly population age 65 years or older (60.5 percent) have only had a middle school education or less (see Table 11.9).

Controlling for age is important for interpreting these data because older persons have had less availability of high school education, yet as we found earlier, they are also more likely to have disabling impairments. The authors assume that, regardless of age, persons with disabling impairments had the same availability of schooling as their siblings and neighbors without such

impairments. This is not to say that persons with disabilities had the same chance to achieve within available schooling, nor that their impairments were not handicaps reducing educational attainment.

Quite the opposite, the data in Table 11.8 lend support to the argument that persons with disabilities have been disadvantaged in regional school systems. But this is speculative without being able to have greater control of age in the analyses. At present we can only conclude that people with disabilities lack the resource of education more than those without disabilities. Not being able to graduate from high school contributes to greater dependency and difficulty achieving personal well-being.

Place Table 8 about here

For every measure, adults age 16 to 64 years with disabilities were two or more times more likely than the general population to only have 8 or fewer years of education. One out of five adults (21.6 percent) with either a mobility or self care limitation have not attended high school, compared to only one out of ten adults in the general population. Adults with a mobility limitation were four times more likely to have not attended high school (36.5 percent verses 9 percent).

This schooling disadvantage was found for both adult males and females, except that women appear to have had an additional discriminant. Men with a mobility limitation were three times as likely as those without disability to have limited achievement past middle school level (center panel, 30.5 percent to 9 percent). The gap was much greater for women with mobility limitation. They were five times more likely to have only middle school education than women without disability (lower panel, 43.4 percent to 9 percent). In the general population adult women showed a slight edge over men in the completion of high school (70.1 percent to 68.0 percent). But among persons with mobility limitations a greater percent of the men (43.2 percent) completed high school than did women (36.9 percent). The implication is that being a woman with an impairment added to the handicapping experience in school well beyond just having the impairment.

Turning to Table 11.9, elderly with disabilities were also found to lack the resource of education more than *manamko* without disabilities. Among these older persons the gap was not as great as was found in Table 11.8. Although nearly three fourths of elders reporting limitations had 8 or fewer years of schooling, the same was the case for almost two-thirds of the general elderly population. The availability and opportunity to attend high school was very limited for this generation. However, in more detailed analyses than shown here, the data suggest that the elderly with disability were disadvantaged in schooling. Whereas just over half of the general elderly population (56.5 percent) had achieved only 1-7 years of schooling, over two-thirds (70.1 percent) of elderly with mobility limitations fell in this lowest category of educational attainment.

Place Table 9 about here

There is clearly a need for more detailed and expanded investigations on this issue of resource disadvantage among persons with disabilities. Discrimination and disadvantage among persons with disabilities is well documented by research in the United States (Bowe, 1983; Murphey, 1987) and there is no reason not to accept the hypothesis of similar social processes on Guam. The 1990 census has now established a baseline, against which longitudinal change can be assessed if comparable census questions are repeated in the year 2000.

Labor Force Participation

Up to this point the defining consequence of people's impairments has been either "self-care" or "mobility" limitations. In this next section attention is turned to work-related disability. That is, impairments where the defining consequence is a limitation in the kind or amount of work the person can do at a job or business. Many of those reporting self-care or mobility limitations very likely defined their impairments as also limiting the work they could do. But a substantial number did not, and there were those whose impairment affected their employability but not their capacity for mobility or self-care. The questions were asked independently, and in fact fewer persons reported work-related disability while more reported self-care or mobility limitations (compare Tables 11.2 and 11.11).

These data were reported as *rates* and *ratios* following demographic convention in studies of labor force participation and employment (see Table 11.10). A "rate" most often refers to the number of cases of a defined condition in a given period of time divided by the number of persons at risk of the condition during that period (Shryock, Siegel and Associates, 1976:5-6). Here, having an impairment causing a work-related disability was a condition, and Guam's 1990 total population comprised all persons at risk of that condition. "Ratios" were used for descriptive purposes comparing the numbers of persons in separate categories expressing one group's size relative to the size of the other.

Place Tables 10 and 11 about here

For every 1,000 persons age 16 to 64 on Guam, the heart of the island's productive, employable population, 29.6 had a work-related disability. This rate varied by age from a low of 14.7 per 1,000 persons age 16 to 34 years to a high of 76.1 per 1,000 persons age 50 to 64 years. The higher rates found among males are expected because they are more often engaged in high risk occupations or military service putting them at risk of disabling impairments. This disparity was illustrated also in the ratios of males per 100 females with work disabilities. The gap increased from only 114.3 males per 100 females with work disabilities among those 16 to 34 years of age to 129.3 males per 100 females with work disabilities among those 50 to 64 years of age.

In summary, the male-female work disability ratio shows that men were at greater risk than women of having an impairment limiting their work activity. There were other gender differences. Women, more than men, were found to report their impairments prevented them from working. The ratio (i.e., percent) of men reporting their condition prevented them from working was 46.8 per 100 men with a work related limitation, compared to a ratio of 58.9 women prevented from working per 100 women with work-related disabilities. The difference remained fairly constant across the age groupings.

The influence of sex role expectations and norms about male occupations and traditional role options for women is being revealed in these gender differences. Male jobs in construction or manual labor are such that impairments are more likely defined as handicaps. Separate of this, when women have work-related impairments, they have more options for choosing not to work than men.

It is unlikely that this discrepancy is due merely to job discrimination which could deny work to women with disabilities. Examining labor force participation rates (lower panels of Table 11.10) revealed that women with work-related disabilities (716.8 per 1,000) were more likely to be working or seeking a job than nondisabled women (620.7 per 1,000).

Men with disabilities (837.7 per 1,000) were just as likely to be in the labor force as nondisabled men (842.2 per 1,000) across all of the age groupings. It was in the younger age category, persons 16 to 34 years of age, where both men and women reported higher labor force participation rates than the nondisabled.

This exploratory overview of census data raises questions needing further research. Because of the time and space needed, this chapter did not examine the labor force participation of persons reporting mobility or self-care limitations (see Table 75, U.S. Bureau of the Census, 1992). The authors encourage readers working with or interested in the situation of the disabled on Guam to pursue this more detailed area of investigation. Our examination of that data (not shown here) revealed lower rates of labor force participation. The categorical definition of persons with mobility or self-care limitations is broader and more encompassing of persons than the category of persons with defined "work-related" impairments. Among those with a mobility or self-care limitation, only 643.8 per 1,000 disabled persons age 16 to 64 years were in the labor force (compared to 792.3 per 1,000 persons with a work-related limitation). But the old adage applies. Are you looking at the glass as "half empty" or as "half full?" This labor force rate indicates two out of three persons with a mobility or self-care limitation are in the labor force. These 2,021 persons, represent 3.1 percent of Guam's total labor force population (N= 64,913).

CONCLUSION

Thirty years ago, family members on Guam provided personal care for a disabled relative who was unable to dress, bathe or eat without help, usually a female -- mother, daughter, niece or sister. These were the caregivers for dependent family members such as children, the elderly,

and anyone with an impairment. Today in the 1990s the issue of dependency remains a core problem for adults with disabilities.

Although human needs and problems of disabilities remain, Guam's society has radically changed. Today the role of the family in providing for the personal care of disabled persons is more complicated. Economic modernization has shifted the locus of our lives from being centered in and around the home to being dispersed though out the island community. The family disperses about the island for work, schooling, shopping, and entertainment. Families are less available today to provide care, including female members. This situation applies for both indigenous (Chamorro) and immigrant (other ethnic) families. The situation among immigrant families is merely intensified because their extended networks are much smaller or nonexistent on island. Furthermore, services for assisting the disabled have increased, but these, also, are dispersed around the island. Offices must be accessed to obtain assistance, and those in need must apply through established program procedures.

The demand for government intervention to help families and individuals deal with their problematic situations has increased over the past several years. Guam's Department of Vocational Rehabilitation (DVR, 1992) reported services provided to 950 persons in 1990, with 269 classified as being "severely" disabled. This may have been everyone who really needed their particular services - to "assist them to regain, preserve, or develop their ability to pursue a gainful occupation," and "conduct programs to remove barriers which may prevent persons with disabilities from living as independent as possible (DVR, 1992: 1)".

From this study the authors conclude that DVR comes close to serving the majority, if not all persons eligible for their services. Given conditions for certification of a work disability (DVR counts) versus people's self reporting (Census counts) it can be safely assumed that not everyone reporting a disabling impairment in the 1990 census needed or met medical qualifications for government assistance. Applying the 1990 Census data to DVR counts indicates they provided services to just under half (43.5 percent) of those persons reporting a work-related disability in 1990. Very likely those in greatest need were served.

Yet these data raise questions about whether or not needs are being met for those with less severe impairments, and what needs they have. DVR's clientele represent about one-third (32.2 percent) of persons age 16 to 64 years who reported a mobility or self-care disability in 1990. DVR services for their definition of severely disabled represented about half (47.7 percent) of those age 16 to 64 years identified as having impairments causing both mobility and self-care disability. Again questions are raised; what needs exist among those not seeking DVR assistance? Are they served by other programs, or do they need help in their efforts to function in the community and have satisfying life experiences.

This study found that age is a primary trait separating types of clientele with different kinds of impairments, different kinds of resultant limitations, and obviously needing different kinds of services. The largest numbers of adults with disabilities (one out of three) fall in the 16 to 34 year age bracket. Most of these cases are situations of impairments causing self-care limitations.

Older persons, on the other hand, have a much higher rate of incidence and as a group of people in the community are more likely to need services for persons with disabilities. Moreover, half of the elderly with disability have impairments causing both mobility and self-care limitations.

Ethnicity was another trait important for targeting public awareness and service programming. The Filipino community was found to have both high numbers and high rates of disability incidence. Incidence was also high among Micronesian and Asian immigrant communities. The study's finding of relatively high labor force participation among Guam's disabled age 16 to 64 years suggests a need for detailed survey research. A reasonable hypothesis is that as a more developed and service oriented economy, Guam may attract disabled persons from less developed areas. Persons with work-related disabilities are employable and can be self supporting if jobs are available where their impairments are not handicapping for work performance.

Although rates of incidence in the Chamorro community were moderate to low for Guam, their numbers as the largest single ethnicity on island mean they compose the majority of cases. Limited extended family support and emigration within the other ethnic communities makes this even more pronounced among the elderly over age 65 years. The Chamorro *manamko* comprise over half, one of every two elderly with a disability.

This exploratory study using Guam's census data makes a call for the public and government leaders to become more aware of disabilities and the disabled on the island. The developments for meeting our social responsibility to assist persons with limitations can evolve only after a basic change in our ways of thinking. Too often the disabled are discounted in island priorities because we lack meaningful counts, and the counts seem small. Too often families accommodate another dependent and fail to encourage independence. It takes great courage and perseverance to break through the mental and physical barriers placed against the disabled by family and community who fail to see them as part of Guam's mainstream.

This is only an introductory chapter to the study of people with disabilities on Guam. The census data is limited in that it aggregates people with disabilities into broad categories defined by the limitations resulting from many different impairments. But Guam's community of the disabled is not monolithic; the range, diversity and degrees of impairment remain undocumented. There are major gaps in the island's knowledge. Information about the prevalence and incidence of particular impairments is required for the specification of needs, and the design of corresponding programs or services or policies to reduce those needs.

REFERENCES

- Bowe, Frank
1983 *Disabled Adults in America*. (Washington: President's Committee on Employment of the Handicapped).

- Bureau of the Census
 1992 *1990 Census of Population and Housing: Social, Economic, and Housing Characteristics*, 1990 CPH-6-G. Washington, D.C.: U.S. Department of Commerce.
- Department of Vocational Rehabilitation
 1992 *Annual Report Fiscal Year 1990*. Agana, GU: Government of Guam.
- Fitzgerald, M. H. and J. Armstrong
 1992 *Culture and Disability In the Pacific*, a paper session organized for the annual ASAO meetings, New Orleans, LA., February.
- Gartner, A. and T. Joe (eds.)
 1987 *Images of the disabled, disabling images*. New York, NY: Praeger.
- Murphey, R. F.
 1987 *The Body Silent*. New York, NY: W.W. Norton.
- Rengiil, Y. K. and J. E. Jarrow
 1992 *Culture and Disability In Palau*, Paper presentation at Fitzgerald and Armstrong (organizers) session on Culture and Disability In The Pacific.
- Shryock, H.S., J.S. Siegel, and Associates
 1976 *The Methods and Materials of Demography*. New York, NY: Academic Press.
- World Health Organization (WHO)
 1980 *International Classification of Impairments, Disabilities, and Handicaps*. Geneva: WHO.

Table . Disability by Sex: 1990

Disability	Numbers			Percent		
	Total	Males	Females	Total	Males	Females
Civilian noninstitutionalized persons 16 to 64 years	9,254	5,151	4,103	100.0	100.0	100.0
With mobility/self-care limitation	152	83	69	1.6	1.6	1.7
With a mobility limitation	94	54	40	1.0	1.0	1.0
In labor force	16	10	6	0.2	0.2	0.1
With a self-care limitation	108	59	49	1.2	1.1	1.2
With a work disability	330	176	154	3.6	3.4	3.8
In labor force	109	69	40	1.2	1.3	1.0
Prevented from work	177	90	87	1.9	1.7	2.1
No work disability	8,924	4,975	3,949	96.4	96.6	96.2
In labor force	5,267	3,089	2,178	56.9	60.0	53.1

Source: 1990 CPH-6-G, Table 41.

Table 46. Age, Marital Status, and Fertility by Region: 1990
(For definitions of terms and meanings of symbols, see text)

Characteristics	All Persons	North	Central	South
AGE				
All persons	133,152	62,614	40,965	29,573
Under 5 years	15,097	6,864	4,745	3,488
5 to 9 years.	13,078	6,101	3,864	3,113
10 to 14 years.	11,777	5,373	3,606	2,798
15 to 19 years.	12,121	5,268	3,779	3,074
20 to 24 years.	14,379	6,226	4,381	3,772
25 to 29 years.	13,490	6,503	4,133	2,854
30 to 34 years.	11,786	5,704	3,509	2,573
35 to 39 years.	10,186	4,996	3,050	2,140
40 to 44 years.	8,143	4,050	2,501	1,592
45 to 49 years.	5,471	2,758	1,700	1,013
50 to 54 years.	4,808	2,429	1,515	864
55 to 59 years.	4,059	2,049	1,302	708
60 to 64 years.	3,527	1,798	1,115	614
65 to 69 years.	2,433	1,268	761	404
70 to 74 years.	1,368	645	442	281
75 to 79 years.	794	334	303	157
80 to 84 years.	376	148	153	75
85 years and over	259	100	106	53
16 years and over	90,990	43,237	28,070	19,683
Median.	25.0	26.0	25.1	22.8
Female				
Under 5 years	62,207	29,393	19,588	13,226
5 to 9 years.	7,406	3,394	2,322	1,690
10 to 14 years.	6,422	3,023	1,881	1,518
15 to 19 years.	5,743	2,641	1,751	1,351
20 to 24 years.	5,673	2,550	1,819	1,304
25 to 29 years.	6,007	2,870	1,971	1,166
30 to 34 years.	6,168	2,998	1,934	1,236
35 to 39 years.	5,442	2,620	1,679	1,143
40 to 44 years.	4,665	2,229	1,447	989
45 to 49 years.	3,694	1,774	1,154	766
45 to 49 years.	2,444	1,173	794	477
50 to 54 years.	2,290	1,142	712	436
55 to 59 years.	1,947	994	612	341
60 to 64 years.	1,606	811	541	254
65 to 69 years.	1,121	555	356	210
70 to 74 years.	741	317	257	167
75 to 79 years.	444	170	178	96
80 to 84 years.	219	78	94	47
85 years and over	175	54	86	35
16 years and over	41,550	19,825	13,304	8,421
Median.	24.9	25.3	25.1	23.3
MARITAL STATUS				
Males 15 years and over.				
Never married	50,564	23,941	15,116	11,507
Now married, except separated	18,341	7,334	5,981	5,026
Separated	29,048	15,185	8,080	5,783
Widowed	436	199	132	105
Divorced.	674	285	248	141
Females 15 years and over.				
Never married	2,065	938	675	452
Now married, except separated	42,636	20,335	13,634	8,667
Separated	12,418	5,386	4,398	2,634
Widowed	24,763	12,563	7,230	4,970
Divorced.	470	201	178	91
Never married	2,519	1,055	897	567
Now married, except separated	2,466	1,130	931	405

Table 46. Age, Marital Status, and Fertility by Region: 1990
(For definitions of terms and meanings of symbols, see text)

Characteristics	All Persons	North	Central	South
FERTILITY				
Women 15 to 19 years	5,673	2,550	1,819	1,304
Children ever born	824	344	253	227
Women ever married	329	156	102	71
Children ever born	210	86	69	55
Women 20 to 24 years	6,007	2,870	1,971	1,166
Children ever born	4,632	2,043	1,518	1,071
Women ever married	2,720	1,419	796	505
Children ever born	3,003	1,514	881	608
Women 25 to 29 years	6,168	2,998	1,934	1,236
Children ever born	8,928	4,144	2,776	2,008
Women ever married	4,461	2,254	1,274	933
Children ever born	7,404	3,591	2,171	1,642
Women 30 to 34 years	5,442	2,620	1,679	1,143
Children ever born	11,091	5,055	3,449	2,587
Women ever married	4,596	2,260	1,358	978
Children ever born	10,064	4,699	3,051	2,314
Women 35 to 39 years	4,665	2,229	1,447	989
Children ever born	11,762	5,327	3,588	2,847
Women ever married	4,235	2,059	1,260	916
Children ever born	11,280	5,142	3,399	2,739
Women 40 to 44 years	3,694	1,774	1,154	766
Children ever born	10,963	4,947	3,433	2,583
Women ever married	3,439	1,679	1,054	706
Children ever born	10,661	4,860	3,328	2,473
Women 45 to 49 years	2,444	1,173	794	477
Children ever born	8,595	3,821	2,938	1,836
No Children	252	127	81	44
1 child	211	118	60	33
2 children	432	225	139	68
3 children	438	223	131	84
4 children	395	197	119	79
5 children	269	109	104	56
6 children	179	75	57	47
7 or more children	268	99	103	66
Women ever married	2,317	1,129	743	445
Children ever born	8,441	3,776	2,882	1,783

Table 47. Citizenship and Year of Entry by Region: 1990
 (For definitions of terms and meanings of symbols, see text)

Characteristics	All Persons	North	Central	South
CITIZENSHIP				
All persons	133,152	62,614	40,965	29,573
Citizen or national	112,546	49,166	35,620	27,760
Born in Guam	63,504	23,273	23,719	16,512
Born in the U.S. or other U.S. Territory or Commonwealth	30,255	13,804	7,897	8,554
Born abroad, U.S. parent(s)	2,701	1,430	667	604
Naturalized citizen	16,086	10,659	3,337	2,090
Not a citizen or national	20,606	13,448	5,345	1,813
Permanent residence	13,805	9,248	3,233	1,324
Temporary residence	6,801	4,200	2,112	489
Female	62,207	29,393	19,588	13,226
Citizen or national	52,676	23,337	17,115	12,224
Born in Guam	31,821	11,654	11,896	8,271
Born in the U.S. or other U.S. Territory or Commonwealth	11,878	5,835	3,310	2,733
Born abroad, U.S. parent(s)	1,244	651	319	274
Naturalized citizen	7,733	5,197	1,590	946
Not a citizen or national	9,531	6,056	2,473	1,002
Permanent residence	7,537	4,985	1,749	803
Temporary residence	1,994	1,071	724	199

Table 47. Citizenship and Year of Entry by Region: 1990
 (For definitions of terms and meanings of symbols, see text)

Characteristics	All Persons	North	Central	South
YEAR OF ENTRY TO THIS AREA				
All persons	133,152	62,614	40,965	29,573
Born in Guam	63,504	23,273	23,719	16,512
Born outside Guam	69,648	39,341	17,246	13,061
1990	6,477	3,578	1,451	1,448
1989	15,836	8,382	3,731	3,723
1988	9,496	4,701	2,256	2,539
1987	5,515	3,120	1,391	1,004
1986	3,340	1,968	852	520
1985	2,911	1,730	781	400
1984	2,010	1,146	553	311
1983	1,926	1,136	545	245
1982	1,576	993	386	197
1981	1,450	983	349	118
1980	1,806	1,214	381	211
1975 to 1979	5,746	3,619	1,491	636
1970 to 1974	5,248	3,314	1,310	624
1962 to 1969	3,762	2,168	991	603
1960 or 1961	381	208	118	55
Before 1960	2,168	1,081	660	427
 Female	 62,207	 29,393	 19,588	 13,226
Born in Guam	31,821	11,654	11,896	8,271
Born outside Guam	30,386	17,739	7,692	4,955
1990	2,332	1,385	616	331
1989	6,270	3,375	1,549	1,346
1988	3,966	2,144	933	889
1987	2,465	1,436	607	422
1986	1,563	950	408	205
1985	1,368	807	375	186
1984	966	561	247	158
1983	978	573	289	116
1982	797	498	197	102
1981	750	510	183	57
1980	954	646	200	108
1975 to 1979	2,946	1,881	740	325
1970 to 1974	2,562	1,626	633	303
1962 to 1969	1,717	974	458	285
1960 or 1961	195	113	56	26
Before 1960	557	260	201	96

Table 48. Place of Birth of Parents by Region: 1990
(For definitions of terms and meanings of symbols, see text)

Characteristics	All Persons	North	Central	South
FATHER'S PLACE OF BIRTH				
All persons	133,152	62,614	40,965	29,573
Guam	48,013	14,070	19,520	14,423
Palau	1,957	1,039	777	141
Northern Mariana Islands	3,052	1,321	1,193	538
Federated States of Micronesia	3,220	1,207	1,637	376
Chuuk	2,012	675	1,141	196
Kosrae	176	87	65	24
Pohnpei	655	318	234	103
Yap	343	116	176	51
Marshall Islands	78	20	55	3
Other Pacific Islands	326	169	93	64
Asia	44,690	29,941	9,529	5,220
Japan	2,534	1,861	489	184
Korea	3,730	2,634	1,022	74
China	1,267	983	233	51
Philippines	35,647	23,517	7,362	4,768
Taiwan	458	316	126	16
Vietnam	325	214	86	25
Other Asia	729	416	211	102
United States	29,472	13,779	7,461	8,232
Elsewhere	2,344	1,068	700	576
Female	62,207	29,393	19,588	13,226
Guam	24,296	7,214	9,819	7,263
Palau	1,029	547	394	88
Northern Mariana Islands	1,555	687	599	269
Federated States of Micronesia	1,462	547	733	182
Chuuk	890	304	497	89
Kosrae	75	32	29	14
Pohnpei	311	151	112	48
Yap	172	56	86	30
Marshall Islands	33	10	20	3
Other Pacific Islands	146	74	45	27
Asia	21,165	14,018	4,543	2,604
Japan	1,330	923	293	114
Korea	1,606	1,141	422	43
China	425	301	100	24
Philippines	17,007	11,149	3,494	2,364
Taiwan	242	155	73	14
Vietnam	194	129	50	15
Other Asia	361	220	111	30
United States	11,546	5,834	3,120	2,592
Elsewhere	975	462	315	198

Table 48. Place of Birth of Parents by Region: 1990
(For definitions of terms and meanings of symbols, see text)

Characteristics	All Persons	North	Central	South
MOTHER'S PLACE OF BIRTH				
All persons	133,152	62,614	40,965	29,573
Guam	51,628	15,419	20,971	15,238
Palau	2,276	1,186	908	182
Northern Mariana Islands	3,336	1,532	1,178	626
Federated States of Micronesia	3,342	1,286	1,650	406
Chuuk	2,078	712	1,150	216
Kosrae	157	75	55	27
Pohnpei	705	334	274	97
Yap	373	161	150	62
Marshall Islands	87	28	53	6
Other Pacific Islands	322	162	88	72
Asia	43,899	29,789	8,993	5,117
Japan	3,093	2,211	655	227
Korea	4,081	2,860	1,100	121
China	1,082	879	166	37
Philippines	33,746	22,659	6,568	4,519
Taiwan	575	379	159	37
Vietnam	478	301	125	52
Other Asia	844	500	220	124
United States	25,748	12,037	6,412	7,299
Elsewhere	2,514	1,175	712	627
Female	62,207	29,393	19,588	13,226
Guam	26,029	7,855	10,551	7,623
Palau	1,188	632	456	100
Northern Mariana Islands	1,686	786	583	317
Federated States of Micronesia	1,542	600	743	199
Chuuk	925	328	500	97
Kosrae	70	28	22	20
Pohnpei	342	162	133	47
Yap	191	81	78	32
Marshall Islands	38	13	20	5
Other Pacific Islands	150	73	45	32
Asia	20,778	13,909	4,303	2,566
Japan	1,577	1,065	379	133
Korea	1,790	1,255	463	72
China	324	244	62	18
Philippines	16,086	10,718	3,120	2,248
Taiwan	312	194	94	24
Vietnam	270	167	77	26
Other Asia	419	266	108	45
United States	9,771	5,007	2,589	2,175
Elsewhere	1,025	518	298	209

Table 49. Ethnic Origin or Race and Residence in 1985 by Region: 1990
 (For definitions of terms and meanings of symbols, see text)

Characteristics	All Persons	North	Central	South
ETHNIC ORIGIN OR RACE				
All persons	133,152	62,614	40,965	29,573
Single ethnic group	120,203	57,109	36,565	26,529
Chamorro	49,935	15,005	20,248	14,682
Carolinian	135	57	55	23
Palauan	1,858	992	773	93
Chuukese	1,919	610	1,114	195
Kosraean	101	57	34	10
Marshallese	71	20	48	3
Pohnpeian	589	278	225	86
Yapese	199	71	107	21
Other Pacific Islander	1,637	1,339	177	121
Asian	39,281	26,916	8,051	4,314
Chinese	1,959	1,583	321	55
Filipino	30,043	20,308	5,808	3,927
Japanese	2,244	1,696	426	122
Korean	3,931	2,671	1,177	83
Other Asian	1,104	658	319	127
White	19,160	9,077	4,655	5,428
Black	3,158	1,674	517	967
Other single ethnic group	2,160	1,013	561	586
Multiple ethnic group	12,877	5,476	4,379	3,022
Chamorro and other group(s)	7,713	2,995	2,941	1,777
Asian and other group(s)	7,449	3,507	2,333	1,609
Unclassified or not reported	72	29	21	22
Female	62,207	29,393	19,588	13,226
Single ethnic group	56,096	26,757	17,469	11,870
Chamorro	25,326	7,717	10,214	7,395
Carolinian	67	27	25	15
Palauan	976	532	385	59
Chuukese	831	274	474	83
Kosraean	39	19	12	8
Marshallese	37	13	21	3
Pohnpeian	282	131	108	43
Yapese	98	35	50	13
Other Pacific Islander	789	656	81	52
Asian	18,482	12,492	3,812	2,178
Chinese	587	406	151	30
Filipino	14,500	9,708	2,815	1,977
Japanese	1,192	856	256	80
Korean	1,599	1,138	419	42
Other Asian	604	384	171	49
White	7,230	3,746	1,851	1,633
Black	1,088	685	188	215
Other single ethnic group	851	430	248	173
Multiple ethnic group	6,081	2,626	2,111	1,344
Chamorro and other group(s)	3,766	1,480	1,440	846
Asian and other group(s)	3,551	1,676	1,125	750
Unclassified or not reported	30	10	8	12

Table 49. Ethnic Origin or Race and Residence in 1985 by Region: 1990
 (For definitions of terms and meanings of symbols, see text)

Characteristics	All Persons	North	Central	South
RESIDENCE IN 1985				
Persons 5 years and over	118,055	55,750	36,220	26,085
Same house in Guam in 1985	54,665	23,453	18,748	12,464
Percent	46.3	42.1	51.8	47.8
Different house in Guam in 1985	24,763	12,214	7,922	4,627
Same district	10,075	5,678	2,038	2,359
Different district	14,688	6,536	5,884	2,268
Outside Guam in 1985	38,627	20,083	9,550	8,994
Palau	354	154	178	22
Northern Mariana Islands	613	345	209	59
Federated States of Micronesia	2,157	750	1,172	235
Chuuk	1,371	417	836	118
Kosrae	61	28	25	8
Pohnpei	527	233	217	77
Yap	182	63	88	31
Marshall Islands	87	42	41	4
Other Pacific Islands	209	112	59	38
Asia	10,847	7,532	2,225	1,090
Japan	1,476	1,022	228	226
Korea	1,979	1,262	684	33
China	790	732	51	7
Philippines	5,996	4,130	1,131	735
Taiwan	144	83	53	8
Vietnam	52	46	6	-
Other Asia	410	257	72	81
United States	22,913	10,321	5,328	7,264
Elsewhere	1,447	827	338	282
Females 5 years and over	54,801	25,999	17,266	11,536
Same house in Guam in 1985	27,118	11,674	9,264	6,180
Percent	49.5	44.9	53.7	53.6
Different house in Guam in 1985	12,330	5,987	3,992	2,351
Same district	5,029	2,788	1,036	1,205
Different district	7,301	3,199	2,956	1,146
Outside Guam in 1985	15,353	8,338	4,010	3,005
Palau	173	76	86	11
Northern Mariana Islands	279	157	95	27
Federated States of Micronesia	938	308	521	109
Chuuk	571	167	354	50
Kosrae	28	10	13	5
Pohnpei	246	101	108	37
Yap	90	27	46	17
Marshall Islands	38	17	18	3
Other Pacific Islands	92	46	31	15
Asia	4,173	2,839	834	500
Japan	615	429	103	83
Korea	479	356	117	6
China	30	26	4	-
Philippines	2,809	1,867	548	394
Taiwan	80	43	31	6
Vietnam	24	20	4	-
Other Asia	136	98	27	11
United States	9,042	4,523	2,269	2,250
Elsewhere	618	372	156	90

Table 50. Language Spoken at Home and Frequency of English Usage by Region: 1990
(For definitions of terms and meanings of symbols, see text)

Characteristics	All Persons	North	Central	South
LANGUAGE SPOKEN AT HOME				
Persons 5 years and over.	118,055	55,750	36,220	26,085
Speak only English at home.	44,048	19,938	13,152	10,958
Speak a language other than English at home	74,007	35,812	23,068	15,127
Chamorro	34,598	10,262	13,789	10,547
Carolinian	82	34	33	15
Palauan.	1,448	754	622	72
Chuukese	1,676	574	947	155
Kosraean	140	55	44	41
Marshallese.	66	22	40	4
Pohnpeian.	548	279	190	79
Yapese	198	75	94	29
Other Pacific Islander Languages	249	115	88	46
Asian languages.	32,518	22,415	6,612	3,491
Chinese.	1,664	1,279	325	60
Japanese	2,721	1,952	560	209
Korean	3,722	2,551	1,093	78
Philippine languages	23,686	16,229	4,435	3,022
Other Asian Languages.	725	404	199	122
Other languages	2,484	1,227	609	648
Females 5 years and over.	54,801	25,999	17,266	11,536
Speak only English at home.	19,121	8,857	6,116	4,148
Speak a language other than English at home	35,680	17,142	11,150	7,388
Chamorro	17,437	5,259	6,872	5,306
Carolinian	38	16	14	8
Palauan.	780	420	314	46
Chuukese	712	244	402	66
Kosraean	60	21	16	23
Marshallese.	29	11	16	2
Pohnpeian.	264	130	94	40
Yapese	92	35	43	14
Other Pacific Islander Languages	112	56	38	18
Asian languages.	15,160	10,382	3,076	1,702
Chinese.	606	420	157	29
Japanese	1,351	951	292	108
Korean	1,433	1,026	374	33
Philippine languages	11,425	7,775	2,152	1,498
Other Asian Languages.	345	210	101	34
Other languages	996	568	265	163

Table 50. Language Spoken at Home and Frequency of English Usage by Region: 1990
 (For definitions of terms and meanings of symbols, see text)

Characteristics	All Persons	North	Central	South
FREQUENCY OF ENGLISH USAGE				
Persons 5 years and over	118,055	55,750	36,220	26,085
Speak only English at home.	44,048	19,938	13,152	10,958
Percent.	37.3	35.8	36.3	42.0
Speak other language at home.	74,007	35,812	23,068	15,127
More frequently than English	26,331	13,904	8,458	3,969
Both equally often	26,789	12,676	8,062	6,051
Less frequently than English	19,710	8,339	6,302	5,069
Does not speak English	1,177	893	246	38
Females 5 years and over	54,801	25,999	17,266	11,536
Speak only English at home.	19,121	8,857	6,116	4,148
Percent.	34.9	34.1	35.4	36.0
Speak other language at home.	35,680	17,142	11,150	7,388
More frequently than English	12,125	6,345	3,915	1,865
Both equally often	13,501	6,402	4,056	3,043
Less frequently than English	9,810	4,233	3,115	2,462
Does not speak English	244	162	64	18
Persons 5 to 17 years	31,797	14,592	9,702	7,503
Speak only English at home.	17,944	8,284	5,406	4,254
Percent.	56.4	56.8	55.7	56.7
Speak other language at home.	13,853	6,308	4,296	3,249
More frequently than English	2,625	1,477	897	251
Both equally often	4,543	2,120	1,364	1,059
Less frequently than English	6,641	2,686	2,021	1,934
Does not speak English	44	25	14	5
Females 5 to 17 years.	15,559	7,179	4,721	3,659
Speak only English at home.	8,680	4,002	2,618	2,060
Percent.	55.8	55.7	55.5	56.3
Speak other language at home.	6,879	3,177	2,103	1,599
More frequently than English	1,224	703	419	102
Both equally often	2,305	1,086	670	549
Less frequently than English	3,329	1,375	1,008	946
Does not speak English	21	13	6	2

Table 51. School Enrollment, Educational Attainment, Literacy, and Vocational Training by Region: 1990
 (For definitions of terms and meanings of symbols, see text)

Characteristics	All Persons	North	Centrall	South
SCHOOL ENROLLMENT AND TYPE OF SCHOOL				
Persons 3 years and over enrolled in school.	37,131	16,688	11,680	8,763
Preprimary school	2,180	855	657	668
Public school	1,402	570	368	464
Elementary school, 1st to 8th grade	19,573	9,043	5,857	4,673
Public school	16,060	7,479	4,578	4,003
High school, 9th to 12th grade.	9,429	4,235	2,960	2,234
Public school	8,058	3,718	2,374	1,966
College	5,949	2,555	2,206	1,188
Public school	5,127	2,193	1,910	1,024
Females 3 years and over enrolled in school.	18,066	8,163	5,673	4,230
Preprimary school	1,026	407	299	320
Public school	652	270	167	215
Elementary school, 1st to 8th grade	9,526	4,423	2,835	2,268
Public school	7,785	3,656	2,222	1,907
High school, 9th to 12th grade.	4,647	2,092	1,466	1,089
Public school	3,846	1,784	1,129	933
College	2,867	1,241	1,073	553
Public school	2,457	1,057	919	481

Table 51. School Enrollment, Educational Attainment, Literacy, and Vocational Training by Region: 1990
 (For definitions of terms and meanings of symbols, see text)

Characteristics	All Persons	North	Central	South
EDUCATIONAL ATTAINMENT				
Persons 25 years and over	66,700	32,782	20,590	13,328
None	975	606	263	106
Elementary: 1 to 4 years	2,362	1,060	733	569
5 and 6 years	3,300	1,815	922	563
7 years	1,095	531	397	167
8 years	1,506	780	425	301
High school: 1 year	1,849	888	589	372
2 years	2,424	1,211	680	533
3 years	2,265	851	773	641
4 years, no diploma	2,064	1,343	473	248
High school graduate, including equivalency	22,220	10,176	7,090	4,954
Some college, no degree	11,318	5,689	3,371	2,258
Associate degree in college, occupational program	1,975	1,050	644	281
Associate degree in college, academic program	1,691	800	539	352
Bachelor's degree	8,792	4,740	2,607	1,445
Graduate or professional degree	2,864	1,242	1,084	538
Percent high school graduate or higher	73.3	72.3	74.5	73.7
Percent bachelor's degree or higher	17.5	18.2	17.9	14.9
Females 25 years and over	30,956	14,915	9,844	6,197
None	407	161	174	72
Elementary: 1 to 4 years	1,446	631	455	360
5 and 6 years	1,830	950	539	341
7 years	555	266	206	83
8 years	732	314	235	183
High school: 1 year	879	401	274	204
2 years	1,145	525	325	295
3 years	1,136	448	375	313
4 years, no diploma	857	529	220	108
High school graduate, including equivalency	10,272	4,766	3,369	2,137
Some college, no degree	4,740	2,365	1,482	893
Associate degree in college, occupational program	786	463	224	99
Associate degree in college, academic program	745	363	235	147
Bachelor's degree	4,274	2,252	1,283	739
Graduate or professional degree	1,152	481	448	223
Percent high school graduate or higher	71.0	71.7	71.5	68.4
Percent bachelor's degree or higher	17.5	18.3	17.6	15.5
Persons 18 to 24 years	19,558	8,376	5,928	5,254
Percent high school graduate or higher	77.7	76.5	75.4	82.3
Persons 25 to 34 years	25,276	12,207	7,642	5,427
Percent high school graduate or higher	85.1	84.0	85.9	86.4
Percent some college or higher	45.3	48.4	44.2	39.9
Percent bachelor's degree or higher	15.9	16.8	16.8	12.8

Table 51. School Enrollment, Educational Attainment, Literacy, and Vocational Training by Region: 1990
 (For definitions of terms and meanings of symbols, see text)

Characteristics	All Persons	North	Central	South
LITERACY				
Persons 10 years and over	104,977	49,649	32,356	22,972
Can read and write in any language.	103,973	49,064	32,137	22,772
Cannot read and write	1,004	585	219	200
Females 10 years and over.	48,379	22,976	15,385	10,018
Can read and write in any language.	47,886	22,719	15,259	9,908
Cannot read and write	493	257	126	110
VOCATIONAL TRAINING				
Persons 16 to 64 years	85,760	40,742	26,305	18,713
Completed requirements for a program.	22,300	10,777	6,391	5,132
In Guam.	9,585	3,828	3,525	2,232
Not in Guam.	12,715	6,949	2,866	2,900
Did not complete requirements for a program	63,460	29,965	19,914	13,581
Females 16 to 64 years	38,850	18,651	12,333	7,866
Completed requirements for a program.	7,928	3,911	2,420	1,597
In Guam.	4,060	1,690	1,476	894
Not in Guam.	3,868	2,221	944	703
Did not complete requirements for a program	30,922	14,740	9,913	6,269

Table 52. Disability, Veteran Status, Military Characteristics, and Poverty Status in 1989 by Place of Birth by Region: 1990
(For definitions of terms and meanings of symbols, see text)

Characteristics	All Persons	North	Central	South
DISABILITY				
Civilian noninstitutionalized persons				
16 to 64 years	73,626	35,909	23,664	14,053
With a mobility or self-care limitation	2,946	2,232	455	259
With a mobility limitation	893	383	295	215
In labor force	252	147	54	51
With a self-care limitation	2,590	2,093	325	172
With a work disability	2,182	878	768	536
In labor force	828	380	269	179
Prevented from working	1,137	408	438	291
No work disability	71,444	35,031	22,896	13,517
In labor force	52,133	26,244	16,701	9,188
Civilian noninstitutionalized females				
16 to 64 years	37,232	17,781	11,859	7,592
With a mobility or self-care limitation	1,388	1,028	228	132
With a mobility limitation	415	164	144	107
In labor force	94	49	21	24
With a self-care limitation	1,216	965	161	90
With a work disability	955	384	324	247
In labor force	281	131	90	60
Prevented from working	563	209	209	145
No work disability	36,277	17,397	11,535	7,345
In labor force	22,516	11,009	7,289	4,218
Civilian noninstitutionalized persons				
65 years and over	5,230	2,495	1,765	970
With a mobility or self-care limitation	781	319	287	175
With a mobility limitation	585	166	265	154
With a self-care limitation	546	245	186	115
Civilian noninstitutionalized females				
65 years and over	2,700	1,174	971	555
With a mobility or self-care limitation	468	166	189	113
With a mobility limitation	359	86	175	98
With a self-care limitation	323	128	118	77

Table 52. Disability, Veteran Status, Military Characteristics, and Poverty Status in 1989 by Place of Birth by Region: 1990
 (For definitions of terms and meanings of symbols, see text)

Characteristics	All Persons	North	Central	South
VETERAN STATUS				
Persons 16 years and over	90,990	43,237	28,070	19,683
Now on active duty	11,888	4,816	2,431	4,641
On active duty in past, but not now	7,974	3,317	2,824	1,833
Never on active duty	71,128	35,104	22,815	13,209
In Reserves or National Guard now	609	282	222	105
In Reserves or National Guard in past, but not now	283	128	92	63
Never served	70,236	34,694	22,501	13,041
PERIOD OF SERVICE				
Civilian veterans 16 years and over	7,974	3,317	2,824	1,833
May 1975 or later service only	2,857	1,237	959	661
September 1980 or later service only	1,666	765	522	379
Served 2 or more years	1,510	713	473	324
Vietnam era, no Korean conflict	2,844	1,155	996	693
Vietnam era and Korean conflict	298	127	105	66
February 1955 to July 1964 only	613	215	255	143
Korean conflict, no World War II	715	256	277	182
Korean conflict and World War II	120	58	43	19
World War II, no Korean conflict	480	247	172	61
World War I	2	1	-	1
Other	45	21	17	7
LENGTH OF SERVICE				
Civilian veterans 16 years and over	7,974	3,317	2,824	1,833
Less than 2 years	368	143	114	111
2 to 10 years	6,578	2,716	2,369	1,493
11 to 19 years	242	101	80	61
20 or more years	786	357	261	168
MILITARY BENEFITS				
Civilian veterans 16 years and over	7,974	3,317	2,824	1,833
Receiving military benefits	1,351	518	512	321
Not receiving Military benefits	6,623	2,799	2,312	1,512
ALL INCOME LEVELS IN 1989				
Persons for whom poverty status is determined	126,460	60,315	39,625	26,520
Related children under 18 years	46,424	21,298	14,250	10,876
Related children 5 to 17 years	31,451	14,486	9,553	7,412
Persons 65 years and over	5,177	2,495	1,712	970
Persons 75 years and over	1,394	582	527	285
INCOME IN 1989 BELOW POVERTY LEVEL				
Persons for whom poverty status is determined	18,957	8,326	6,641	3,990
Percent below poverty level	15.0	13.8	16.8	15.0
Related children under 18 years	8,756	3,786	2,920	2,050
Related children 5 to 17 years	5,632	2,440	1,855	1,337
Persons 65 years and over	833	388	247	198
Persons 75 years and over	269	109	97	63
RATIO OF INCOME TO POVERTY LEVEL				
Persons below 50 percent of poverty level	8,022	3,268	3,142	1,612
Persons below 125 percent of poverty level	27,323	12,728	8,877	5,718
Persons below 185 percent of poverty level	47,916	23,351	14,094	10,471
Related children under 18 years	21,524	10,143	6,170	5,211
Related children 5 to 17 years	13,924	6,611	4,006	3,307

Table 53. Labor Force Characteristics by Place of Birth by Region: 1990
(For definitions of terms and meanings of symbols, see text)

Characteristics	All Persons	North	Central	South
LABOR FORCE STATUS				
Persons 16 years and over	90,990	43,237	28,070	19,683
In labor force.	66,138	32,185	19,776	14,177
Percent of persons 16 years and over.	72.7	74.4	70.5	72.0
Armed Forces.	11,952	4,833	2,459	4,660
Civilian labor force.	54,186	27,352	17,317	9,517
Employed	52,144	26,481	16,662	9,001
Also did subsistence activity	1,517	767	372	378
At work.	50,977	25,882	16,304	8,791
35 or more hours.	45,844	23,353	14,659	7,832
Unemployed	2,042	871	655	516
Percent of civilian labor force.	3.8	3.2	3.8	5.4
Not in labor force.	24,852	11,052	8,294	5,506
Subsistence activity only.	396	119	98	179
Females 16 years and over	41,550	19,825	13,304	8,421
In labor force.	24,722	12,178	7,948	4,596
Armed Forces.	1,616	870	472	274
Civilian labor force.	23,106	11,308	7,476	4,322
Employed	22,004	10,822	7,157	4,025
Also did subsistence activity	527	282	111	134
At work.	21,344	10,502	6,949	3,893
35 or more hours.	18,214	8,933	5,981	3,300
Unemployed	1,102	486	319	297
Not in labor force.	16,828	7,647	5,356	3,825
Subsistence activity only.	180	41	32	107
With own children under 6 years	10,679	4,975	3,283	2,421
In labor force	6,338	2,971	2,051	1,316
With own children 6 to 17 years only.	8,395	4,099	2,490	1,806
In labor force	5,860	2,906	1,744	1,210
Own children under 6 years living with both parents	12,157	5,924	3,471	2,762
Both parents in labor force	6,587	3,200	2,023	1,364
Own children under 6 years living with one parent	4,564	1,730	1,704	1,130
Parent in labor force	2,981	1,175	1,132	674
Persons 16 to 19 years.	9,911	4,229	3,099	2,583
Not enrolled in school, includes Armed Forces	3,639	1,480	1,061	1,098
High school graduate, includes Armed Forces.	2,160	814	560	786
Employed, civilians.	898	369	307	222
Unemployed, civilians.	85	30	28	27
Not in labor force, civilians.	401	178	128	95
Not high school graduate, includes Armed Forces.	1,479	666	501	312
Employed, civilians.	636	307	216	113
Unemployed, civilians.	121	46	45	30
Not in labor force, civilians.	681	310	232	139

Table 53. Labor Force Characteristics by Place of Birth by Region: 1990
(For definitions of terms and meanings of symbols, see text)

Characteristics	All Persons	North	Central	South
WORK STATUS IN 1989				
Persons 16 years and over	90,990	43,237	28,070	19,683
Worked in 1989	67,675	32,750	20,445	14,480
50 to 52 weeks	50,237	24,212	15,374	10,651
40 to 49 weeks	4,416	2,431	1,032	953
27 to 39 weeks	3,130	1,513	964	653
14 to 26 weeks	5,105	2,569	1,511	1,025
1 to 13 weeks	4,787	2,025	1,564	1,198
Usually worked 35 or more hours per week	61,046	29,610	18,424	13,012
50 to 52 weeks	47,965	23,028	14,718	10,219
40 to 49 weeks	3,852	2,160	870	822
27 to 39 weeks	2,437	1,175	738	524
14 to 26 weeks	3,743	1,939	1,083	721
1 to 13 weeks	3,049	1,308	1,015	726
Usually worked 15 to 34 hours per week	5,509	2,628	1,721	1,160
Did not work in 1989	23,315	10,487	7,625	5,203
Females 16 years and over				
Persons 16 years and over	41,550	19,825	13,304	8,421
Worked in 1989	26,355	12,875	8,463	5,017
50 to 52 weeks	17,813	8,789	5,900	3,124
40 to 49 weeks	1,854	1,001	490	363
27 to 39 weeks	1,695	814	538	343
14 to 26 weeks	2,487	1,157	764	566
1 to 13 weeks	2,506	1,114	771	621
Usually worked 35 or more hours per week	22,371	10,862	7,263	4,246
50 to 52 weeks	16,513	8,049	5,524	2,940
40 to 49 weeks	1,536	847	394	295
27 to 39 weeks	1,255	595	390	270
14 to 26 weeks	1,643	736	516	391
1 to 13 weeks	1,424	635	439	350
Usually worked 15 to 34 hours per week	3,447	1,742	1,037	668

Table 54. Occupation and Class of Worker by Place of Birth by Region: 1990
 (For definitions of terms and meanings of symbols, see text)

Characteristics	All Persons	North	Central	South
OCCUPATION				
Employed persons 16 years and over	52,144	26,481	16,662	9,001
Managerial and professional specialty occupations	12,108	5,688	4,375	2,045
Executive, administrative, and managerial occupations.	6,809	3,377	2,473	959
Management related occupations.	2,181	1,000	804	377
Professional specialty occupations	5,299	2,311	1,902	1,086
Teachers, librarians, and counselors.	2,490	964	913	613
Technical, sales, and administrative support occupations.	16,341	7,921	5,435	2,985
Health technologists and technicians	287	130	98	59
Technologists and technicians, except health	1,107	498	420	189
Sales occupations.	6,260	3,459	1,917	884
Administrative support occupations, including clerical	8,687	3,834	3,000	1,853
Secretaries, stenographers, and typists.	1,971	832	715	424
Service occupations	8,255	4,484	2,317	1,454
Private household occupations.	64	35	20	9
Protective service occupations	1,447	538	509	400
Service occupations, except protective and household	6,744	3,911	1,788	1,045
Food preparation and service occupations	3,369	2,071	860	438
Health service occupations, except household	306	148	95	63
Cleaning and building service occupations.	1,844	993	479	372
Personal service occupations	1,225	699	354	172
Farming, forestry, and fishing occupations.	610	230	208	172
Precision production, craft, and repair occupations.	8,831	5,259	2,436	1,136
Mechanics and repairers.	2,366	1,116	825	425
Construction trades.	5,272	3,550	1,258	464
Extractive occupations	13	3	7	3
Precision production occupations	1,180	590	346	244
Operators, fabricators, and laborers.	5,999	2,899	1,891	1,209
Machine operators, assemblers, and inspectors.	1,227	624	405	198
Transportation and material moving occupations	2,212	1,005	671	536
Handlers, equipment cleaners, helpers, and laborers.	2,560	1,270	815	475

Table 54. Occupation and Class of Worker by Place of Birth by Region: 1990
(For definitions of terms and meanings of symbols, see text)

Characteristics	All Persons	North	Central	South
Employed females 16 years and over	22,004	10,822	7,157	4,025
Managerial and professional specialty occupations	5,682	2,500	2,120	1,062
Executive, administrative, and managerial occupations	2,803	1,292	1,067	444
Management related occupations	1,270	574	466	230
Professional specialty occupations	2,879	1,208	1,053	618
Teachers, librarians, and counselors	1,765	697	636	432
Technical, sales, and administrative support occupations	10,862	5,225	3,554	2,083
Health technologists and technicians	213	99	63	51
Technologists and technicians, except health	249	89	105	55
Sales occupations	3,942	2,213	1,130	599
Administrative support occupations, including clerical	6,458	2,824	2,256	1,378
Secretaries, stenographers, and typists	1,917	806	697	414
Service occupations	4,279	2,510	1,125	644
Private household occupations	58	34	16	8
Protective service occupations	131	50	50	31
Service occupations, except protective and household	4,090	2,426	1,059	605
Food preparation and service occupations	2,121	1,286	541	294
Health service occupations, except household	257	127	79	51
Cleaning and building service occupations	850	527	186	137
Personal service occupations	862	486	253	123
Farming, forestry, and fishing occupations	77	31	24	22
Precision production, craft, and repair occupations	349	180	104	65
Mechanics and repairers	88	41	26	21
Construction trades	60	32	18	10
Extractive occupations	1	1	-	-
Precision production occupations	200	106	60	34
Operators, fabricators, and laborers	755	376	230	149
Machine operators, assemblers, and inspectors	383	230	111	42
Transportation and material moving occupations	96	34	26	36
Handlers, equipment cleaners, helpers, and laborers	276	112	93	71
CLASS OF WORKER				
Employed persons 16 years and over	52,144	26,481	16,662	9,001
Private for profit wage and salary workers	32,599	19,009	9,599	3,991
Private not-for-profit wage and salary workers	1,436	662	477	297
Local or territorial government workers	10,217	3,567	3,971	2,679
Federal government workers	6,208	2,365	2,027	1,816
Self-employed workers	1,615	851	556	208
Unpaid family workers	69	27	32	10
Employed females 16 years and over	22,004	10,822	7,157	4,025
Private for profit wage and salary workers	13,349	7,498	3,999	1,852
Private not-for-profit wage and salary workers	794	322	284	188
Local or territorial government workers	5,009	1,818	1,991	1,200
Federal government workers	2,145	841	632	672
Self-employed workers	669	328	233	108
Unpaid family workers	38	15	18	5

Table 55. Industry by Place of Birth: 1990
(For definitions of terms and meanings of symbols, see text)

Characteristics	All Persons	North	Central	South
Employed persons 16 years and over	52,144	26,481	16,662	9,001
Agriculture	436	179	141	116
Forestry and fisheries.	77	27	40	10
Mining.	55	27	25	3
Construction.	8,023	5,299	1,890	834
Manufacturing	2,302	980	811	511
Nondurable goods	965	503	326	136
Food and kindred products.	310	178	89	43
Textile mill products.	45	23	21	1
Apparel and other finished textile products.	121	74	36	11
Printing, publishing, and allied industries.	422	203	161	58
Petroleum and coal products.	31	10	7	14
Rubber and miscellaneous plastics products	5	-	-	5
Leather and leather products	3	1	1	1
Other nondurable goods manufacturing	28	14	11	3
Durable goods.	1,337	477	485	375
Lumber and wood products, including furniture.	20	8	7	5
Stone, clay, glass and concrete products	208	90	95	23
Metal industries	41	23	15	3
Machinery and transportation equipment.	941	291	320	330
Professional and photographic equipment, and watches	47	27	19	1
Other durable goods manufacturing.	80	38	29	13
Transportation, communications, and other public utilities.	5,603	2,543	1,901	1,159
Transportation	3,522	1,701	1,131	690
Bus service and urban transit.	299	138	102	59
Taxicab service.	188	152	30	6
Communications	958	440	344	174
Utilities and sanitary services.	1,123	402	426	295
Wholesale trade	1,584	833	544	207
Durable goods.	573	318	189	66
Nondurable goods	1,011	515	355	141
Retail trade.	9,959	5,569	2,919	1,471
Eating and drinking places	2,679	1,599	773	307
Finance, insurance, and real estate	2,767	1,304	1,064	399
Business services	1,176	525	450	201
Repair services	834	423	302	109
Personal services	3,829	2,536	844	449
Hotels and motels	3,137	2,155	610	372
Entertainment and recreation services	1,124	562	336	226
Professional and related services	8,677	3,542	3,249	1,886
Health services	2,005	958	713	334
Legal services.	360	108	177	75
Educational services.	4,291	1,540	1,634	1,117
Engineering and architectural services.	473	277	140	56
Other professional and related services	1,548	659	585	304
Public administration	5,698	2,132	2,146	1,420

Table 55. Industry by Place of Birth: 1990
 (For definitions of terms and meanings of symbols, see text)

Characteristics	All Persons	North	Central	South
Employed females 16 years and over	22,004	10,822	7,157	4,025
Agriculture	102	46	33	23
Forestry and fisheries.	20	5	14	1
Mining.	7	4	2	1
Construction.	587	312	169	106
Manufacturing	663	311	238	114
Nondurable goods	461	246	163	52
Food and kindred products.	117	68	35	14
Textile mill products.	40	21	18	1
Apparel and other finished textile products.	105	66	30	9
Printing, publishing, and allied industries.	182	85	73	24
Petroleum and coal products.	5	-	3	2
Rubber and miscellaneous plastics products	1	-	-	1
Leather and leather products	2	1	1	-
Other nondurable goods manufacturing	9	5	3	1
Durable goods.	202	65	75	62
Lumber and wood products, including furniture.	3	1	1	1
Stone, clay, glass and concrete products	25	12	9	4
Metal industries	8	4	4	-
Machinery and transportation equipment.	110	23	36	51
Professional and photographic equipment, and watches	28	13	14	1
Other durable goods manufacturing.	28	12	11	5
Transportation, communications, and other public utilities.	1,565	755	541	269
Transportation	1,085	558	346	181
Bus service and urban transit.	36	13	14	9
Taxicab service.	7	4	2	1
Communications	311	142	113	56
Utilities and sanitary services.	169	55	82	32
Wholesale trade	506	266	155	85
Durable goods.	193	102	61	30
Nondurable goods	313	164	94	55
Retail trade.	5,870	3,315	1,633	922
Eating and drinking places	1,714	1,022	483	209
Finance, insurance, and real estate	1,707	785	630	292
Business services	408	192	155	61
Repair services	147	68	61	18
Personal services	2,140	1,429	479	232
Hotels and motels	1,667	1,161	322	184
Entertainment and recreation services	432	239	115	78
Professional and related services	5,761	2,358	2,083	1,320
Health services	1,428	696	480	252
Legal services.	211	58	102	51
Educational services.	2,990	1,099	1,112	779
Engineering and architectural services.	112	57	40	15
Other professional and related services	1,020	448	349	223
Public administration	2,089	737	849	503

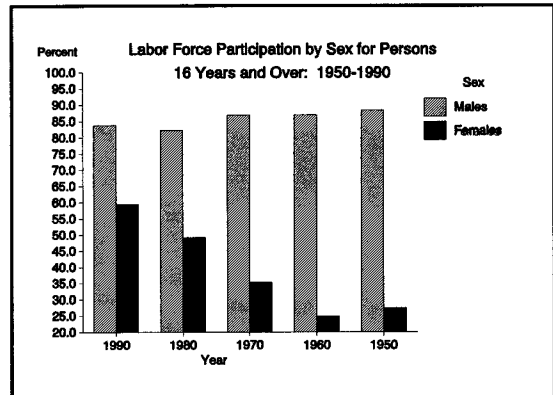
Table 56. Commuting Characteristics by Place of Birth by Region: 1990
(For definitions of terms and meanings of symbols, see text)

Characteristics	All Persons	North	Central	South
MEANS OF TRANSPORTATION TO WORK AND CARPOOLING				
Workers 16 years and over	62,753	30,630	18,708	13,415
Car, truck, or private van/bus	55,890	28,411	17,100	10,379
Drove alone	43,762	22,037	13,729	7,996
Carpooled	12,128	6,374	3,371	2,383
2-person carpool	8,355	4,167	2,480	1,708
3-person carpool	1,067	574	322	171
4-person carpool	609	346	187	76
5-person carpool	356	231	79	46
6-person carpool	234	156	52	26
7-to-9-person carpool	846	719	85	42
10-or-more-person carpool	661	181	166	314
Persons per private vehicle	1.1	1.2	1.1	1.2
Public van/bus	300	140	66	94
Boat	85	5	8	72
Taxicab	105	69	27	9
Motorcycle	172	110	42	20
Bicycle	359	171	58	130
Walked	3,180	846	758	1,576
Other method	1,739	603	402	734
Worked at home	923	275	247	401
TRAVEL TIME TO WORK				
Workers 16 years and over	62,753	30,630	18,708	13,415
Did not work at home	61,830	30,355	18,461	13,014
Less than 5 minutes	3,580	1,428	880	1,272
5 to 9 minutes	10,089	5,240	2,736	2,113
10 to 14 minutes	10,187	4,994	3,574	1,619
15 to 19 minutes	13,863	7,157	5,053	1,653
20 to 24 minutes	9,782	5,148	3,177	1,457
25 to 29 minutes	2,895	1,367	836	692
30 to 34 minutes	7,863	3,580	1,747	2,536
35 to 39 minutes	675	301	99	275
40 to 44 minutes	710	269	112	329
45 to 59 minutes	1,747	706	197	844
60 to 89 minutes	418	153	46	219
90 minutes or more	21	12	4	5
Mean (minutes)	16.7	16.4	15.5	19.4
Worked at home	923	275	247	401
DEPARTURE TIME				
Workers 16 years and over	62,753	30,630	18,708	13,415
Did not work at home	61,830	30,355	18,461	13,014
12:00 AM to 4:59 AM	1,235	585	346	304
5:00 AM to 5:59 AM	2,619	1,006	666	947
6:00 AM to 6:29 AM	5,946	2,634	1,422	1,890
6:30 AM to 6:59 AM	9,201	4,225	2,481	2,495
7:00 AM to 7:29 AM	14,282	7,054	3,807	3,421
7:30 AM to 7:59 AM	9,301	4,184	3,609	1,508
8:00 AM to 8:29 AM	5,787	3,146	1,975	666
8:30 AM to 8:59 AM	2,194	1,211	737	246
9:00 AM to 12:59 PM	5,450	3,058	1,743	649
1:00 PM to 3:59 PM	2,283	1,309	616	358
4:00 PM to 11:59 PM	3,532	1,943	1,059	530
Worked at home	923	275	247	401

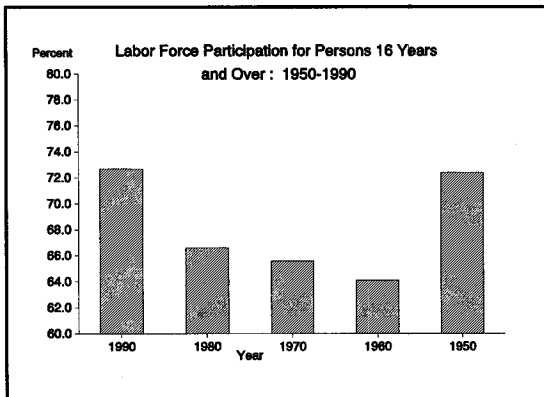
LABOR FORCE STATUS IN 1989

Labor Force Participation	1990	1980	1970	1960	1950
Persons 16 years and over	90,990	66,773	49,548	41,026	44,133
Labor force	66,138	44,484	32,493	26,304	31,965
Percent	72.7	66.6	65.6	64.1	72.4
U.S. Armed Forces	11,952	10,125	9,997	8,705	13,294
Percent	18.1	22.8	30.8	33.1	41.6
Civilian labor force	54,186	34,359	22,496	17,599	18,671
Employed	52,144	32,692	22,112	17,208	(NA)
Unemployed	2,042	1,667	384	391	(NA)
Percent	3.8	4.9	1.7	2.2	(NA)
Not in labor force	24,852	22,289	17,055	14,722	12,168

Source: U.S. Bureau of the Census Decennial Reports.



The data on labor force status in 1989 were derived from answers to question 31a. Persons 16 years old and over were classified as "in labor force in 1989" if (a) in 1989 they worked one or more weeks for pay or profit (including weeks on paid vacation or on paid sick leave) or worked without pay on a family farm or in a family business or were on active duty in the U.S. Armed Forces; or (b) had any weeks of unemployment in 1989. The categories "Worked in 1989" and "With unemployment in 1989" were not mutually exclusive.



Worked in 1989 (Work Status in 1989). Persons 16 years old and over who worked one or more weeks according to the criteria described below were classified as "worked in 1989"; all other persons 16 years old and over "did not work in 1989". Some tables showing work status in 1989 include 15 year

olds; those persons were classified as "Did not work in 1989", by definition.

Weeks worked in 1989. The data on weeks worked in 1989 were derived from answers to questions 31a and 31c. Question 31b (Weeks worked in 1989) was asked of persons 16 years old and over who indicated in question 31a that they worked in 1989.

The data pertained to the number of weeks during 1989 in which a person did any work for pay or profit (including paid vacation and sick leave) or worked without pay on a family farm or in a family business. Weeks of active service in the U.S. Armed Forces were also included. Persons who did only subsistence activity in 1989 were tabulated in the category "did not work in 1989". It is probable that the number of persons who worked in 1989 and the number of weeks worked were understated since there was some tendency for respondents to forget intermittent or short periods of employment or to exclude weeks worked without pay.

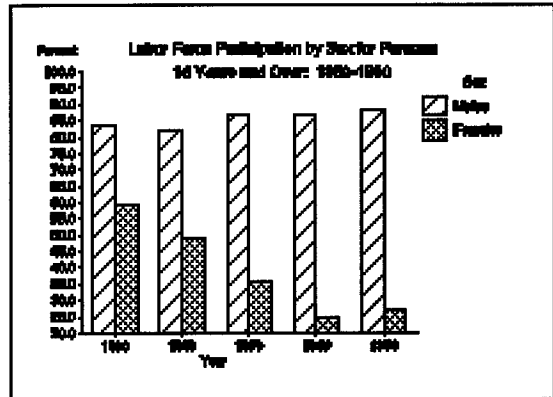
Usual Hours Worked in 1989. The data on usual hours worked per week in 1989 were derived from answers to question 31c. This question was for persons 16 years old and over who indicated that they worked in 1989.

The data pertain to the number of hours a person usually worked during the weeks worked in 1989. The respondent was to report the number of hours worked per week in the majority of the weeks he or she worked in 1989. If the hours worked per week varied considerably during 1989, the respondent was to report an approximate average of hours worked

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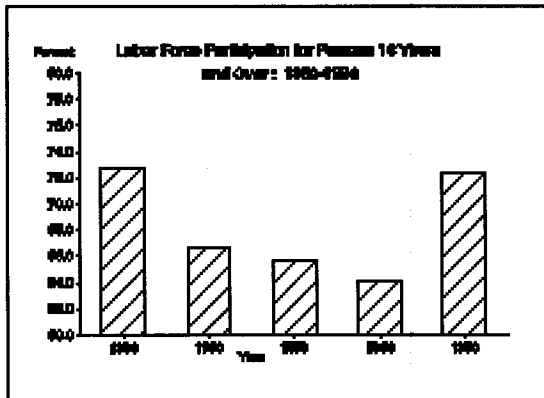
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