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POPULATION OF AMERICAN SAMOA



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No. 7.1 **POPULATION OF AMERICAN SAMOA**

by
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PREFACE

As part of their respective work programmes, the Economic and Social Commission for Asia and the Pacific (ESCAP) and the South Pacific Commission (SPC) have undertaken the preparation and publication of a series of monographs on the population situation of each interested island country in the South Pacific. Each monograph is being prepared in close collaboration with country experts and with financial support from the United Nations Fund for Population Activities (UNFPA) and SPC. The present monograph on American Samoa is the first in the series, and work is in progress on similar studies for Papua New Guinea and the Cook Islands. Monographs for other Pacific countries will be prepared as resources permit.

The purpose of the monographs is to provide a comprehensive picture of past, current and prospective population trends in the countries concerned and to provide a basis for measuring such human needs as health services, housing, education, employment and family planning in terms of population size, growth, age composition, marital status and family size. Another objective is to encourage the maximum analysis and utilization of data collected through periodic censuses, sample surveys, vital registration, etc. for planning purposes.

Apart from the introduction, the present monograph was prepared by Dr. Chai Bin Park, University of Hawaii School of Public Health and East-West Population Institute, Honolulu. Mr. Gregory Chu Cartography Officer of the East-West Population Institute, prepared the maps and figures.

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INTRODUCTION

A. Location and physical features

American Samoa consists of a group of seven islands located in the South Pacific at about 170° west and 14° south. They lie some 3,700 km south-west of Hawaii and about 2,500 km north-east of New Zealand. The nearest neighbours are the Independent State of Western Samoa¹, 130 km away, Tonga (to the south-west) and Tokelau (to the north). Total land area is about 200 sq km.

Tutuila, the largest island in the group, extends 30 km from east to west and is about 6 km wide, with a land area of 150 sq km. The capital, Pago Pago, lies at the head of Pago Pago Bay, which almost bisects the island and is one of the most sheltered deep-water harbours in the South Pacific. The small island of Aunu'u lies off the south-eastern tip of Tutuila.

The three Manu'a Islands, Ofu, Olosega and Ta'u, with a total land area of some 50 sq km, are situated about 100 km east of Tutuila. Rose Island, 300 km east of Tutuila, is uninhabited and is preserved as a national wildlife refuge for turtles and sea-birds. Swain's Island, which is privately owned, lies about 400 km north of Tutuila.

Tutuila, Aunu'u and the Manu'a Islands are of volcanic origin. They rise steeply from the sea and the mountainous areas are covered by tropical rain forest. The highest point is Mount Matafae on Tutuila, which rises to 702 m. Mount Pioa ("the Rainmaker"), which overlooks Pago Pago Bay, is 563 m high. There are limited coastal plains and some fertile valleys. Sand and coral rubble beaches edge much of the coast, and there is a fringing reef which provides some protection to the shore. About 30 per cent of the total land area are suitable for cultivation.

Rose Island and Swain's Island are coral atolls.

Trade winds and frequent rains give American Samoa a pleasant tropical climate. Pago Pago usually receives about 5,000 mm of rain annually, most of it falling between December and March. The average temperature ranges from 21° to 32°C. Humidity averages 80 per cent.

B. Historical sketch

Although no archaeological research has been carried out in American Samoa, results of excavations in nearby islands suggest that the territory has been inhabited for the past 2,500 years.

¹ The Independent State of Western Samoa is now known as Samoa. However, in order to avoid confusion, the terms "Western Samoa" and "Western Samoan" have been used throughout this monograph.

The first Westerner to visit the islands was the Dutchman Roggeveen, who made brief contact with the people of the Manu'a group in 1722. The French explorer Bougainville visited Ofu and Olosega in 1768, and gave the name "Navigator Islands" to what are now American Samoa and the Independent State of Western Samoa. In 1787 the Frenchman La Perouse visited Tutuila; his second-in-command and 11 of his men were massacred while their ship lay at anchor off the north coast of the island. Four years later HMS *Pandora* visited Tutuila twice during her search for the *Bounty* mutineers.

By 1830 a number of runaway sailors and convicts were living in Samoa; a form of Christianity was introduced by some of them and also by converts from other Polynesian islands. The first European missionaries, John Williams and Charles Barff of the London Missionary Society (LMS), visited Samoa in 1830, and the first resident LMS missionary, A.W. Murray, arrived six years later.

Charles Wilkes was the first American to call at Tutuila, in 1839 during a voyage of exploration. During the mid-nineteenth century Pago Pago, with its sheltered harbour, became a popular port of call for American whaling wessels. In 1872 the need for a coaling station in the South Pacific brought the USS *Narragansett* to Tutuila, where Commander Richard Meade entered into an agreement called the "Commercial Regulations" with the High Chief of Pago Pago. The agreement was never ratified by the United States Senate, but in 1878 a second agreement was ratified and remained in force for more than 29 years.

Meanwhile international competition for bases in the South Pacific increased, and local wars among Samoans added to the problems. On 14 June 1889, Germany, Great Britain and the United States of America entered into a pact designed to ensure stable government in the Samoan archipelago. Ten years later, the three Powers signed a Convention whereby Germany and Great Britain agreed to drop all claims to islands east of 171° west, while the United States gave up all claims to the islands of Savai'i and Upolu, which now form the Independent State of Western Samoa.

In 1900, President McKinley directed the navy to establish United States authority in what is now American Samoa. A series of deeds of cession was negotiated with the chiefs of Tutuila during the same year, and in 1904 the "king" of the Manu'a chain ceded those islands to the United States.

American Samoa continued under naval government until 30 June 1951, when the administration of the territory was transferred to the United States De-

partment of the Interior. The territory's first constitution was approved in 1960.

C. The people

The people of American Samoa are Polynesians. In 1900, the population totalled 5,679. By 1974 it had risen to 29,190, over 90 per cent of whom were Samoans or part-Samoans. The non-Samoan population comprised Polynesians from other parts of the Pacific, Asians working on the foreign-owned fishing boats and Europeans, mostly American.

The traditional social structure is built on the *aiga*, or extended family, which may include as many as several thousand people. The *matai* (chiefs) are responsible for the control of the *aiga*'s lands and property and for its general well-being. They represent the *aiga* on the county and district councils. The Samoan way of life (*fa'a Samoa*) places great importance on the dignity and achievements of the group rather than of its individual members. This creates some conflict between the desire to preserve Samoan tradition and the development of a cash-oriented economy.

Traditionally subsistence agriculture was carried out on plots located near the village and assigned to members of the *aiga* by the *matai*. Most villages were sited on the coast near a point where a stream entered the sea. The majority of American Samoans still live in rural villages, but in 1974 64 per cent of males aged 14 years and over and 45.9 per cent of females in the same age group were working in occupations other than agriculture.

American Samoans are nationals of the United States, with free rights of entry, and may become citizens if they wish, provided that they satisfy the necessary requirements. Large numbers of American Samoans now live permanently on the United States mainland and in Hawaii.

D. Education

Education in American Samoa is compulsory and is based on the United States system of eight years of elementary schooling and four years of high school. In 1974 about 7,200 children were enrolled in elementary schools, 2,600 in secondary schools and 600 in the Community College. More than 80 per cent attended state schools, the best being accommodated at private schools. A number of students continue their education in the United States. There is a strong Early Childhood Education Programme serving children between the ages of three and five. Television is used as a medium of educational instruction.

Most American Samoans speak both Samoan and English.

E. Health services

All health services in American Samoa are provided by the Department of Medical Services. Medical care is free except for a minimal charge of 50 cents a day for patients admitted to hospital. Health problems include infantile gastroenteritis and diarrhoea, infectious hepatitis, venereal disease, filariasis and cardio-vascular diseases. The latter account for more than 30 per cent of all deaths in American Samoa. There are still a few cases of leprosy.

Rapid change to a more westernized life-style is leading to increased use of processed foods, with high consumption of sugar. This is causing problems of malnutrition in infants and the elderly, and of over-nutrition. In order to improve the nutrition of children, the Department of Education provides free breakfasts and lunches in schools.

High priority is presently being given by the Government to the improvement of environmental sanitation and the water supply.

F. Government

The executive branch of the Government of American Samoa consists of the Governor and Lieutenant Governor (previously appointed by the Department of the Interior, but locally elected since 1977) and heads of government departments.

The Legislature is composed of the Senate and the House of Representatives. Each of the 15 political counties elects one or more *matai* to the 18-member Senate for four years. The 20 voting members of the House of Representatives are elected by popular vote at the polls in the 17 representative districts. There is one delegate from Swain's Island, elected by the permanent adult residents at an open meeting; he has all the privileges of a member of the House except the right to vote. The representatives and the member for Swain's Island hold office for two years. Business in both houses of the Legislature is conducted in the Samoan language and later translated into English.

The territory's first constitution, approved in 1960, provided, *inter alia*, for the protection of "persons of Samoan ancestry against alienation of their lands and the destruction of the Samoan way of life and language". A revised constitution, which became effective on 1 July 1967, gave the local Legislature the sole authority to enact laws for American Samoa. The Legislature meets twice each year for 30-day sessions.

Local government is the responsibility of the Office of Samoan Affairs, which supervises government operations carried out at district, county and village levels. Responsible local officials of the districts, counties and villages respectively are the district governors, county chiefs and *pulemu'u* (village mayors).

The judicial branch is composed of a High Court with jurisdiction throughout the territory, a district court for each of the five judicial districts, a small claims court, a traffic court and a *matai* title court.

G. Transport and communications

A paved road runs along the entire southern shore of Tutuila, and two roads cut across from this to villages on the north coast. A local airline flies from Tutuila to the Manu'a group, and also to Niue, Tonga and Western Samoa. International airlines link American Samoa with Fiji, French Polynesia, Hawaii and New Zealand.

American Samoa's main shipping links are with the west coast of the United States. Cruise ships flying a number of different flags and operating out of Australia and the United States call at Pago Pago.

All parts of American Samoa are linked to the telephone system except Swain's Island, which communicates with Pago Pago by two-way radio.

There are radio and television services (the latter introduced in 1964). The Government publishes a daily *News Bulletin*, and there is a semi-weekly privately-owned newspaper.

H. The economy

The single largest employer in the territory is the American Samoa Government, for which more than half the population in paid employment works. The second largest employer is the American-owned fish canning industry, sited on the shores of Pago Pago Bay. The minimum daily wage in 1976 was between US\$ 1.05 and \$US1.42.

The fish canning industry is by far the greatest income-earner in American Samoa and accounts for the territory's favourable balance of trade. In fiscal year 1976 exports of tuna alone were worth more than \$US44 million. Pet food, frozen fish, shark fins and fish meal, turned out as by-products of the canneries, are also exported.

The American Samoa Government has established an industrial park which can accommodate about 20 light assembly plants. Watch and jewellery facilities are already in operation, and some two and a half million dollars' worth of watches and jewellery were exported in the 1976 fiscal year.

The main imports are diesel fuel, gasoline, food and drinks. American Samoa's imports and exports in recent years, expressed in thousands of dollars, are summarized below.²

<i>Year</i>	<i>1971-1972</i>	<i>1972-1973</i>	<i>1973-1974</i>
Imports	24 114	35 953	46 549
Exports	53 750	66 576	82 989
<i>Year</i>	<i>1974-1975</i>	<i>1975-1976</i>	<i>1976-1977</i>
Imports	49 893	51 100	59 941
Exports	56 034	64 893	81 232

The Government is making efforts to improve local agriculture and food production, and in 1976 a small quantity of taro was exported. Copra, a common export crop in many Pacific islands, is of no significance in American Samoa. Vegetables, bananas, breadfruit, taro, yams, sugar-cane, pineapples and kava are produced for local consumption. Nearly 30 per cent of the eggs needed are produced locally, and the Government is encouraging pig-rearing.

Fisheries development, carried out by the Office of Marine Resources, aims to supply fresh fish for the local market and increase employment opportunities. Baitfish are being cultured locally for use in pole-and-line fishing for skipjack and other tuna.

American Samoa is a member of the Pacific Islands Tourism Development Council, but efforts to expand tourism have been hampered by inadequate air services.

The territory has no known mineral resources.

² These figures are taken from SPC *Statistical Bulletin 13, Overseas Trade 1977*. Imports by government authorities and fish caught by foreign vessels and sold to the local canneries are excluded.

Chapter I

SIZE AND GROWTH OF TOTAL POPULATION

A. Population in the nineteenth century

In the absence of census enumerations as we understand them today, an analysis of trends in size and growth of the population of the Samoan islands during the nineteenth century has to be based on summary figures and estimates which in many instances were not prepared for demographic purposes. The arrival of missionaries in the early 1830s signalled the beginning of serious efforts to obtain population data on the Samoa islands. Earlier visitors left little description of such matters.¹

The first population estimates made by the missionaries appear to be highly conjectural. John Williams, who went to Samoa in 1830 as the first missionary, estimated the population at 160,000; but it has been asserted by Erskine that "this was certainly an over-estimate".² Russell gave a similar figure, without mentioning his source or a reference time, when he wrote in 1842 that "the population has been estimated at not less than 150,000".³

An estimate of the population of Samoa by the component islands was first supplied by Lafond de Lurcy⁴ who went to Upolu Island in 1831. But these estimates which were gathered from the interpreters appear to be of dubious credibility for two reasons. Firstly, for the area now known as American Samoa, de Lurcy's figures showed a population of 12,000 for Tou-Tou-ila (Tutuila) and 25,000 for the Manoua (Manu'a) group. These estimates seem to be too high, especially that for Manu'a, whose population was never described as more than 2,000 people during the nineteenth century. It is possible that de Lurcy's informants were ignorant of the demographic situation in the islands away from Upolu. Secondly, the sum of

the estimates for the individual islands (98,000) does not tally with the total indicated for Samoa (85,000).⁵ It is possible that some kind of mechanical error occurred in the recording or transcription of his notes. It should be pointed out that since de Lurcy's journal was published in 1845, three years after his death, any questionable data could not have been corrected or checked by him.

The best known estimate of population is that of Commodore Charles Wilkes, who visited Tutuila in October 1839 while commanding the United States Exploring Expedition of 1838-1842. Taking the statements of resident missionaries as a basis, he estimated the total population of the archipelago at 56,000 and that of all the islands now comprising American Samoa, except Swain's Island, at 10,000 (Tutuila 8,000 and Manu'a 2,000 persons).⁶ It has, however, been argued that the estimates of Commodore Wilkes for the larger and more rugged islands of Upolu, Savai'i and Tutuila are likely to be highly speculative.⁷

Comparatively reliable and detailed estimates of the Samoan population became available in 1845, when Reverend Stair, who spent seven years in Samoa from 1838 to 1845, declared that "a successful census was made" in 1845. Though the total population was then reported to be 40,000, Stair was of the opinion that this figure was an under-estimate but that the population certainly did not exceed 45,000.⁸ In the same year, the missionaries claimed that there was "a population rising 4,000" for Tutuila Island and about 1,350 for the three islands in the Manu'a group.⁹ These estimates could be

⁵ Gabriel Lafond de Lurcy, *loc. cit.*, provides the following estimates:

"Sevai	25,000 habitants
"Opouzou	22,000 habitants
"Tou-Tou-ila	12,000 habitants
"Manoua	9,000 habitants
"Apolina	5,000 habitants
"Le groupe seul de Monoua	25,000 habitants
"Total	85,000 habitants"

⁶ Charles Wilkes, *Narrative of the United States Exploring Expedition during the Years 1838, 1839, 1840, 1841, 1842* (London, Ingram, Cooke and Co., 1852), vol. 1, pp. 189-190.

⁷ Norma Mc Arthur, *Island Populations of the Pacific* (Canberra, Australian National University Press, 1967), p. 100.

⁸ John B. Stair, *Old Samoa* (London, The Religious Tract Society, 1897), p. 58. However, for 1845, a somewhat larger total was also reported. Erskine, visiting Samoa in 1849, noticed that in 1845 the *Samoan Reporter*, which was published by the missionaries, spoke of the population being between 50,000 and 60,000. Nevertheless, Erskine added that "it is now [1849] tolerably ascertained that their whole numbers do not exceed 38,000". See John E. Erskine, *op. cit.*, p. 10.

⁹ *Samoan Reporter*, No. 1, March 1845, pp. 3-4.

¹ Although Deschanel attributed a population estimate of 80,000 for the entire archipelago to La Perouse, who visited the islands in 1787, the source of this information is not known; no population figures were mentioned in La Perouse's journal or letters. [See Paul Deschanel, *La politique française en Océanie* (Paris, Berger-Levrault et Cie, 1884), p. 234] Kotzebue, who sojourned in the Samoan islands in 1824, only mentioned that "all these islands are . . . very thickly peopled". [See Otto von Kotzebue, *A New Voyage round the World in the Years 1823-1826* (London, H. Colburn and R. Bentley, 1830), pp. 257-258.]

² John E. Erskine, *Journal of a Cruise among the Islands of the Western Pacific* (London, John Murray, 1853), p. 10.

³ Michael Russell, *Polynesia: Or An Historical Account of the Principal Islands in the South Seas* (Edinburgh, Oliver and Boyd, 1842), p. 267.

⁴ Gabriel Lafond de Lurcy, "Quelques semaines dans l'archipel de Samoa", *Bulletin de la Société de géographie* January 1845, p. 9.

considered reasonably accurate since Tutuila had received the first missionary seven years earlier.

Estimates of the Samoan population dating from 1831 until the partition of the archipelago at the turn of the century are summarized in table 1. The 1853 missionary census is considered "the first realistic estimate of population",¹⁰ while the census of 1869 was claimed to be "absolutely correct".¹¹ The Deschanel estimates for 1881 may be dismissed as an obvious over-estimate, especially for the eastern islands.

It will be seen from table 1 that with a few exceptions, the various estimates of the population of eastern Samoa appear to be more or less uniform indicating a population of 3,500 to 4,000 persons for Tutuila and about 1,500 for Manu'a. If we place reasonable credence on the estimates since 1850, we may conclude that the population at the middle of the nineteenth century of what is now American Samoa was at most 5,000, with about 3,500 or less in Tutuila and approximately 1,400 in the Manu'a islands. It will also appear from the table that there was an increase in the population of eastern Samoa in the last decade of the nineteenth century to a level of 5,700 at the turn of the century.¹²

The depopulation of the Samoan archipelago since Western contact has been the subject of much discussion. If the various estimates of the total Samoan population are taken at their face value, there appears to have been a decline in the population of the archipelago from 56,600 in 1839 as estimated by Wilkes to 37,000 in 1849 as estimated by Erskine. Although there were several severe epidemics, civil wars and calamities, it is very unlikely that the total population would have decreased by about 30 per cent in 10 years. Estimates for the years prior to 1850 are probably grossly exaggerated.¹³ It seems quite certain, however, that there was a stagnation, if not an actual decrease in population growth during the second half of the nineteenth century.

¹⁰ Norma Mc Arthur, *op. cit.*, p. 114.

¹¹ A.B. Stenberger, *Report on Samoa or Navigator's Island* (Washington, DC, United States Senate Document No. 45, 1874), p. 20.

¹² It may be noted that during the latter half of the nineteenth century, Manu'a received relatively less attention in regard to population estimates. During this period, three Western powers, Germany, Great Britain and the United States, were competing for control of the islands. Politically aloof Manu'a may not have attracted their attention and hence been excluded from the 1874 census and the estimates made in 1886 by Thurston, the British Colonial Secretary in Fiji, and from the estimates made in 1887 by Baron Plessen, the German Ambassador to Great Britain. The 1874 census apparently repeated the figure of the 1863 census for Manu'a.

¹³ In fact, Durand has questioned the reliability of Wilkes' estimates for 1839 as their source was the missionaries who had lived in Samoa only since 1836. See John D. Durand, *The Population of Western Samoa* (New York, United Nations, Population Division, 1974), p. 4. Mc Arthur considered that even the "successful" 1845 census may have been just as exaggerated as the 1839 estimate because of the method of census-taking. See Norma Mc Arthur, *op. cit.*, p. 102.

Available evidence indicates that the most important factors responsible for the stagnant population growth in the latter half of the last century were epidemics of new diseases brought in by early missionaries and visitors. Many of the explorers had described the Samoans as being very healthy.¹⁴ Of course some diseases did exist, and those most frequently mentioned by early visitors were: elephantiasis,^{15,16,17} spine affection resulting in humpback,^{17,18} pulmonary affections,^{17,18} a trachoma-like eye disease,^{15,16,17} skin disease,^{16,17,19} and insanity. Some of these diseases cause little or no mortality. It would, however, appear that there were no epidemics of acute infectious diseases with fever such as influenza and dysentery^{15,16,17} until 1830, when the Reverend John Williams and his party brought influenza to Samoa.²⁰ Subsequently, the first influenza epidemic swept over the islands. It was fatal in many cases, especially to the old people and those previously weakened by pulmonary diseases.²¹ More influenza epidemics were recorded in May 1837, June 1839, November 1839 and from November 1846 to January 1847.²² Other diseases arrived in quick succession: whooping cough in 1849,²³ mumps in 1851,²⁴ and measles in 1862.²⁵

The disastrous effects of the epidemics have been vividly described by eye witnesses. Erskine noted "60 deaths in one district of 2,500 people, and even a larger proportion in some marshy and damp areas" during the 1846-1847 influenza epidemic. He also observed that the 1849 whooping cough epidemic caused a 5 per cent reduction of population over an 18-month period.²⁶ Perhaps more dramatic is the following description by Hood:

"The measles had broken out on the island [of Tutuila], and the people died in hundreds, whole villages were depopulated, not one being left to tell the story of their miserable end. So virulent the disease, that in many houses, father, mother, and children all lay dead or dying at the same

¹⁴ For instance, see Alfred St. Johnston, *Camping Among Cannibals*, (London, McMillan and Co., 1883), p. 203.

¹⁵ Julius L. Brenchley, *Jottings during the Cruise of H.M.S. Curacao among the South Sea Islands in 1865* (London, Longmans, Green and Co., 1873), p. 57.

¹⁶ Charles Wilkes, *op. cit.*, p. 185.

¹⁷ George Turner, *Samoa, A Hundred Years Ago and Long Before* (London, McMillan and Co., 1884), p. 137.

¹⁸ Charles Wilkes, *op. cit.*, p. 184.

¹⁹ Julius L. Brenchley, *op. cit.*, p. 39.

²⁰ John A.C. Gray, *Amerika Samoa* (Annapolis, United States Naval Institute, 1960), p. 34.

²¹ George Turner, *op. cit.*, p. 139.

²² Norma Mc Arthur, *op. cit.*, p. 102.

²³ John E. Erskine, *op. cit.*, p. 104.

²⁴ George Turner, *op. cit.*, p. 139.

²⁵ T.H. Hood, *Notes of a Cruise in H.M.S. Fawn in the Western Pacific in the Year 1862* (Edinburgh, Edmonston and Douglas, 1863), p. 114.

²⁶ John E. Erskine, *op. cit.*, p. 104.

Table 1. Population of eastern Samoa in the nineteenth century

Year	Source	Tutuila	Manu'a	Eastern Samoa	All Samoan islands
1831	Lafond de Lurcy ^a	12 000	25 000	37 000	85 000
1839	Wilkes ^b	8 000	2 000	10 000	56 600
1845	Missionary census ^c	4 000	1 350	4 350	50-60 000
1849	Erskine ^d	3 700	1 300	5 000	37 000
1853	Missionary census ^e	3 389	1 275	4 664	33 901
1863	Foster ^f	3 450	1 421	4 871	35 097
1865	Brenchley ^g	3 948	...	...	...
1869	Missionary census ^h	3 450	1 431	4 881	35 107
1874	Marques ⁱ	3 746	1 421	5 167	34 307
1875	du Fief ^j	3 746	1 421	5 167	34 265
1879	British Consulate ^k	3 700	1 400	5 100	34 100
1881	Deschanel ^l	5 000	2 000	7 000	35 350
1886	Thurston ^m	3 500	...	...	...
1887	FOCP ⁿ	3 500	...	...	33 450
1899	Olivares ^o	3 700	1 500	5 200	36 000
1899	Reinecke ^p	...	...	4 000	36 800
1899	FOCP ^q	4 000	1 759	5 759	33 800
1900	Naval census ^r	3 923	1 756	5 679	38 494

- Sources: ^a Gabriel Lafond de Lurcy, "Quelques semaines dans l'archipel de Samoa", *Bulletin de la Société de géographie*, 1845), p. 9
- ^b Charles Wilkes, *Narrative of the United States Exploring Expedition during the Years 1838, 1839, 1840, 1841, 1842*. (London, Ingram, Cook and Co., 1852) p. 190.
- ^c *Samoan Reporter*, No. 1, March 1845.
- ^d John E. Erskine, *Journal of a Cruise Among the Islands of the Western Pacific* (London, John Murray, 1853), p. 60.
- ^e *Samoan Reporter*, No. 15, January 1854.
- ^f U.S.C.D. Foster to Hunter, 8 February 1875, cited in Norma Mc Arthur, *Island Populations of the Pacific* (Canberra, Australian National University Press, 1967), p. 101.
- ^g Julius L. Brenchley, *Jottings during the Cruise of H.M.S. Curacoa among the South Sea Islands in 1865* (London, Longmans, Green and Co., 1873), p. 57. The total is further broken down to 1,293 men, 1,197 women, 765 boys and 699 girls.
- ^h A.B. Steinberger, *Report on Samoa or Navigator's Islands* (Washington, DC, United States Senate Document No. 45, 1874), p. 20.
- ⁱ A. Marques, *Iles Samoa. Notes pour servir a une monographie de cet archipel* (Lisbon, Imprimerie Nationale, 1889), p. 5.
- ^j Jean B.A.J. du Fief, "Les iles Samoa" (*Bulletin de la Société royale belge de géographie*, Brussels, vol. 13, 1889), p. 351.
- ^k British Consulate, Samoa, cited in Norma Mc Arthur, *op. cit.*, p. 101.
- ^l Paul Deschanel, *La politique française en Océanie* (Paris, Berger-Levrault et Cie, 1884), p. 234.
- ^m Acting High Commissioner John. B. Thurston to Mr. Standhope, 1 October 1886. Area Studies Series (*British Parliamentary Papers, Correspondence, Treaties and Conventions Respecting the Affairs of Samoa 1881-99*, Irish University Press, 1971), p. 102.
- ⁿ FOCP No. 5532. Plesson to Foreign Office, 3 March 1887, cited in Norma Mc Arthur, *op. cit.*, p. 101.
- ^o Jose de Olivares, *Our Islands and Their People* (St. Louis, N.D. Thompson Pub. Co., 1899), p. 541. Reference year for the estimate is not given.
- ^p Franz Reinecke, *Samoa* (Berlin, Wilhelm Susserott, 1902), p. 2.
- ^q FOCP No. 3233. Maxse to Salisbury, 16 February 1899, cited in Norma Mc Arthur, *op. cit.*
- ^r United States Department of Navy, *American Samoa. A General Report by the Governor, 22 June 1912* (Washington, DC, Government Printing Office, 1913).

time, none being able to render the other any assistance. . . ."²⁷

Many of these descriptions, however, refer to hard-hit villages only. It should also be noted that not all the epidemics claimed high mortality. For instance, Turner apparently doubted that the mumps epidemic of 1851 resulted in much mortality even though "scarcely a native escaped" from the disease.²⁸

The extra mortality caused by the epidemics is, of course, difficult to estimate. After a careful analysis of the various reports, Mc Arthur concluded that the maximum decline in population resulting from the two early epidemics of influenza was only 5 per cent. Having considered the effects of whooping cough and fighting in 1849, she estimated a 10 per cent reduction in the population during the decade 1839-1849.²⁹

Constant fighting among the islanders was also an important factor contributing to population decline in Samoa.³⁰ Early visitors were aware of this. Stair believed that the population had been steadily decreasing, even before the introduction of Christianity, "principally in consequence of the ferocious and bloody wars in which the natives so constantly engaged."³¹ The conflicts, however, probably had less effect on the growth of population in eastern Samoa than in western Samoa, because the inhabitants of Tutuila were forbidden by their chiefs to participate in the civil war which was raging in the western islands from 1848 to 1853.³² On the other hand, there is a record of a civil war in Tutuila which devastated several villages in 1858 and 1859, but no casualty figures are given.³³ Even these fights appear to have subsided considerably by the 1860s. In 1862, Hood referred to the increase of population, which resulted mainly from the cessation of feuds between tribes.³⁴ At about this time, the *Samoan Reporter* also claimed that, compared with other South Pacific islands, no marked diminution of population was occurring in Samoa.³⁵

It has been argued that famine, the third of the Malthusian "positive checks" on population growth, was of minor importance in nineteenth-century

²⁷ T.H. Hood, *op. cit.*, p. 143. Hood further asserted that his population estimate of 34,000 for 1862 was perhaps not more than a third of what it once was.

²⁸ George Turner, *op. cit.*, p. 139.

²⁹ Norma Mc Arthur, *op. cit.*, p. 103. This estimate is, in fact, in agreement with Erskine who observed that "the population [of Tutuila] is decreasing, though not rapidly, and is now estimated by the missionaries who have the means of knowing with tolerable exactness, at from 3600 to 3700 souls, having been called 4000 ten years since". See John E. Erskine, *op. cit.*, p. 60. Mc Arthur, however, holds the view that this statement was exaggerated.

³⁰ John D. Durand, *op. cit.*, p. 5.

³¹ John B. Stair, *op. cit.*, p. 56.

³² Norma Mc Arthur, *op. cit.*, p. 104.

³³ *Samoan Reporter*, No. 22, March 1861, p. 2.

³⁴ T.H. Hood, *op. cit.*, p. 143.

³⁵ *Samoan Reporter*, No. 22, March 1861, p. 4.

Samoa.³⁶ There were occasional hurricanes, notably in 1848, 1858 and 1889,³⁷ which might have resulted in food shortages and subsequent malnutrition, but these may not have had any visible influence on population growth.

Although there must have been extensive inter-island movement, records do not indicate any signs of emigration to areas outside the archipelago. Even the inter-island migration was essentially but a temporary exchange of population between islands. Any gain or loss of residents in an island through such movement of population should have been small, if not nil. On the other hand, there appear to have been a considerable number of "imported Polynesians" by the fourth quarter of the century, possibly totalling as many as 2,000 in all the Samoan islands,³⁸ though the number of such Polynesians in eastern Samoa is not precisely known. It is, however, suspected that most of them resided in Upolu as they were copra and cotton workers. Undoubtedly they contributed to the population dynamics of Samoa after about 1870, but were not significant to the change in population size at the initial stage of Western contact.

In eastern Samoa during the last decade of the nineteenth century, there were a series of epidemics, notably influenza in 1891, measles in 1893 and 1894 and diarrhoea and dysentery in 1895. The measles epidemic is said to have caused many deaths in Tutuila.³⁹ The eastern islands were, however, relatively detached from the civil unrest which was sweeping the western islands during most of that time. Although in 1896 a period of unprecedented drought and famine was reported in Savai'i, Tutuila was not affected.⁴⁰ Some population increase must have taken place in the last decade, but an abrupt increase is not likely. It is likely that by 1890 Tutuila's population had already reached almost 3,900 and that of Manu'a 1,700.

Information on fertility and mortality is extremely limited. Fragmentary records do not necessarily show deaths outnumbering births, in spite of the concern for depopulation shown by some of the contemporary missionaries. Brenchley, visiting Tutuila in July 1965, said that the population had been stationary for many years, "the deaths equaling the births, being 1 in 39½".⁴¹ This means that both birth and death rates were slightly more than 25 per 1,000 population; however, the real level is likely to have been much higher. There were 1,464 boys and girls in Tutuila, comprising 37 per cent of the total population of

³⁶ John D. Durand, *op. cit.*, p. 6.

³⁷ John A.C. Gray, *op. cit.*, pp. 87-91.

³⁸ Norma Mc Arthur, *op. cit.*, p. 108.

³⁹ United States Department of the Navy, *American Samoa: General Report by the Governor, 22 June 1912* (Washington, DC, Government Printing Office, 1913), p. 25.

⁴⁰ Norma Mc Arthur, *op. cit.*, p. 111.

⁴¹ Julius L. Brenchley, *op. cit.*, p. 57.

3,948. The proportion of children in the entire archipelago was remarkably similar, at the level of 36 per cent. Mc Arthur observed that the birth rate in the population of Fiji in 1891, which had roughly the same proportion of children, was between 35 and 40 per 1,000 each year.⁴²

The proportion of children may have been comparable for Samoa and Fiji. But the proportion for Samoa was for 1865 and that for Fiji was for 1891. It is possible that the infant mortality was much higher for the former and that even with the same proportion of children, the birth rate of Samoa could have been higher than that of Fiji. Turner, a medical missionary, and the *Samoan Reporter* of 1852 stated that probably "one-half of them [Samoan infants] die before they reach their second year".^{43,44} Quoting Powell, Mc Arthur presents a birth rate of 42 per 1,000 in Manu'a for 1854-1855.⁴⁵ Even during the period which included the 1846-1847 influenza epidemic, Erskine noted six more births over deaths in six years in Manu'a, which had a population of 1,300,⁴⁶ the annual average increase rate being 0.08 per cent. Mc Arthur maintains that even with birth rates of 3.5 to 4 per cent, population losses would be compensated for in non-epidemic years.⁴⁷

Although it is difficult to determine the demographic parameters of nineteenth century Samoa from the available information, a review of literature and records appears to indicate that the population of eastern Samoa was near 5,000 around 1850; about two thirds lived in Tutuila, the remainder in Manu'a. In spite of a high fertility rate of more than 40 per 1,000, there may have been an intermittent excess of deaths over births, mainly as the result of epidemics of new diseases. There is, however, no sustainable proof of depopulation. Instead, during the next 50 years a very gradual increase appears to have taken place, with Tutuila's population approaching 4,000 and that of Manu'a approaching 1,800 at the turn of this century.

B. Population in the twentieth century

Reliable data on the population of American Samoa are available from the several censuses carried out during this century. During the initial stages of the United States naval administration several censuses of population were taken by the naval governors between 1900 and 1912. Since 1920, the islands have been included in the United States decennial censuses. In addition, special censuses were taken in 1945, 1956 and 1974. Relatively accurate vital statistics have also been maintained since about 1930. It is thus possible to

determine the pattern of population growth in the present century more accurately than in the last century.

The population of American Samoa as recorded at the various censuses from 1900 to 1974 is presented in table 2. It will be seen from the table that the population has increased more than five-fold from 5,679 in 1900 to 29,190 in 1974. This corresponds to an overall average growth rate of 2.2 per cent per annum. The census enumerations also show that the population has been doubling roughly every 30 years; it was 10,055 in 1930 and 20,051 in 1960.

American Samoa has a very rapidly growing population, even by Pacific standards, and competes with Hawaii whose population also grew five times during the past 70 years. In comparison, the independent western portion of the archipelago grew 4.3 times from a population of 34,500 in 1900⁴⁸ to 146,626 in 1971⁴⁹. The rapid population growth in American Samoa is particularly interesting in view of the almost stagnant growth during the nineteenth century and of the extensive emigration during recent years.

Although the rate of growth of the American Samoan population averaged about 2.2 per cent per annum between 1900 and 1974, the population did not grow at a uniform rate throughout this period. The percentage increases and the average annual rates of growth have shown appreciable variations from one inter-censal period to another. It will be seen from figure 1 that the trend of increase up to 1940 was fairly stable, since then the pattern of growth has been somewhat irregular. It is also evident from table 2 that the average annual rate of increase between 1900 and 1940 was just over 2 per cent, with a slight tendency to increase at each census, although there was a decline in the rate between 1912 and 1920. A phenomenal increase of about 4 per cent per annum was observed in the 1940s. During the 1950-1960 inter-censal period the increase came almost to a standstill, the average annual rate of increase being even less than 0.6 per cent. Over the next decade, a tremendous upsurge of population growth was again recorded: the annual rate of increase rose to over 3 per cent. Since then, the result of the special census of 1974 suggests a slowing down of the growth rate to 1.8 per cent per annum.⁵⁰ As will be noted later in chapter II, prior to 1940, natural increase played a predominant role in

⁴² Norma Mc Arthur, *op. cit.*, p. 114.

⁴³ George Turner, *op. cit.*, p. 135.

⁴⁴ *Samoan Reporter*, No. 14, September 1852, p. 1.

⁴⁵ Norma Mc Arthur, *op. cit.*, p. 114.

⁴⁶ John E. Erskine, *op. cit.*, p. 39.

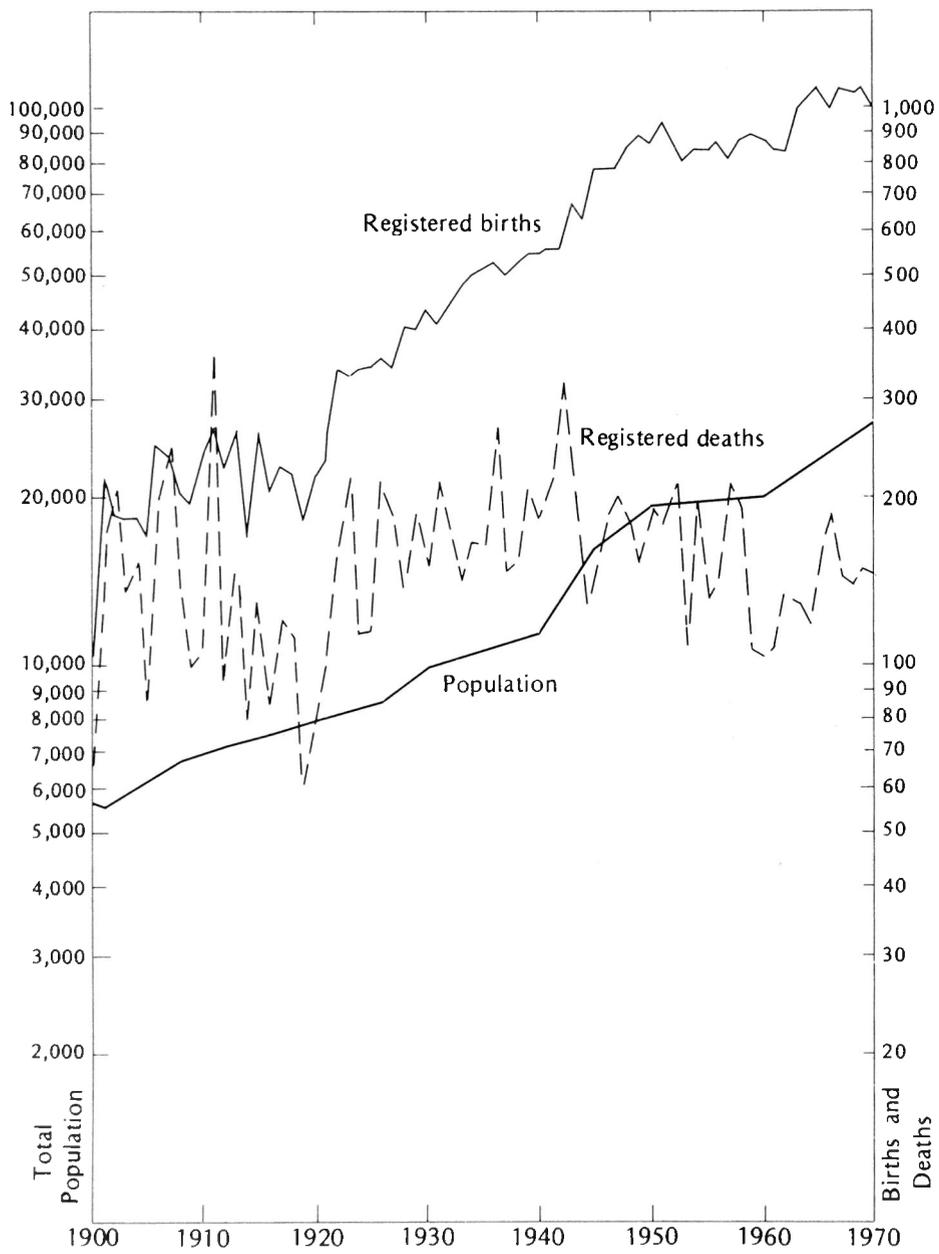
⁴⁷ Norma Mc Arthur, *op. cit.*, p. 114.

⁴⁸ Peter N.D. Pirie, "Samoa: two approaches to population and resource problems", in Wilbur Zelinsky, Leszek A. Kosinski and R. Mansell Protero, eds., *Geography and a Crowding World* (Oxford University Press, 1970), p. 494.

⁴⁹ Department of Statistics, *1971 Western Samoa Census*, Apia, Samoa.

⁵⁰ Since the methods and concepts employed for the 1974 special census were different from those of the United States decennial census, further investigation is necessary before firm conclusions can be drawn on the observed average annual rate of increase of the population between 1970 and 1974.

FIGURE 1
Population, births, and deaths: American Samoa, 1900–1970



population growth, but after 1940 migration assumed equal importance.

As was observed in the preceding paragraph, the average annual rate of growth of the population between 1900 and 1912 was higher than the rate between 1912 and 1920. Mc Arthur holds the view that the revolt against the German regime in Western Samoa during the first decade may have forced some of the protagonists to seek refuge in American Samoa.⁵¹ She also implies that the relatively low increase between 1912 and 1920 was due to their return to Western Samoa when the New Zealand forces assumed control there.

In the early years of this century, permanent migration does not seem to have taken place to any great extent. However, there undoubtedly was a large volume of population movement between the two Samoas in terms of temporary migration. A time-honoured Samoan pastime, *malaga*, or mass visitation, allows persons from one village to visit another, fully expecting to be fed and housed for the duration of their stay.⁵² There may have been some migration of a permanent nature besides that due to marriage between islanders. However, there is no reason to suspect that such population movement has predominantly been in one direction. Before 1940, the net population gain from migration for American Samoa appears to have been negligible. In fact, available evidence presents an annual natural increase rate of slightly over 2 per cent between 1920 and 1930 and 2.5 per cent between 1930 and 1940,⁵³ roughly coinciding with the observed growth rates shown in table 2.

It may be noted that there was also an acceleration in the rate of population growth in western Samoa at the turn of this century, but this rate has always lagged behind the rate for eastern Samoa. For instance, during the period 1900 to 1918, the population of western Samoa increased at a rate of 1.1 per cent per annum; that of American Samoa increased at a rate of 1.8 per cent per annum. Since migration was not a major cause of population change in the earlier decades of the century, the disparity in the rates of population growth between the two Samoas may be attributed to the "greater success of the U.S. Navy in applying modern medical techniques to their small area".⁵⁴ Vaccination was a routine procedure. There were vigorous campaigns against hookworm, gonorrhoea, filariasis and water-borne diseases. Effective medical facilities and sanitation were provided. Because of the maintenance of strict

⁵¹ Norma Mc Arthur, *op. cit.*, p. 144.

⁵² The extent to which this custom was practised was ruinous to the travellers as well as to their hosts, and hence both German and American authorities had to issue the Malaga Regulation of 1903 limiting the size of parties travelling together between the two Samoas. See John A.C. Gray, *op. cit.*, p. 154.

⁵³ C.B. Park, *Population Statistics of American Samoa: A Report to the Government of American Samoa* (Honolulu, East-West Population Institute, 1972), p. 7.

⁵⁴ Peter N.D. Pirie, *op. cit.*, p. 495.

quarantine, American Samoa was entirely spared the world pandemic of influenza in 1918 which killed as many as one fifth of Western Samoans.⁵⁵ Pirie concluded that "within the limits of contemporary medical knowledge, American Samoa was a model of tropical public health".

The rapid population growth of American Samoa did not escape the notice of its authorities. In 1912 the then Governor reported:

"It is believed that the increase [of population] is largely due to the improved methods of hygiene, the education of natives in sanitation, the establishment of a hospital, and the care of the Samoan sick given by the Naval medical officers."⁵⁶

The Governor's report of 1926 cited a number of similar causes for the population increase, as well as such factors as the absence of civil wars, establishment of a Samoan nursing school, and routine inspections by district sanitary inspectors and Samoan nurses.⁵⁷

From about 1940, the growth of population in American Samoa was profoundly influenced by migration which in turn was determined by various "push and pull" forces, especially economic ones, operating between the two Samoas and between the Samoan archipelago on the one hand and Hawaii and the mainland United States on the other. The phenomenal increase in population between 1940 and 1950, equivalent to an average annual rate of nearly 4.0 per cent, was due to both augmented natural increase and substantial population influx, mostly from Western Samoa. During the Second World War, Pago Pago was a hub of activity. There was an almost unlimited demand for labour. Mc Arthur estimates that the natural increase for the decade was about 4,700, while the net increase recorded was just over 6,000, implying that immigration contributed more than one fifth of the total increase.⁵⁸ In fact, the increase due to migration mostly took place between 1940 and 1945; the growth in the latter part of the 1940s was merely at the level of natural increase. The population increased from about 13,000 in 1940 to 15,500 in 1945; the annual increase averaged more than 5 per cent, a rate which would require only 14 years for the population to double. On the other hand, the average rate of increase for the second half of the decade amounted to 2.8 per cent per year.

Migration is often sex-selective. During the period when the population growth exceeded the natural increase, the increase in male population was greater than

⁵⁵ Newton Allen Rowe, *Samoa under the Sailing Gods* (London, Putnam, 1930), pp. 315-316.

⁵⁶ United States Department of the Navy, *American Samoa: A General Report by the Governor, 1916* (Washington, DC, Government Printing Office), p. 44.

⁵⁷ *American Samoa: A General Report by the Governor, 1926*, (Washington, DC, Government Printing Office 1927), p. 9.

⁵⁸ Norma Mc Arthur, *op. cit.*, p. 144.

Table 2. Population of American Samoa in census years 1900 to 1974, intercensal increase, percentage increase and average annual growth rates

Census year	Enumerated population	Intercensal increase	Percentage increase	Average annual growth rate (%)
1900 ^a	5 679			
1912 ^a	7 251	1 572	27.68	2.06
1920 ^b	8 058	807	11.13	1.33
1930 ^c	10 055	1 997	24.78	2.24
1940 ^c	12 908	2 853	28.37	2.53
1950 ^c	18 937	6 029	46.71	3.91
1960 ^d	20 051	1 114	5.88	0.57
1970 ^e	27 159	7 108	35.45	3.08
1974 ^f	29 190	2 031	7.48	1.82

Sources:

- ^a United States Department of the Navy, *American Samoa: A General Report by the Governor, 1 May 1921* (Washington, DC, Government Printing Office, 1922).
- ^b United States Bureau of the Census, *Fourteenth Census of the United States 1920*, vol. III, Washington, DC, Government Printing Office) p. 1237.
- ^c United States Bureau of the Census, *Census of Population: 1950, Vol. II: Characteristics of Population: Territories and Possessions* (Washington, DC, Government Printing Office, 1953), pp. 54-10 and 54-11.
- ^d United States Bureau of the Census, *U.S. Census of Population: 1960. General Population Characteristics, American Samoa*, final report PC(1) – B56 (Washington, DC, Government Printing Office, 1961).
- ^e United States Bureau of the Census, *U.S. Census of Population: 1970. Number of Inhabitants, American Samoa*, final report PC(1) – A56 (Washington, DC, Government Printing Office, 1971).
- ^f *Report on the 1974 Census of American Samoa* (Government of American Samoa and East-West Population Institute, 1977).

that of the female population; between 1940 and 1945, males increased by 5.3 per cent annually and females by 4.7 per cent. But during the next five years both sexes recorded virtually equal rates of increase.

Over the next decade, 1950-1960, the average annual growth rate declined to less than 0.6 per cent per year. There was even a decrease between 1956 and 1960, indicating that the small growth rate recorded during the decade was actually concentrated in the first half of the 1950s. During this period fertility remained extremely high but mortality continued to decline rapidly.⁵⁹ The natural increase rate around 1960 was about 3.7 per cent. In other words, the average emigration amounted to 3.0 per cent or more annually. However, according to Mc Arthur, the net loss through emigration from 1950 to 1956 was 3,000 as against 4,100 of natural increase. Mc Arthur also noted that “probably only two-thirds of this number [3,000] could be regarded as ‘permanent’ emigrants”.⁶⁰ During the three and a half years between the two censuses of 1956 and 1960, there were about 2,450 more births than deaths, while there was a decrease in total population of 103 persons. These figures suggest a net loss of 2,550 due to emigration, or an average annual emigration rate as high as 3.6 per cent.⁶¹ The main cause of the mass emigration was the economic crisis which followed the end of the war in 1945 and the administrative transfer from the navy to the Department of Interior in 1951.

In the decade of the 1960s, a dramatic reversal in the population growth trend was observed: the increase averaged 3.1 per cent per year. It is generally believed that this situation stemmed from improved economic conditions on Tutuila. However, as will be seen from table 3, there were still a large number of emigrants. Natural increase recorded for the decade was approximately 8,400, corresponding to just short of 42 per cent of the entire 1960 population. As there was an intercensal increase of 7,100, the difference from the natural increase, 1,300, may be attributed to net out-migration. But this number does not really represent the outflow of American Samoans, as there were also a large number of Western Samoans moving into American Samoa. Analysing the data on birthplace given in the 1960 and 1970 censuses, Park indicated a net gain of 2,831 Western Samoans during the decade.⁶² There were also 955 foreign-born persons (a majority presumably being Tongans). In the meantime, there was an influx of American administrators and technicians recruited to initiate governmental programmes,⁶³ and the two censuses show an increase of 990 persons residing in American Samoa who were born in the

⁵⁹ For further discussion on this aspect, see chapter II.

⁶⁰ Norma Mc Arthur, *op. cit.*, p. 144.

⁶¹ For further discussion on this aspect, see chapter II.

⁶² C.B. Park, *op. cit.*, p. 7.

⁶³ Peter N.D. Pirie, *op. cit.*, p. 496.

Table 3. Migration and natural increase, American Samoa, 1960-1974

Item	1960-1970 ^a			1970-1974 ^b
	Males	Females	Total	Total
(1) First census population	10 164	9 887	20 051	27 159
(2) Intercensal births	4 997	4 702	9 699	4 720
(3) Intercensal deaths	773	528	1 301	660
(4) Imputed second census population (1) + (2) - (3)	14 388	14 061	28 449	31 219
(5) Second census population	13 682	13 477	27 159	29 190
(6) Net migration (4) - (5)	706	584	1 290	2 029
(7) Actual increase (5) - (1)	3 518	3 590	7 108	2 031
(8) Natural increase (2) - (3)	4 224	4 174	8 398	4 060
(9) Percentage intercensal increase (7)/(1)	34.6	36.3	35.4	7.5
(10) Percentage intercensal natural increase (8)/(1)	41.6	42.2	41.9	14.9
(11) Percentage intercensal migration (6)/(1)	6.9	5.9	6.4	7.5
(12) Annual increase rate	3.02	3.15	3.08	1.80

Sources:

^a C.B. Park, *Population Statistics of American Samoa: A Report to the Government of American Samoa* (Honolulu, East-West Population Institute, 1972), p. 9.

^b Adapted from: *Demographic Yearbook, 1974* (New York, United Nations, 1975), pp. 522-523; and *Demographic Yearbook, 1975* (New York, United Nations, 1976), p. 457.

United States. Keeping these and other figures in mind, Park contends that nearly 5,600 American Samoans, or over 30 per cent of American Samoans, left their islands in the presumably prosperous 1960s.⁶⁴

There was a significant reduction in the rate of growth of the population between 1970 and 1974. This decline was certainly not due to a change in the rate of natural increase, which has remained more or less unchanged at the earlier level.⁶⁵ In spite of a tightening of immigration laws, the 1974 census recorded an increase of 2,849 residents born in Western Samoa, and this number more than accounts for the total increase in population between 1970 and 1974. It is therefore clear that the emigration of American Samoans to the mainland United States and Hawaii has accelerated recently even in the face of governmental efforts to improve the economic conditions of the islands.

The rate of growth of the population in recent years has been extremely high. If the average annual rate of growth observed between 1960 and 1970 were to continue, the population of American Samoa would double in about 23 years time. The rapid growth in population has very serious implications. For instance, the density of population, which currently amounts to about 148 persons per square kilometre, is particularly

high considering the fact that the land suitable for habitation comprises only one third of the total land area. Although this density is not as high as in some of the more densely populated rural parts of India, Pakistan or Bangladesh, it is still some two and a half times greater than the density in the western part of the archipelago. As will be seen from table 4, the density of population in American Samoa is the third highest in the South Pacific, surpassed only by Nauru and Tokelau which are quite small in terms of absolute size.

In recent years the Government has taken positive steps to moderate the rate of population growth. It is attempting to discourage inflow from Western Samoa and Tonga and has imposed stringent conditions for the employment of aliens. Attempts are also being made to discourage the emigration of American Samoans to Hawaii and the mainland United States by improving economic conditions and providing better educational facilities and employment opportunities. As a result of the provision of family planning services by the Government, there has been a slight reduction in the birth rate. However, any substantial reduction in these rates is not likely to take place in the immediate future on account of Samoan cultural traditions. The death rate has already reached a very low level and probably no further significant reduction in mortality will take place. The rate of natural increase will probably continue to exceed 3.0 per cent per annum for some time to come. The over-all growth rate in the immediate future will be contingent on migration balance.

⁶⁴ C.B. Park, *op. cit.*, p. 10.

⁶⁵ Although there was a reduction in the birth rate during this period, this reduction was minimal and was partly offset by a decline in the death rate.

Table 4. Area, population and density of islands in the South Pacific

	<i>Area km²</i>	<i>Population</i>	<i>Density</i>	<i>Year of census</i>
Melanesia				
Solomon Islands	28 530	196 823	7	1976
New Hebrides	11 880	77 988	7	1967
New Caledonia	19 103	133 233	7	1976
Fiji	18 272	588 068	32	1976
Total	77 785	1 015 500 ^a	13	
South Micronesia and Polynesia				
Gilbert and Ellice Islands ^b	716 ^c	57 813	81	1973
Nauru	21	6 966 ^d	332	1977
Wallis and Futuna	255	9 192	36	1976
Tonga	699	90 085	129	1976
Niue	259	3 843	15	1976
Western Samoa	2 935	151 983	52	1976
American Samoa	197	29 190	148	1974
Tokelau	10	1 575	158	1976
Cook Islands	240	18 127	76	1976
French Polynesia	3 265	133 828	41	1977
Pitcairn Islands	5	74	15	1976
Total	8 602	502 676	58	

Sources: Adapted from *Statistical Bulletin of the South Pacific*, No. 15, "Population", 1979. South Pacific Commission, pp. 4-8.

^a Assuming a 2.5 per cent increase in 1967-1976.

^b Now Kiribati and Tuvalu.

^c Excludes the Phoenix Islands.

^d Provisional figures.

Chapter II

COMPONENTS OF POPULATION CHANGE

A. DATA SOURCES

The three components of population change, fertility, mortality and migration, are discussed in this chapter. Although the registration of births and deaths was started soon after the establishment of the naval administration, it is generally recognized that the coverage was not complete during the early days of the American administration.¹ The registration of births and deaths was further formalized with the creation of the office of the Attorney General in 1931.² Since about 1930, the Government of American Samoa has believed that "the present system of collecting vital statistics is such as to make it very unlikely that any births or deaths are not reported".³ Thus, the vital statistics are generally adequate to assess the current levels of fertility and mortality.

Even though American Samoa is an island territory, adequate primary data are not available to indicate accurately the volume of departures and arrivals. Hence indirect estimates have to be made through analyses of census and other relevant data.

B. FERTILITY

It will be seen from figure I that there was a considerable increase in the number of births between 1900 and 1970. The number of registered births around 1930 was a little more than 400 per annum, and this number increased to 550 by 1940, thereafter increasing sharply to a level around 900 by the end of that decade. During the next 12 years, the number of births levelled off at about 850 but in 1963 there was again a sharp increase and since then the number has lingered around 1,000 per annum. It will also be noted from figure I that between 1930 and 1965 the birth curve was almost

parallel to the population curve, suggesting a constant birth rate over that period of time. The levelling out of the birth curve since about 1965, coupled with an increasing population, is indicative of a declining birth rate.

Estimates of birth rates based on the age distribution of the past censuses as well as on the registration data are presented in table 5. It will be seen that according to estimates based on census data, the birth rate fluctuated around 50 per 1,000 until 1950.⁴ Only after 1950 did the crude birth rate start to decline and between 1965 and 1970 to less than 40.⁵ It will also be seen that until about 1950, the birth rates based on registration data are considerably lower than those estimated from census data; this is probably due to under-registration of vital events in earlier days. However, since 1950 the registration data seem to confirm the declining trend in birth rates indicated by the census data.

For the first time in the recent history of American Samoa, the crude birth rate recorded a substantial decline from 47.8 in 1950 to 43.8 in 1960 (table 6). This reduction by over 8 per cent within a decade coincided with the movement out of the country of a large number of persons of reproductive age. The decline in birth rate, therefore, may have been largely due to changes in the age-sex distribution of the population⁶ resulting from this emigration, and not due to any significant changes in the actual fertility of women. This hypothesis is confirmed by other fertility indices that are less dependent on the age and sex distribution of the population. The general fertility rate,⁷ or the number of births per 1,000 women of childbearing age, recorded a decline of only about 3 per cent from 229.0 in 1950 to 221.3 in 1960. The child-woman ratio, or

¹ There were no regulations concerning the registration of births and deaths until 5 September 1906 (see *American Samoa: A General Report by the Governor, 1926*, Washington, DC, Government Printing Office, 1927), although records of vital events are available for periods even before 1900. They are included in the *First Vital Statistics Report, 1970-1971* (Pago Pago, Government of American Samoa, Department of Administrative Service, Office of Territorial Registrar, 1972).

² In the code of American Samoa, 1949, the Attorney-General was still the Registrar for births and deaths. In the late 1960s, this function was transferred to the Clerk of the High Court, but the procedure for registration is otherwise unaltered. (See Norma Mc Arthur, *Island Populations of the Pacific* (Canberra, Australian National University Press, 1967), pp. 151-153).

³ American Samoan Commission, *American Samoa: Hearings before the Commission Appointed by the President of the United States*, (Washington, DC, Government Printing Office, 1931), p. 413.

⁴ Durand noted that the birth rate for Western Samoa between 1906 and 1945 was probably in the range of 45-55 per 1,000 population, one of the highest in the world. See John D. Durand, *The Population of Western Samoa* (New York, United Nations, Population Division, 1974), pp. 17 and 18.

⁵ The birth rate for Western Samoa has also declined recently, but the level is somewhat higher than that of American Samoa, being 41.9 for the 1966-1971 period. See S. Raghavachari, *Demographic Situation in Western Samoa, 1966-1971*, a report prepared for the Government of Western Samoa (United Nations, Office of Technical Co-operation, 1976), table 4.2.

⁶ Although the crude birth rate is a valuable measure of fertility, its analytical utility is extremely limited since it is influenced by many factors, particularly the specific composition of the population with respect to age, sex and other characteristics.

⁷ The general fertility rate corrects to some extent the abnormalities in the crude birth rate due to an abnormal sex ratio in the population or an abnormal age distribution.

Table 5. Crude birth rate per 1,000 population: American Samoa, 1910-1973

Year	Birth rate	
	Estimated from censuses ^a	Rate from registered data
1910-1915	48.7	...
1915-1920	45.9	...
1920-1925	50.3	...
1925-1930	49.2	...
1930-1935	51.8	42.4
1935-1940	45.8	42.9
1940-1945	51.1	41.3
1945-1950	48.6	47.0
1950-1955	41.7	45.1
1955-1960	43.4	43.6
1960-1965	43.0	42.0
1965-1970	38.1	41.7
1971-1974	...	37.1

^a The rates have been estimated by applying the reverse survival method to the census populations in the age groups 0-4 and 5-9 years. Adjustments were made for under-enumeration of children in the 0-4 age group in the censuses of 1920 and 1930.

Table 6. Summary of fertility measures, American Samoa, 1930-1974

Year	Crude birth rate ^{a b}	General fertility rate ^c	Total fertility rate ^d	Child-woman ratio ^e	Ratio children under one year to 1 000 women aged 15-44 years
1930	41.7	197.0	n.a.	799.4	167.7
1940	42.5	204.0	6 347	836.3	170.0
1945	44.4	...	...	...	...
1950	47.8	229.0	6 235 ^f	895.5	193.1
1956	41.7	204.7	6 267 ^g	909.0	202.3
1960	43.8	221.3	6 800 ^h	935.7	219.7
1967	42.5	210.0	6 570 ^h	742.7	n.a.
1970	38.5	189.7	6 051 ^h	863.9	188.4
1974	37.8	178.9	...	752.8	156.1

^a Three-year average based on the number of births released by the Territorial Registrar of Vital Statistics, 1972.

^b Crude birth rate is the number of births per 1,000 population.

^c Number of births per 1,000 women aged 15-44 years.

^d Number of births per 1,000 women.

^e Number of children under five years per 1,000 women aged 15-44 years.

^f As provided by Norma Mc Arthur, *Island Populations of the Pacific* (Canberra, Australian National University Press, 1967).

^g As provided by Lee J. Cho, 1964 for 1955-1960, *op. cit.*

^h Births to mothers of unknown ages are prorated.

the number of children under five years old per 1,000 women of childbearing age, recorded a slight increase of about 4 per cent from 895.5 in 1950 to 935.7 in 1960. The ratio of children under one year of age to 1,000 women of childbearing age also recorded an increase of about 14 per cent during the period. It must, however, be noted that an increase in these two ratios does not necessarily indicate an increase in fertility, since decline in infant and childhood mortality can also result in an increase in these ratios. The total fertility rate,⁸ which is obtained by adding together the age-specific fertility rate for women of each age, also shows an increase of about 10 per cent during the decade 1950-1960. Thus, it can hardly be said that the decline in the crude birth rate in the 1950s actually indicates a decline in the fertility of women; rather the decline appears to reflect the change in population structure. On the other hand, all the indices seem to suggest that a real decline in fertility has been taking place since 1960.

The age-specific fertility rates⁹ for various periods from 1949 to 1973 are shown in table 7. The rate, which is about 50 per 1,000 for women in the age group 15-19 years, rises sharply to about 300 for women aged 20-24 years, and then slowly to a peak at ages 25-29. Thereafter, even though the rate starts declining rapidly, the level is still high at ages 35-39, being in the range of 150-200 per 1,000 women. In general, the age-specific fertility rates in American Samoa are very high, but considerably lower than the rates for Western Samoa, especially in the reproductive years after age 25. Currently, American Samoan women bear about two children less in a lifetime than their Western Samoan counterparts.¹⁰

The age-specific fertility data given in table 7 suggest that there was no definitive decline in fertility during the 1950s as indicated by general fertility rates for this period. There has been a fluctuation in age-specific rates: rates for some age groups decreased while others increased. These changes, however, are minor and may well be due to sample variations and possible omissions in coverage.¹¹ But the decline in fertility after 1960 indicated by the various measures in table 6 is confirmed by the age-specific fertility rates. The age data seem to indicate that the decline after 1960 stemmed from a decline in the fertility of women in the latter part of the reproductive span, that

⁸ The total fertility rate, which indicates the total number of births in the lifetime of a woman for a given fertility schedule, is free from the effects of the age and sex distribution of a population.

⁹ The age-specific fertility rate for women of a given age group is the number of babies born to women of that age group per 1,000 women of that age group in the population.

¹⁰ S. Raghavachari, *op. cit.*, p. 39. The author states that the total fertility rate for Western Samoa is between 7 and 8 as compared to 6.05 for American Samoa.

¹¹ Norma Mc Arthur, *op. cit.*, p. 155, claims a 93 per cent completeness for the 1950 birth registration.

is, in women over the age of 25. In the age groups below 25 years, little change has taken place.

The changing pattern of fertility may be seen from the parity distribution of ever-married women given in table 8. It will be seen that between 1960 and 1974, significant changes have occurred in the parity distribution of ever-married women in the incompleting fertility age groups, 25-34 years and 35-44 years, while the changes in the completed fertility age group, 45-54 years, were not significant. Women in the age group 25-34 years are moving towards lower parities: while in 1960, only 46 per cent of the ever-married women were of three or fewer parities, in 1974 the proportion was as high as 59 per cent. In the age group 35-44 years, there was a decrease in the proportion of both higher and lower parities, but this decline was compensated for by an increase in the proportion of women with parities four to seven. Thus, it appears that the younger the woman, the greater the preference for a smaller family. This apparent contradiction with the findings of the age-specific fertility data is probably due to the nature of the measurements. The parity distribution presents the effect of accumulated fertility in the past. Thus, the parity distribution of older women does not reflect the changes in recent fertility.

The parity distribution is indicative of the high level of American Samoan fertility. Of women aged 45-54 years, half have borne seven or more children as of either 1960 or 1974. Over 22 per cent of women have had 10 or more children. Only about 5 per cent of women remain childless by age 45-54. A considerable decline in the mean number of births is observed for younger women; for instance, in the age group 25-34 years, this average fell from 3.8 in 1960 to 3.2 in 1974. In the older ages, however, there are increases; for the age group 35-44, parity increased from 5.3 births in 1960 to 5.7 in 1974, and for the age group 45-54, it increased from 6.1 to 6.6. This increase during the 15-year period may or may not be real, since it is generally acknowledged that the older women are more subject to recall lapse and this may have been particularly true for 1960.

It is evident from table 9 that there is a substantial difference in average parity between districts. The remote Manu'a group has distinctly higher fertility than Tutuila. Within Tutuila the less developed Eastern district is higher than the others. The Central and Western districts, which include five large villages with populations of over 1,000 each, do present lower mean numbers of children ever born.

The reduction in fertility in the 1960s is also confirmed by changes in birth order of the registered births. As will be seen table 10, the over-all median birth order was 4.0 for mothers in 1961-1962, but declined to 3.3 in 1971-1972. In every age group of mothers, except the oldest age group which had only a small numbers of births, a substantial decline in the

Table 7. Age-specific fertility rates per 1,000 women, American Samoa, 1949-1971

Age of woman	1949-1951 ^a	1955-1960 ^b	1959-1961	1969-1971	1971-1973	Western Samoa 1966-1971 ^c
15-19 ^d	64	44.0	46.2	53.2	55.0	40.97
20-24	309	290.2	285.5	293.3	276.7	297.47
25-29	336	381.7	353.2	322.7	306.2	391.94
30-34	271	260.2	304.7	228.0	213.0	319.75
35-39	196	180.2	185.6	913.5	150.2	255.69
40-44	54	76.1	102.1	71.9	64.1	122.45
45-49 ^e	17	21.0	15.9	18.9	18.4	42.83

^a As provided by Norma Mc Arthur, *Island Populations of the Pacific* (Canberra, Australian National University Press, 1967).

^b As provided by Lee J. Cho, 1964, *op. cit.*

^c As provided by S. Raghavachari, *Demographic Situation in Western Samoa, 1966-1971* (United Nations, Office of Technical Co-operation, 1976).

^d Births to mothers below 15 years of age are included.

^e Birth to mothers of 50 years of age and above are included.

Table 8. Percentage distribution by parity, ever-married women, American Samoa

Age	Year	0	1	2	3	4-5	6-7	8-9	10+
25-34	1960	5.4	10.1	12.9	15.8	29.3	17.4	6.8	2.4
	1974	7.6	13.9	18.8	18.9	27.0	11.0	2.3	0.4
35-44	1960	6.5	6.0	8.0	9.5	18.9	20.3	17.1	16.2
	1974	4.8	5.2	6.2	8.7	21.3	24.6	17.5	11.0
45-54	1960	5.8	5.8	5.2	7.0	17.5	17.8	18.4	22.4
	1974	5.1	4.4	6.0	6.0	18.2	18.8	18.3	22.7

Table 9. Mean number of children ever born per ever-married women, American Samoa, 1974

Age	Total	Tutuila			Manu'a
		West	Central	East	
20-24	1.5	1.3	1.4	1.8	1.9
25-29	2.6	2.6	2.4	2.7	3.6
30-34	3.9	4.0	3.9	3.9	4.6
35-39	5.2	5.2	4.9	5.6	6.0
40-44	6.4	6.2	6.0	7.1	7.4
45-49	6.6	6.6	6.3	6.4	7.6

Table 10. Number of births by order of live birth and age of mother, 1961-1962 and 1971-1972

1961-1962								
<i>Live-birth order</i>	<i>Age of mother</i>							
	<i>All ages</i>	<i>15-19</i>	<i>20-24</i>	<i>25-29</i>	<i>30-34</i>	<i>35-39</i>	<i>40-44</i>	<i>Unknown</i>
Total births	1 653	168	401	401	376	194	73	40
1	257	67	122	32	12	2	0	22
2	258	98	103	35	15	2	0	5
3	214	2	88	81	38	3	1	1
4	195	1	59	93	33	5	2	2
5	146	—	15	57	51	21	1	1
6	146	—	6	48	63	20	8	1
7	134	—	3	30	71	27	2	1
8	87	—	4	11	39	26	5	2
9	75	—	—	7	31	25	10	2
10+	139	—	—	7	23	63	44	2
Unknown	2	—	1	—	—	—	—	1
Median parity	4.0	1.7	2.3	4.1	6.1	8.2	9.7	

1971-1972								
<i>Live-birth order</i>	<i>Age of mother</i>							
	<i>All ages</i>	<i>15-19</i>	<i>20-24</i>	<i>25-29</i>	<i>30-34</i>	<i>35-39</i>	<i>40+</i>	<i>Unknown</i>
Total births	2 115	173	706	575	342	213	104	2
1	408	111	226	57	10	4	—	—
2	400	41	245	93	11	8	2	—
3	298	13	126	108	44	6	1	—
4	253	6	71	125	38	11	1	1
5	208	1	30	95	54	24	4	—
6	129	—	5	45	50	28	1	—
7	134	—	1	35	56	31	11	—
8	89	—	1	11	37	28	12	—
9	50	—	—	2	18	22	8	—
10+	138	—	—	4	23	48	63	—
Unknown	8	1	1	—	1	3	1	1
Median parity	3.3	1.3	2.0	3.7	5.8	7.3	9.7	

median birth order has been recorded. The reduction is especially marked for the age group 35-39 years: the median birth order decreased by almost one, and the proportion of mothers of seventh birth order and above declined from 73 per cent in 1961-1962 to 61 per cent in 1971-1972.

As noted earlier, examination of the fertility data suggests that while there were no signs of reduction in fertility through the decade of the 1950s, there has been a substantial decline in fertility since the early 1960s. To reiterate some of the indices of decline, the crude birth rate decreased from an annual average of 43.8 per 1,000 population in 1959-1961 to 38.5 in 1969-1971; the child-women ratio declined from 936 in 1960 to 864 in 1970 and to 753 in 1974; and a reduction of more than 10 per cent in the total fertility rate was observed between 1960 and 1970, decreasing from 6,800 to 6,051 per 1,000 women. The reduction was not uniform, however, for all ages. Declines took place only for ages over 25 years, the groups which had already borne several children. Although it may be too early to assert a long-range downward trend, the observed decline alone deserves attention, since it may be the first such decline in history.

Over the years there do not seem to have been any changes in the age at marriage. On the other hand, as will be seen later in chapter III, there has been a clear tendency towards increasing remarriage among widows and divorcees. Under the circumstances, the decline in fertility after 1960 would suggest a gradual increase in the adoption of contraceptive measures among Samoan women, resulting in reduced marital fertility. However, a reduction in the number of males in the reproductive ages through migration would also partly account for the decline in fertility.

Family planning services have been available for some time at the government hospital. In 1971, the Department of Medical Services reported that no more than 4 to 7 per cent of the population at risk had accepted the programme,¹² but there are indications that family planning acceptance is increasing. The number of new acceptors tripled between 1971 and 1973 from almost 500 to about 1,500. There appears to have been a decline since then, though a substantial number of tubal ligations have been carried out.¹³ While fertility has shown signs of decline in recent years, a precipitous decrease may not occur in the near future, since several characteristics of Samoan culture are definitely favourable to high fertility. Marriage occurs at an early age and few remain unmarried after the age of 30. Divorce may be obtained relatively

¹² 1972 *State Plan for Comprehensive Health Planning, Public Law 89-749, section 314 (d) for American Samoa* (Pago Pago, Government of American Samoa, Department of Medical Service, 1971), p. 50.

¹³ Government of American Samoa, *American Samoa, Annual Report to the Secretary of the Interior* (Pago Pago, Office of Samoan Information, 1975), p. 60.

easily, and remarriage of divorcees and widows is unrestricted.

The Samoan family organization is also favourable to the production of many children. It is customary for married sons and daughters to live with their parents and other relatives in large, co-operative household groups where responsibility for the care and support of children is shared by many adults.¹⁴ According to a recent survey, problems associated with high fertility are considered secondary only to problems related to lack of land, such as the construction of more apartment houses or emigration. The survey also found that men over 30 years old generally oppose family planning as something foreign to traditional Samoan culture.¹⁵

In a report to the Secretary of the Interior, Combs presents the view that the evidence of reduction in fertility as shown in the census and vital statistics data may simply be a reflection of the fact "that a certain amount of fertility is being exported; that is, as younger men and women are leaving the island, births that would have occurred in American Samoa are actually occurring in Hawaii or elsewhere".¹⁶ But the total fertility rate, which is free from the effects of age and sex distribution, has also shown a decline recently. In addition, it can be analogously argued that some fertility was imported, since American Samoa receives a large volume of emigrants from Western Samoa, who contribute to the fertility rate. According to the birth registration for 1970 and 1971, about one third of the total births were to parents who were born in Western Samoa.¹⁷ Some of them may have been naturalized, but others may have come to American Samoa for the purpose of having their babies, seeking either better medical care or certain legal advantages.

In summary, the fertility of American Samoa is still high but may be in the first stages of a downward trend. Combs stated that while women were proud of having borne 12, 13 or even 15 children, they nevertheless decried the fact that during much of their child-bearing period they had borne a child every year.¹⁸ Thus, for many women, the number of children they bear may be too many even by Samoan standards. Confronted with the traditional values, the process may be slow, but decline in fertility will gradually take place. The total fertility is already two births less than in Western Samoa.

¹⁴ Margaret Mead, *Coming of Age in Samoa* (New York, William Morrow, 1928), pp. 34-42, 45.

¹⁵ Joe Harding and Dorothy Clement, "Attitudes towards family planning and the family planning programme in American Samoa" (submitted by Policy Research and Planning Group, Berkeley, for Department of Medical Services, Government of American Samoa, 1972), cited by Jerry W. Combs in "Population growth in American Samoa" (Bethesda, Center for Population Research, National Institute of Child Health and Human Development, 1974), p. 12.

¹⁶ Jerry W. Combs, *loc. cit.*, p. 10.

¹⁷ *First Vital Statistics Report, 1970-1971*, pp. 3 and 10.

¹⁸ Jerry W. Combs, *loc. cit.*, p. 11.

C. MORTALITY

It will be observed from figure I that the number of registered deaths has fluctuated violently over the years. This phenomenon may be due to a number of factors such as chance variation owing to small population, outbreaks of communicable diseases, natural calamity, migration, and in the earlier days, defects in registration. Some of the abrupt peaks observed for the early part of the century apparently reflect the severity of epidemics. Despite a small population at that time, 1911 was the year recording the highest number of deaths; in that year, a severe epidemic of measles struck the islands.¹⁹

In spite of irregularities, the number of registered deaths after 1930, when vital registration is considered to have become fairly complete, indicates a slow increase up to the early 1940s, then an abrupt decline around 1945, followed by a downward trend. Currently, the annual number of deaths has more or less stabilized at about 150. Considering the trend of population growth and improvement in vital registration since the early 1900s, figure I seems to suggest a gradual decrease in the death rate through the 1930s and a drastic drop in the death rate in the middle of the 1940s, followed by further slow decline.

The exact level of mortality prior to 1930 is difficult to determine. However, if no net migration is assumed for the earlier days, the crude death rate can be derived as the difference between the rate of population growth and the birth rate. If it is further assumed that the crude birth rate before 1930 ranged from 46 to 52 per 1,000 and that the average annual rates of population growth given in table 2 are synonymous with the rates of natural increase, the imputed crude death rate would be 33-39 for 1910-1920 and 24-30 for 1920-1930. Although a rate of 15.8 is estimated for the period 1930-1940 on the basis of the vital records, some degree of under-registration presumably existed during this period. If a 90 per cent completeness in registration is assumed, the average annual death rate would then be 17.5 for the decade. If these estimates are assumed to be approximately correct, the death rate appears to have fallen by half in a 20-year period between 1910-1920 and 1930-1940. Such a rapid reduction in mortality during these decades was not unique to American Samoa. Durand estimated that the death rate for Western Samoa, which probably experienced a lesser degree of mortality evolution, was cut approximately by half from a level of 50 per 1,000 during the period 1906-1911 to 21 per 1,000 from 1926-1936. He further observed that "without a reduction of this order, the population growth during the latter period would have been literally impossible".²⁰

Pirie also estimated that the death rate of American Samoa declined from 35 per 1,000 in 1906-1907 to 13 per 1,000 in 1927,²¹ but the rate for the latter period is likely to be a gross under-estimate. Although the age composition of the populations may be different, such a low level of mortality as 13 per 1,000 was not attained until the period 1936-1944 even in the United States.²²

Vital statistics indicate that the crude death rate continued to decline, reaching a level below 10 per 1,000 by 1950 and a level of 5 per 1,000 in the 1970s. The estimated crude death rates are chronologically summarized in table 11. It would appear that the crude death rates for American Samoa are comparable to those of Western Samoa until about 1930, but thereafter there is a divergence in the rates for the two countries. The decline of the death rate in Western Samoa virtually ceased from 1936 to 1945, stabilizing at a level of 21,²³ while the decline accelerated in American Samoa. Inadequacy of vital registration does not allow a direct computation of death rates for Western Samoa, but a careful estimation indicates that a large gap still exists between the two Samoas: for the period 1966-1971, the death rate of Western Samoa was 9.8,²⁴ nearly twice that of American Samoa. As noted earlier, in terms of population growth, the rapid decline in the death rate of American Samoa in the early days was undoubtedly due to the successful implementation of health measures. Recently, improvement in living standards resulting from ambitious economic development programmes is believed to be an important factor contributing to the low levels of mortality.

Table 11. Crude death rate per 1,000, American Samoa

<i>Year</i>	<i>Crude death rate</i>
1910-1920	33-39
1920-1930	24-30
1930-1940	17.5
1938-1942	16.6
1943-1947	10.8
1948-1952	9.8
1954-1958	8.8
1958-1962	6.5
1968-1972	5.4
1973-1975	4.9

²¹ Peter N.D. Pirie, "Samoa: two approaches to population and resource problems", in Wilbur Zelinsky, Leszek A. Kosinski and R. Mansell Prothero, eds., *Geography and a Crowding World* (Oxford University Press, 1970), p. 496.

²² United States Bureau of the Census, *Vital Statistics Rates in the United States: 1900-1940* (Washington, DC, Government Printing Office), p. 200.

²³ John D. Durand, *op. cit.*, p. 24.

²⁴ S. Raghavachari, *op. cit.*, p. 24.

¹⁹ United States Department of the Navy, *American Samoa: General Report by the Governor 22 June 1912*, (Washington, DC, Government Printing Office, 1913), p. 25.

²⁰ John D. Durand, *op. cit.*, p. 23.

Table 12. Average annual mortality rates in American Samoa, by age and sex, per 1,000

Age group	Males					Females				
	1940	1950	1960	1970	1974	1940	1950	1960	1970	1974
0	128.0	73.4	31.5	26.7	31.9	125.5	62.3	25.0	24.1	22.1
1-4	17.2	8.5	3.6	2.0	2.2	17.8	9.6	2.7	2.8	1.5
5-9	3.9	1.5	1.0	.6	.8	1.4	1.5	.4	.3	.6
10-14	3.1	1.4	.6	.9	.7	1.2	1.2	.7	.7	.4
15-19	5.1	1.6	1.1	1.2	1.9	5.7	4.2	.7	1.0	1.0
20-24	6.1	3.9	3.5	2.6	3.5	8.4	4.2	.9	.3	1.4
25-29			4.1	1.5	3.9			3.5	1.6	.6
30-34	7.4	1.2	2.0	2.6	3.0	6.0	4.8	1.6	3.1	1.5
35-39			5.2	3.2	4.3			3.9	.5	2.1
40-44	17.1	6.3	3.1	6.5	3.2	11.9	7.9	2.6	3.9	2.7
45-49			15.1	5.6	10.0			5.0	5.8	4.6
50-54	31.4	18.1	10.3	9.0	11.4	19.2	10.5	9.3	6.2	6.0
55-59			13.0	18.3	14.1			6.9	19.1	11.7
60-64	51.3	41.3	20.5	38.8	26.5	55.2	29.3	12.4	17.4	10.8
65-69			15.6	55.6	48.3			16.8	18.8	24.3
70-74			49.8	49.0	88.4			20.8	49.4	56.6
75-59	108.5	90.4	130.4	31.0		127.0	102.2	40.6	83.3	
80 and over			182.8	200.0	136.1			149.7	70.4	129.3

Sources: For 1940 and 1950, Norma Mc Arthur, *Island Populations of the Pacific* (Canberra, Australian National University Press, 1967), p. 154.

For 1960 and 1970, C.B. Park, *Population Statistics of American Samoa: A Report to the Government of American Samoa* (Honolulu, East-West Population Institute, 1972), p. 72.

For 1974. Calculated from vital statistics given in American Samoan annual reports and 1970 and 1974 censuses.

The present mortality level in American Samoa is very low, even by developed world standards, and is still dropping, though slowly. For instance, the death rate in the United States in 1970 was 9.4 compared to only 6.0 in American Samoa. Such a low mortality is, however, partly due to the age structure of the population. Because of the high birth rate in American Samoa, the population is very young. As mortality is low in the young age groups, a population with a large number of young people tends to have a lower over-all death rate. In fact, if the death rate for American Samoa for the period 1969-1971 is adjusted on the basis of the age composition of the United States, the rate becomes 11 per 1,000, nearly 20 per cent higher than that of the United States.²⁵

²⁵ C.B. Park, *Population Statistics of American Samoa: A Report to the Government of American Samoa* (Honolulu, East-West Population Institute, 1972), p. 7.

The age-specific mortality rates for recent years are presented in table 12. Because of the size of the population, these rates show some erratic fluctuations here and there. Nonetheless, the general pattern of the mortality curve by and large conforms to experiences in other countries. In terms of the standards set by the model life tables developed by Coale and Demeny,²⁶ however, the general level of mortality in young adults and middle-aged persons appears to be somewhat high in comparison with the levels for early childhood and old age. In view of the small population size, this relatively high mortality in young and middle-aged adults would usually be dismissed as chance fluctuation. However, further examination of the data seems to indicate that this situation largely results from the

²⁶ Ansley J. Coale and Paul Demeny, *Regional Model Life Tables and Stable Population* (Princeton, Princeton University Press, 1966),

inclusion of non-resident deaths in the mortality computation, as well as from the high risk of dying from external causes. There are a large number of tuna fishermen from oriental countries working in the neighbouring waters. They are not residents of American Samoa, and, accordingly, are not included in the base population. Deaths among these fishermen, however, if occurring within American Samoan territory, are included in the death registration data.²⁷

Despite the chance of fluctuations because of the small population size, the data in table 12 suggest that there has been a substantial decrease in mortality in every age group for both sexes during the two-decade period 1940-1960. However, there was little sign of further improvements during the following decade. This may be because by 1960, the mortality of American Samoans had already reached a very low level. Thus, the current decline in the crude death rate is largely due to the changes in the age structure of the population and not to changes in the age-specific mortality.

The decline in mortality is most impressive for young ages, especially in the infant and pre-school age groups. The rate for these age groups declined by one quarter or more between censuses from 1940 to 1960. However, no appreciable decrease took place in recent years.

At older ages, reduction in male mortality was relatively small compared to that for females which was substantial. During the period 1940-1960, there was little differential by sex, and higher mortality for females was occasionally observed within a given age group. In recent years, however, a marked sex differential favouring females is being experienced, as in most parts of the world.

As noted earlier, the infant mortality rate declined rapidly: it was reduced from over 150 per 1,000 live births in 1940 to about 30 in 1960. Since then, it has been fluctuating, mostly within a range of 25 to 35, as shown in table 13. Considering the infant mortality level of the developed world, there is still room for further improvement. But in comparison with Western Samoa, infant mortality in American Samoa is low, less than half the Western Samoan rate.²⁸ It should also be emphasized that American Samoa's infant

mortality rate is remarkably low for a society with such a high birth rate. The average neonatal mortality rate for the five calendar years 1969-1973 was only 13.9. The infant mortality of American Samoa will probably decline further, but the pace will be extremely slow.

A life table based on the mortality experience of 1959-1961 and 1969-1971 is given in table 14. The life expectancy at birth was 65 years for males and 70 years for females. Again, there is a considerable difference between American Samoa and Western Samoa, as the life expectancy at birth of Western Samoan males was 59.6 years and that of females 63.4 years for the period 1966-1971.²⁹

Table 13. Infant mortality in American Samoa

Year	Mortality rates	
	Neonatal ^a	Infant ^b
1958	11.0	46.0
1959	18.0	33.0
1960	13.8	31.2
1961	13.0	23.7
1962	12.4	45.5
1963	10.3	33.6
1964	8.2	32.6
1966	5.0	36.1
1967	10.8	28.7
1968	10.4	15.0
1969	13.1	23.5
1970	12.9	26.7
1971	17.2	24.8
1972	18.6	33.4
1973	12.2	27.4
1974	12.9	15.6
1975	13.7	23.0

Source: 1958-1975 American Samoa Governor's annual reports, except neonatal rate of 1968 from Department of Medical Services, Government of American Samoa.

^a Deaths under 28 days of age per 1,000 live births.

^b Deaths under one year of age per 1,000 live births.

²⁷ For instance, according to a special list provided by the Department of Medical Services, during the three-year period 1970-1972, there were 11 deaths of foreign fishermen - 6 from the Republic of Korea, 1 Japanese and 4 Chinese - all but one of whom were in the 25-49 age group. These deaths account for 17 per cent of all deaths and 24 per cent of male deaths in this particular age group. In addition, 14 Western Samoan and 3 Tongan deaths occurred in the 25-49 age group. It is quite possible that although these Pacific islanders may have actually been residents of American Samoa, some may have come to American Samoa to seek better medical care and eventually died there.

²⁸ The infant mortality rate for Western Samoa for 1966-1971 is estimated at 65.3. See Raghavachari, *op. cit.*, table 3.1.

²⁹ *Ibid.*, p. 34.

Table 14. Abridged life table of American Samoa, 1960-1970^a

Age interval Period of life between two exact ages stated in years (1)	Proportion dying Proportion of persons alive at beginning of age interval dying (2)	Of 100,000 born alive		Stationary population		Average remaining lifetime Average number of years of life remaining at beginning of age interval (7)
		Number living at beginning of age interval (3)	Number dying during age interval (4)	In the age interval (5)	In this and all subsequent age intervals (6)	
x to x + n	n ^q _x	L _x	n ^d _x	nL _x	T _x	e ^o _x
Females						
0	0.02286	100000.	2286.	97985.	7012647.	70.13
1	0.01063	97714.	1039.	388246.	6914662.	70.76
5	0.00314	96675.	304.	482618.	6526416.	67.51
10	0.00270	96372.	260.	481208.	6043799.	62.71
15	0.00339	96112.	326.	479743.	5562590.	57.88
20	0.00509	95786.	488.	477710.	5082847.	53.06
25	0.00822	95298.	783.	474532.	4605138.	48.32
30	0.01070	94515.	1011.	470046.	4130605.	43.70
35	0.01292	93504.	1208.	464497.	3660559.	39.15
40	0.01760	92295.	1624.	457416.	3196062.	34.63
45	0.02715	90671.	2462.	447201.	2738646.	30.20
50	0.03860	88209.	3405.	432534.	2291445.	25.98
55	0.05553	84804.	4709.	412249.	1858910.	21.92
60	0.08064	80095.	6459.	384329.	1446661.	18.06
65	0.11796	73636.	8686.	346467.	1062332.	14.43
70	0.17306	64950.	11240.	296650.	715865.	11.02
75	0.25314	53710.	23596.	234559.	419215.	7.81
80	1.00000	40114.	40114.	184656.	184656.	4.60
Males						
0	0.02690	100000.	2690.	97632.	6526086.	65.26
1	0.01082	97310.	1053.	386684.	6428453.	66.06
5	0.00399	96257.	384.	480325.	6041770.	62.77
10	0.00389	95873.	373.	478433.	5561444.	58.01
15	0.00608	95500.	581.	476049.	5083012.	53.23
20	0.01178	94919.	1118.	471802.	4606963.	48.54
25	0.01529	93801.	1434.	465421.	4135161.	44.08
30	0.01785	92367.	1649.	457714.	3669740.	39.73
35	0.02178	90718.	1976.	448652.	3212026.	35.41
40	0.02935	88742.	2605.	437201.	2763374.	31.14
45	0.04024	86138.	3466.	422024.	2326173.	27.01
50	0.05709	82672.	4720.	401559.	1904149.	23.03
55	0.08175	77952.	6373.	373828.	1502590.	19.28
60	0.11801	71579.	8447.	336779.	1128762.	15.77
65	0.17104	63132.	10798.	288666.	791982.	12.54
70	0.24747	52334.	12951.	229293.	503316.	9.62
75	0.35442	39383.	13958.	162020.	274023.	6.96
80	1.00000	25425.	25425.	112003.	112003.	4.41

^a Principally because of the small population, the mortality curve oscillates erratically from age to age. Hence, for age groups 10-40 age-specific death rates were graduated graphically, and a smoothing technique was applied for the average age-specific death rate curve. For age groups 40 and above, a series of multipliers was applied to obtain the age-specific death rates. These age-specific rates were used for the construction of the life table by the Reed-Merrell method

Table 15. Top ten causes of death in American Samoa, aggregated for the three years 1970-1972

	<i>% of all deaths</i>
1. Heart disease	20.6
2. Cerebro-vascular disease (stroke)	12.2
3. Pulmonary disease (excluding tuberculosis and pneumonia)	11.5
4. Pneumonia	7.7
5. Trauma (accidents)	7.2
6. Cancer	6.3
7. Diarrhoea and dehydration	5.7
8. Meningitis	3.8
9. Septicaemia	3.8
10. Liver failure	3.6
11. All others	17.6
Total	100.0

Source: 1972 State Plan for Comprehensive Health Planning, Public Law 89-749, section 314 (d) for American Samoa (Pago Pago, Government of American Samoa, Department of Medical Services, 1971).

Leading causes of death are shown in table 15. Apart from the inherent problems of reliability of diagnosis, the age composition is profoundly related to the ranking of the causes of death. Therefore, a direct comparison of such a ranking with those in other societies of different age structures requires caution. The ranking apparently indicates that American Samoan mortality is in the process of transition. While such diseases as heart disease and cerebro-vascular accidents rank high, as in developed countries, pulmonary diseases, pneumonia, and diarrhoea and dehydration still occupy conspicuously important positions, as in many developing countries. A further reduction of mortality will occur as the latter types of preventable disease are controlled.

In summary, the current mortality of American Samoa is very low by world standards and possibly the lowest in the South Pacific islands. Although the age-specific death rate is not very likely to be lowered to any appreciable degree in the near future, the crude death rate may continue to decline because of the young age composition and high fertility level.

D. MIGRATION³⁰

The change of administration from the United States navy to the Department of the Interior in 1951 marked a turning-point in the international migratory movements of American Samoa. Prior to this time, frequent movements of the Samoan population were practically confined to the two Samoas. In fact, even these movements were not really migrations of Samoans; since the partition was a result of foreign intervention,

such movements were nothing more than frequent social visits between islands in accordance with tradition. In any case, until recently Samoans seldom left their own islands permanently.³¹ Even in the late 1940s, the United States Navy Department reported that labour migration was non-existent.³² However, following the switch in administrative authority, naval transports carried many members of disbanded Samoan *fitafita* guards and their relatives to Hawaii. A wave of Samoan migrants began to arrive in Honolulu in 1951.³³ In 1952, the USS *President Jackson* alone brought as many as 1,000 American Samoans³⁴ to Hawaii and the Pacific coast of the United States. At present, this exodus continues. Today, there are more American Samoans in Hawaii and California than in American Samoa.³⁵

³⁰ For the purposes of the present study, the term "migration" refers to population movements into and out of American Samoa regardless of national boundaries: thus, the term would include movements between either American Samoa and the United States, or American Samoa and Western Samoa.

³¹ *American Samoa: A General Report by the Governor, 1926*, p. 7.

³² "American Samoa: information on American Samoa transmitted by the United States to the Secretary-General of the United Nations" (Washington, Dc, Navy Department, OP Nav-P22-100B, 1947), p. 11.

³³ Ted J. Born, "American Samoans in Hawaii: a short summary of migration and settlement patterns, *Hawaii Historical Review*, 1968, pp. 455-459.

³⁴ David B. Eyde, "A preliminary study of a group of Samoan immigrants in Hawaii" (mimeographed, 1954, University of Hawaii Library).

³⁵ Gordon R. Lewthwaite, C. Mainzer and P.J. Holland, "From Polynesia to California: Samoan migration and its sequel", *Journal of Pacific History*, No. 8 (1972), p. 133.

Although there was a large volume of population exchange between the two Samoas before 1940, there is no evidence that either side gained any population through such exchange. As observed earlier, not only does the growth rate for the two decades 1920-1940 roughly correspond to the natural increase rate, but the relevant records of Western Samoa for the period 1922 to 1940 show that the number of emigrants almost balanced the number of immigrants.³⁶ However, in the nearly 1940s, with the outbreak of the Second World War, Pago Pago became a busy centre of operations providing more opportunities for employment than usual; this resulted in the immigration of a large number of Western Samoans. During the period 1940-1950, the population of American Samoa as a whole increased by as much as 46.7 per cent. Mc Arthur estimated that immigration from Western Samoa probably contributed more than one fifth of this increase.³⁷

There was a reversal of the trends in the 1950s when drought, the declining job market, the cost-price squeeze and other unfavourable conditions resulted in a net loss of Samoans in American Samoa. At the 1950 census, 1,908 persons born in Western Samoa were living in American Samoa. This number decreased to 1,729 in 1956 and to 1,704 in 1960, recording a decline of more than 10 per cent in a decade. On the other hand, only 105 people who were born in American Samoa lived in Western Samoa in 1951, but this number increased to 1,437 in 1961.³⁸ Thus, during the 10-year period of 1950-1960, American Samoa lost to Western Samoa over 1,500 people, including those Western Samoans who returned home.

The direction of population flow between the two Samoas changed again during the decade 1960-1970. Those born in Western Samoa living in American Samoa increased from 1,704 in 1960 to 4,545 in 1970, a net gain of 2,831. Meanwhile, in Western Samoa there was a decrease in those born in American Samoa from 1,437 to 1,021.³⁹ Thus, the net gain from Western Samoa amounted to over 3,200 corresponding to nearly half the total population increase between 1960 to 1970. Migration data from the 1970 census of American Samoa leads one to the conclusion that probably over 2,000 Western Samoans emigrated to American Samoa during the last five years of the 1960s.⁴⁰

There are indications that the movement of Western Samoans into American Samoa accelerated after 1970, even in the face of a stiffer alien employment regulation. According to the 1974 census, there were 7,384 persons born in Western Samoa in American

Samoa. This number was 2,849 more than the corresponding number enumerated in the 1970 census and is almost equal to the increase in the total population of American Samoa during the 1960-1970 intercensal period. Since the total enumerated population of American Samoa in 1974 was 29,155, the number of persons born in Western Samoa constituted over 25 per cent of the population in that year. The actual number of persons born in Western Samoa may have been even higher because according to a government document,⁴¹ the number of Western Samoans residing in American Samoa as at 22 July 1973 was 7,721 or over 30 per cent of the total population. More than 1,500 of them were under investigation regarding their legal residence status. Another report estimated that there were about 14,000 aliens living in American Samoa, some 12,000 of whom or 41 per cent of the total population were Western Samoan, the remainder being Tongans.⁴² The 1974 census also shows that the largest concentration of Western Samoans was in the age group 15-29, in which Western Samoans constituted 40.3 per cent of the population, followed by ages 30-44 years with 36.9 per cent and ages 45-59 years with 28.8 per cent.

Migration of American Samoans to Hawaii and the mainland United States is today taking place on an extensive scale. Unfortunately, precise estimates of the number involved are difficult to obtain from the available data,⁴³ as American Samoans are United States nationals who can freely enter or leave the country without a visa. Also, "Samoan" does not appear as a separate category in the United States census reports.

A number of young Samoan men went to work in the Pearl Harbour shipyard in Hawaii in the 1940s,⁴⁴ but until 1950, the Samoan population in Hawaii was very small. As stated earlier, full-fledged migration towards the north and east was initiated by the naval transport in 1951-1951. At that time "something approaching migration fever was in the air",⁴⁵ with thousands expressing a desire to migrate.⁴⁶ Nevertheless, the actual number who initially migrated is not known. The available estimates vary and range from about 1,100 who migrated by 1956⁴⁷ to about 2,000

⁴¹ Memorandum from Fa'afetai Ieremia, Supervisory Immigration Officer to Fa'afetai Lefiti, Chief Immigration Office, 22 July 1973.

⁴² Robert C. Miller, "Happy, rich Samoa", *Sunday Star Bulletin and Advertiser* (Honolulu), 3 April 1977.

⁴³ See, for instance, P. Bowman, "Samoans elude census counts", *Honolulu Star Bulletin*, 8 March 1972.

⁴⁴ "American Samoa: information on American Samoa transmitted by the United States to the Secretary-General of the United Nations," p. 13.

⁴⁵ Gordon R. Lewthwaite and others, *loc. cit.*, p. 135.

⁴⁶ Government of American Samoa, *Annual Report of the Governor, 1952*, (Washington, DC, Government Printing Office), p. 2.

⁴⁷ F.M. Keesing and M.M. Keesing, *Elite Communication in Samoa: A Study of Leadership* (Stanford, Stanford University Press, 1956), p. 16.

³⁶ John D. Durand, *op. cit.*, p. 26.

³⁷ Norma Mc Arthur, *op. cit.*, p. 144.

³⁸ New Zealand Department of Island Territories, *Western Samoa Population Census 1961* (Apia, Census Commissioners Office, 1961), p. 40.

³⁹ *Ibid.*

⁴⁰ C.B. Park, *op. cit.*, p. 11.

carried by the naval transports alone.⁴⁸ Lewthwaite and others, by scanning Navy Department reports, came to the conclusion that precisely 2,461 emigrated between November 1947 and June 1956, of whom 1,987 left after May 1950.⁴⁹

According to the Governor's official report, more than 4,000 persons left for the United States between the censuses of September 1956 and April 1960.⁵⁰ This is, however, likely to be an exaggeration as it probably includes those who left the island for short visits. The total of the estimates given by Lewthwaite and others and the Governor's report indicates that 6,000 people emigrated to the United States alone in the decade 1950-1960, which corresponds to almost 30 per cent of the 1950 American Samoan population. However, estimates derived from vital statistics and the 1950 and 1960 census data present a somewhat smaller number, showing a net loss of 5,400 American Samoans through migration,⁵¹ 1,300 of whom moved to Western Samoa during the decade.⁵² Therefore, the net emigration to Hawaii and the mainland was estimated at about 4,000. Between 1960 and 1970, Polynesians from Western Samoa moved into American Samoa, while American Samoans continued to move out. As discussed earlier, a minimum of 5,600 American Samoans left for Hawaii and the continental United States during the presumably prosperous 1960s.

The primary destination of the Samoan migrants was initially Hawaii, but Lewthwaite and others suspect that California may have become a more important destination than Hawaii by the end of the 1950s. In fact, currently, many Samoans are moving directly to California, bypassing Hawaii which formerly served as a stepping stone for adaptation to a new life.⁵³ In addition to Hawaii and California, there are Samoan colonies in the northern Pacific coast regions and Mormon concentrations in Utah and Missouri.

The number of Samoans living in Hawaii is not precisely known. Numerous estimates have, however, been reported by the Hawaii State Department of Planning and Economic Development.⁵⁴ A survey of

Oahu households conducted over a 36-month period ending in March 1967 as part of the Hawaii Health Surveillance Programme estimated that there were 2,420 Samoan residents; but it is believed that Samoans were under-represented in this survey. According to the 1969-1970 round of this survey, the Samoan population in the State was 6,753 with an additional 7,000 part-Samoans. The 1971 round of the survey enumerated a total of 13,058 Samoans and part-Samoans. The Samoan Task Force on Immigration in December 1971 "identified" 6,544 Samoans on the island of Oahu and believed this to be an under-enumeration. The State Statistician obtained a figure of 5,660 as reconstructed from the registered Samoan births. The Department of Planning and Economic Development considers that the Samoan population exceeds 6,500 and may even be twice that total. Lewthwaite and others also quote a population of 12,000 Samoans in Hawaii.⁵⁵

The settlement of Samoans on the mainland was also initiated by the navy, which moved "many of its Samoan personnel from Hawaii to the Pacific Coast bases between Seattle in the north and San Diego in the south".⁵⁶ However, the number living on the mainland cannot be precisely determined. Lewthwaite and others observed that "perhaps a hint is given by the fact that Samoan census-takers in the Los Angeles area, after accounting for 21,000 identifiable Samoans, reckoned the total as 25,000 . . .".⁵⁷ By adding concentrations of 7,000 to 9,000 in the San Francisco Bay area and 300 to 350 in the Oxnard-Port Hueneme district, a total of 34,000 Samoans are believed to live in California alone. Samoan communities in Seattle-Tacoma are considered to total 800. Mormon centres in Salt Lake City have attracted about 1,200 and Independence, Missouri, about 1,250. Lewthwaite and others state that "responsible Samoans now affirm that small communities of their countrymen exist in virtually every major American city, and variously suggest that there cannot be fewer than 41,000-47,000 on the mainland".⁵⁸ That is equivalent to about 1.5 times the number of Samoans in American Samoa.

Could this estimate of more than 50,000 Samoans living in Hawaii and the mainland in the early 1970s be correct? As discussed earlier, an analysis of census data suggests that there were 4,000 Samoan emigrants to the United States in the 1950s and another 5,600 in the 1960s. Assuming an accelerated outflow in the early part of the 1970s, and even allowing for the high fertility of emigrants, proliferation of part-Samoans through inter-marriages, and the small number of migrants before 1950, it would appear that the total given by Lewthwaite and his associates is a gross exaggeration. It may

⁴⁸ Aliifaati Laolagi, "A descriptive study of the Samoan families who have settled in San Francisco" (unpublished M.A. Thesis, San Francisco State College, 1961, p. 68) cited in Gordon R. Lewthwaite and others, *loc. cit.*, p. 136.

⁴⁹ Gordon R. Lewthwaite and others, *loc. cit.*, pp. 136-137. The authors stated: "it seems a safe assumption that approximately 1,000 American Samoans migrated to Western Samoa and nearly 2,000 to Hawaii and the mainland in the 1951-1956 period but the process accelerated towards the end of the decade".

⁵⁰ Government of American Samoa, *Annual Report of the Governor, 1960* (Washington, DC, Government Printing Office), p. 5.

⁵¹ C.B. Park, *op. cit.*, p. 8.

⁵² New Zealand Department of Island Territories, *op. cit.*, p. 40.

⁵³ Gordon R. Lewthwaite and others, *loc. cit.*, p. 143.

⁵⁴ "Size and characteristics of the Samoan Population in Hawaii" (State of Hawaii Department of Planning and Economic Development Research Report 73-2, 1973), pp. 3-4.

⁵⁵ Gordon R. Lewthwaite and others, *loc. cit.*, p. 155.

⁵⁶ *Ibid.*, p. 140.

⁵⁷ *Ibid.*, p. 155.

⁵⁸ *Ibid.*

be more realistic to place the estimate of the total number of Samoans in the United States, including Hawaii, at 20,000 in the early 1970s.

Whatever the true number of American Samoans living outside their islands may be, it is undeniable that these people, who were relatively immobile at least in the century after European discovery, are now on the move in large numbers: American Samoans to the north and east and Western Samoans to New Zealand in the south. The enormous size of the emigrant population may have alleviated the pressure of population in these resource-scarce islands to a considerable extent; but the selectivity of migration distorts the demographic structure and connotes a number of social and economic implications. Cohort analysis based on census data indicates heavy migration among the young and among the males.^{59, 60} Between 1950 and 1960, the net outmigration was as high as 54 per cent for males and 32 per cent for females in the age group 15-19 years.⁶¹

The migration of American Samoans, especially conspicuous in the 1950 and 1960 censuses, has become of grave concern to the American Samoan administration. By providing more employment and income-producing opportunities, attempts were made to slow the outward movement and to retain within the country the able and ambitious workers.⁶² Since subsequent local "censuses" taken by the Office of Samoan Affairs showed a large population increase,⁶³ it was believed by some that the massive infusion of capital and ambitious economic and social development programmes had helped to reduce out-migration considerably. However, it soon became evident that this increase shown by the local "censuses" was deceptive. Firstly, it is suspected that there was a large degree of over-count, probably because of the inclusion of villagers

living outside American Samoa by village chiefs who were responsible for the enumerations. Secondly, a large number of immigrants from Western Samoa and other Pacific islands replaced the migrants leaving American Samoa. Regardless of the situation at home, young and skilled American Samoans tend to leave their islands, while the improved economic conditions in American Samoa attract more immigrants. Port statistics show that there were nearly 9,000 more arrivals than departures of Western Samoans during the period 1961-1970.⁶⁴ It has already been mentioned that one third of all births in American Samoa in 1970-1971 were to Western Samoan parents.

Realizing the problems created by the great influx of Western Samoans, the Government of American Samoa has been introducing more stringent regulations in regard to immigration. The employment of non-residents is now difficult, at least by law. In fact, the Government of Western Samoa stated that emigration to American Samoa would taper off owing to the new "restrictions which make it difficult for Western Samoans to reside and work in American Samoa".⁶⁵ A new law now defines an American Samoan to be a person of American Samoan ancestry (Public Law 12-50), thus excluding even those who were born in American Samoa to Western Samoan parents. Nevertheless, at least in the near future, there will be a continuous inflow from Western Samoa because of strong familial loyalty. Once they come to American Samoa, many Western Samoans may choose to stay because of better economic conditions. On the other hand, the out-migration of American Samoans will almost certainly continue regardless of the situation in the islands.

⁵⁹ Norma McArthur, *op. cit.*, pp. 147-151.

⁶⁰ Wolf Management Services, *Economic Development Program for American Samoa* (New York, United States Department of Commerce, Economic Development Administration, 1969), pp. 29-30.

⁶¹ C.B. Park, *op. cit.*, pp. 57-59 and tables A 7 and A 17.

⁶² N. Koenig, *The Economic Needs of American Samoa* (Washington, DC, United States Senate, Committee on Interior and Insular Affairs, Government Printing Office, 1961), p. 57.

⁶³ The local "censuses" reported the following numbers of inhabitants:

1963	21 000	1967	28 000
1964	22 000	1968	32 097
1965	23 000	1969	33 000
1966	24 500		

⁶⁴ C.B. Park, *op. cit.*, table A 8.

⁶⁵ Government of Western Samoa, *Western Samoa's Economic Development Programme 1966-1970* (Apia, Government Printing Office, 1966).

Chapter III

POPULATION COMPOSITION

A. AGE AND SEX

The distribution of the population of American Samoa by age and sex for various census years since the United States decennial census of 1920 is presented in figure II and table 16. Although it has been claimed that the 1920 census data by broad age groups are sufficiently accurate,¹ the age pyramid for this census year exhibits irregularities, apparently stemming from defects in age-reporting. This is confirmed by the fact that the irregularities in the 1920 age pyramid largely disappear in the 1930 pyramid. In addition, cohorts such as the 25-34 year old, with unusual swelling or denting in comparison with adjacent age groups in 1920, do not present the same tendency ten years later. Judging from the age distribution of females, who are less subject to migration, age-reporting at the census has been reasonably accurate since 1940. Nevertheless, in examining and interpreting census data on age distribution, the possibility of incorrect age-reporting, especially for earlier censuses in general, and for older people and immigrants in recent times, should not be ignored.

It will be seen from figure II that broad bases are prominent in all the age pyramids, indicating that the American Samoan population has typically been young. The proportion of pre-school-age children (0-4 years) in the total population has been 16 per cent or more (table 17). Although children under 15 years of age constituted about 50 per cent of the total population in 1960, this proportion is still slightly lower than that of Western Samoa where it was more than 51 per cent in 1966.² In the United States, on the other hand, children under 15 years of age constituted a mere 31 per cent of the total population in 1960 even though the post-war "baby-boom" had pushed up this proportion considerably. It may also be noted that the proportion of children under 15 years of age in American Samoa has been gradually decreasing since 1960. In fact the number of children aged 0-4 years declined for the first time between 1970 and 1974.

Over the years, the median age³ of the population has become progressively lower. The median age which was slightly over 20 years in 1920, decreased to 18 in 1930, and in the last four United States censuses remained around 16.⁴ In 1974 the median age of the entire population of American Samoa was 17.1, but if only the Samoans and part-Samoans are considered, the median age drops to 16.5 years. This is in contrast to earlier years, when median ages for the entire population and for Samoans were virtually equal.⁵ The median age of American Samoa is extremely low in comparison with developed countries (the median age was 28.1 years for the United States in 1970),⁶ but is almost equal to that of Western Samoa (14.9 years in 1971).⁷ The high proportion of children and the low median age in both Samoas is mainly the result of persistent high fertility and of migration of people in the reproductive age groups. It will be seen from table 17 that the 15-24 age group comprised 18 to 20 per cent of the population during the past four decades. It is noteworthy that this age group increased slightly when the islands were relatively prosperous, as in 1950 or 1970. The proportion of young adults was somewhat lower in 1974, but this was largely due to the inclusion of non-residents who were mostly in the 25-44 age bracket.

The proportion of those aged 25-44 years to the total population recorded a gradual decrease from about 25 per cent in 1930 to 20.5 per cent in 1960. However, since 1960 this proportion has gradually increased to 20.7 in 1970 and to 22.7 in 1974. A similar trend is noticeable with regard to the middle-aged group, 45-64 years, which recorded a decline from 11.4 per cent in 1930 to 8.6 in 1950, thereafter gradually increasing to slightly over 10 per cent of the total population in 1970 and to 11 per cent in 1974. The oldest age group, 65 years and over, has maintained a relatively stable

³ The median age may be defined as the age which divides the population into two equal-size groups, one of which is younger and the other older than the median.

⁴ Median ages adapted from United States censuses 1920-1970, and *Report on the 1974 Census of American Samoa*, Government of American Samoa and East-West Population Institute, Honolulu, 1977.

⁵ For instance, in 1960 when the over-all median age was 15.2, the lowest ever recorded, that for Polynesians and part-Polynesians was 15.0.

⁶ United States Bureau of the Census, *U.S. Census of Population: 1970, Number of Inhabitants, American Samoa*, final report PC (1)-A56 (Washington, DC, Government Printing Office, 1971).

⁷ Government of Western Samoa, *Western Samoa: Census of Population and Housing* (Apia, Department of Statistics, 1971).

¹ J.A. Hill, *Fourteenth Census of the United States in the Year 1920*, vol. 3, Composition and characteristics of the population by state (Washington, DC, Department of Commerce, United States Bureau of the Census, 1922) p. 1253.

² Hilde Wander, *Trends and Characteristics of Population Growth in Western Samoa* (United Nations, report No. TAO/WESA/3, 1971), p. 17.

FIGURE 2

Population composition by age, American Samoa, 1920–1970

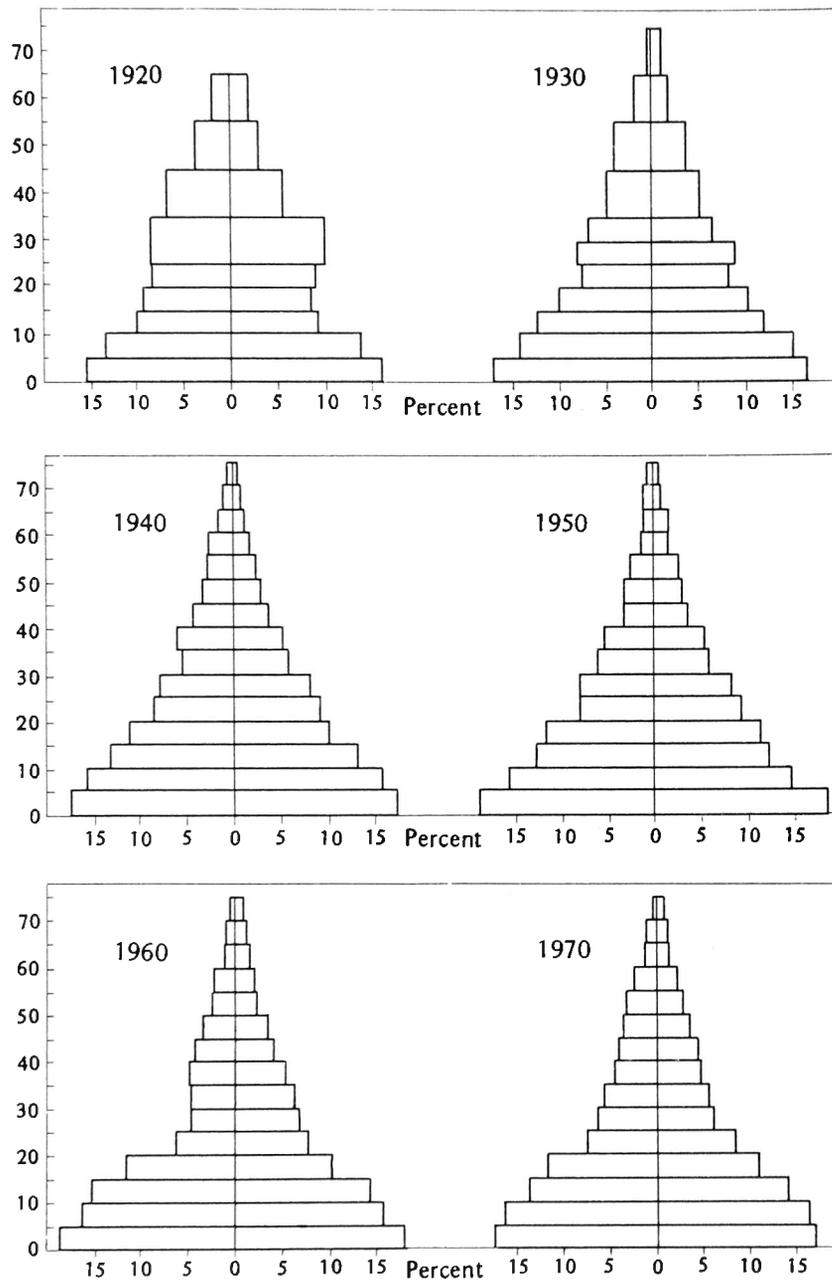


Table 16. Age and sex distribution of the population of American Samoa, 1920-1974

Age group	Males							Females						
	1920	1930	1940	1950	1960	1970	1974	1920	1930	1940	1950	1960	1970	1974
0		182	213	403	445	512	479		175	244	360	426	511	483
1-4	641	710	939	1 436	1 474	1 874	1 901	630	635	852	1 339	1 364	1 794	1 777
5-9	557	737	1 034	1 542	1 689	2 214	2 402	545	722	988	1 333	1 555	2 201	2 143
10-14	410	646	868	1 236	1 581	1 877	2 926	363	580	828	1 114	1 412	1 896	1 885
15-19	379	528	717	1 137	1 178	1 602	1 505	332	493	646	1 024	1 004	1 486	1 641
20-24	336	394	552	774	670	1 012	951	354	405	582	856	774	1 158	1 336
25-29		421	501	774	484	864	1 006		424	523	752	670	816	1 065
30-34	686	359	353	608	490	776	949	774	313	374	523	617	750	809
35-39			387	527	513	622	787			325	472	517	622	705
40-44	554	518	276	327	432	566	673	429	494	238	324	382	598	608
45-49			211	324	353	475	568			187	282	335	459	592
50-54	310	443	166	245	260	445	431	238	349	159	248	214	375	426
55-59			149	133	231	346	418			121	137	194	279	336
60-64	158	198	100	111	113	189	248	156	158	82	142	134	172	235
65-69			59	110	107	162	169			63	74	119	160	136
70-74		60	42	67	67	68	113		84	37	67	80	81	124
75-79	108				46	43		96				41	48	
80-84		12	45	64	14	21	66		15	47	72	24	40	110
85+					17	14						25	31	
Not stated							55							32
Total	4 139	5 208	6 612	9 818	10 164	13 682	14 747	3 917	4 847	6 296	9 119	9 887	13 477	14 443

Source: Census reports.

Table 17. Percentage distribution of population by age group, American Samoa, 1930-1974

Age group	1930	1940	1950	1960	1970	1974	
						Total	Samoans ^a
0-4	16.9	17.4	18.7	18.5	17.3	15.9	16.4
5-14	26.7	28.8	27.6	31.1	30.1	29.1	30.0
15-24	18.1	19.3	20.0	18.1	19.4	18.7	19.2
25-44	25.2	23.1	22.7	20.5	20.7	22.7	21.1
45-64	11.4	9.1	8.6	9.1	10.1	11.2	10.9
65+	1.7	2.3	2.4	2.7	2.4	2.5	2.4
0-14	43.6	46.2	46.3	49.6	47.4	45.0	46.4
15-44	43.3	42.4	42.7	38.6	40.1	41.4	40.2
15-64	54.7	51.5	51.3	47.7	50.1	52.5	51.2

^a Includes part-Samoans.

proportion of about 2.4 per cent of the total population since 1940, except in 1960, when the migration of the young and working-age people resulted in a proportional increase in other ages.

Because of the large number of children in the population, the dependency ratio, or the number of persons under 15 and over 65 years of age per 100 persons aged 15-64 years, is very high, being about 100 in 1970.⁸ This means that for each person of working age, there is a person of dependent age. Actually, the dependency ratio of American Samoa is even higher than it appears, as more than one third of the people in the working age group are Western Samoans. Since the current high fertility rates and the emigration of adults are likely to continue, the heavy burden of dependence will also continue in the near future.

As is shown in the population pyramids, the increasing depletion of the female population with age has been rather systematic since 1940, in contrast to the males in respect of whom some irregularities are noticed. These irregularities are essentially due to selective migration and not to misstatement of age or under-enumeration of certain age groups at the census. The large dip observed in recent times at ages 20-30 reflects the age-selectivity of emigration. The deficit in the young adult ages is especially noticeable in 1960 and reflects the tremendous amount of emigration that took place in the 1950s. However, the age pyramid of 1970 restores to a considerable extent the deficit cohort observed in 1960, reflecting the large number of returning migrants and/or immigrants from Western Samoa in the 1960s.

⁸ C.B. Park, *Population Statistics of American Samoa: A Report to the Government of American Samoa* (Honolulu, East-West Population Institute, 1972), p. 62.

Even though more males than females have migrated, American Samoa has always had more males than females. Until 1950, the overall sex ratio (number of males per 100 females) was more than 105. Since then, however, the sex ratio has declined markedly, reaching a low of 101.5 in 1970. Evidently both migration and differential mortality between the sexes have contributed to this decline. The 1974 census shows a slightly increased ratio of 102.4, that is, an excess of 349 males. However, this census enumeration includes temporary alien workers who are mostly males.⁹ If only the Samoans and part-Samoans are considered, then the sex ratio is virtually balanced at 100.1.

Age-specific sex ratios are shown in table 18. Assuming that the age-reporting was correct, the censuses between 1930 and 1970 for the most part show that the excess of males over females increases through the teen years, drops sharply in the twenties, recovers after age 30, and then declines in old age when the sex ratio reaches well below 90. As male mortality is higher than female mortality in all age groups, the increasing sex ratio in the teens could be due to the excess of male immigrants from Western Samoa. The dip in the sex ratio in the twenties reflects the strong male selectivity of emigration in this age group. It is interesting that, according to the 1974 census, the decline in sex ratio begins earlier, in the teens rather than the twenties, which may be an indication that out-migration is now occurring largely at younger ages. It should be noted that even in years when the net migration was relatively small, as in 1950 and 1970, the sex ratio for the 20-24 age group remained low, suggesting that a large loss of males took place in this particular age group. The increase in the sex ratio at age 30 and over is probably

⁹ For instance, of the total 154 Koreans enumerated at this census, 118 were males.

Table 18. Sex ratio^a in American Samoa by age group, 1930-1974

Age	1930	1940	1950	1960	1970	1974
Under 1	104.0	87.3	111.9	104.5	100.2	99.2
Under 5	110.1	105.1	108.2	107.2	103.5	105.3
5-9	102.1	104.7	115.7	108.6	100.6	112.1
10-14	111.4	104.8	111.0	112.0	99.0	107.5
15-19	107.1	111.0	111.0	117.3	107.8	91.7
20-24	97.3	94.8	90.4	86.6	87.4	71.2
25-29	99.3	95.8	102.9	72.2	105.9	94.5
30-34	114.7	94.4	116.3	79.4	103.5	117.3
35-39		119.1	111.7	99.2	100.0	111.6
40-44	104.9	116.0	100.9	113.1	94.6	110.7
45-49		112.8	114.9	105.4	103.5	96.0
50-54	126.9	104.4	96.8	121.5	118.7	101.2
55-59		123.1	97.1	119.1	124.0	124.4
60-64	125.3	122.0	78.2	84.3	109.9	105.5
65-59		93.6	148.6	89.9	101.2	124.3
70-74	71.4	113.5	100.0	83.8	84.0	91.1
75+	80.0	95.7	88.9	85.6	65.6	60.0
Total	107.4	105.0	107.7	102.8	101.5	102.1

Source: Census reports.

^a Number of males per 100 females.

due both to the return of some Samoan male emigrants and to the departure of female emigrants to join husbands abroad. The decline in the sex ratio in old age, as in most societies, is due to the differential mortality favouring females.

To recapitulate, the American Samoan population is very young, nearly 50 per cent comprised of children under 15 years old. With decline in fertility some decrease may be observed in the proportion of the children, but a drastic decrease is not likely, as young adults will continue to emigrate while the inflow of Western Samoans may to some extent be curbed. The outflow of young adult males will considerably alleviate the pressure of over-supply in the labour force resulting from high fertility, but it will also bring a high dependency ratio. If it is assumed that male emigrants will continue to exceed female emigrants, sooner or later females will outnumber males in American Samoa.

B. MARITAL STATUS

The proportionate distribution of males and females aged 15 years and over by marital status for the various census years 1920 to 1974 is shown in table 19. It will be seen that during the period 1940-1970 there was no substantial change in the proportion of never-married males, which has ranged from 42 to 44 per cent for those aged 14 years and over. Though this proportion for 1974 shows a decline, it is not strictly comparable with the proportions for previous years since it has been computed for the population 15 years and over. On the other hand, the proportion of never-married females has recorded a gradual increase from 29.4 in 1940 to 35.8 per cent in 1970.

Though the proportion of "married" people, both male and female, fluctuated over the years, the magnitude of change has been small, the proportion

Table 19. Percentage distribution of population by marital status, American Samoa, 1920-1974

	<i>Never-married</i>		<i>Married</i>		<i>Widowed</i>		<i>Divorced</i>	
	<i>Males</i>	<i>Females</i>	<i>Males</i>	<i>Females</i>	<i>Males</i>	<i>Females</i>	<i>Males</i>	<i>Females</i>
1920 ^a	40.0	27.2	54.0	59.0	4.5	12.1	2.2	3.4
1930 ^a	37.9	24.1	55.6	59.7	4.3	12.8	2.0	3.5
1940 ^a	39.4	25.7	55.5	58.2	3.2	12.5	2.0	3.5
1940 ^b	42.0	29.4	53.0	55.4	3.0	11.9	1.9	3.3
1950 ^b	43.7	31.1	52.9	57.1	3.4 ^c	11.8 ^c		
1960 ^a	40.7	29.2	55.6	59.3	2.6	9.6	1.1	1.9
1960 ^b	44.0	32.9	52.6	56.2	2.4	9.1	1.0	1.8
1970 ^b	42.6	35.8	55.1	55.0	1.4	6.9	1.0	2.2
1974 ^a	39.1	31.8	58.6	60.4	.8	5.4	1.5	2.3

^a For persons aged 15 years and over.

^b For persons aged 14 years and over.

^c Includes the divorced.

remaining fairly stable over time. The proportion of married males was around 53-55 per cent between 1920 and 1970, while that of married females was slightly higher than the figure for males in all years. It may be of interest to note that in 1950 and 1960 the proportion of married males was lower than in other years while the proportion of married females was higher.

Over the years there has been a definite downward trend in the proportion of the widowed. The proportion of widowed females declined from nearly 12 per cent in 1940 to less than 7 per cent in 1970, while that of males declined from 3 per cent in 1940 to 1.4 per cent in 1970. However, the trend over time is difficult to evaluate because of the differences in ages included in the various censuses. It is thus difficult to determine exactly when the downward trend began, but it was obvious by 1940 for males and by 1960 for females. The proportion of divorced, among both males and females, has always been very small. It would appear that there was a decline in this proportion during the 1940s and 1950s, and that a stabilization occurred thereafter. Although the decline in mortality would account for some of the decrease in the proportion widowed, it is possible that more remarriages are now occurring among the widowed and divorced in view of the simultaneous increase in the proportion married.

As noted in the preceding section, there have been considerable changes in the age structure of the population. These changes themselves would have influenced the changes in marital status composition of the population to a certain extent. In order to eliminate such influence, the marital status distribution of the popula-

tion is calculated for each five-year age group for the census years 1960 and 1974. The age-sex marital status distribution given in table 20 shows that only a small fraction of women aged 30 years and over and of males aged 40 years and over remained unmarried in the two census years. For Western Samoa, Raghavachari observes that the institution of marriage is universal because "the status of woman in the tradition bound Samoan Society is primarily that of keeping house and rearing children to perpetuate the *aiga*".¹⁰

It will also be seen from table 20 that in both 1960 and 1970 approximately 90 per cent of teen-aged women were not married and that of those aged 20-24 years, nearly half were married. At ages 30-34, less than 10 per cent of the women remained single. In the case of the males the increase in the proportion married occurs at later ages. In both 1960 and 1974, about 75 per cent of the males were not married at ages 20 to 24. Only in the 35-39 age group does the proportion of never-married men decline to about 10 per cent.

The proportion of women married increases progressively to a peak of 90 per cent at ages 35-39. Thereafter the proportion decreases gradually until the ages 50-54 and steeply thereafter. In the case of males, the proportion increases rapidly until the ages 30-34 and then gradually to a peak at ages 50-54. Thereafter, though the proportion declines, it is still high in comparison to that of females.

¹⁰ S. Raghavachari, *Demographic Situation in Western Samoa, 1966-1971* (United Nations, Office of Technical Cooperation, 1976), p. 15.

Table 20. Percentage distribution of population by marital status and by age and sex, American Samoa, 1960 and 1974

Age	<i>Never-married</i>		<i>Married</i>		<i>Widowed</i>		<i>Divorced</i>	
	1960	1974	1960	1974	1960	1974	1960	1974
Males								
15-19	97.4	97.6	2.3	2.1	0.1	—	0.2	0.1
20-24	74.8	78.6	24.9	21.0	0.1	—	0.1	0.4
25-29	37.2	38.3	61.0	60.1	0.4	0.2	1.4	1.4
30-34	14.5	19.5	82.6	78.1	0.6	0.2	2.2	2.2
35-39	9.7	11.2	87.7	86.5	1.4	0.3	1.2	2.0
40-44	6.2	9.4	90.0	88.4	2.3	0.6	1.4	1.6
45-49	4.0	7.9	91.8	88.9	3.1	0.5	1.1	2.6
50-54	1.5	8.1	91.5	89.8	4.6	0.7	2.3	1.4
55-64	3.5	6.9	86.0	87.2	8.7	3.0	1.7	2.9
65+	6.4	5.5	70.5	84.2	20.7	8.1	2.4	2.3
Total	40.7	39.1	55.6	58.6	2.6	0.8	1.1	1.5
Females								
15-19	90.4	91.0	8.9	8.4	0.4	—	0.3	0.6
20-24	49.2	53.4	47.4	44.6	1.2	0.4	2.2	1.6
25-29	16.1	16.5	80.7	79.7	1.8	0.9	1.3	2.9
30-34	6.2	9.0	87.5	86.0	2.9	1.9	3.4	3.1
35-39	4.2	5.0	90.5	90.1	2.1	2.7	3.1	2.3
40-44	3.9	4.9	86.9	88.8	7.8	3.8	1.3	2.5
45-49	1.8	2.9	82.4	87.5	12.8	5.8	3.0	3.9
50-54	0.9	3.8	72.9	83.6	23.4	9.2	2.8	3.5
55-64	2.1	4.0	56.1	71.1	40.2	21.2	1.5	3.7
65+	4.2	2.4	30.4	46.5	64.0	47.8	1.4	3.2
Total	29.2	31.8	59.3	60.4	9.6	5.4	1.9	2.3

At ages 65 and above the proportion of married men is approximately double that of married women. The age difference of marriage partners and the sex differential for age at death would account for the higher percentages of widowed females and thus the lower proportion of married females.

Between 1960 and 1974, in every age group except the oldest, there was an increase in the proportion of people never married for both sexes. This is in contrast to the analysis made in respect of the total population which indicated an increasing trend only for females.

The trend over time of the proportion married has not been the same for the male and female populations. The percentage of married men decreased by a point or two between 1960 and 1974 for all age groups up to age 55, when an increase took place. In the female

population, on the other hand, declines, which in any case were small, were confined to ages below 35; for older age groups, 40 and above, there was a noticeable increase between 1960 and 1974 in the proportion of women married.

Decline in widowhood during the 15-year period from 1960 to 1974 is impressive for males, especially for ages 35 and above. The 1974 percentages are only small fractions of the corresponding 1960 figures. For females, an unmistakable trend of decline in widowhood is also observed, but is much lower than for males.

Although there is a slight increase in the overall proportion of the divorced, the age data do not show a consistent increase or decrease for either males or females. The changes in age composition in the meantime must have resulted in the apparent increase in the population of marriageable age. It does seem,

however, that some increase in divorce took place among women aged 40 years and above. This possibly indicates that more divorced women were reporting their marital status correctly at the last census.

Over the years, few changes have taken place in regard to average age at marriage. The average age in first marriage, estimated by applying Hajnal's method¹¹ to age data of the never-married, was 26.2 in 1960 and 26.5 in 1974 for men, and 23.2 in both years for women. Although the mean age at marriage of the American Samoan male is close to that of his counterpart in Western Samoa, the mean age of the female is about two years higher in American Samoa.¹² In essence, the proportion of American Samoans who remain unmarried is increasing in both sexes. In the younger age groups, the proportion of married persons is declining slightly, but the opposite is true at old ages. There is an increasing tendency for widowed persons, especially men, to remarry. The mean age at marriage remained practically constant during the 15-year period from 1960 to 1974.

C. HOUSEHOLD AND FAMILY

The United States census defines a household as including all the persons who occupy a group of rooms or a single room which constitutes a housing unit.¹³ Not all households contain families, because a household may be composed of a group of unrelated persons or one person living alone. All other living arrangements, such as institutions, rooming-houses or dormitories, are classified as group quarters.¹⁴

The household composition of the American Samoan population is shown in table 21. It will be noted that those who live in group quarters comprise only a small fraction of the population. Both the 1960 and 1970 censuses show that about 99 per cent of the islands' inhabitants are members of households. This is probably to be expected in view of Samoa's cultural heritage which is built on the extended family concept or *aiga*.

It will also be noted that the trend in the number of households is more or less in accord with that of the population. During the economic depression decade of 1950-1960, while the population increased by a mere 6 per cent, the number of households decreased by 3 per cent. During the following decade 1960-1970, a very prosperous period, the population increased by as much as 35 per cent and the number of households by a phenomenal 48 per cent from 2,608 to 3,858.

In general, the people live in large households, which is common in many societies with young populations. The average size of a household is about seven persons. This number may be compared to less than six persons in Micronesia and a mere 3.1 persons in the United States.¹⁵ The large household size in American Samoa reflects not only the high level of fertility but also the extended family system. As shown in table 21, a large number of household members are non-nuclear family members, namely, those who are neither family heads, nor their spouses, nor children. These "other relatives of head" comprised 6,360 out of a total of 26,796 household members or about 24 per cent in 1970. In 1960 the proportion was more than 33 per cent, but this proportion is not strictly comparable with that of 1970 as the 1960 census classified a child of the family head who was 18 years old or over in the category of "other relatives". In the United States, where the nuclear family dominates, only 6 per cent of household members were either "other relatives" or "unrelated to family heads" in 1970.

The predominance of the extended family in American Samoa can also be seen in the extent to which married couples live with their relatives (husband-wife sub-family). As shown in table 22, in both 1960 and 1970 over 13 per cent of all married couples belonged to this group, compared with only 1.4 per cent in the United States. On the other hand, the number of household heads living alone or with non-relatives (primary individuals) was negligible, being only 0.2 per cent of the population in households in 1960 and 0.7 per cent in 1970. The number of persons living with unrelated household heads was also very small, 389 or 1.5 per cent in 1970.

The average size of household, though large in American Samoa, has fluctuated somewhat, increasing from 6.7 persons in 1950 to 7.6 persons in 1960 and then declining to 6.9 persons in 1970.¹⁶ The increase between 1950 and 1960 may be explained by the fact that on account of the economic depression during this period, hardly any new households came into existence; the existing households absorbed the additional population.¹⁷ The decrease in average household size during the period 1960-1970 may be due to improved economic conditions and the subsequent formation of new, smaller households.

It may even be argued that in American Samoa, nuclear families have now begun to replace the traditional communal living of the extended family. This view finds some support in the fact that if only nuclear family members (family head, wife of head and child of head) are considered, the average number of persons

¹¹ John Hajnal, "Age at marriage and proportions marrying", *Population Studies*, vol. 7, No. 1 (1953).

¹² *Ibid.*, p. 15.

¹³ United States Bureau of the Census, *op. cit.*, appendix 2.

¹⁴ *Ibid.*, appendix 3.

¹⁵ Marshall Kaplan, Gans, Kahn and Yamamoto, "Housing in American Samoa" (Pago Pago, Government of American Samoa, 1972), p. 13.

¹⁶ *Ibid.*, p. 16.

¹⁷ *Ibid.*, p. 15.

Table 21. Household composition, American Samoa, 1950-1974

	1950	1960	1970	1974
Total population	18 937	20 051	27 159	...
Population in households	18 033	19 866	26 796	...
Population in group quarters	904	185	363	...
Percentage in households	95.2	99.1	98.7	...
Households	2 687	2 608	3 858	...
Primary individual ^a	...	45	192	...
Primary family	...	2 563	3 666	...
Husband-wife	...	2 154	2 870	...
Percentage of husband-wife families	...	82.6	74.4	...
Persons per household	6.71	7.62	6.95	6.85 ^b
Household relationships				
Family heads	...	2 563	3 666	4 260 ^c
Male	...	...	3 226	3 714 ^c
Female	...	...	440	546 ^c
Primary individual	...	45	192	...
Wife of head	2 072	2 151	2 870	...
Child of head	8 265	8 339 ^d	13 319	...
Other relatives of head	4 292	6 639	6 360	...
Unrelated to head	717	129	389	...
Percentage of other relatives or unrelated	27.8	34.1	25.2	...

^a A primary individual is a household head living alone or with non-relatives only.

^b M. Levin, "Report on the 1974 census of American Samoa", part II (unpublished manuscript, in press), table X.6.

^c *Ibid.*, table X.3.

^d Child under 18 years only for 1960, data adapted from census reports.

per family remains close to five in the 1950-1970 period. The exact figures – 4.8 in 1950, 5.1 in 1960 and 5.4 in 1970 – show a slight trend towards increase, but this may be due to the changes in definition of family members adapted at the censuses.¹⁸ On the other hand, there has been a fluctuation in the average size of "other relatives of head" – 1.6 persons per family in 1950 to 2.6 in 1960 and to 1.7 in 1970. Thus, the variations in size of household actually depended on the number of non-nuclear family members.

The situation in American Samoa perhaps indicates that during periods of economic hardship, a large number of relatives are absorbed by existing households or merge to live together. However, in analysing the variation in household size, it must be remem-

bered that the Western concept of a household may not be meaningful in the Samoan context. In the West, the concept implies a closed housing unit, the occupants of which are usually closely related. A Samoan "family" or household, on the other hand, is not so clearly defined within a closed unit. The traditional Samoan housing, the *fale*, is an open structure constructed of poles which support a thatched roof. It is used primarily when needed for shelter, since most Samoan living is outdoors.¹⁹ The extended family may actually

¹⁸ As, for instance, the inclusion of primary individuals in 1950 and exclusion of own children over 17 years in 1960.

¹⁹ Wolf Management Services, *Economic Development Program for American Samoa* (New York, United States Department of Commerce, Economic Development Administration, 1969), p. 145.

Table 22. Family composition, American Samoa, 1960 and 1970

	1960	1970	Change %
Number of families	2 563	3 666	43.0
Married couples	2 489	3 322	33.5
Husband-wife primary family ^a	2 154	2 870	33.2
Husband-wife sub-family ^b	335	452	34.9
Percentage sub-families in married couples	13.5	13.6	...
Single parent family	...	239	...
Single, male parent	...	56	...
Single, female parent	...	183	...
Proportion of families by presence of own children		%	
All families			
With children under 3 years		39.5	
6 years		56.6	
18 years		80.9	
Husband-wife families			
With children under 6 years		62.6	
18 years		86.5	
Families with female head			
With children under 6 years		33.2	
18 years		60.2	

Source: United States census reports.

^a A husband-wife family is a family in which the head and his wife are enumerated as members of the same household.

^b A sub-family is a married couple with or without children, or one parent with one or more single children under 18 years old, living in a household and related to, but not including, the head of the household or his wife.

live in two separate housing units, but cook and eat in the same place. Thus, it is difficult to determine whether this group of people belongs to two households or one. In one census, this group may be counted as two households, and if the same criteria are not used in other censuses, the same group may be counted as one large household instead of two small ones. Thus, changes in the number and size of households enumerated in censuses may also be due to inconsistent tabulation of a "housing unit".

In fact, there are some contradictions in the census data. Though the decrease in the average number of persons per household between 1960 and 1970 was due to appreciable increase in the number of households, the proportion of husband-wife families to all

households decreased from 83 per cent in 1960 to 74 per cent in 1970, although in absolute numbers husband-wife families grew by 33 per cent. In other words, economic progress was followed by a faster growth of extended families than of nuclear families.

In summary, the American Samoan household is a large one containing on the average about seven persons. A substantial proportion of this number is comprised of non-nuclear family members, an average of 1.7 persons per household in 1970. There is some evidence that existing households "absorb" their relatives during periods of unfavourable economic conditions but further investigation is required to confirm this finding.

Table 23. Distribution of population by race and sex, American Samoa, 1920-1974

Race and sex	1920	1930	1940	1950	1960	1974	
						Number	%
Polynesian							
Males	3 975	4 541	5 711	9 032	9 668	12 850 ^a	87.1
Females	3 801	4 385	5 580	8 565	9 546	12 846 ^a	88.9
Part-Polynesian							
Males	127	469	687	538	255	1 186 ^b	8.0
Females	106	408	616	432	249	1 144 ^b	7.9
White							
Males	31	174	200	236	79	477	3.2
Females	10	53	100	122	27	358	2.5
Others							
Males	6	24	14	12	20	234 ^c	1.6
Females	—	1	—	—	7	95 ^c	0.7
Total							
Males	4 139	5 208	6 612	9 818	10 164	14 747	100
Females	3 917	4 847	6 296	9 119	9 887	14 443	100

Source: Census reports.

^a Includes part-Polynesians, except part-Samoan.

^b Part-Samoans only.

^c Includes 118 persons from the Republic of Korea and 116 "not stated".

^d Includes 36 persons from the Republic of Korea and 59 "not stated".

D. RACE, ETHNICITY AND NATIONALITY

Three different terms are used in this section to describe a person's ancestry — race, ethnicity and nationality. The term race is used here to distinguish between Polynesians, whites and others. Ethnicity describes Polynesians by their islands of origin, such as Samoan, Tongan, Niuean, Fijian, etc. For a person of Samoan ethnicity, nationality differentiates between American Samoan and Western Samoan.

In terms of both race and ethnicity, the American Samoan population is remarkably homogeneous. It will be seen from table 23 that until 1960, 98 per cent or more of the population was either Polynesian or part-Polynesian. In 1974, this proportion decreased considerably because of an increase of whites and other races. However, persons of Polynesian extraction still comprised more than 95 per cent of the population.

Though American Samoa has been subject to Western influence for well over a century and a possession of the United States for the last 75 years, there are very few locally-born white residents in these islands. Out of a total of 249 whites enumerated in the 1960

census, only 26 were born in American Samoa; in 1974 only 30 out of 835 whites enumerated were born there. Many of those locally-born are the children of whites temporarily staying in the islands, and will therefore emigrate with their parents. Most of the whites have moved to the islands under various contracts and remain for relatively short periods of time. The majority of "others" enumerated in the 1974 census came from the Republic of Korea and worked in fishing or construction companies and would therefore leave the islands sooner or later. In addition, there were a large number of oriental fishermen who were not enumerated in the 1974 census.²⁰ It should, however, be noted that the 1974 census, being a *de facto* census, would have included more temporary foreign visitors than the earlier *de jure* United States censuses.

Contrary to the situation in Western Samoa, where the proportion of part-Polynesians is increasing, the proportion of part-Polynesians in American Samoa

²⁰ In 1972, the Governor reported that there were more than 4,000 oriental fishermen in American Samoa. See Office of Samoan Information, *American Samoa, Annual Report 1972* (Washington, DC, Government Printing Office).

has been reduced by about half at each census between 1940 and 1960 (table 23). However, it is debatable whether these figures are accurate, as it would appear that in American Samoa there has been an increasing tendency for part-Samoans to "pass" as full-blooded Samoans. In fact the 1974 census enumerated five times as many part-Samoans as the 1960 census. By including the part-Samoans under the general category of part-Polynesians, the 1960 United States census counted 500 part-Polynesians, but the 1974 census enumerated 2,300 part-Samoans alone. Such an increase in 15 years is highly unlikely and can probably be explained by changes in the definition of "part-Samoan" and "Samoan". The major difference is that race was self-defined in the 1974 census, but was enumerator-defined according to certain guidelines in the 1960 and earlier United States censuses. That the problem is primarily one of definition and technique is further supported by 1956 census results. Operating under the same concepts, the 1956 census showed remarkable agreement with the 1974 census in that it found 7.5 per cent of the population to be part-Samoan.

During the days of the United States Navy control, a small minority of whites resided in American Samoa. In 1950 nearly 2 per cent of the population was classified as belonging to this racial group. With the transfer of administration to the Department of the Interior, however, the white population declined sharply to 0.5 per cent in 1960. Since then, massive development planning has brought in a large number of temporary white residents under various contracts; in 1974 the number exceeded 800, or about 3 per cent of the entire population. Naturally, most of these *palagis* are in the prime working age group; 55 per cent of the whites and 73 per cent of those from the Republic of Korea were in the 15-44 age bracket in 1974.

Although American Samoa has in recent years attracted an increasing number of people from other Pacific islands, the latter still constitute only a small proportion of the Polynesian population. The "other Pacific islanders" increased from 310 or 1.5 per cent of the total American Samoan population in 1956 to 930 or 3.2 per cent in 1974. All but 50 were from Tonga, Tokelau or Niue. Tongans comprised the largest group (576), followed by Tokelauans (176) and Niueans (128). Except for Niueans, the sex ratios of these other Pacific islanders were more or less balanced.

As a result of the influx of Western Samoans and the emigration of native American Samoans, there has been a change in the composition of the population by nationality. Although data on nationality are lacking, nationality status can be inferred from available data on birth place. These data indicate that there has been a rapid reduction in the proportion of native-born from about 90 per cent in 1960 to 78 per cent in 1970 and to 64 per cent in 1974. Since the proportion of

whites and other races is insignificant and the number of naturalized citizens is also small, the proportions of native-born could be deemed to equal that of American Samoan residents of United States nationality.

The rapid decline in the proportion of native-born American Samoans is more the result of the increase in the immigration of persons born in Western Samoa than in the emigration of those born in American Samoa. The proportion of Western Samoan natives residing in American Samoa increased from 8.5 per cent in 1960 to 16.7 per cent in 1970 and to 25.3 per cent in 1974; at the same time, the absolute number of Western Samoans increased more than four times. There was also a sharp increase in residents who had been born in the United States. Whereas in 1960 there were only 221 residents born in the United States, their number increased to 1,211 in 1970 and to 1,845 in 1974. In 1960, only 40 of the 221 born in the United States were Polynesians and part-Polynesians. As information on race was not collected in the 1970 census, it is not possible to determine the number of Polynesians born in the United States. However, since 835 whites were enumerated in the 1974 census, it may be assumed that approximately 1,000 of the 1,845 born in the United States were of Samoan stock.

Of the 5,873 foreigners enumerated in 1970, less than 3 per cent were naturalized United States citizens and the great majority, 4,331 or 73.7 per cent, were aliens with permanent visas. Others were staying in the islands with temporary visas. The foreign-born of American parents numbered only 57. As already indicated in the section on migration in chapter II, these foreign-born came to the islands relatively recently. Twenty-two per cent of them came during 1969-1970 and an additional 20 per cent during 1967-1968. Those who immigrated in 1950 or before made up only 17 per cent of the total foreign-born.²¹

E. RELIGION AND EDUCATION

1. Religion

The special censuses of 1956 and 1974 were the only ones to collect information on the religious affiliation of American Samoans. In both censuses, a majority of American Samoans were found to belong to the Congregational Church (also known as the London Missionary Society). According to the 1956 census, 69.5 per cent of the total population were members of the Congregational Church, and this proportion declined to 56.3 per cent in 1974. This decline was compensated for by an increase in the proportions of those belonging to other religious groups. The proportion of Roman Catholics increased from 15.6 per cent in 1956 to 20.2 per cent in 1974, while the proportion of Mormons increased from 5.5 to 8.2 per cent and

²¹ United States Bureau of the Census, *op. cit.*

that of Methodists from 4.0 to 7.0 per cent. Although comprising a small proportion of the total population, those belonging to the Seventh Day Adventist Church recorded the greatest percentage increase, from 0.5 per cent of the population in 1956 to 2.1 per cent in 1974.^{22, 23}

2. Education

The Government of American Samoa places a strong emphasis on strengthening its educational system. Government-provided education starts with the Early Childhood Education Centers, which began in 1969 for three, four and five year old children, and continues up to the Community College of American Samoa, which was established in 1971. The educational television system in American Samoa has been described as the most developed in the world and is an integral part of daily elementary school education. Reflecting the sophistication of the educational system, the school enrolment in recent years has been very high compared to levels in most developing countries.

The attendance of elementary school-age children (7-13 years of age) reached nearly 90 per cent in 1950 and thereafter improved steadily until it attained the 95 per cent mark in 1974. A change in the educational system in between 1962 and 1964, whereby the number of years of elementary schooling was increased from six to eight years, did not lead to an increase in the enrolment ratio of children aged 7 to 13 years.²⁴ This would indicate that an eight-year elementary education was almost universal even before the change.

The school attendance of 14 and 15 year old children is also over 90 per cent. It is thus clear that most Samoans are now continuing their education beyond elementary school. The over-all attendance rate of the elementary through secondary school ages (7-17 years) has been steadily improving and had reached 91 per cent in 1974.

As will be seen in table 24, the attendance rate of the older teens has declined in recent years. For ages 16 and 17, the rate reached a peak in 1960, and for ages 18 and 19, the peak rate was in 1970. However, this decline in the rate for the secondary school ages does not contradict the impact of the territory's expanding educational programme, since children who missed their elementary education earlier were "making up" in later days. As the pool of these older children was exhausted, the attendance rate declined. For instance, in 1960, of the 17 year old students 75 per cent were in elementary schools (grades below 9), but in 1974 only 12 of these students, or less than 2 per cent, were in elementary schools. In fact, during the decade 1960-1970, the number of enrolments of high school increased 4.6 times, but those in elementary schools by only 1.1.

As shown in table 25, there is little sex differential in school attendance before the age of 15. From age 15, when secondary education generally begins, there is a tendency for male attendance to surpass that of female attendance. A similar situation was also observed in 1960. Although the educational status of the Samoan teenage boys who emigrated cannot be determined, it is apparent that among those remaining in the territory, males were more favoured than females to continue their education beyond elementary school.

Educational attainment for persons 25 years old and over is shown in table 26, by years of school completed. It is evident that during the past quarter of a century, there was a substantial improvement in the educational attainment of the population. For males, the median school years completed increased from 6.2 years in 1950 to 9.2 years in 1974, and for females from 4.1 years to 8.9 years. Those without formal education decreased from 16 per cent in 1950 to 5 per cent in 1974.²⁵ There is also a significant decline in the proportion of persons with elementary education only. In 1950 about 70 per cent of the population received less than nine years of schooling but in 1974 this proportion dropped to about 45 per cent. In the meantime, there has been a large increase in the number of persons educated in high school and colleges. The proportion of males educated in high school increased from 7 per cent in 1950 to 40 per cent in 1974; the college-educated increased from 3 to 14 per cent. The proportion of females educated in high school increased from 2 to 40 per cent; the proportion of college-educated increased from 1.5 to 8.4 per cent in the 24-year period.

There is some differential by sex in the level of educational attainment, but the difference has considerably narrowed in the last 25 years. Over half of American Samoan adults have now received education beyond elementary school. With the current level of enrolment of children of high school age and the vigorous education programme of the Government, it is expected that over two thirds of the entire population will soon have received more than eight years of schooling.

²² Government of American Samoa, "Census of American Samoa, 25 September 1956" (mimeographed).

²³ *Report of the 1974 Census of American Samoa*, (Government of American Samoa and East-West Population Institute, Honolulu, 1977), part II.

²⁴ Wolf Management Services, *op. cit.*, p. 73.

²⁵ The percentages for 1960 are unusually low and may be due to definitional problems.

Table 24. School enrolment by age and sex, American Samoa, 1950-1974

Age	1950			1960			1970			1974		
	Population enrolled		%									
5 and 6 ^a	1 320	380	28.8	1 333	172	12.9	1 916	1 455	75.9	1 887	1 087	57.6
7 to 13	3 483	3 065	88.0	3 325	3 859	89.2	5 622	5 103	90.8	1 887	1 087	95.1
14 and 15	876	779	88.9	1 099	986	89.7	1 343	1 147	85.4	1 473	1 335	90.6
16 and 17	824	609	73.9	959	747	77.9	1 299	964	74.2	1 308	960	73.4
18 and 19	883	448	50.7	703	373	53.1	1 096	521	56.7	1 107	414	37.4
20 and 21				656	158	24.1		132	13.4	972	135	13.9
22 to 24	1 630	376	23.1	788	89	11.3	2 170	38	3.2	1 315	50	3.8
Totals												
5 to 24	9 016	5 657	62.7	9 863	6 384	64.7	13 446	9 460	70.4	13 889	9 523	68.6
5 to 34				12 124	6 451	53.2	16 652	9 510	57.1	15 960	9 543	59.8
7 to 24	7 696	5 277	68.6	8 530	6 212	72.8	11 530	8 005	69.4	12 002	8 476	70.3
7 to 19	6 060	4 901	80.9	7 086	5 965	84.2	9 360	7 835	83.7	9 715	8 251	84.9
7 to 17	5 183	4 453	85.9	6 383	5 592	87.6	8 264	7 214	87.3	8 608	7 837	91.0

Source: Census reports.

^a For ages 5 and 6, children in nursery schools and kindergarten are included in 1970; in 1950, the level and type of school in which the child was enrolled is not given and may include kindergarten and nursery school.

Table 25. School attendance by age and sex, American Samoa, 1974

<i>Age</i>	<i>Total</i>	<i>Males attending school</i>	<i>% in school</i>	<i>Total</i>	<i>Females attending school</i>	<i>% in school</i>
5	512	163	31.8	443	139	31.4
6	504	427	84.7	428	358	83.6
7	446	413	92.6	426	387	90.8
8	470	450	95.7	424	406	95.8
9	470	447	95.1	422	408	96.7
10	436	417	95.6	406	391	96.3
11	400	380	95.0	390	370	94.9
12	408	394	96.6	354	342	96.6
13	402	386	96.0	373	351	94.1
14	380	349	91.8	362	336	92.8
15	372	345	92.7	359	305	85.0
16	339	280	82.6	332	261	78.6
17	322	213	66.1	315	206	65.4
18	244	123	50.4	339	143	42.2
19	228	77	33.8	296	71	24.0

Table 26. Years of school completed by persons 25 years old and over by sex, American Samoa, 1950-1974

	1950		1960		1970		1974	
	No.	% ^a	No.	%^{a}	No.	%^{a}	No.	%^{a}
Males 25 years and over	3 290	100	3 127	100	4 591	100	6 857	100
No school years completed	504	16.3	70	2.3	279	6.1	347	5.1
Elementary:								
1-4 years	613	19.8	495	16.1	456	9.9	716	10.5
5 and 6 years	706	22.9	794	25.8	863	18.8	1 129	16.5
7 years	352	11.4	397	12.9	300	6.5	331	4.9
8 years	626	20.3	633	20.6	441	9.6	696	10.2
High school:								
1-3 years	125	4.0	363	11.8	1 106	24.1	1 453	21.3
4 years	60	1.9	146	4.7	660	14.4	1 242	18.2
College:								
1-3 years	26	0.8	116	3.8	207	4.5	457	6.7
4 years	75	2.4	20	0.6	136	3.0	278	4.1
5 years or more			43	1.4	143	3.1	159	2.3
Not reported	203		50		—		49	
Median school years completed	6.2		7.5		8.9		9.2	
Females 25 years and over	3 093	100	3 352	100	4 431	100	7 099	100
No school years completed	874	28.9	121	3.7	352	7.9	280	4.0
Elementary:								
1-4 years	831	27.5	862	26.1	507	11.4	809	11.4
5 and 6 years	873	28.8	1 314	39.8	1 089	24.6	1 350	19.1
7 years	173	5.7	310	9.4	331	7.5	403	5.7
8 years	161	5.3	411	12.4	400	9.0	767	10.8
High school:								
1-3 years	27	0.9	195	5.9	1 127	25.4	1 564	22.1
4 years	38	1.2	35	1.1	407	9.2	1 302	18.4
College:								
1-3 years	22	0.7	30	0.9	125	2.8	425	6.0
4 years	26	0.8	12	0.4	55	1.2	122	1.7
5 years of more			10	0.3	38	0.8	52	0.7
Not reported	68		52		—		24	
Median school years completed	4.1		6.7		7.8		8.9	

Source: Census reports.

^a The total excludes "not reported".

CHAPTER IV

POPULATION DISTRIBUTION AND INTERNAL MIGRATION

A. REGIONAL DISTRIBUTION

American Samoa is divided into four districts: Swain's Island, Manu'a and the Eastern and Western districts of Tutuila. The Manu'a district consists of three constituent islands, Ta'u, Ofu and Olosega, which are subdivided into five counties. The island of Ta'u has three of the five counties, while each of the remaining two islands forms an independent county. In the Eastern district of Tutuila, which includes Aunu'u Island, there are six counties, and in the Western district four counties.¹ In each county there are a number of villages, each of which in turn is comprised of a group of extended families. *aiga*. (See maps 1 and 2.)

The settlement of people in American Samoa has been concentrated on the island of Tutuila. With 70 per cent of the total land area of the Territory, Tutuila contained 92 per cent of the total population in 1970 and 94 per cent in 1974. The Manu'a group, comprising 28 per cent of the land area, contained the remainder of the population. Swain's Island has played an insignificant role in population settlement: its population in 1970 consisted of a mere 74 persons. As noted earlier, the island has experienced intermittent changes in population size which has never exceeded the 1950 population of 164 persons. Hence, Swain's Island has been excluded from the present analysis relating to population distribution.

The Eastern district of Tutuila has traditionally been the most populous area. Encompassing the bay area and part of Nu'uuli, this district contains all the major population centres of American Samoa except Leone. Until the middle of this century, the Eastern district was the fastest growing area in the territory (table 27). Fifty-nine per cent of the total population and 64 per cent of the Tutuila population lived in Eastern Tutuila in 1970. Since the turn of the century, its population has grown 7.2 times, from over 2,200 in 1900 to nearly 16,000 in 1970.

The Western district is rapidly catching up with Eastern Tutuila in population size. Western Tutuila's population comprised 33 per cent of the total population in 1970, at which time its population size had multiplied 5.3 times since 1900. Since 1950 the pace of growth of the Western district has surpassed that

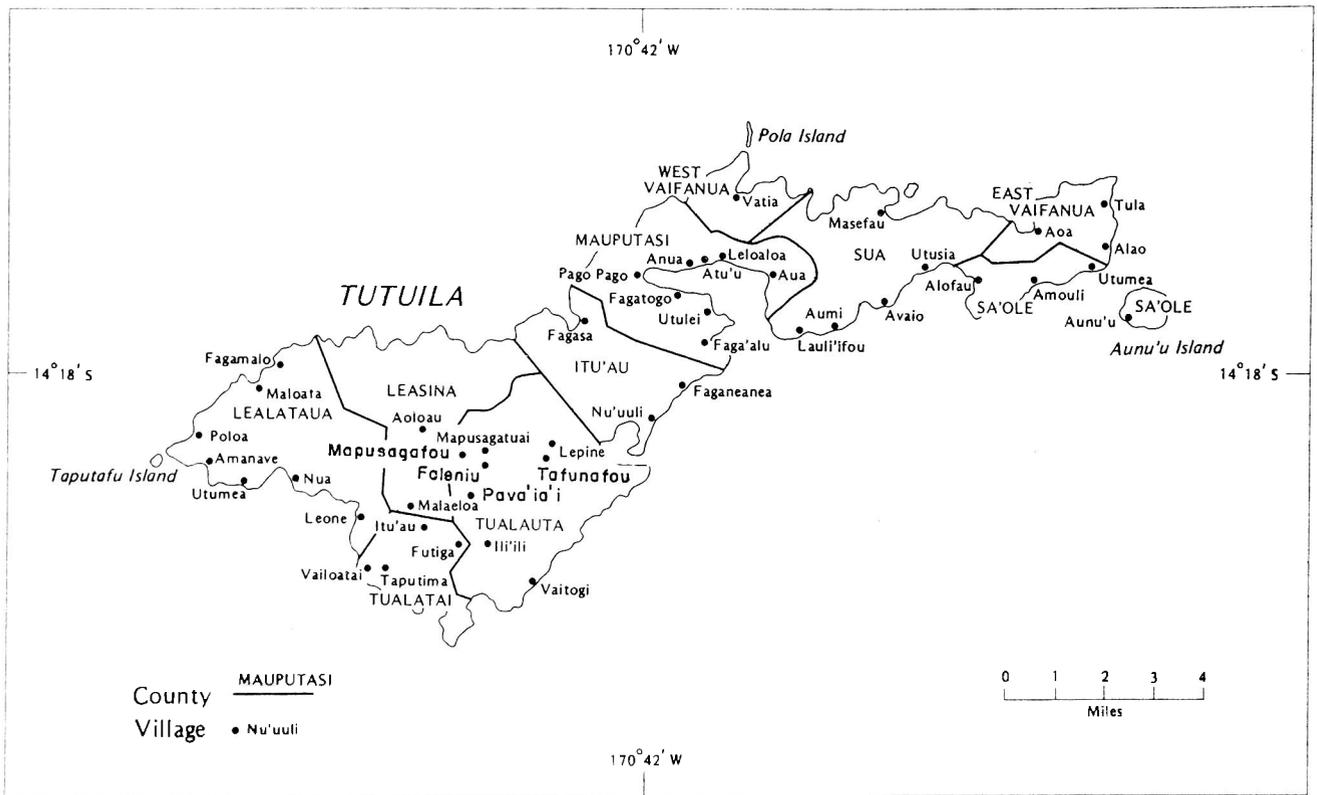
of the Eastern district; between 1950 and 1970, the Western district experienced a 69 per cent increase in population, compared to a 59 per cent increase in the Eastern district. Since 1960 the annual growth rate of the Western district has been almost 4 per cent while that for the Eastern district was 1.3 per cent. The population of Manu'a, on the other hand, grew slightly until 1950, but has declined ever since. Between 1960 and 1970 Manu'a recorded a 22 per cent loss in population from 2,695 to 2,112 inhabitants. The population of Manu'a continues to drop, as evidenced by its 1974 population of 1,842.

The difference in population growth by district essentially stems from migration which is selective for socio-economic and demographic characteristics. For instance, the median age is highest in the Eastern district of Tutuila which attracts persons of working age from other districts and foreign countries. Likewise, the dependency ratio is highest in Manu'a where the population, especially of working-age people, is decreasing; in 1970 nearly 63 per cent of Manu'ans were either under 18 or over 65 years of age, the corresponding proportions for the Eastern and Western districts being 56 and 58 per cent respectively (table 28).

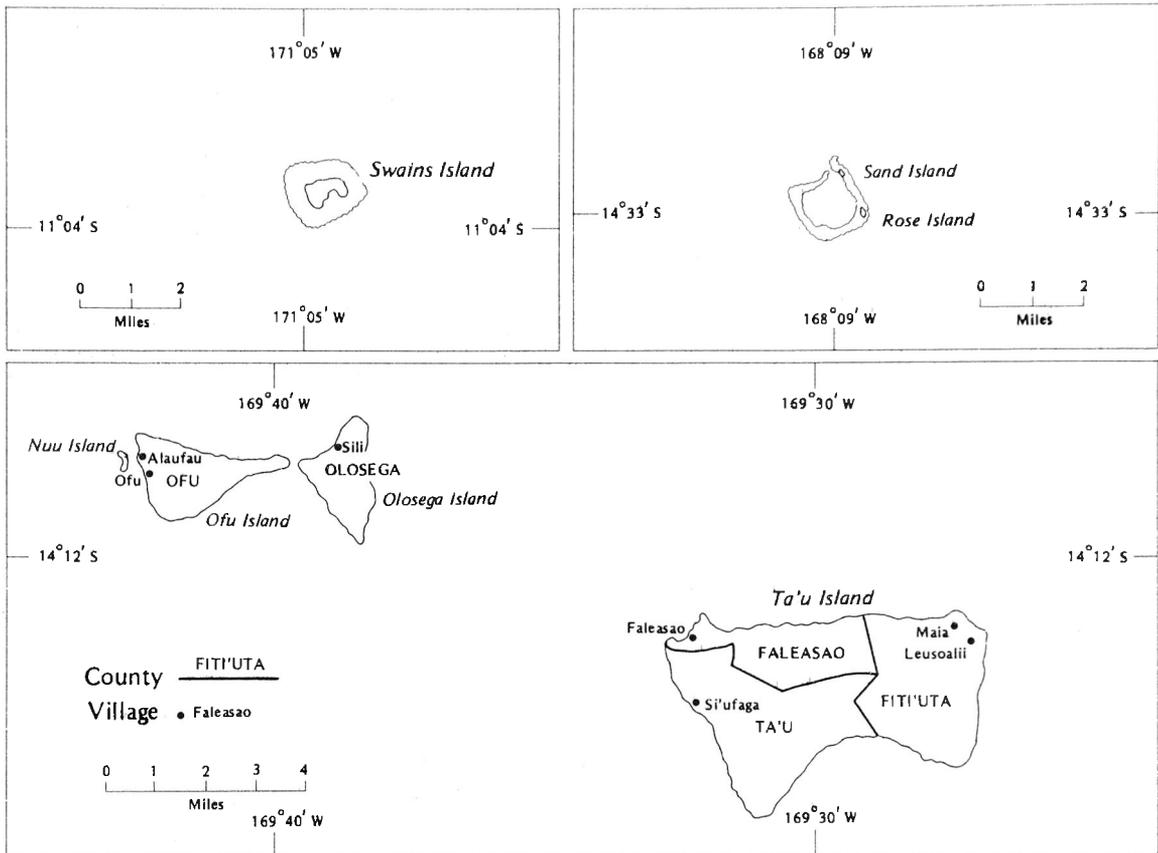
As discussed earlier, under the *aiga* system, existing households usually expand to absorb newcomers as needed. It follows then that in Manu'a, where out-migration has been most substantial, the household size will be smallest. In fact, in 1970 the average household size was 5.4 persons. In the Eastern district, on the contrary, where in-migration is significant, the households should be larger, and in 1970 the average was 7.1 persons per household. More significant is the average number of non-nuclear family members per household. Households in the Eastern district have nearly twice as many non-nuclear family members as do those in Manu'a, and households in the Western district fall somewhere in between.

Most residents born in Hawaii, California or foreign countries live on the island of Tutuila. According to the 1970 census, only 50 out of 5,000 persons born in Western Samoa and only 12 out of 1,200 born in the United States lived in the Manu'a islands. The 1974 census corroborates these figures as according to this census, 76 out of 7,400 born in Western Samoa, and 76 out of 3,100 born outside the Samoan islands lived in the Manu'a district. On Tutuila most of these foreign-born persons resided in the Pago Pago Bay area and in the Western districts.

¹ In the 1974 census, Mauputasi and Itu'au, the two most populous counties by Pago Pago Bay, were separated from the Eastern district to form a new district, referred to as Central Tutuila in the census report.



MAP 1



MAP 2

Table 27. Population growth by district, American Samoa, 1900-1974

Year	Enumerated population				
	Territory	Tutuila		Manua's	Swain's
		Eastern	Western		
1900 ^a	5 679	2 221	1 702	1 756	...
1912 ^a	7 251	3 186	2 268	1 797	...
1920 ^b	8,058	3 777	2 408	1 873	...
1930 ^c	10 055	5 032	2 777	2 147	99
1940 ^c	12 908	6 733	3 431	2 597	147
1950 ^c	18 937	10 624	5 330	2 819	164
1956 ^d	20 154	11 405	5 902	2 767	80
1960 ^e	20 051	11 137	6 113	2 695	106
1970 ^e	27 159	15 955	9 018	2 112	74
1974 ^f	29 190	16 828	10 520	1 842	...
		<i>Average annual growth rate (percentages)</i>			
1900-1912	2.06	3.05	2.42	0.19	
1912-1920	1.33	2.15	0.75	0.52	
1920-1930	2.24	2.91	1.44	0.41	
1930-1940	2.53	2.95	2.14	1.92	
1940-1950	3.91	4.67	4.50	0.82	
1950-1960	0.57	0.47	1.38	-0.45	
1960-1970	3.08	3.66	3.96	-2.41	
1970-1974	1.82	1.34	3.93	-3.36	

- Sources: *a* United States Department of the Navy, *American Samoa: A General Report by the Governor, May 1, 1921* (Washington, DC, Government Printing Office, 1922).
- b* United States Bureau of the Census, *Fourteenth Census of the United States 1920*, vol. III (Washington, DC, Government Printing Office), p. 1237.
- c* United States Bureau of the Census, *Census of Population: 1950. Vol. II: Characteristics of Population: Territories and Possessions* (Washington, DC, Government Printing Office, 1953), pp. 54-10 and 54-11.
- d* John C. Cool, "Census of American Samoa, September 25, 1950", Pago Pago (mimeographed).
- e* United States Bureau of the Census, *U.S. Census of Population: 1970. Number of Inhabitants, American Samoa*, final report PC(1)-A56 (Washington, DC, Government Printing Office, 1971).
- f* *Report of the 1974 Census of American Samoa* (Government of American Samoa and East-West Population Institute, Honolulu, 1977).

The growth of population by county has not been even within a given district (table 29). Prior to 1950 Mauputasi and its south-western neighbour, Itu'au, recorded distinctively higher rates of growth than other counties. However, in recent years, the rate of growth of Mauputasi has slowed, but its neighbours, Itu'au, Sua, Tualauta and Tualatai, are now growing rapidly. This trend is the result largely of the non-availability of open land in the Eastern district. The Western district, on the other hand, has almost all the land needed for development. Not a single county in the Manu'a district has recorded any growth since 1950. Decreases in Ta'u and Ofu counties are particularly marked.

The most populous county in American Samoa is Mauputasi. With 30 per cent of the total population, it has the highest density with 2.0 persons per acre. All other counties have less than one person per acre (see map 3). Mauputasi, Tualauta, Lealataua, Itu'au and Sua, five of the most populous counties, together comprise more than 70 per cent of the total population.

The growth of Tutuila, in particular Mauputasi county, was mainly due to the urbanization of the villages, especially those in the Pago Pago Bay area. The village has traditionally been the basis of human settlement in Samoa. All persons are assigned statis-

Table 28. Selected general characteristics of population by district and large village, American Samoa, 1970

	<i>American Samoa</i>	<i>Districts</i>			<i>Villages</i>				
		<i>Tutuila</i>		<i>Manu'a</i>	<i>Fagatogo</i>	<i>Leone</i>	<i>Nu'uuli</i>	<i>Pago Pago</i>	<i>Urulei</i>
		<i>Eastern</i>	<i>Western</i>						
Population	27 159	15 955	9 018	2 112	1 592	1 657	1 804	2 451	1 074
Percentage under 18 years	54.8	53.7	55.7	58.2	48.2	55.2	52.0	52.5	51.1
Percentage 65 years and over	2.4	2.4	2.1	4.4	2.9	2.4	2.4	2.5	3.1
Median age	16.1	16.5	15.8	15.1	19.0	16.3	17.0	16.9	17.8
Sex ratio	101.5	103.1	98.1	103.1	110.0	88.5	113.5	103.4	97.4
Number of families	3 666	2 093	1 242	320	204	207	217	289	151
Persons per household	6.95	7.07	6.90	6.36	6.90	7.65	7.77	7.87	6.08
Non-nuclear persons per household	1.75	1.93	1.63	1.08	2.44	2.28	2.46	2.24	1.80
Percentage married couples in sub-families	13.6	15.7	12.0	5.4	23.0	17.9	12.4	20.8	6.1
Percentage born in a United States territory	73.9	73.6	68.9	97.1	64.9	71.9	67.1	70.3	63.7
Percentage born in United States	4.4	4.1	6.1	.6	7.2	4.6	4.8	2.7	17.2
Percentage foreign-born	21.6	22.3	25.0	2.4	27.9	23.4	28.0	27.0	19.1
Residence in 1965 for persons 5 years old and over									
Percentage in United States	5.0	4.6	6.8	.7	7.1	5.3	5.1	2.5	17.0
Percentage in foreign country	12.5	12.7	14.9	.7	18.0	12.5	20.0	14.8	9.2
Percentage enrolled in schools by age									
5 and 6 years	75.9	71.9	80.9	85.5	62.6	83.9	43.6	56.3	70.8
7 to 13 years	90.8	88.4	92.9	97.7	68.0	95.0	61.4	95.1	86.0
14 and 15 years	85.4	82.0	88.5	99.2	52.2	89.6	59.0	88.3	79.6
Percentage by level of school completed for persons 25 years and over									
Less than 5 years	17.7	17.8	18.4	12.6	9.5	18.1	18.1	19.1	15.3
Median school years completed	8.4	8.6	8.0	9.2	10.2	7.8	8.2	9.0	9.8
Percentage in labour force for persons 16 years and over									
Males	50.4	54.0	50.1	21.3	56.3	52.3	49.5	52.9	65.3
Females	28.9	31.5	29.4	5.9	31.5	33.6	28.9	30.8	34.4
Median family income (\$US)	2 840	3 270	2 755	250	4 500	3 650	3 806	3 536	5 833

Source: United States population census report, 1970.

Table 29. Population growth by county, American Samoa, 1920-1970

County	1920	1950	1960	1970	1974	Percentage change			
						1920-1950	1950-1960	1960-1970	1970-1974
Tutuila, Eastern	3 777	10 624	11 137	15 955	16 828	181.3	50.2	43.3	5.5
Itu'au	573	1 796	1 887	2 884	3 128	213.4	60.6	52.8	8.5
Mauputasi	1 701	5 467	5 340	7 886	8 518	221.4	44.2	47.7	8.0
Saole	366	844	1 105	1 295	1 279	130.6	53.4	17.2	-1.2
Sua	633	1 325	1 500	2 336	2 365	109.3	76.3	55.7	1.2
Vaifanua, East			972	1 163	1 143		5.6	19.7	-1.7
West	504	1 192	333	391	395	136.5	22.4	17.4	1.0
Tutuila, Western	2 408	5 330	6 113	9 018	10 520	121.3	69.2	47.6	16.7
Lealataua	1 134	2 201	2 393	3 145	3 418	94.1	42.9	31.4	8.7
Leasina	290	447	571	637	739	54.1	42.5	11.6	16.0
Tualatai	333	844	1 008	1 565	1 684	153.4	85.4	55.3	7.6
Tualauta	651	1 838	2 141	3 671	4 679	182.3	99.7	71.5	27.5
Manu'a	1 871	2 819	2,695	2 112	1 808	50.7	-25.1	-21.6	-14.4
Faleasao	269	368	345	288	253	36.8	-21.7	-16.5	-12.2
Fiti'uta	335	559	596	492	441	66.9	-12.0	-17.4	-10.4
Ofu	716	576	605	412	374	56.6	-28.5	-31.9	-9.2
Olosega		545	429	380	250		-30.3	-11.4	-34.2
Ta'u	551	771	720	540	490	39.9	-30.0	-25.0	-9.3

Sources: United States census reports, 1920-1970, and *Report on the 1974 Census of America Samoa* (Government of American Samoa and East-West Population Institute, Honolulu, 1977).

tically to villages. The size of the villages varies widely, ranging from less than 50 persons to over 2,000 persons. Villages in the eastern and north shore areas of Tutuila remain relatively small with populations under 500. The western area, however, has several large villages such as Leone and Vailoatai, but population concentration is heaviest in the villages around the Pago Pago Bay. Together the villages around Pago Pago Bay present the characteristics of an urban centre.²

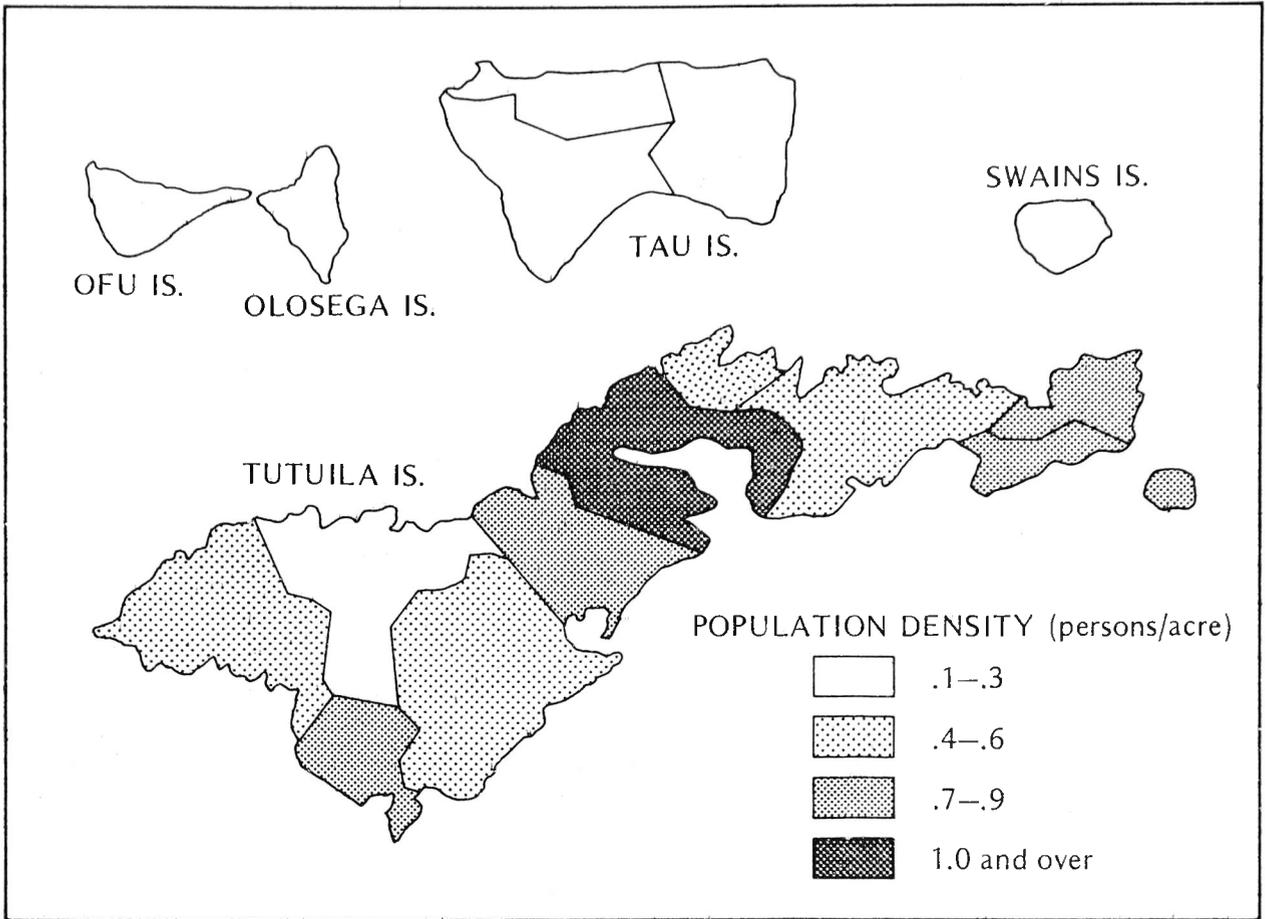
Villages are situated along the shoreline in all areas except the Tafuna plain, which contains the only flat land in the territory. The majority of dwellings hug the shore above the main road, which traverses Tutuila from Tula on the eastern end to Po'loa in the west. Wherever a valley exists along the shore, a village is found. Most houses are close to the road, while agricultural lands are further inland on the valley floor. Despite the tradition of settlement along the shore, some of the inland villages have shown the fastest growth rate in the decade 1960-1970, probably because of the lack of land elsewhere. The population nearly

tripled, for instance, in the villages of Mapusagatuai and Mapusagafou in Tualauta County. Nevertheless, the total population of 12 inland villages (Lepine, Tafunafou, Mapusagatuai, Faleniu, Mapusagafou, Pava'ia'i and Ili'ili in Tualauta County, Itu'au, Futiga and Taputima in Tualatai County, and Aoloau and Mala'eloa in Leasina County) still formed less than 18 per cent of the population in 1974.

B. URBAN DEVELOPMENT: PAGO PAGO BAY AREA

In absolute size, Pago Pago Bay is only a small urban area, even by South Pacific standards. But considering its pace of growth and its proportion to the total population of American Samoa, the Bay area is the sprawling urban centre of the Territory. Urbanization probably started in the early twentieth century when the United States gained control of present-day American Samoa, establishing a naval station and constructing government buildings in Fagatogo village at the head of the bay. But by far the most important factor in the urbanization of the area was the Second World

² E. Bloomfield, "The Pago Pago Bay area", *South Pacific Bulletin*, first quarter 1968, p. 25.



MAP 3

War.³ The Pago Pago Bay area experienced an economic boom at that time. A cash economy was introduced to the communal society, a class of wage-earners was created and a concentration of population rapidly evolved. The population of Mauputasi County increased from 17.4 per cent of the total population in 1912 to 31.8 per cent in 1945.

The urbanized area around the Bay is not at present officially or legally defined, nor is there any form of local urban government.⁴ In the absence of an official definition of the urban area, the eight villages facing the Bay may be referred to as the urbanized area in American Samoa. These villages are: Anua, Atu'u, Aua, Faga'alu, Fagatogo, Leloaloa, Pago Pago and Utulei. The entire area is often called Pago Pago by outsiders, and these villages are now, in fact, contiguous.

The population growth of the urban area since 1912 is shown in table 30. The general trend of growth has been parallel to that of the entire territory, though somewhat exaggerated. When the population growth

Table 30. The growth of the Pago Pago Bay area,^a 1912-1974

Year	Bay Area population	% of total population	% annual growth rate	
			Territory	Bay area
1912	1 264	17.4		
1920	1 677	20.8	1.3	3.6
1930	2 307	22.9	2.2	3.2
1940	3 037	23.5	2.5	2.8
1950	4 892	25.8	3.9	4.9
1960	4 785	23.9	0.6	-0.2
1970	7 685	28.3	3.1	4.9
1974	8 446	28.8	1.8	2.4

Source: Census reports.

^a Includes Anua, Atu'u, Aua, Faga'alu, Fagatogo, Leloaloa, Pago Pago and Utulei.

of American Samoa as a whole was slow, the Pago Pago Bay area actually decreased in population. Likewise, during the territory's fastest-growing periods, 1940-1950 and 1960-1970, the Bay area experienced the highest average annual growth rates at almost 5 per cent. In the 1960s Pago Pago village nearly doubled its population, from 1,251 in 1960 to 2,491 in 1970.⁵ Today the population of the villages around the Bay totals more than 8,000 people, or nearly 30 per cent of the entire population. With the availability of better transportation, the day-time population increased even more, as many of those employed in the Bay area commute daily from their villages. For example, in

³ *Ibid.*, p. 54.

⁴ *Ibid.*, p. 53.

⁵ United States census reports, 1960 and 1970.

1963, out of 719 cannery workers, 43 per cent resided outside the Bay area.⁶ Nearby villages, especially Nu'uuli and Tafunafau, are also growing very rapidly. Between 1960 and 1970, Nu'uuli's population increased by nearly 60 per cent and Tafunafau's by almost 120 per cent.⁷

Abundant and varied employment opportunities in the area are principally responsible for attracting people. The concentration of employment in the Bay area stems from its multiple roles as administrative centre, commercial centre, port of entry, industrial area, tourist resort and cultural centre.⁸ Thus the area will continue to grow rapidly. Because of acute pressure on the available land in the area, further expansion will necessarily be towards the westward plain. The Government has already begun to develop an airport, housing facilities and more recently a 35-acre industrial park in that area.

C. INTERNAL MIGRATION

In American Samoa, the differential growth of population by area does not yield much information about internal migration because of the confounding nature of international migration, which is extensive. No doubt there has been considerable exchange of population between villages. The traditional custom of *malaga*, taking the form of mass visitation, is now facilitated by modern roads and transportation. Calkins has observed that villages, families, societies and friends seem to be always on the move.⁹ But, quantitatively speaking, little is known about the extent and direction of internal migration in the territory.

Doumenge studied the birthplace and residence data of some 700 cannery workers in 1963.¹⁰ Although the study was selective for age and other socio-economic factors, it indicated that a large number of persons had left the Manu'a islands and the north shore of Tutuila to seek employment in the canneries. Aunu'u Island was also experiencing a loss of population. Those who left these areas moved mainly to the Pago Pago Bay area and, to a lesser extent, to the west coast and the south-western plain.

The results of the 1974 census throw further light on internal migration. As will be seen from table 31, the most mobile people are the Manu'ans. Among those still living in American Samoa, only slightly more than half those born in Manu'a still reside in the Manu'a islands. About 32 per cent of Manu'ans prefer to live in the Central district of Tutuila. If we take into consideration

⁶ F. Doumenge, *L'homme dans le Pacifique Sud* (Paris, Musée de l'Homme, publications de la Société des Océanistes, No. 19, 1966), p. 504, table CXXIV.

⁷ United States census reports, 1960 and 1970.

⁸ E. Bloomfield, *loc. cit.*, pp. 56-57.

⁹ F.G. Calkins, *My Samoan Chief* (Honolulu, University of Hawaii Press, 1971) p. 198.

¹⁰ F. Doumenge, *op. cit.*, pp. 504-507.

Table 31. Percentage distribution of American Samoans by district of residence in each district of birthplace, 1974

Residence	Place of birth			Manu'a
	Tutuila			
	West	Central	East	
Tutuila				
West	90.9	8.9	6.0	9.4
Central	5.9	85.4	7.7	31.8
East	2.3	3.9	85.2	6.8
Manu'a	0.8	1.8	1.0	52.0
Total	100	100	100	100

Source: Report of the 1974 Census of American Samoa (Government of American Samoa and East-West Population Institute, Honolulu, 1977).

the unknown number of emigrants to Hawaii and the mainland United States, it may be safely assumed that a majority of those born in Manu'a have migrated. Of those born in the Central and Eastern districts, about 15 per cent live elsewhere. While most of those born in Central Tutuila move to the Western district, people born in the Eastern district disperse more evenly to the other two districts on the island. Those born in the Western district appear to be the least mobile; only about 9 per cent of them reside in other districts, mainly in the Central district.

As will be seen from table 32, 80 per cent or more of the American Samoan residents are native to the district in which they live. Residents of the Central district are slightly more heterogeneous than residents of other areas, as 79 per cent are native to that district. Even though far more Manu'ans leave their birthplace than Tutuilans, 88 per cent of Manu'a's current American Samoan residents are native, reflecting the lack of in-migration to Manu'a.

In short, although to a certain degree the Central and Western districts have attracted people from other

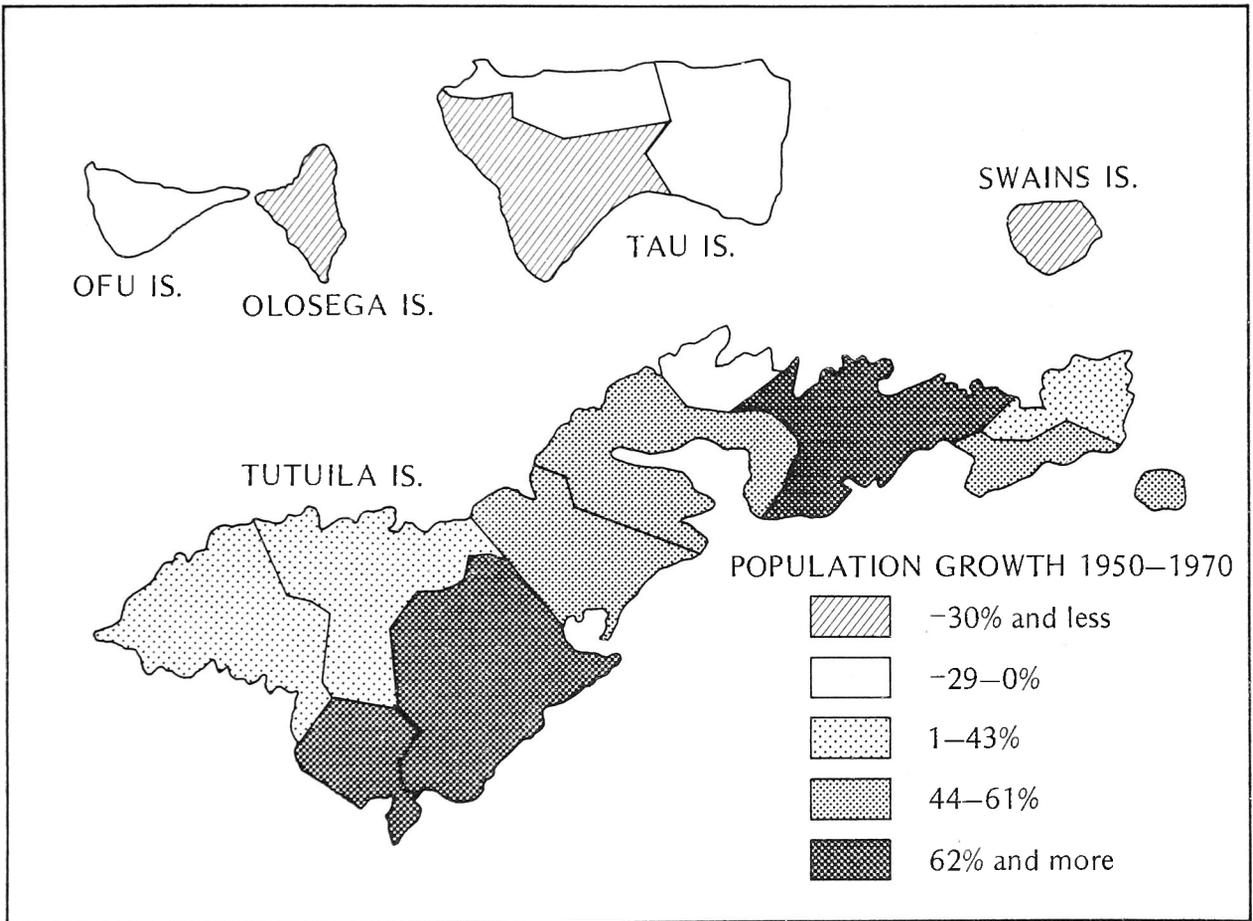
Table 32. Percentage distribution of American Samoans by district of birthplace in each district of residence, 1974

Residence	Place of birth			Manu'a	Total
	Tutuila				
	West	Central	East		
Tutuila					
West	82.0	9.8	3.7	4.4	100
Central	4.5	79.0	4.0	12.6	100
East	3.4	6.9	84.5	5.2	100
Manu'a	2.6	7.2	2.3	87.9	100

Source: Report of the 1974 Census of American Samoa (Government of American Samoa and East-West Population Institute, Honolulu, 1977).

districts, internal migration within Tutuila Island does not seem to be extensive. This is probably because of the small land area and the improvement in public transportation and roads. Tutuilans may not need to move within the island to be closer to jobs and schools, as all areas now have easy access to these necessities of modern life. On the other hand, a large number of Manu'ans have left their birthplace, which has resulted in the current depopulation of the Manu'a district.¹¹

¹¹ The analysis of internal migration does not include foreign-born residents. However, it may be noted that 31 per cent of the 1974 residents of the Western district were born in Western Samoa, while only 47 per cent of the population was native. Similarly, in the Central district, 25 per cent of the population originally came from Western Samoa and 49 per cent was native. In the Eastern district, 22 per cent were from Western Samoa and 61 per cent native. Only 4 per cent of Manu'ans were from Western Samoa and more than 80 per cent were native. The proportion of foreign-born residents from countries other than Western Samoa is also worthy of note. Other foreign-born persons comprised 11 per cent of the population in the Western district, 6 per cent in the Eastern district and 4 per cent in Manu'a.



MAP 4

Chapter V

THE LABOUR FORCE

A. INTRODUCTION

A systematic analysis of the trends in size and growth of the labour force in American Samoa is handicapped by several factors. In the first instance, it is difficult to apply the concept of the labour force to the Samoan situation where the basic socio-economic structure is built around a communal, extended family (*aiga*) system. It is true that the islands are experiencing a degree of modernization and industrialization and that opportunities for wage employment are expanding fast.¹ Today the islanders enjoy the highest wage level in the South Pacific. Yet Samoan living is still based on a mixture of cash employment and subsistence activities. The land is communally owned and the *matai* (chief of the *aiga*) holds the tenure. The *matai* allots the work, collects the fruit of labour and distributes it among his *aiga* members. Samoans, therefore, do not have to work to earn the means of their own living or to support their own family.² Therefore the concept of the labour force, which implies carrying on of an activity from which the person derives pay or profit, is not fully relevant to the American Samoan situation.

Secondly, inconsistencies in the data on economic activity of the American Samoan population render time series as well as international comparisons difficult. For instance, in the early censuses, those engaged in subsistence farming activities were apparently included in the category of the economically active population, while in the latter censuses they were excluded. According to the 1940 census, 80 per cent of the gainfully employed Polynesian and part-Polynesian men were classified as farmers and fishermen.³ And in 1960, nearly one half of all the male labour force was in

¹ The Second World War opened the path to general wage employment for the American Samoan people. The demand for labour greatly increased in the 1960s as a result of vigorous governmental efforts to industrialize the territory. It is claimed that at least 90 per cent of Samoan males in the working age group have paid employment. See Peter N.D. Pirie, "Samoa: two approaches to population and resource problem" in Wilbur Zelinsky, Leszek A. Kosinski and R. Mansell Prothero, eds., *Geography and a Growing World* (Oxford University Press, 1970), p. 500.

² Whether a Samoan is working in a paid occupation or engaged in subsistence activities, there may be little difference in the material aspect of individual living. Further, if the unemployed are defined as those who are not working but are seeking work for pay or profit, then few in the Samoan society would fall in this category of economic activity, regardless of economic and employment conditions.

³ United States Bureau of the Census, *U.S. Census of Population: 1940. Characteristics of the Population* (Washington, DC, Government Printing Office), table 14.

agriculture,⁴ although little commercial agriculture was known to exist in those days. Ten years later, however, when commercial agriculture began to develop, the census showed that only 2 per cent of the male labour force was in agriculture.⁵

In the 1974 census, there were efforts to adopt measures of economic activity more relevant to the situation obtaining in the islands. The concepts of "gainful workers" (used prior to 1950) and "labour force" (used in and after 1950) were discarded. In the 1974 census, economic status of the people was primarily classified according to the source of their income. For those engaged in agriculture, efforts were made to determine whether they were communal farmers or commercial farmers. In addition to the category of "unemployed", which was defined in the usual manner, a new category of "underemployed" was introduced. The latter included those who were dependent but would take appropriate jobs if offered and those over-qualified⁶ for their present jobs. The category of "underemployed" also encompassed part-time or subsistence workers who would like to have full-time jobs.

These and other data limitations must be borne in mind in any analysis of the trend in size and composition of the labour force in American Samoa.

B. AGE-SEX PARTICIPATION RATES

According to the censuses of 1960 and 1970, the proportion of the population economically active has dropped from 29 to 20 per cent. In 1974, when the participation rate was measured in a more refined way, the proportion economically active increased to 32 per cent. Nevertheless, the over-all participation rate for 1974 is low compared with developed countries which have participation rates in the range of 40 to 50 per cent.

Comparison of the Samoan labour force participation rate with that of other South Pacific islands is difficult because of definitional problems and differences in statistical quality. However, the comparison

⁴ United States Bureau of the Census, *U.S. Census of Population: 1960. General Population Characteristics, American Samoa* (Washington, DC, Government Printing Office), tables 19 and 20.

⁵ United States Bureau of the Census, *U.S. Census of Population: 1960. General Population Characteristics, American Samoa*, final report PC(1)-B56 (Washington, DC, Government Printing Office), tables 12 and 13.

⁶ The census, however, did not clearly define the criteria for determining those who were over-qualified.

could be effected by limiting the analysis to the male labour force only, because female rates are very much influenced by local custom and especially difficult to measure in traditional societies.⁷

The male labour force participation rate was highest in 1974, at 37 per cent. Though a few subsistence workers were included in the category of the economically active in 1970, the rate was only 25 per cent. However, even the 1970 male participation rate for American Samoa appears to be high compared to corresponding rates for other South Pacific islands. Although, according to a United Nations study, the male participation rates in other South Pacific islands in the 1960s were 40 per cent or higher,⁸ it should be pointed out that a substantial number of subsistence farmers were included in the category of the economically active population of these islands. According to a compilation by the South Pacific Commission,⁹ in which a distinction was made between subsistence and commercial agriculture, the male participation rate for American Samoa was surpassed only by Nauru, Fiji and Guam. For French Polynesia, the Cook Islands, and New Caledonia, in respect of which such a distinction was not made, the corresponding rates were within ranges comparable with that of American Samoa. In all other islands the rates were much lower than that of American Samoa, that for neighbouring Western Samoa being only 12 per cent in 1966.

As may be expected, the male labour force in American Samoa outnumbers the female labour force. In recent censuses males constituted more than 60 per cent of the total labour force. However, this proportion is remarkably low in comparison with other islands in the region. In Western Samoa, for instance, over 72 per cent of the total labour force, excluding those engaged in subsistence agriculture, was male in 1966.¹⁰ Although female participation in the labour force is difficult to compare internationally, American Samoa females are nevertheless economically very active by South Pacific standards. This is to be expected in view of the large demands for female labour in American Samoa generated by canneries, teaching positions and medical services. For the age group 15-64, female labour participation in activities other than agriculture in 1970 was 30.4 per cent. In the South Pacific, only Guam had a higher rate (36.5 per cent).¹¹ And in 1974, almost 50 per cent of American Samoan women of working age were participating in the labour force.

⁷ Monica Fong, "Female labour force participation in a modernizing society: Malaysia and Singapore 1921-1957", Papers of the East-West Population Institute, No. 34 (Honolulu, East-West Center, 1975), p. 3.

⁸ Hilde Wander, *Trends and Characteristics of Population Growth in Western Samoa* (United Nations, report No. TAO/WESA/3, 1971), p. 26.

⁹ South Pacific Commission, *Economically Active Population*, Statistical Bulletin of the South Pacific No. 3, Noumea, 1973.

¹⁰ *Ibid.*

¹¹ *Ibid.*

For both males and females, the increase in labour force participation in recent years is impressive. In 1960 the non-agricultural male work force constituted 36 per cent of the population aged 14 years and over. This proportion increased to 45 per cent in 1970 and to 64 per cent in 1974. The corresponding proportion for females increased from 22 per cent in 1960 to 26 per cent in 1970 and then to 46 per cent in 1974 (table 33). Part of the sharp increase in these proportions between 1970 and 1974 may be due to changes in definitions and concepts used. However, the rapidly expanding economy was undoubtedly responsible for a large part of the increase in the proportion of males and females engaged in non-agricultural activities.

Labour force participation rates by age and sex are shown in table 34. Compared to other countries in the region, the rates for ages below 20 are relatively low. For example, the male rate for the age group 15-19 is 56 per cent in Fiji (1966); in Guam, 42 per cent; (16-19 years, 1970) and in Nauru 68 per cent (15-19 years, 1966).¹² Even in Western Samoa, which had an over-all rate equivalent to about one half of American Samoa's, 11 per cent of 15 to 19 year old males were engaged in the cash economy in 1966,¹³ as compared to 6.6 per cent for American Samoa. However, there is a sudden increase in the labour force participation rate after age 20. The female participation rate in later teen years, which is higher than the corresponding male rate, also records a precipitous jump after age 20.

The low rates of labour force participation observed for teenagers could be explained by the comparatively high rates of enrolments in high school. Though only a small fraction of those aged 16-17 years are economically active, at ages 20-21, on completion of secondary education, over one third of the persons are in the labour force. For males, the participation rate continues to rise, though slowly, from the middle twenties. The maximum rate for males is reached in the age group 35-44, after which it declines rather rapidly. The peak rate for females is attained at around 25 years of age. After age 20, male participation rates are higher than the female rates and the difference becomes greater with age. In each age group there was a significant increase between 1970 and 1974.

A high proportion of American Samoan women with dependent children participate in the labour force. Well over 30 per cent of women with children of pre-school age were economically active in 1970. Similarly, married women living with their husbands work as much as women who are not married. This is in contrast to the situation in Guam or the Trust Terri-

¹² *Ibid.*

¹³ *Ibid.*

Table 33. Employment status, American Samoa, 1960, 1970 and 1974

	1960			1970			1974 ^a		
	Total	Males	Females	Total	Males	Females	Total	Males	Females
Total population	20 051	10 164	9 887	27 159	13 692	13 477	29 190	14 747	14 443
Total 14 years and over ^a	10 684	5 274	5 410	14 930	7 513	7 417	16 094	7 939 ^a	8 155 ^a
Labour force ^b	5 889	3 589	2 300	5 413	3 450	1 963	9 315 ^b	5 608 ^b	3 807 ^b
% of total 14 years+	55.1	68.1	42.5	36.3	45.9	25.5	57.9	69.4	46.7
Employed	5 833	3 550	2 283	5 110	3 249	1 861	7 475	4 892	2 583
Unemployed	51	34	17	293	193	100	189	79	110
% of labour force	0.9	0.9	0.7	5.4	5.6	5.1	2.0	1.4	2.9
Underemployed							1 651	537	1 114
Employed in agriculture ^c	2 840	1 708	1 132	82	70	12	494	428	66
Labour force less employed in agriculture	3 044	1 876	1 168	5 321	3 372	1 949	8 821	5 080	3 741
% of total 14 years+	28.5	35.6	21.6	35.6	44.9	26.3	54.8	64.0	45.9
Not in labour force	4 795	1 685	3 110	9 517	4 063	5 454	6 779 ^d	2 431 ^d	4 348 ^d
Enrolled in school	1 827	976	851	2 896	972 ^e	777 ^e	2 229	1 124	1 105
Other									
Under 65 years	2 599	589	2 010	6 034	2 179 ^e	3 677 ^e	3 673 ^f	967 ^f	2 706 ^f
65 years and over	369	120	249	587	240	347	877 ^g	340 ^g	537 ^g

Source: Data adapted from census reports.

^a For 1974, labour force data are for persons 15 years and over.

^b For 1974, labour force = all employed + underemployed + unemployed + temporary unemployed. It excludes those who receive their sole income from "other sources", such as pension, retirement or *aiga*.

^c For 1960, persons engaged in subsistence farming are included, while for 1970 they are apparently not included. For 1974 all persons who drew income, partly or solely, from agriculture are listed; agriculture was the primary source of income for 111 men and 20 women only.

^d For 1974, those who receive their income solely from "other sources" are included in this class.

^e For persons 16 years and older.

^f For 1974, persons under 60 years.

^g For 1974, persons 60 years and over.

Table 34. Percentage labour force participation by age and sex, American Samoa, 1970-1974

Age	1970		1974	
	Males	Females	Males	Females
16-17	3.3	4.5		
18-19	10.5	14.8	17.5 ^a	23.8 ^a
20-21	36.4	39.9		
22-24	52.1	46.2	73.9	61.2
25-34	68.6	42.7	89.1	67.2
35-44	72.7	38.4	91.5	58.9
45-64	58.1	17.8	83.8 ^b	36.1 ^b
65+	22.1	3.1	43.0 ^c	11.2 ^c
Total	50.4	28.9	69.4	46.7

Source: Data adapted from census reports.

^a 15-19 years of age.

^b 45-59 years of age.

^c 60 years and over.

tory of the Pacific Islands where the labour force participation of married women with young children is distinctly lower than that for women of any other marital status.¹⁴

C. EMPLOYMENT

As was noted earlier, there has been a large fluctuation in labour force participation rates during the 15-year period 1960-1974, but this was caused to a large extent by the inclusion of subsistence farmers in the category of the economically active at the 1960 census. When farm workers are excluded from the labour force, a definitive trend towards increase can be noticed in the labour force over the years. It is apparent that the growing labour force has largely been absorbed by expanding opportunities for cash employment in recent years. As will be seen from table 33, the total employment in productive sectors other than agriculture increased from 3,000 in 1960 to 5,000 in 1970 and to nearly 9,000 in 1974, an impressive three-fold increase in 15 years. These numbers mean that in 1960 less than 30 per cent of persons 14 years old and above were employed, but that by 1974 this proportion had increased to about 55 per cent.

For both sexes, the employment rate increased more than 20 per cent between 1960 and 1970, the rate for males increasing faster than the female rate. During the next four years, the pace of increase appears to have accelerated even more. If the problems of comparability are ignored and the census figures taken at face value, it would appear that there was a 25 per cent increase in the employment rate for

males and a 75 per cent increase in the female rate between 1970 and 1974. The over-all employment ratio for persons aged 15 years and over in 1974 was 64 per cent for males and 46 per cent for females. No other country in the South Pacific has such a high cash employment rate for men. The closest is Guam with a rate of 35 per cent for 15-64 year olds in 1970.¹⁵

In relative terms, there has been a phenomenal increase in unemployed persons (table 33). There was a six-fold increase between 1960 and 1970 and if the "underemployed" are included another six-fold increase between 1970 and 1974. In terms of absolute numbers the 1960 figure was a mere 51 and that for 1970 was 293. In 1974 there were 1,651 "underemployed" but the unemployed totalled only 189. As mentioned earlier, unemployment cannot be clearly defined in the context of the unique socio-economic structure of American Samoa. In view of the large number of persons "underemployed" (more than 10 per cent of the population 15 years and over) in 1974, however, it seems that there is a large pool of potential labour, even if they are not actively looking for a job. As indicated earlier, the term "underemployed" used in the 1974 census referred to persons who would take paid employment if a suitable job were available, although they might currently be engaged in communal agriculture, working in the household, or rendering services to their *matasi*. Another indication of a large potential labour supply may be found in a recent official report which states that the unemployment rate is 14 per cent.¹⁶

¹⁴ United States Bureau of the Census, *U.S. Census of Population: 1970. Characteristics of the Population, parts 54, 56, 58, Outlying Areas* (Washington, DC, Government Printing Office, 1973).

¹⁵ South Pacific Commission, *op. cit.*

¹⁶ Government of American Samoa, *Annual Report to the Secretary of the Interior 1974* (Pago Pago, Office of Samoan Information, 1974), p. 25.

D. OCCUPATION AND INDUSTRY

Available data on the occupation and industry of employed persons are seriously inadequate for time series comparison because of the lack of detailed classification. For example, the 1950 census reported that 1,951 Polynesian and part-Polynesian women worked in 1949. If farmers and farm labourers are excluded, the number of employed women drops to 1,517. Of these, 1,156 or more than 75 per cent were classified as "operatives and kindred workers", but no further subgroupings were provided. These women classified as "operatives and kindred workers" in the 1950 census are not comparable with the "operatives" enumerated in the 1960 or 1970 censuses, of whom the majority worked in the tuna canneries. Since the cannery industry did not exist until some time in the 1950s,¹⁷ it is not known where the 1949 female "operatives" were employed. Considering the industry structure that existed at that time, it is probable that a great majority of them were weavers producing the famous Samoan pandanus mats. The meagre earnings of those women are hardly comparable with the incomes of the present-day cannery workers.¹⁸

Before the Second World War, only a few groups of Polynesians received cash wages.¹⁹ They were those who enlisted in the navy (the Fitafita Guard) or who were employed by the navy; those who were on the government payroll, most of whom were teachers and nurses; and those who worked as cooks and servants for the white people. Salaries for most of the above-mentioned workers came from taxes raised in the United States, though there were some officials, school-teachers, copra clerks, and others who received remuneration from local sources through the sale of copra and native artifacts. However, the total number receiving cash wages was still not large.

The end of the war in 1945 also signalled the termination of many forms of employment. Nevertheless, the number of non-agricultural male workers of Polynesian stock increased by over two and a half times between the 1940 and 1950 censuses, from 770 in 1939 to 2,014 in 1949, much of the increase possible due to the remnants of military-related indus-

¹⁷ Although the first fish cannery was established in 1948, financed by the Rockefeller Foundation, the industry was inactive. "Except for two trial runs which caught about three tons of fish each, the cannery never operated". The first cannery began operations in 1955. See Wolf Management Services, *Economic Development Program for American Samoa* (New York, United States Department of Commerce, Economic Development Administration, 1969), p. 234.

¹⁸ The 1953 Governor's report indicates that some \$US 1,000 worth of mats and wood craft were sold and more than 4,000 skilled weavers were retained for work, implying an average earning of less than \$11 per worker per annum.

¹⁹ John W. Coulter, *Land Utilization in American Samoa* (Honolulu, Bernice P. Bishop Museum Bulletin 170, 1941).

try.²⁰ If farm-related workers and *matai* are excluded, most of the 1,494 gainfully employed males of Polynesian stock in 1950 belonged to three occupational groups: 26 per cent were "craftsmen, foremen and kindred workers"; 23 per cent "non-farm labourers" and 20 per cent "professional, technical and kindred workers". Of the total 1,517 employed females, 76 per cent were "operative and kindred workers". The other groups such as "service workers (except private household)", "non-farm labourers" and "professional, technical and kindred workers" each had only about 5 per cent of the total females employed. Among 39 employed whites, nearly 70 per cent belonged to the professional and technical group.

The distribution of the employed by major occupational groups for 1960 and 1970 is shown in table 35. The 1974 data are not included in the table, as the classifications of the 1974 census are not comparable with those of the United States decennial censuses.²¹ The data for 1960 shown in table 35 seem to suggest that some diversification in the employment structure took place between 1950 and 1960, although the lack of detailed classification of occupations does not make it possible to discern changes within major occupational groups. In comparison with 1950, the proportion of clerical workers, managers and officials and service workers of both sexes increased significantly in 1960. The proportion of female professional and technical workers also increased, and gains for women were evident in teaching, nursing and government positions. On the other hand, labourers of both sexes, male craftsmen and female operatives decreased in relative importance. These changes probably reflect the emergence of a modern economy beyond the level of subsistence activities.

The differential growth of employed persons by occupation between 1960 and 1970 is indicative of the progress of the American Samoan economy. Decreases were recorded for private household workers of both sexes, though the absolute numbers involved were rather small. The only other category showing a decrease was that of female operatives, which was apparently due to the failure of American Samoa's primary cottage industry — mat-weaving. Government reports show that there were 400 weavers in 1960, when the sale of floor mats totalled \$US 115,716. Annual sales decreased to less than \$40,000 in two years and the quasi-government producer-type co-operative, which was created in 1946 to assist the Samoan producers

²⁰ There was a 10 per cent decline in the number of female workers during the same period, but this decrease may well be artificial resulting from the variations in classification. For instance, in 1939, 1,800 women were classified as "all other gainful workers", but no comparable category can be found in the 1950 census report.

²¹ For instance, most of the employees in the cannery complex appear to have been classified as "fishery and related workers" in the 1974 census, probably because of confusion between the terms "industry" and "occupation".

Table 35. Distribution of employed persons by occupation and sex, American Samoa, 1960 - 1970

	1960 ^a		1970 ^b		% increase between 1960 and 1970	
	Males	Females	Males	Females	Males	Females
Total population in working age group	5 274	5 410	7 513	7 417	42.5	37.1
Total employed	3 550	2 283	3 240	1 854	-8.7	-18.8
Employed in farm-work	1 708	1 132	70	12	-95.9	-98.9
% of employed	48.1	49.6	3.0	.8	-	-
Employed excluding farm-work	1 842	1 151	3 170	1 842	72.1	60.0
% of total population	34.9	21.3	46.4	27.3	-	-
in working age group						
% of labor force	51.3	50.0	92.2	94.2	-	-
Occupation group						
Professional, technical, etc.	390	230	594	422	52.3	83.5
Managers, officials, etc.	209	56	347	71	66.0	26.8
Clerical, etc.	179	62	284	305	58.6	391.9
Sales workers	10	22	41	83	310.0	277.3
Craftsmen, foremen, etc.	367	1	780	30	112.5	2900.0
Operatives, etc.	207	598	295	505	42.5	-15.6
Transport operators	127 ^c	1 ^c	186	1	46.4	-
Private household workers	6	59	2	47	-66.7	-20.3
Service workers	147	52 ^c	365	305	148.3	486.5
Labourers	163	24	276	73	69.3	200.0
Not reported	35	46	...	...	...	...

Source: Data adapted from census reports.

^a For persons 14 years and over.

^b For persons 16 years and over.

^c Adjustments are made to improve comparability with the 1970 data.

of mats and woodcraft, ceased operation and was abolished by an act of the Legislature in 1961.²² On the other hand, a second cannery was opened in 1963. In that year alone, more than 450 women worked in the two canneries,²³ mostly in the packing operation.²⁴ Employment in the cannery complex has been steadily increasing ever since. Recently the government reported that of more than 1,200 cannery employees,²⁵ women outnumbered men.²⁶ Thus, the decline in the number of household mat-weaving workers took place simultaneously with an increase in the number of cannery packers, who presumably occupy a more prestigious position in the social ladder.²⁷

A tremendous increase was noted in the number of service workers of both sexes, males increasing by about two and a half times and females nearly six times. The remarkable increase in the number of female

service workers may partly be attributed to changes in the classification system,²⁸ but is also due to the emerging tourist industry which absorbs an increasing number of female service workers. The increase in the number of craftsmen and kindred workers and sales workers is evidence of the boom in construction and

²² Government of American Samoa, *Governor's Report, 1961* (Washington, DC, Government Printing Office).

²³ F. Doumenge, *L'homme dans le Pacifique Sud* (Paris, Musée de l'Homme, publication de la Société des Océanistes, No. 19, 1966), p. 501.

²⁴ Wolf Management Services, *op. cit.*, p. 244.

²⁵ Government of American Samoa, *Annual Report to the Secretary of the Interior, 1973* (Pago Pago, Office of Samoan Information, 1973), p. 9.

²⁶ Wolf Management Services, *op. cit.*, p. 244.

²⁷ *Ibid.*, p. 290.

²⁸ For instance, the classification of low-level nursing personnel was changed from "professional" to "service workers".

Table 36. Percentage distribution of persons employed in non-agricultural industry by class of worker and sex, American Samoa, 1960-1970

Class of worker	1960 ^a		1970 ^b		% increase in number 1960 - 1970	
	Males	Females	Males	Females	Males	Females
Private and salary workers	36.4	65.7	39.2 ^c	55.1 ^c	84.8	34.1
Government employees	58.0	24.3	58.4 ^c	43.0 ^c	72.8	182.8
Self-employed workers	4.3	4.9	2.2	1.1	-11.4	-62.5
Unpaid family workers	1.2	5.1	.2	.7	-73.9	-78.0
No. employed in non-agricultural industries	1 842	1 151	3 163	1 840	71.7	59.7

Source: Data adapted from census reports.

^a For persons 14 years and over.

^b For persons 16 years and over.

^c The distribution for the 1970 data was made by subtracting agricultural workers from the total. For males a total of 55 salaried workers was recorded in agricultural industry. Of them 34 were allocated to the private sector based on the 1960 experience. For females, all of 14 salaried workers in agricultural industry were allocated to the private sector based on the 1960 experience.

commerce. The rapidly expanding economy has also created a demand for more secretaries, stenographers and the like, resulting in a five-fold increase in female clerical workers.

Despite problems of data comparability between the 1974 and previous censuses, indications are that for both sexes, the white-collar class continued to increase rapidly. There was an approximately two-fold increase in the number of clerical workers from 1970 to 1974, while a slight increase was observed in the number of professional and technical workers. Although the number of female service workers did not record any increase, the number of male service workers appears to have experienced a 50 per cent increase. Transport operators have also increased rapidly, possibly by as much as 75 per cent in the four-year period. Although the number of sales workers increased markedly between 1960 and 1970, no further growth appears to have taken place between 1970 and 1974. In fact, a large decrease, from 80 to 20 persons, was recorded in the number of female sales workers. However, this may be due to the changes in classification.

All in all, a diversification as well as an increase in wage employment have clearly been seen in American Samoa recently. Nonetheless, the Government remains the largest single employer. In 1970, out of 5,012 persons employed in activities other than farming, 710 (14.2 per cent) were in public administration, 634 (12.6 per cent) were teachers in government schools and 361 (7.2 per cent) were in the government-run hospital and health services. According to government reports, the numbers are even higher. For instance,

in fiscal year 1972, 3,750 were employed by the Government,²⁹ and the number increased to 5,021 in fiscal year 1973.³⁰ The 1974 census, however, gives more modest figures; it enumerated 3,777 government employees (2,630 men and 1,147 women). Even according to the 1974 census, the Government is by far the largest employer, providing for over half the total paid employment. The second and third largest employers are the two canneries, which employed 718 and 679 workers respectively. When the 26 employees of the canning company producing cans for packing tuna are added, 20 per cent of the paid employees in the territory were engaged in the tuna fish-processing industry. The Government stated that in 1972 the payroll of the two canneries totalled nearly three million dollars.³¹ There were only two additional employers with more than 100 employees in 1974 – a hotel with 127 employees and a construction company with 119. Other entrepreneurs had relatively small numbers of employees.

As shown in table 36, the group of self-employed workers is very small, comprising less than 5 per cent of the workers in non-agricultural industry. Among male workers the proportion of government and private salaried workers has been relatively stable over the years. Female workers in the private sector greatly outnumbered government employees in the 1960 census, but the gap had narrowed in the last 15 years.

²⁹ Government of American Samoa, 1974, *op. cit.*, p. 9.

³⁰ *Ibid.*, p. 14.

³¹ *Ibid.*, p. 25.

CHAPTER VI

POPULATION PROJECTIONS

A. EARLIER PROJECTIONS

Population projections by age and sex for American Samoa, other than projections of the total population, have been a matter of recent concern. The first attempt to project the population by age and sex was apparently made in 1967 by the Office of Samoan Affairs of the Government of American Samoa in response to budgetary planning needs. The projection was made for five-year intervals from 1970 to 1985 and appears to have used the results of the 1960 United States census and the 1967 local census to build up the population of the base year.¹ The methodology employed for the projection was not documented and the assumptions used are not known. A rudimentary analysis indicates inconsistencies in the projection. Therefore, mention of the existence of such a projection will suffice here.

The next serious effort to project the population of American Samoa was made by Wolf Management Services in 1969 as part of an economic development programme for American Samoa prepared for the Economic Development Administration, United States Department of Commerce.² That projection was primarily intended to set an economic expansion goal for the territory. Although eight sets of annual projections were prepared covering the 13-year period 1968 to 1980, only one set gives the age and sex breakdown. The underlying assumptions for this set were: (a) that in a static employment situation 85 per cent of the natural increase of population would emigrate, but if new employment was created annually, the economy would absorb an equal number of would-be emigrants; (b) that there would be a gradual decrease in the rate of natural increase, from 3.8 per cent in 1968 to 2.6 per cent in 1980; (c) that the growth of employment would be at a high but "reachable" rate of 3.5 per cent each year; and (d) that the crude birth rate would decline but the crude death rate would remain at the same level over the projection period. The authors claimed that if this projection was set forth as a goal for the Government of American Samoa and for the Samoan community. "then the end of the 1970s should find the popula-

tion stabilizing, emigration tailing off, and the economy in a stronger position than it has enjoyed since the years of the Second World War".³

The third set of projections for American Samoa are those of Park⁴ who made four projections covering the period 1975 to 1990 at five-year intervals based on combinations of different assumptions regarding future fertility and migration levels. A common mortality schedule was applied to all four projections. The fertility rates for the base year were computed by averaging the age-specific fertility rates for 1959-1961 and 1969-1970. The determination of the migration rate was difficult, as it had fluctuated tremendously in previous years. A set of age-sex-specific migration rates was generated by fitting free-hand curves to five-year migration rates by age and sex, which were estimated from cohort analysis of 1950-1960 and 1960-1970 census data. The four sets of assumptions were:

- projection I Constant fertility and no migration;
- projection II Declining fertility and no migration;
- projection III Constant fertility and constant migration;
- projection IV Declining fertility and constant migration.

The results of the 1974 census and vital statistics for subsequent years show that base fertility level as estimated by Park may have been too high. As indicated earlier, there have been signs of decline in fertility since 1960.

B. REVISED PROJECTIONS

On the basis of more recent information on fertility patterns, Park revised his earlier projections. For the revised projections, the assumptions regarding the future course of mortality and migration are the same as those for the earlier projections. Two different sets of fertility rates were assumed in the revised projections. The levels indicated for the base year in the first set were obtained by averaging the rates for the periods 1969-1971 and 1971-1973, and these levels were assumed to remain constant throughout the pro-

¹ Memorandum of Sonoma, L.T. Unutoa, GAS/8C. Serial 15. Dated March 1967.

² Wolf Management Services, *Economic Development program for American Samoa* (New York, United States Department of Commerce, Economic Development Administration, 1969), pp. 31-45.

³ *Ibid.*, p. 36.

⁴ C.B. Park, *Population Statistics of American Samoa: A Report to the Government of American Samoa* (Honolulu, East-West Population Institutes), pp. 56-57 and tables A 18-A 21.

Table 37. Population projections by broad age group, American Samoa, 1970-2000

Age group		1970 ^a	1975 ^b	1980 ^b	1985 ^b	1990 ^b	1995 ^b	2000 ^b
Under 15	Projection I	12 879	14 410	16 690	20 440	25 090	29 870	34 790
	Projection II	12 879	14 410	15 760	18 310	21 370	24 090	26 290
	Projection III	12 879	13 910	15 070	16 870	18 980	21 110	23 180
	Projection IV	12 879	13 660	13 270	15 160	16 200	17 040	17 510
15-64	Projection I	13 612	16 700	20 190	23 760	27 900	33 190	40 020
	Projection II	13 612	16 700	20 190	23 760	27 640	33 280	37 920
	Projection III	13 612	14 980	16 470	17 820	19 320	21 060	23 250
	Projection IV	13 612	14 980	16 470	17 820	19 100	20 420	21 950
65 and over	Projection I	668	720	910	1 140	1 360	1 650	1 880
	Projection II	668	720	910	1 140	1 360	1 650	1 880
	Projection III	668	730	920	1 150	1 370	1 620	1 800
	Projection IV	668	730	920	1 150	1 370	1 620	1 800
Total	Projection I	27 159	31 830	37 790	45 330	54 360	64 700	76 700
	Projection II	27 159	31 560	36 870	43 210	50 370	58 010	66 100
	Projection III	27 159	29 620	32 460	35 840	39 660	43 780	48 230
	Projection IV	27 159	29 370	31 660	34 130	36 660	39 070	41 260

Notes: Projection I assumes constant fertility and no migration.
 Projection II assumes declining fertility and no migration.
 Projection III assumes constant fertility and constant migration.
 Projection IV assumes declining fertility and constant migration.

a Census population.

b Population rounded to nearest 10.

c Individual age groups may not add to totals owing to rounding error.

jection period, providing projections I and III. In the second set, the assumption was that for each age group of women, a successive 5 per cent reduction in fertility would take place every five years. Projections II and IV are based on these declining fertility assumptions. For the initial period of the projection, 1970-1975, the fertility rates used for projections I and III were applied.

The revised projections by broad age groups, percentage changes relative to the 1970 population, growth in each 5-year period and age structure for each reference time are shown in tables 37 to 41. The detailed projections by 5-year age group and sex are given in tables 42 to 46.

If the current fertility rate were to prevail and there were no migration (projection I), the population would double in the 20-year period following 1970, exceeding 54,000 in 1990. The increase would be almost three-fold in a generation, reaching nearly 77,000 in the year 2000. If fertility were to decline by 5 per cent in each five-year period, which might not be an unrealistic assumption (projection II), and in the absence

of migration, the population would grow to 50,370 in 1990 and 66,100 in the year 2000, recording a 150 per cent increase over the 1970 population. If the 1950-1970 level of migration is assumed, the population growth will slow down. Under the assumption of constant fertility (projection III) the population in the year 2000 would be 48,000, corresponding to a 90 per cent increase over the 1970 population. Under the assumption of declining fertility (projection IV), the population would be 41,300 in 2000, recording an increase of about 60 per cent in 30 years.

Over a relatively short period of time, far more relief from excessive population growth could be attained through migration than through a moderate reduction in fertility. While the immediate effects of declining fertility are reflected only in the number of births, those of migration are exerted upon the population sizes of the late teens and adults. The emigration of persons in the reproductive age group in turn results in a reduction in the number of young children by "exporting" fertility. However, the effects of migration

Table 38. Population projections as percentage of the 1970 population, American Samoa, by broad age group, 1970-2000^a

Age group		1970 ^b	1975	1980	1985	1990	1995	2000
Under 15	Projection I	100.0	111.9	129.6	158.7	194.8	231.9	270.1
	Projection II	100.0	109.8	122.4	142.2	166.0	187.0	204.2
	Projection III	100.0	108.0	117.0	131.0	147.4	163.9	180.0
	Projection IV	100.0	106.1	110.8	117.7	125.7	132.3	136.0
15-64	Projection I	100.0	122.7	148.3	174.5	205.0	243.8	294.0
	Projection II	100.0	122.7	148.3	174.5	203.0	237.1	278.6
	Projection III	100.0	110.0	121.0	130.9	141.9	154.7	170.8
	Projection IV	100.0	110.0	121.0	130.9	140.4	150.0	161.2
65 and over	Projection I	100.0	108.5	136.4	170.9	204.1	246.6	282.0
	Projection II	100.0	108.5	136.4	170.9	204.1	246.6	282.0
	Projection III	100.0	109.0	137.9	172.8	204.4	242.0	269.3
	Projection IV	100.0	109.0	137.9	172.8	204.4	242.0	269.3
Total	Projection I	100.0	117.2	139.1	166.9	200.1	238.2	282.4
	Projection II	100.0	116.2	135.8	159.1	185.5	213.6	243.4
	Projection III	100.0	109.1	119.5	132.0	146.0	161.2	190.5
	Projection IV	100.0	108.1	116.6	125.6	135.0	143.8	163.3

^a For assumptions on projections, see notes on table 37.

^b Census population.

do not seem to be long-term, and in any case, migration may not be socially desirable. Let us consider table 40 which gives the percentage increase population in each five-year period for each projection. In projection III, which assumes continuing migration and constant fertility, the growth in the initial periods is rather slow, being less than 10 per cent for every five-year period, but there is no trend of declining rate of growth. The five-year growth rate in 1995-2000 is still 10 per cent. On the other hand, declining fertility induces an accelerating decline in the growth rate both with migration (projection IV) and without migration (projection II).⁵

As will be seen from table 41, although the assumption of constant migration would yield a relatively small increase in population, it would result in a smaller proportion of persons in the working ages of 15 to 64 years than would the assumption of no migration. When migration and constant fertility are com-

bined (projection III), the proportion of the population in the reproductive age group would decline at an accelerating rate over time, resulting in a dependency ratio of more than 100. If fertility were to decline, the proportion in the working age group would increase, especially if there were no migration.

The proportion of children under 15 would steadily decrease over the years in projections II and IV, as might be expected. Although the constant fertility assumption would result in some decline in the proportion of children under 15 in the 1970s, the proportions would rise again after 1980. The heaviest burden of children would occur under the assumption of both constant migration and constant fertility (projection III), as the proportion of children would surpass 48 per cent after 1990.

If no migration is assumed, as in projections I and II, the proportion of the old age group of 65 years and over would be stabilized from 1980 onward, although according to projection II there would be a tendency for this group to increase slightly. In projections II and IV the group would keep increasing; in the latter case, the aged would constitute more than 4 per cent, that is, an increase of about 75 per cent in the proportion since 1970.

⁵ It must, however, be noted that these projections are not intended to predict the future size and growth of the American Samoan population. They merely illustrate the future population processes which would take place if the assumptions on which they are based remain valid throughout the projection period. Of course, no demographic parameters are constant in the real world. Until better data are made available, however, it may be considered that projection I and projection IV provide the range of probable population estimates for socio-economic planning.

Table 39. Population projections as percentage of projection I in each year, American Samoa, by broad age group, 1970-2000^a

Age group		1970 ^b	1975	1980	1985	1990	1995	2000
Under 15	Projection I	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	Projection II	100.0	98.1	94.5	89.6	85.2	80.6	75.6
	Projection III	100.0	96.6	90.3	82.5	75.6	70.7	66.6
	Projection IV	100.0	94.8	85.5	74.2	64.5	57.0	50.3
15-64	Projection I	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	Projection II	100.0	100.0	100.0	100.0	99.0	97.2	94.8
	Projection III	100.0	89.7	81.6	75.0	69.2	63.4	58.1
	Projection IV	100.0	89.7	81.6	75.0	68.5	61.5	54.8
65 and over	Projection I	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	Projection II	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	Projection III	100.0	100.5	101.0	101.1	100.2	98.2	95.5
	Projection IV	100.0	100.5	101.0	101.1	100.2	98.2	95.5
Total	Projection I	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	Projection II	100.0	99.2	97.6	95.3	92.7	89.7	86.2
	Projection III	100.0	93.0	85.9	79.0	73.0	67.7	67.4
Total	Projection I	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	Projection II	100.0	99.2	97.6	95.3	92.7	89.7	86.2
	Projection III	100.0	93.0	85.9	79.0	73.0	67.7	67.4
	Projection IV	100.0	92.2	83.8	75.3	67.4	60.4	57.8

^a For assumptions on projections, see notes on table 37.

^b Census population.

Table 40. Percentage quinquennial increase for each population projection, American Samoa, 1970-2000^a

	1970-1975	1975-1980	1980-1985	1985-1990	1990-1995	1995-2000
Projection I	17.2	18.7	20.0	19.9	19.0	18.5
Projection II	16.2	16.8	17.2	16.6	15.2	13.9
Projection III	9.1	9.6	10.4	10.7	10.4	10.1
Projection IV	8.1	7.8	7.8	7.4	6.6	5.6

^a For assumptions on projections, see notes on table 37.

Table 41. Percentage distribution of population projections by broad age group, American Samoa, 1970-2000^a

Age group		1970	1975	1980	1985	1990	1995	2000
Under 15	Projection I	47.4	45.3	44.2	45.1	46.2	46.2	45.4
	Projection II	47.4	44.8	42.8	42.4	42.4	41.5	39.8
	Projection III	47.4	47.0	46.4	47.1	47.8	48.2	48.1
	Projection IV	47.4	46.5	45.1	44.4	44.2	43.6	42.4
15-64	Projection I	50.1	52.5	53.4	52.4	51.3	51.3	52.2
	Projection II	50.1	52.9	54.8	55.0	54.9	55.6	57.4
	Projection III	50.1	50.6	50.7	49.7	48.7	48.1	48.2
	Projection IV	50.1	51.0	52.0	52.2	52.1	52.2	53.2
65 and over	Projection I	2.5	2.3	2.4	2.5	2.5	2.5	2.4
	Projection II	2.5	2.3	2.5	2.6	2.7	2.8	2.8
	Projection III	2.5	2.4	2.8	3.2	3.4	3.7	3.7
	Projection IV	2.5	2.5	2.9	3.4	3.7	4.1	4.4
Total	Projection I	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	Projection II	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	Projection III	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	Projection IV	100.0	100.0	100.0	100.0	100.0	100.0	100.0

^a For assumptions on projections, see notes on table 37.

Table 42. Projected annual crude birth and death rates per 1,000 population, American Samoa, 1970-2000

Projection ^a	Crude birth rate						Crude death rate					
	1970-1975	1975-1980	1980-1985	1985-1990	1990-1995	1995-2000	1970-1975	1975-1980	1980-1985	1985-1990	1990-1995	1995-2000
I	37.8	40.3	41.8	41.4	39.9	38.9	6.1	6.0	5.5	5.2	5.1	5.0
II	36.1	37.0	37.2	35.8	33.5	31.3	6.0	6.0	5.5	5.2	5.3	5.3
III	38.9	40.0	41.0	41.2	40.7	40.4	6.3	6.4	6.1	6.0	6.1	6.1
IV	37.1	36.7	36.5	35.7	34.2	32.5	6.2	6.3	6.1	6.1	6.4	6.5

^a For assumptions on projections, see notes on table 37.

Table 43. Population projection I (constant fertility and no migration) for American Samoa, 1975-2000

Age group	Males							Females						
	1970	1975	1980	1985	1990	1995	2000	1970	1975	1980	1985	1990	1995	2000
0-4	2 386	2 730	3 430	4 300	5 110	5 880	6 820	2 305	2 630	3 300	4 130	4 910	5 650	6 550
5-9	2 214	2 360	2 700	3 410	4 280	5 080	5 850	2 201	2 290	2 610	3 290	4 120	4 890	5 630
10-14	1 877	2 200	2 360	2 700	3 400	4 260	5 060	1 896	2 190	2 280	2 600	3 280	4 110	4 880
15-19	1 602	1 870	2 190	2 350	2 680	3 390	4 250	1 486	1 890	2 190	2 280	2 600	3 280	4 100
20-24	1 012	1 590	1 850	2 180	2 330	2 670	3 370	1 158	1 480	1 880	2 180	2 270	2 590	3 260
25-29	864	1 000	1 570	1 830	2 150	2 310	2 640	816	1 150	1 460	1 870	2 160	2 260	2 580
30-34	776	850	980	1 550	1 810	2 130	2 280	750	810	1 140	1 450	1 860	2 150	2 250
35-39	622	760	840	970	1 530	1 790	2 100	622	740	800	1 130	1 440	1 840	2 140
40-44	566	610	740	820	950	1 500	1 760	598	610	730	790	1 110	1 430	1 820
45-49	475	550	590	720	800	930	1 460	459	580	600	720	780	1 100	1 400
50-54	445	450	520	560	700	770	890	375	440	570	580	700	760	1 070
55-59	346	410	420	490	520	650	720	279	360	420	540	560	670	720
60-64	189	310	370	370	440	470	580	172	260	330	400	510	520	630
65+	308	340	440	560	640	750	840	360	390	470	590	720	900	1 040
Total	13 682	16 020	19 010	22 800	27 340	32 570	38 630	13 477	15 810	18 780	22 540	27 010	32 140	38 070

Notes: Projected numbers are rounded in tens.
The total may not agree with the sum of individual age groups owing to the rounding.

Table 44. Population projection II (declining fertility and no migration) for American Samoa, 1975-2000

<i>Age group</i>	<i>Males</i>							<i>Females</i>						
	<i>1970</i>	<i>1975</i>	<i>1980</i>	<i>1985</i>	<i>1990</i>	<i>1995</i>	<i>2000</i>	<i>1970</i>	<i>1975</i>	<i>1980</i>	<i>1985</i>	<i>1990</i>	<i>1995</i>	<i>2000</i>
0-4	2 386	2 590	3 100	3 690	4 150	4 490	4 820	2 305	2 500	2 980	3 540	3 990	4 320	4 630
5-9	2 214	2 360	2 570	3 080	3 670	4 130	4 470	2 201	2 290	2 480	2 970	3 530	3 980	4 300
10-14	1 877	2 200	2 360	2 560	3 070	3 660	4 120	1 896	2 190	2 280	2 470	2 960	3 520	3 970
15-19	1 602	1 870	2 190	2 350	2 550	3 060	3 640	1 486	1 890	2 190	2 280	2 470	2 960	3 510
20-24	1 012	1 590	1 850	2 180	2 330	2 540	3 040	1 158	1 480	1 880	2 180	2 270	2 460	2 950
25-29	864	1 000	1 570	1 830	2 150	2 310	2 510	816	1 150	1 460	1 870	2 160	2 260	2 950
30-34	776	850	980	1 550	1 810	2 130	2 280	750	810	1 140	1 450	1 860	2 150	2 200
35-39	622	760	840	970	1 530	1 790	2 100	622	740	800	1 130	1 440	1 840	2 140
40-44	566	610	740	820	950	1 500	1 760	598	610	730	790	1 110	1 430	1 820
45-49	475	550	590	720	800	930	1 460	459	580	600	720	780	1 100	1 400
50-54	445	450	520	560	700	770	890	375	440	570	580	700	760	1 070
55-59	346	410	420	490	520	650	720	279	360	420	540	560	670	720
60-64	189	310	370	370	440	470	580	172	260	330	400	510	520	630
65+	308	340	440	560	640	750	840	360	390	470	590	720	900	1 040
Total	13 682	15 880	18 540	21 720	25 310	29 160	33 230	13 477	15 680	18 330	21 500	25 060	28 850	32 870

Notes: Projected numbers are rounded in tens.
The total may not agree with the sum of individual age groups owing to the rounding.

Table 45. Population projection III (constant fertility and migration) for American Samoa, 1975-2000

Age group	Males							Females						
	1970	1975	1980	1985	1990	1995	2000	1970	1975	1980	1985	1990	1995	2000
0-4	2 386	2 590	2 910	3 330	3 700	4 030	4 410	2 305	2 480	2 790	3 180	3 530	3 860	4 220
5-9	2 214	2 310	2 510	2 830	3 230	3 590	3 920	2 201	2 270	2 440	2 750	3 140	3 480	3 800
10-14	1 877	2 120	2 220	2 410	2 710	3 100	3 440	1 896	2 140	2 200	2 370	2 670	3 050	3 390
15-19	1 602	1 650	1 860	1 940	2 120	2 380	2 720	1 486	1 700	1 920	1 980	2 130	2 400	2 740
20-24	1 012	1 180	1 220	1 380	1 450	1 570	1 770	1 158	1 290	1 480	1 670	1 720	1 860	2 090
25-29	864	800	940	970	1 100	1 150	1 250	816	1 010	1 130	1 300	1 470	1 520	1 640
30-34	776	760	700	820	850	970	1 010	750	720	900	1 010	1 160	1 310	1 360
35-39	622	720	700	650	770	800	900	622	680	660	820	920	1 050	1 190
40-44	566	590	690	680	630	740	770	598	570	620	600	750	840	970
45-49	475	540	570	660	550	610	710	459	550	530	580	560	700	790
50-54	445	450	520	540	640	620	580	375	430	520	490	540	530	660
55-59	346	420	420	490	510	600	590	279	350	400	480	460	510	490
60-64	189	310	370	380	440	460	540	172	260	320	370	450	430	470
65+	308	340	450	570	660	770	860	360	390	470	580	700	850	940
Total	13 682	14 780	16 090	17 660	19 460	21 400	23 490	13 477	14 840	16 380	18 180	20 210	22 380	24 730

Notes: Projected numbers are rounded in tens.
The total may not agree with the sum of individual age groups owing to the rounding.

Table 46. Population projection IV (declining fertility and constant migration) for American Samoa, 1975-2000

Age group	Males							Females						
	1970	1975	1980	1985	1990	1995	2000	1970	1975	1980	1985	1990	1995	2000
0-4	2 386	2 460	2 630	2 850	3 000	3 080	3 100	2 305	2 360	2 520	2 730	2 870	2 940	2 970
5-9	2 214	2 310	2 380	2 550	2 770	2 920	2 990	2 201	2 270	2 320	2 480	2 690	2 830	2 900
10-14	1 877	2 120	2 220	2 290	2 450	2 660	2 800	1 896	2 140	2 200	2 260	2 410	2 610	2 750
15-19	1 602	1 650	1 860	1 940	2 010	2 150	2 330	1 486	1 700	1 920	1 980	2 020	2 170	2 350
20-24	1 012	1 180	1 220	1 380	1 450	1 500	1 600	1 158	1 290	1 480	1 670	1 720	1 760	1 890
25-29	864	800	940	970	1 100	1 150	1 190	816	1 010	1 130	1 300	1 470	1 520	1 550
30-34	776	760	700	820	850	970	1 010	750	720	900	1 010	1 160	1 310	1 360
35-39	622	720	700	650	770	800	900	622	680	660	820	920	1 050	1 190
40-44	566	590	690	680	630	740	770	598	570	620	600	750	840	970
45-49	475	540	570	660	650	610	710	459	550	530	580	560	700	790
50-54	445	450	520	540	640	620	580	375	430	520	490	540	530	660
55-59	346	420	420	490	510	600	590	279	350	400	480	460	510	490
60-64	189	310	370	380	440	460	540	172	260	320	370	450	430	470
65+	308	340	450	570	660	770	860	360	390	470	580	700	850	940
Total	13 682	14 660	15 680	16 780	17 930	19 020	19 980	13 477	14 710	15 980	17 340	18 730	20 050	21 270

Notes: Projected numbers are rounded in tens.
The total may not agree with the sum of individual age groups owing to the rounding.

Under the assumption of both constant fertility and constant migration, the burden of dependence would increase more and more, although migration might ease the total population pressure. The trend of the dependency ratio in projection I appears somewhat stabilized from 1985. But if the 15-59 year age group is considered as the productive age group instead of the 15-64 group, there would be a gradual increase in the dependency ratio. On the other hand, even with continuing migration which eliminates the productive group more selectively, if fertility were to decline, the proportion of persons aged 15-64 years would still increase slowly during the rest of the decade.

The crude birth rates and the crude death rates implied in the various projections are shown in table 42. According to projection I, the birth rate would increase until 1985 and then would start to decline. Towards the end of the century the birth rate would be about 39 per 1,000. Such changes would be due to changes in the relative size of the child-bearing population, even if age-specific fertility remained constant. On the other hand, the crude death rate would continue to decrease, reaching as low as 5.0 per 1,000 in the 1990s. This low level of mortality would be caused by the increased proportion of persons of young age. A similar trend is observed in respect of projection III. The levels of both vital rates at the turn of the century would, however, be somewhat higher for projection III than for projection I. Declining fertility would result

in a reduction of the overall birth rate only after 1985 if there were no migration (projection II). Once a decrease commenced, however, the pace would be fast, declining from 37 per 1,000 in 1980-1985 to 31 per 1,000 in 1995-2000. If migration is assumed to occur with declining fertility (projection IV), a steady decrease in the birth rate would be observed. The death rate under projection II would take a downward trend, but under projection IV would climb, following a relatively steady trend during the first 20 years of the projection period. The level of the crude death rate is apparently more influenced by the degree of migration than changes in fertility; they are similar in projections I and II, and in projections III and IV.

The natural growth rate would keep increasing until about 1990, with or without migration, as long as fertility remained constant; thereafter a gradual decrease would be observed. Yet the level would be well over 3.0 per cent per annum, requiring only about 20 years for the population to double. Under the assumption of declining fertility and no migration, a decrease in the natural growth rate, as in the birth rate, would be seen only after 1985. Projection IV would bring about a steady declining annual rate of natural increase, first rather slowly and then rapidly. In both projections of declining fertility, the natural increase rate would reach a level of 2.6 per cent at the end of the century. It is a decline in the age-specific fertility rates, not in migration, that would result in a reduction in the rate of natural increase within American Samoa.

Chapter VII

POPULATION POLICIES

In recent decades, American Samoa, like many developing countries, has experienced the first phase of demographic transition, which is characterized by rapid reduction in mortality and *status quo* of fertility. By the mid-twentieth century, the crude death rate was reduced to one sixth of its 1910 level, while fertility continued to remain almost unchanged at traditionally high levels. Although there are now signs that the territory has entered an incipient stage of declining fertility, the current rate of natural increase is still very high, averaging over 3 per cent per annum. Given the current rate of growth, the population will double in some 20 years.

New developments in the movement of population have also evolved in recent times. The time-honoured form of population movement, which mainly took the form of short social visitations between villages, is being gradually replaced by overt migration, involving change of permanent residence and regulated by the usual "push" and "pull" forces operating in the sending and receiving areas. Accordingly, new movements have been in definitive directions. A large number of Western Samoans are flowing into American Samoa, while a large number of American Samoans emigrate to Hawaii and the continental United States. Within American Samoa, Tutuila, and particularly the Pago Pago Bay area, is attracting many people, resulting in a depopulation of the Manu'a islands and the formation of an urban centre in Tutuila.

The rapid population growth currently being experienced is without precedent since Western contact. The density of American Samoa is one of the highest in the Pacific region: the land area per person decreased from 10 acres to 2 acres in the first 70 years of this century. An increasing population further aggravates the problem of land-man ratio in a context where the rugged terrain limits the availability of land. Though in terms of absolute size the population of the territory is very small, the scarcity of natural resources would render even this small society very vulnerable to any adverse economic conditions, however minute by outside standards.

It would appear that political leaders of American Samoa have been conscious of the implications of rapid population growth for some time, but did not articulate this awareness until recently. Certainly, the general public does not appear to be sensitive to the problem of rapid population growth even now. This insensitivity is probably due to certain situations unique to the islands. In the first place, there are an almost unlimited

number of outlets for the excess population of the islands. Migration to the United States is easy, since visas are not required. It is therefore physically possible to move out any number of people, although such out-movement may be quickly nullified by immigrants from Western Samoa. Secondly, rapid economic development since 1960, by generating prosperity and new avenues of employment, has considerably eased the population pressure.¹ The Government is vigorously assisting development in a number of areas including tourism, commerce, construction, manufacturing and others.

Thirdly, traditional values and cultural heritage not only favour large families but also prevent individuals from becoming destitute. In American Samoa, a family with many children is not an economic burden. In fact, children are not necessarily attached to their own biological mothers;² they are commonly owned by all the members of the same *aiga*. As the *Matai* assigns work and distributes the fruits of labour among *aiga* members, a Samoan need not worry about the number of mouths to feed in his own family.

Fourthly, American Samoa is a territory of the United States; the maintenance of American Samoa's economic standards and welfare is not a heavy burden to the sponsor. Each year, the United States Government spends about \$1,000 per person in the islands. In recent years more than \$250 million came from Washington.³ The Territorial Government has been the single largest employer, providing for thousands in the work force whose positions are largely immune to general economic conditions.

American Samoa is in the midst of a rapid social, economic, cultural and political transition. While it is true that *fa'a Samoa*, the traditional Samoan way of life with its emphasis on community sharing, has harmoniously co-existed with the modernizing life style of American Samoans, there is also no denying that the traditional Samoan values and customs are being diluted

¹ For instance, the cannery alone, which came into existence in the middle of 1950s, now employs 1,400 workers. According to Doumenge, the average number of persons in a cannery worker's family in 1963 was 7.9. If the same ratio is still applicable, more than 35 per cent of the total population is benefited by this industry. (See F. Doumenge, *L'homme dans Le Pacifique Sud* (Paris, Musée de l'Homme, publications de la Société des Océanistes, No. 19, 1966).)

² F.G. Calkins, *My Samoan Chief* (Honolulu, University of Hawaii Press, 1971), p. 154.

³ Robert C. Miller, "Happy, rich Samoa", *Sunday Star Bulletin and Advertiser* (Honolulu), 3 April 1977.

with the spread of education, the growth of the cash economy and with increasing exposure to the outside world and materialistic conveniences. Rapid population growth and urbanization would no doubt accelerate such a process of dilution.

The physical resources of American Samoa are extremely limited. The total land area of these volcanic islands is merely 19,900 hectares, of which less than 30 per cent is used for agriculture.⁴ In the past, although Samoan agriculture has never been extensive, the territory was self-sufficient in basic foods. With the increasing availability of cash employment, many of the agricultural activities are still in the hands of the subsistence farmers, their production has become trifling.⁵

For some time, American Samoa did not grow enough food for its own people. By 1968 the purchase of imported taro, the Samoans' staple food, accounted for most of the islands' annual expenditure for food. Because of the vigorous effort on the part of the Government to make the territory again self-sufficient in its basic staple food, no import of taro has been recorded in recent years, but imports of other foreign food-stuffs have been steadily increasing. Practically all beef consumed is imported. At least for the time being, food importation will probably increase with the growth in population, changing food habits, improvements in living standards and generalization of the cash economy.

As was seen earlier, because of high fertility and the extensive emigration of young adults, the proportion of children in the total population is large. Thus, American Samoa has a very large potential labour force. Even with the implementation of ambitious economic development programmes, the discovery of tuna fishing grounds in nearby high seas, and the opening of a trans-Pacific jet air service, the Government has repeatedly reported high unemployment rates in recent years. While there are certain advantages under United States tariff regulations (Headnote 3A) for the development of product assembly,⁶ the scarcity of physical and natural resources would hamper large-scale industrialization. Sectors which show promise require some sort of compromise with traditional Samoan values if they are to be developed.⁷ The advantage of low cost labour, which is common in most developing countries, does not exist

in American Samoa, where, as noted earlier, the wage levels are high compared to other South Pacific islands. It is also reported that union demands for even higher pay have created a fear that the two canneries may be moved to either Apia or Tonga, where labour is cheaper.⁸

Since the beginning of the 1970s, the Government of American Samoa has adopted specific measures which influence the population variables. Two approaches were taken: one was to reduce fertility through the provision of family planning services and education, and the other was to check the flow of immigrants from neighbouring countries through the imposition of stiffer rules for aliens. In addition, the Government hoped that an increase in job opportunities and improvement in living standards resulting from massive economic development would help on the one hand to stem the flow of emigrants to the United States and on the other to lure back those who had already emigrated.

A large proportion of the population still appears to be opposed to family planning. The ostensible objectives of family planning services are, in fact, not to reduce fertility, instead, they are to improve the health of mothers and infants by spacing pregnancies in such a manner as to allow physical recovery of the mother, and to allow her to provide more attention to the child, and to wean in an appropriate manner at the proper time.⁹ A wide range of contraceptive methods is provided by the Department of Medical Services, including oral contraceptives, injectables, tubal ligation, IUDs and condoms. The acceptance has, however, been less than impressive. In fiscal year 1971, when records were made for the first time, the total number of acceptors was 260, or only about 4 per cent of eligible women.¹⁰ During the next two years acceptance did increase, but in fiscal year 1974 it declined to less than the 1972 level, possibly due to adverse allegations prevailing at that time. Since then acceptance of family planning has improved slightly, and 398 new acceptors were recruited in fiscal year 1975.¹¹ The general trend over the years may be seen in the number of tubal ligations, the most effective form of female contraception.¹²

⁴ Peter N.D. Pirie, "Samoa: two approaches to population and resource problems", in Wilbur Zelinsky, Leszek A. Kosinski and R. Mansell Prothero, eds., *Geography and a Crowding World* (Oxford University Press, 1970), p. 497.

⁵ Although the Government has recently been encouraging commercial farming, the scale is small and the results yet to be seen.

⁶ Headnote 3A permits foreign goods which can be imported into American Samoa duty-free to enter the United States also duty-free, provided 50 per cent of the value of goods has been added during their transit through American Samoa.

⁷ Edwin F. Black, "American Samoa: who will be in control?", *Sunday Star Bulletin and Advertiser* (Honolulu, October 1977).

⁸ Robert Miller, *loc. cit.*

⁹ Government of American Samoa, *FY73/FY74 State Plan for Maternal and Child Health and Crippled Children Service for American Samoa* (Pago Pago, Department of Medical Services, 1973), p. 38.

¹⁰ Government of American Samoa, *FY 314(d) Program Evaluation Report July 1, 1970 - June 30, 1971* (Pago Pago, Department of Medical Services, 1971), pp. 7 and 8.

¹¹ *American Samoa, Annual Report to the Secretary of the Interior, 1975* (Office of Samoan Information, Government of American Samoa, Pago Pago, 1975), p. 60.

¹² *Ibid.*

Fiscal year 1971	11
Fiscal year 1972	76
Fiscal year 1973	139
Fiscal year 1974	68
Fiscal year 1975	84

The prevalence of contraceptive use is not known, but does not appear to be large, judging from the information on new acceptors. During the five years after fiscal year 1971, the total number of acceptors constituted only about 30 per cent of the 6,000 eligible women (15-44 years of age). Since the continuation rate is low,¹³ the prevalence is evidently well below the acceptance rate.

Nevertheless, the accomplishment is significant. In this communal society with a strong traditional preference for large families, acceptance of family planning could be a major breakthrough. If vigorous programmes of information, education and communication are implemented, there may be a significant decline in fertility during the 1980s.

The Government has been increasingly concerned about the large number of Western Samoans, Tongans and other aliens living and working in American Samoa. In 1972, Public Law 12-50 was proclaimed, detailing entry and work permits for aliens. The purpose of the legislation was stated as follows:

“There are limited land resources, water, sewage facilities and economic opportunities in American Samoa. Therefore, with the increasing mobility of today’s population, the only way to preserve the Samoan culture and

way of life and allow the people of Samoa to determine their political and economic future is to restrict the entry of non-American Samoans into American Samoa”.¹⁴

The law is very strict in its definition of the American Samoan. Only those born to parents of American Samoan ancestry are deemed to be American Samoans. “American Samoan ancestry” means “lineal descendants of the inhabitants of the islands now commonly known as American Samoa whose permanent place of residence was American Samoa in April 17, 1900”¹⁵, the time of the United States annexation. Even since the proclamation of the law, there has been a tremendous increase in the number of residents born in Western Samoa: 4,535 in 1970 and nearly 7,400 in 1974. It appears that cultural and family ties between the two Samoas are so strong that the enforcement of the immigration law has not been very effective.

The islanders recently elected their own Governor for the first time after 77 years under the United States. This political change will certainly usher in profound economic and social changes. The latter will in turn interact with population variables. Sooner or later the new administration will begin to realize the demographic realities and efficient and realistic population programmes must inevitably be introduced.

¹³ *op. cit.*, Government of American Samoa, *FY73/FY74 State Plan*, p. 60.

¹⁴ American Samoa, Public Law 12-50, sect. 24,0201.

¹⁵ *Ibid.*, sect. 24.0202.

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These are issued in two series:

- [A] : a report to the United States (19--+)
- [B] : a report by the United States to the United Nations (1946)

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