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Women In Development

Some Effects of Emigration and Remittances on the Lives of Rural Women in Selected Areas of the Cape Verde Islands

by

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Preface

General Activity Identifications

As an invited guest of the República de Cabo Verde, I visited the Cape Verde Islands from August 17, 1984 to October 15, 1984. The on-going United States Agency for International Development (hereafter U.S.A.I.D.) project with which I was affiliated was the University of Arizona Food Crops Research Project. Its only resident American staff member at the time I was there was Dr. Thomas W. Crawford, Jr., who was a Co-Director of the Project. Others with whom I worked closely were Sr. Horácio Soares, Director General of the Ministry of Rural Development; Sr. Elísio Rodrigues, Director of Research for the Ministry; and Sr. Tito Lívio Andrade and Srta. Amarilla de Barros Semedo, Researchers. Others who gave valuable help were Mr. August "Joe" Hartman, of U.S.A.I.D.; and Mr. Dennis Reece, of the American Embassy in Praia. At the University of Arizona, valuable guidance was given by Drs. Helen K. Henderson, Project Director, Consortium for International Development/Women In Development Project (hereafter CID/WID); Jimmye S. Hillman, Head, Department of Agricultural Economics; Robert McC. Netting, Professor, Anthropology; Carlos Vélez-Ibañez, Director of the Bureau of Applied Research in Anthropology; and Timothy J. Finan, Associate Director of the Bureau of Applied Research in Anthropology. I am grateful, also, to Judith Warner and Judy Voss for their able staff support.

The content which follows is written to meet specific guidelines advanced by CID/WID for Fellows' trip reports.

Specific Activity Information

Objective and Methods

The object of the trip was to gather data on the effects of emigration and remittances on the lives of rural women in the Cape Verde Islands and to gain a broad perspective of problems of rural women as a basis for future work. It was planned that the information should be gained through structured interviews of a stratified random sampling of male and female heads of households. If male heads of household had wives or de facto wives, then wives were also to be interviewed and to be interviewed separately. In addition, further questions were to be asked, as they presented themselves, in order to gain a deeper and more meaningful understanding of the problems of poor, rural women in Cape Verde. The sampling was to be stratified, with subsamples from three different ecological zones of the island of Santiago. The three zones were to be selected from among areas which are considered very dry, semi-humid and humid. The island of Santiago was selected for several reasons: first, it has a large rural popoulation; second, it is the base island of the University of Arizona Food Crops Research Project; and, third, it includes the capital city, Praia, and thus offers increased logistical availabilities and greater opportunity for research in libraries and among its government, business and intellectual leaders, as well as among representatives of the international

community. In general, it was possible to adhere quite closely to the planned research design, although the sample was shortened due to logistical difficulties and time constraints.

Preparation of Local Leaders

To explain our mission and to make arrangements for fieldwork in specific locations, we met with the Responsável of each zone, and, in several instances, we made additional journeys to meet with higher officials or with the Responsavel of the Women's Organization, the Organização das Mulheres, for the geographic area involved. With those with whom we met, we explained the concept, need for, and methods of applying random sampling techniques and the methods of interviewing that we intended to use. Involving the local leaders in understanding and supporting the goals of the work thus provided both educational opportunities for them and legitimization of the project for us.

Contacts Made During Activity

Institutions

Institutions of Cape Verde with which I made contact during my stay included the Ministry of Rural Development, the Center for Agrarian Studies, the Women's Organization, the Bank of Cape Verde, the Department of State and the Ministry of Health and Social Services.

Individuals

Individuals in Cape Verde with whom I made contact included the following:

Horácio da Silva Soares, Director Geral, Ministério de Desenvolvimento Rural, Praia

Elísio Rodrigues, Gabinete de Inquéritos Rurais, Ministério de Desenvolvimento Rural, Praia

Gilles de Mirbeck, Gabinete de Inquéritos Rurais, Ministério de Desenvolvimento Rural, Praia

Tito Lívio Andrade, Gabinete de Inquéritos Rurais, Ministério de Desenvolvimento Rural, Praia

Amarilla de Barros Semedo, Gabinete de InquéritosRurais, Ministério de Desenvolvimento Rural, Praia

Oswaldo Cruz, Director do Serviçio Nacional, Ministério de Desenvolvimento Rural, São Jorge dos Orgãos

Emílio Fernandes, Ministério de Desenvolvimento Rural, Assomada

Maria Luisa Lobo, Directora Adjunta, Centro de Estudos Agrários, São Jorge dos Orgãos

José Cândido Guedes Pereira, Subdirector, Banco de Cabo Verde, Praia

Antero Barbosa, Secretária de Estado de Cooperação e Planeamento, Praia

Maria das Dores Silveira Pires, Secretária-Geral, Organização das Mulheres, Praia

Crispina Gomes, Vice-president, Organização das Mulheres, Praia

Arlete Spencer, in charge of emigration problems, Organização das Mulheres, Praia

Joana Cabral, First Secretary, Organização das Mulheres in Concelho of Tarrafal

Maria José de Pina Monteira, Segunda Responsável, Organização das Mulheres, Tarrafal

Maria Tereza, Responsável, Organização das Mulheres, Tarrafal

Maria do Rosário, in charge of emigration matters, Ministério de Negócios Estrangeiros, Praia

Stanislau Gomes Furtado, Secretary, Departamento das Organizações de Massas, Assomada

Nicolau Mendes da Silva, Agente Administrativo da Secção, Assomada

Regino Rocha Brito, Responsável, Santana

Eduardo Monteiro, First Secretary, Partido Africano da Independência de Cabo Verde (PAICV), Concelho de Santa Catarina

Benvindo Pereirs, Ajunto Administrativo, Freguesia de São Miguel

Dr. Lisboa Ramos, Ministério da Saúde e Assuntos Sociais, Praia

Dr. Alice Dupret, PMI/PF, Ministério da Saúde e Assuntos Sociais, Praia

Ze Évora, handicrafts and art instructor, Praia

Training

The CID/WID Fellowship provided for further outreach, both through the training I was able to give to individuals with whom I worked most closely and through a seminar involving, particularly, the U.A. Food Crops Research Project, U.S.A.I.D., and the Cape Verde Ministry of Rural Development.

In terms of training individuals, I adhered to the following procedure: After identifying either a need or what appeared to be a genuine interest and concern on the part of an individual, I spoke about that need with Horacio Soares to obtain his guidance and/or consent for future action. Then I talked privately with the individual involved, without reference to any previous conversation, and preferably in a non-business setting. Two staff professionals in two different organizations showed strong interests in learning to design scientifically valid field studies. To develop their capabilities in research design, I held sessions with them to demonstrate appropriate scientific methodologies.

Concluding Seminar

At the conclusion of my stay in Cape Verde and with the help of Tom Crawford, Horacio Soares and Joe Hartman, a small seminar was arranged in the offices of the U.A. Food Crops Research Project. Those taking part included Horácio Soares, Elísio Rodrigues and Oswaldo Cruz of the Ministry of Rural Development; Maria Luisa Lobo of the Center for Agrarian Studies; Bia Soares of the Solidarity Institute; Joe Hartman and Mary Beth Bennett of U.S.A.I.D.; and Tom Crawford and me. At the meeting, I reported briefly on the findings of my research in Cape Verde, asking, at each juncture, for feed-back, additions, possible explanations for some of the findings and other comments, several of which provided new perspectives and considerable utility.

Potential Trainers

Among the Cape Verdeans with whom I worked most closely, two persons showed special interest in social science research and seem likely to be potential trainers. They are Tito Lívio Andrade, a research assistant and interviewer in the Research Department of the Ministry of Rural Development, and Arlete Spencer, a department head in the Women's Organization. Tito Andrade is recommended because of his ability to grasp ideas quickly, to be resilient and flexible, and to approach each individual,--whether the person be a foreigner, a rural Cape Verdean or a fellow co-worker,--with understanding, compassion and quiet reassurance. He has the approximate equivalent of only a junior high school education. He needs structured course work to cover more thoroughly than I could in the time available the

principles of hypothesis formulation and testing, sampling techniques and statistical analysis. Similarly, Arlete Splencer, one of the higher level members of the Women's Organization, is highly motivated to acquire new knowledge and skills. She already heads a department in which social science research is an important component of the work. She is open and receptive to new ideas and new methods, and needs only the access to them.

Publication Possibilities

The CID/WID Fellowship Project office has also requested information concerning the potential for publication resulting from the study I conducted. It is possible that, after further study, some ideas, certain theoretical reorientations, some data and much background information will be incorporated into a doctoral dissertation. With the approval of appropriate Cape Verde authorities, other possibilities include articles concerning the economic condition of matrifocal households and/or the economic value of children in the Cape Verde Islands. Such articles could appear in both academic journals and the popular press.

Recommendations

An urgent demand for future CID/WID or U.S.A.I.D. activity is the study and the implementation of a program to help rural women of Cape Verde earn income. The need for such a study and its implementation was discussed and agreed upon at the seminar concluding my stay in Cape Verde. As indicated earlier, those in attendance included Horácio Soares, Director General of the Ministry of Rural Development; August "Joe" Hartman, acting head

of U.S.A.I.D.; and Tom Crawford, resident head of the U.A. Food Crops Research Project. The problem is acute in Cape Verde not only for many of the reasons which contribute to poverty and food shortage in much of Africa, but also for reasons special to Cape Verde. An historic response to poverty in Cape Verde has been emigration, which disproportionately affects young men, thus creating a situation in which there are many households headed by single women. A single woman head of household is called a solteira in Cape Verde. (In my study, 37.5 percent of all rural households were headed by solteiras.) If a woman has more than two small children, she often cannot work outside the home because no child is yet old enough to care for the others and because she has "too many children to leave with a neighbor." If she has no land, or if the land is not producing because of the drought, her only source of income may be collecting and selling fire "wood," brush often no thicker than one's finger. In one case which I studied that was similar to this, the woman earned less than the equivalent of U.S. $300.00 in a year. During the ten-day period that I spent in her zone, she lost her youngest child, a sixteen month old boy, to malnuitrition. Her child was one of two in that zone who died that day.

Help in the development of income-earning opportunities for rural women of Cape Verde may be available from other sources as well. Ms. Reiko Niim of the United Nations Children's Fund (hereatter UNICEF) has indicated that UNICEF is gradually establishing centers on the various islands where women may meet to discuss problems and possible solutions. Dr. Homero Ferrinho

of the Food and Agriculture Organization of the United Nations (hereafter FAO) has talked about the need to develop a center where the handicapped may produce articles of value. This project could possibly be expanded to include income-earning activities for women. Any study of the possible development of an industry for women must take into account the activities of UNICEF and the FAO, as well as the wishes of the government of Cape Verde, and should study jointly with them the income-producing activities that women could engage in within their own homes.

Several possible income-producing activities could be explored, and researchers may well have suggestions for other activities as well. Current thinking (see esp. Carr 1984) is that, instead of developing new products, development workers first examine the income-producing activities women currently pursue, and attempt to improve the productivity of those activities. Certainly a study should be made of the markets and roadsides in Cape Verde where women offer produce and other commodities for sale. Such a study should include the source of the value added; sometimes it may be transportation of the product to a convenient location; other times it may include cooking food, or actual production of baskets or pottery. The study must go beyond supply and demand of products in the marketplace and reach into the rural areas to find such women as the <u>solteira</u> (described on page viii), who cannot leave her home for the market. A difficulty with products for export is that international markets, governed by changing styles, tend to be fickle, and communication may be slow between the buying centers

and the rural producers. On the other hand, unemployment and under-employment are endemic in Cape Verde; with many households having a glut of free labor, there may be few opportunities for women to work at home creating goods or performing services of value to others. A study of women's work in Cape Verde must consider not only the supply and demand for particular kinds of labor, but also the availability of a regular supply of raw materials, problems of distribution, quality control and financing. Surveys from other Third World countries have shown that preferred activities for women's work are vegetable growing, livestock raising, poultry raising, sewing and marketing (Carr 1984). Of these, only sewing and marketing appear possible at present for the poor of Cape Verde because of the country's long term drought and its general poverty in the rural areas. Even a sewing machine is a large investment.

Production for foreign markets may be found to be the only viable pursuit, in which case a cooperative, such as that being mentioned by Dr. Ferrinho of the FAO, may be useful in helping to make available the raw materials, training workers, cushioning the financing, handling distribution and maintaining close contact with the markets. Among raw materials which exist in Cape Verde are animal skins and sisal. There is already some leather tanning in Cape Verde; a leather industry has the advantages that its products have long shelf lives, are easily and cheaply transportable, and, if styled in ways desired by modern world markets, might command larger returns than many other handcrafted products. Sisal is cultivated in Cape Verde

for erosion control purposes; and presumably more could be cultivated if needed, thereby making the product plentiful and inexpensive. The processing of sisal, as found in Brazil, can offer difficulties, but, if such problems could be solved, items such as placemats, doormats and wall coverings might be produced.

An indigenous skill which exists is the art of crochet work, in which many women currently engage. Modernized, expanded, and under the protection of a cooperative or similar agency, crochet work could offer income to women for work in their homes. Such a cottage industry has been developed within the United States,--in New England,--using designer styles to create fashion sweaters. This industry, like the leather industry, could have the advantage of commanding high prices for quality products.

As indicated above,future researchers may well have other ideas for the development of suitable income-producing opportunities for the women of Cape Verde. The important,--and urgent,--message is that the developed nations help these women to help themselves now. Because malnuitrition is an impatient enemy. It does not wait.

Commitments for Future Activity

In response to a question raised in the CID/WID Guidelines, I made no commitments for future activity in the Cape Verde Islands. I mentioned, however, my own interest in returning. At the same time, Horacio Soares again indicated that I was "always welcome," and he gave me a letter of invitation for possible future use. Relevant materials collected during the trip include numerous scholarly studies which are in my possession and which

will be quoted when applicable in future writing. They will, of course, be available to other scholars and to the CID/WID office.

Immediate or Future Impact of the CID/WID Fellowship on my Career

Having seen firsthand some of the problems and poverty of rural women in the Cape Verde Islands, I wish to return to Cape Verde to conduct research on an aspect of women's problems which could possibly have significance in other Third World countries where food production is limited and birthrates are high.

Some Effects of Emigration and Remittances On the Lives of Rural Women In Selected Areas of the Cape Verde Islands

Appearing to be classic Malthusian victims of increased population growth with reduced capacity to feed themselves, the people of the Cape Verde Islands have, for three centuries, sought relief from famine in a strategy of emigration. Today, while the problems persist, the picture is modified by a concerned government, well aware of its problems; a people who are optimistic, open and receptive to innovation; and some visible results from social and economic programs in a country not yet ten years old.

First recorded in 1580-1583 (Carreira 1984:17), droughts in the Sahel have caused recurring famines in the Cape Verde Islands (see Figure 1), with resulting population loss due to both deaths and emigration. The current long term cyclical drought started in 1972, with some relief in 1975, but only rare and spotty relief thereafter. Emigration, while not limited to males, is sufficiently gender related that in 1980 the sex ratio was 86.26 males for every 100 females. In the age cohorts from ages 20 to 45, the average sex ratio was 62.9 males for every 100 females (see Tables I and II). Thus, there is an acute shortage of males in the age cohorts corresponding to women's most reproductive years.

Because women want to have children as a help to them in their old age and for possible other reasons that need to be further researched, large numbers of women bear children. Women who are not married often have children, and are heads of households. These women are called solteiras. In this study, they comprised 37.5 percent of heads of household. The role of the solteira is prevalent, recognized and institutionalized. The government has tried to protect unmarried women and their households in its Codiga de Familia, enacted June 20, 1981, and has eliminated the concept of illegitimacy. Yet the solteira is usually the poorest of the poor, often landless, sometimes with four children under the age of seven, other times forced to farm out her children to their fathers or to relatives. She is usually poorly housed, poorly clothed and poorly fed.

I went to Cape Verde to study the phenomenon of emigration and remittances home. I learned that whereas the economic impacts of emigration can be both beneficial and detrimental, the most severe economic effects of emigration appear to occur in the households of the solteiras.

The Land and the People

Discovery, Location and Surface Features

The Cape Verde Islands were discovered, uninhabited, sometime between 1446 and 1460 by the Portuguese, or by Genoans sailing under the Portuguese flag (Duncan 1972: 18-9; Carreira 1983: 17). The archipelago, which lies 455 kilometers off the west coast of Africa between the Tropic of Cancer and the

Equator (see Figure 2), is comprised of ten large and eight small islands. Only the nine largest islands are inhabited. These are Santo Antao, São Vicente, São Nicolau, Sal and Boa Vista on the north; and Maio, Santiago, Fogo and Brave on the south. The land area is 4,033 square kilometers.

All islands are formed from volcanic eruption. The easternmost islands, Sal, Boa Vista and Maio, are relatively flat, and produce virtually no agriculture. The other islands are mountainous, with some areas rising over 900 meters. On the mountainous islands, regadio agriculture and sequeiro agriculture are possible. Regadio refers to irrigated land; and sequeiro refers to dry land. Irrigated land is usually found in the canyon bottoms, whereas dry land agriculture, which depends upon rainfall, usually occurs at higher elevations and on the watershed side of the mountains. There is no necessary connection between the locations at which people live and the type of land, if any, to which they have access. At least two solteiras whom I interviewed lived adjacent to the regadio, but had access only to land in the sequeiro, to which they had to travel long distances on foot or by jitney trucks. Although both men and women may work the same kinds of land, there is a tendency to some division of labor by gender, with men favored to work in the regadio, where the labor is more arduous, but the produce more valuable.

Climate

The Cape Verde Islands are considered part of the Sahel. They receive little rainfall, but their sea location modifies

land temperature and humidity. Temperatures are extremely moderate, both in their diurnal extremes and seasonal variations. The average daily high temperature in August, September and October is 29 degrees Celcius (84 degrees Fahrenheit), whereas the average daily high temperature in January and February is 25 degrees Celcius (77 degrees Fahrenheit). The average daily low temperature in February is 19 degrees Celcius (66 degrees Fahrenheit) (World Climate Chart 1983). Thus, while many houses in the rural area are poor, with open windows and doors, and with wide air cracks in the rock walls, there is relatively little discomfort due to temperature extremes.

Winds come in three major currents. Winds from the northeast are humid and cool. Winds from the east are sporadic, but bring gusts of warm, dry continental air. Winds from the south and southwest, occurring from August through October bring the "rainy season" (Cape Verde Islands: xvi).

Rain, when it comes, is unpredictable and variable as to time, place and quantity. Some localities in some years receive no rainfall at all. During my stay in Cape Verde, one rain brought some areas more than 150 mm. of rain, and destroyed trees, bridges and roads; it was said that it was the biggest rain in sixteen years. Both agricultural experts and the rural poor agreed that the presence or absence of rain is the most important single factor currently determining the food supply.

Natural Resources

The Cape Verde Islands are poor in natural resources. At present, salt is produced on the island of Sal; and on the mountainous

islands, some bananas are grown for export. Only coastal fishing is abundant. Possibilities for development, according to the government, include fisheries, wind and solar energy, reafforestation for firewood, stone products and improved agricultural resources (Roundtable of Development Partners 1982: 8).

People

Unity, a sense of common identity and pride in their country seem to characterize the people of Cape Verde. The present population stems from a genetic and cultural intermixture of Portuguese and other European stock with African slaves brought to Cape Verde as early as 1466. Because Cape Verde was used as a transshipment point for slaves destined for the Americas, a system of "Latinization" was introduced so that slaves could become baptized before going to "non-Christian" lands. As a result, the new people of Cape Verde lost the tribal rivalries common to many African nations; at the same time, they developed their own language, a crioulo based on African dialects and Fifteenth Century Portuguese; and in the years since then they have developed their own poetry, fiction, music and cuisine.

Growth of the Population

Catastrophe and Early Population Growth

Population growth in the Cape Verde Islands appears to have been markedly uneven, due to extensive famines and other catastrophes. Demographer Custodio Conim notes six periods of

famine since 1773 (Figure 1; Table III). Others give slightly different dates and note other catastrophes, as well. Historian António Carreira reports famines in 1580-1583, 1610-1611, 1809-1811, 1864 (30,000 deaths), 1889-1890, 1890-1900 (locust infestation), 1901-1904, 1911-1915 (drought and locusts), 1916-1918 (greatly reduced shipping between Portugal and Cape Verde), 1921-1922 (24,000 deaths, 5000 emigrants), 1923-1924, 1941-1943 (25,000 deaths); and 1947-1948 (21,000 deaths from starvation, 30,000 total)(1984:17-134). In addition, the First National Development Plan of Cape Verde indicates that deaths by malaria took 30 percent of the population in the early 1870's and five percent at about 1915.

The Cape Verde Islands are currently experiencing a long-term drought, which was especially severe in 1972, when no rain at all was reported in many places. This drought has not resulted in severe mortality losses because of international food aid.

Early Emigration

Migration is commonly cited as a response to famine and as a check to population growth, yet a direct correlation to periods of famine is difficult because of intervening political and economic factors. Such intervening factors can include interruptions in shipping, the absence of economic opportunities elsewhere or restrictive immigration policies in potential receiving countries.

No figures exist to describe early emigration from Cape Verde. The first flow of emigration, according to Carreira, began as a trickle with the arrival of whaling vessels from North

America at the end of the seventeenth century. Although whaling started much earlier, the ships of the English settlers in North America first reached Cape Verde between 1685 and 1700. Carreira conjectures that the American whalers may have trained some Cape Verdeans in whale fishing and that, perhaps, due to adverse winds, returned to the North American continent with their crews. Once accustomed to the new country, Cape Verdeans would have sent word or returned for relatives and friends. The first recorded Cape Verdean immigrant to the new world, more than a century later, was José da Silva, born in Brava in 1794 and naturalized as an American citizen in Nantucket in 1824. By 1900 the supply of whales was exhausted, but the pattern of emigration to North America was established. The period 1900 to 1924 represented the height of emigration to the United States. Carreira indicates that people from the small islands of Brava and Fogo, suffering endemic famine, emigrated in order to obtain better lives for themselves and their families, whereas those from Santiago, the most populous island, tended to emigrate at times of specific crisis. Beginning in 1917, the United States required literacy for admission, and in its Immigration Acts of 1924 and 1929 introduced quotas, which after 1930 restricted immigration from Portugal, Madeira, the Azores and Cape Verde to a total of 440 persons per year (see Table IV)(Carreira 1982:42-55; 71).

Meanwhile, emigration to the Guinea coast had begun after the famine of 1863-6. In Guinea, emigrants, especially from Santiago, Maio, Brava and Santo Antão, settled in the country to cultivate sugar cane and operate sugar presses, stills and storehouses. Some men brought their wives; others set up

households locally. There was a demand for alcoholic beverages, and apparently the Cape Verdeans did well until about 1920, when the Portuguese were able to establish administrative control in the countryside; then, regulations were enforced governing the production of spirits, and giving preference to Portuguese imports. Following that, the immigrants and their descendants fell to petty trade, subsistence farming, low and medium level official jobs and other miscellaneous jobs. Between 1920 and 1940 possibly 70 percent of the Guinea officials were Cape Verdeans or their descendants. Other Cape Verdeans migrated from Guinea to Dakar, where men found jobs as dock workers or in the municipal cleaning service, and women in domestic work (55-7).

Meanwhile, emigration to other countries began to gain some strength, probably gaining numbers at the end of whaling in Cape Verdean waters. The early twentieth century saw expanded migration to Brazil, Argentina, Uruguay and Chile and to Senegal, Gambia, Angola, Mozambique and Portugal (see Table IV). Carreira labels the emigration to S. Tomé and Principe as "forced emigration" because of the government's decisive intervention in sending workers south and the low-pay, deprivations and floggings associated with work there (1982:101-79). Later, Angola and Mozambique also became destinations for forced emigration.

The period following World War II, from 1946 to 1973, is labelled the "great exodus" by Carreira. Emigration to Europe greatly increased: first to the Netherlands, some direct, some by way of Dakar and up the African coast; then, after a few years, to Portugal, France, Luxembourg, Italy, Switzerland and other destinations (74-5).

For many Cape Verdeans, emigration was considered only a temporary state. Carreira points out that, initially, it was the return of affluent Cape Verdeans from America which stimulated others also to go to the United States for work (47-52; 54). In the relatively crisis-free period from 1933 to 1942, there were almost as many return migrants as out-migrants (Table V).

Political and economic factors which either limited or forced emigration were apparently more powerful in determining emigration rates than famine crises, per se. During the period from 1900 to 1970, famines occurred in the early 1900's, the 1920's and the 1940's. If famine alone dictated emigration, we would expect those decades to show the highest emigration rates. Instead,--due to factors whose exposition is outside the scope of this paper, but may be presumed to include interrupted shipping during World Wars I and II and restrictive policies in receiving countries,--emigration is relatively low during the decades of great famine. On the other hand, emigration showed a general increase throughout this century, moving from an annual percentage rate of 1.4 in the decade of 1900 to 3.4 percent of the total population in 1970 (Table VI).

Current Population Growth

Despite emigration, net population growth is now increasing more rapidly than in the past. Formerly, some extended periods showed almost flat population growth rates (Table III). Eighty years were needed to double the population from 76,000 in 1871 to 150,000 in 1950, but only 30 years to double the 1950 population to 296,000 in 1980.

In common with many other newly developing countries, Cape Verde seems to be undergoing a marked demographic transition. This is the period, according to demographers, when death rates are declining more rapidly than birth rates (Kammeyer 1971:128-36). The phenomenon is usually attributed to improved medical care, which operates, especially, to lower infant mortality. The wide base of Cape Verde's poplation pyramid (Figure 3), showing a large number of young people, is typical of developing countries; distinctive characteristics of the Cape Verde pyramid are its excess of females over males at ages 20 to 65, and the narrowing of the pyramid at ages 45 to 55, reflecting the famine and emigration of the 1940's. In the case of Cape Verde, a number of factors may be operating simultaneously to enhance its current population growth rate. Since independence in 1975, Cape Verde has substantially increased its health services. Its maternal and infant health care program has contributed to the reduction of the infant mortality rate from 108.8 (per 1000 live births) in 1975 to 60.0 in 1980 (Table VII). During the disastrous 1940's, the ten-year period showed a negative rate of natural increase (Table VIII); the cohort of women born during that period are now reaching the end of their fertility, thus larger numbers of women born after the 1940's are now coming to age to give birth. At the same time, death rates due to all causes have been dropping (Table IX). That factor plus probable return migration of older people has increased the persons age 65 and over from 4.8 percent in 1970 to 6 percent in 1980 (Table X). Thus Cape Verde has an extraordinarily high dependency ratio of 104.5 dependents for

every 100 persons of working age. Finally, the current drought has not resulted in the number of deaths that would have occurred formerly because of improved social services and the presence of an international food aid program.

The food aid program may represent one of several structural changes in the economy which may have the effect also of reducing emigration from the proportion that might have been expected formerly. A study of the food aid program would necessitate further research; nonetheless, some effects of the aid program appeared in answers to some of the questions asked during our survey. Under the aid program, the government of Cape Verde, wishing to maintain the work ethic among its people and to avoid their dependence on a state welfare roll (Round Table of Development Partners 1982:61) sells to its people much of the food it receives from contributing countries. The people, in turn, earn the money to purchase the food from work in various government conservation and road projects. Receipts from the sale of food products help the government to finance the work projects. Officials limit the number of people per family who may work in the government projects, and work is not always available. In response to questions about why people had emigrated, answers concerning emigration that occurred since 1975 were never concern over starvation, per se, but centered instead on the ability to earn more money or to obtain a better life. Thus it may be that the population of Cape Verde is also being enlarged by people who would formerly have emigrated, but who now remain at work on government projects in Cape Verde.

Current Emigration

Destinations and Rates of Emigration

In the years 1979, 1980 and 1981, emigration was greatest to Portugal (see Table XI). Carreira points out, however, that in the past Portugal was often a transitional point en route to some other destination (1982: 47-8). In our study, 82.8 percent of all emigrants whose destinations were known (N = 29) went to Portugal and only to Portugal, the remaining going to France, or using Portugal or Angola as interim stopping places (see Table XII). That so many emigrants went to Portugal may be due to the fact that the study was limited to the island of Santiago. Previous research by Jacques Richard (1983) indicates that there is inter-island variation in choice of destination (see Table XIII). In Richard's study of 1981-82 emigration, Santiago sent 79.3 percent of its emigrants to Portugal; whereas Santo Antao sent 33.2 percent to Holland and 31.6 to Portugal; Sao Nicolau sent 39.4 percent to Holland, 22.6 percent to Italy and 21.5 percent to Portugal; and Brava sent 41.9 percent to Portugal and 39 percent to the United States (1983: 16-7; 42-4; 70; 95-6). That emigrants from particular islands should tend to select the same countries of destination was apparent in our study, where 37.9 percent of all emigrants (N = 29) were lent or given money for their passage by relatives, fictive relatives or close friends already in the country of destination; those emigrating independently may also have chosen the same destinations for social, political and other reasons (Carreira 1982:47-8).

In 1980, emigration had returned to the rate of 1.5 percent of total population (adapted from Tables XIV and XV), or about the same rate as at the beginning of the twentieth century (Table VI). The island of Santiago, the most populous island, had an emigration rate of 1.4 percent in 1980.

Studies of emigration from Cape Verde have, until the present, been concerned almost exclusively with quantifying the numbers of emigrants and their destinations, with little attention paid by researchers thus far to the social consequences of emigration. Government leaders in Cape Verde recognize that monetary gifts, or remittances, sent home by emigrants significantly add to Cape Verde's foreign exchange, and that material gifts help raise the standard of living. In 1976, for example, remittances home totalled U.S. $17.5 million, whereas during the same year total exports from Cape Verde were less than U.S. $2 million. With currently lower emigration rates, those interested in the well-being of the Cape Verde Islands will want answers to such questions as: To what extent are remittances increasing or decreasing? What are some of the values of remittances for the society of Cape Verde and for the individual household? Does the amount and consistency of remittances vary in any systematic way? What is the current disproportion of male to female emigration, and how does that affect the lives of rural women in Cape Verde?

Research Methods

To answer the many questions concerning emigration, its effects on the lives of rural women in Cape Verde, and possible

implications of those findings for the University of Arizona Food Crops Research Project, the following procedure was adopted.

Site selection. In consultation with the research department of the Cape Verde Ministry of Rural Development and guided by the precedent set by the U.A. Food Crops Research Project, communities in three different ecological zones of the island of Santiago were selected as targets for study. The three communities, hereafter called Communities A, B, and C, were in areas of normally increasing rainfall, their average rainfall for the years 1981, 1982 and 1983 having been, respectively, 52 mm., 184 mm. and 256 mm. (See Table XVI). Rainfall in the Cape Verde Islands is erratic, however; and the rainfall received in Community C in 1982 has been described as a damaging rain; the rain which fell in 1983 in Community B reached 322 mm., or more than the recent average for Community C. Rainfall tends to increase by altitude and by being on the watershed side of the mountains. Community A is located under 300 meters altitude, Community B is at 400 to 500 meters, and Community C is at 500 to 700 meters. According to information made available by the Ministry of Rural Development, there are only about 41.1 inhabitants per sq. km. in the driest area, 136.9 in the mid-range area , and 157.1 in the area of greatest rainfall. The average area cultivated per household is about 1.14 hectares in the driest area, 1.38 in the mid-range area, and 1.5 in the wettest area. In Community A, in the very dry zone, crops are +cultivated in the regadio, a canyon bottom which receives a tiny stream diverted by stone lined channels to irrigate a wider area.

In Community A, crops grown in the regadio include sugar cane, manioc and sweet potatoes. Some households do not farm at all, but engage in buying and selling produce and/or aguardente, the alcoholic beverage made locally from sugar cane, and a few have no income other than collecting and selling lenha, firewood, to the aguardente operation. Some households have access to land both in the regadio and in the sequeiro, the latter being land that is considered capable of being used for dry farming in years of adequate rainfall. Other households, even though they live in proximity to the regadio, have access only to land some distance away in the sequeiro. Crops grown in the sequeiro usually include beans and corn, interplanted with one another.

In Communities B and C, the principal locus of agriculture is the sequeiro, although it is possible that there are some households which have access to regadio agriculture. Many households, in all three communities, engage in multiple income-producing activities. Of the households I interviewed, one woman, in Community C, took in sewing. Several, including that woman, engaged in small trade. In all three communities, people worked, when they could, for the government or in the public works programs, and many engaged in forms of share-cropping or sold their labor to other cultivators.

The purpose of selecting communities in the three ecological zones was, first of all, to gain information which could be easily integrated with that of the U.A. Food Crops Research Project, which was following the same procedure. Also, because of the various communities' differences, it was possible that wealth could differ from one community to another, that emigration could

differ, and that, because of different kinds of agricultural practices and crops, the impact on women could vary when male members of households emigrated.

Household sample selection. To determine which households in each community should be interviewed, we first obtained a list from the Responsável of each community of the "heads of household" in that community. Then, applying a table of random numbers I selected a list, slightly longer than we could use. The Responsável then arranged with each household, in order, that the head of household and, if a married man, his wife also, be present at the time we expected to visit. By rigidly adhering to random selection, our results, although based on a small number of cases do not differ appreciably from those of other studies and national statistics; e.g. we found that among our interviewees, 38 percent of households were headed by solteiras, and other studies show a range of 36 percent to 39 percent. In our study 37 people were interviewed at length, and 24 household histories, covering a 20-year period, 1964-1984, were collected. The histories dealt with emigration, fertility and household economics.

The lists of households provided by Responsáveis are apparently derived from each household's own evaluation of its head. This is an acceptable approach for many purposes and has some advantages. When used as a basis for studies in which comparative socio-economic data are sought, however, such lists can create confusion.

Where members of a single household live, i.e., sleep, can vary. Usually members sleep in a single house, but, in one instance, they slept in three houses within 100 to 200 meters of one another; in another instance they slept in two houses, one in the country, the other in Praia, the capital city, with some children in each house and the mother spending three days per week in the country and four days in the city (where those children worked and went to school). In another case, a man who was considered a head of household spent his daytime and slept in his own house, but was furnished meals by another; in another case a family member spent the day and ate in one house, but slept in another. In still another case, a widowed man ate and slept most of the time in the house of his _de facto_ wife, their son and his adopted son, but occasionally slept and/or ate in the house of his children.

The designated head of household was usually the senior man in the house. If the household lacked a senior man, then usually the senior woman was the head of household, whether she were a _solteira_, a widow or the wife of an emigrant. In one instance, however, there were two senior women, ages 71 and 73, the younger of whom was the designated head of household. In that instance, a widow and a _solteira_ had joined in a common household more than 30 years ago, and at that time the widow had the greater resources; by now, a daughter of the widow had married a son of the _solteira_, and the _solteira_ has furnished the only three wage earners to the household. In the latter case, and in several others, the chief decision-maker in determining how resources were to be allocated was a member of the younger generation.

Different criteria, other than self-determination, are required to define the household and household heads. After initially accepting as household heads those individuals so named by the people themselves, I came to believe that households should be defined according to those who share in receiving, holding and disbursing economic resources, and that household heads should be those who exercise greatest authority over the allocation of those resources. The centrality of food in rural people's lives was apparent in answers to question after question and from one family to the next. Only in the very few cases of people relatively "wealthy" by the standards of the rural poor was there any primary mention of a need other than for food. In every case, agricultural produce, if any, income from supplementary activities and almost all salaried income were shared by groups of people, usually related to one another. The household in rural Cape Verde,--regardless of size, sleeping or eating location, geographic distribution or blood relationship,--is the economic unit for receiving, holding and disbursing resources to care for its members. The researcher should consider that the head of household is the person who is most responsible for household decisions regarding the allocation of resources. Because the lists of households furnished by the Responsáveis included, as separate households, many names of older people who were, in fact, being supported by their children or grandchildren, it was not possible to know, without making a detailed study, the total number of households in each community. Inasmuch as the number of households by the definition underlined

above would be fewer than the number supplied by the Responsáveis, we can say that in Community A we interviewed at least 4.7 percent of heads of household; in Community B, 2.8 percent; and in Community C, 8.7 percent.

Interview techniques. Interviews were conducted in privacy and within each home. In a very few cases, it was possible for me to communicate directly in Portuguese with those heads of household who were returned emigrants from Portugal or young persons who had studied Portuguese in school. Overwhelmingly, however, the interviews were conducted in Crioulo by my counterpart interviewer from the Ministry of Rural Development; he or she would translate into Crioulo the purpose of our visit, our intention to keep confidential the names of respondents and communities, and our request for questions or comments. This initial introduction generally required 20 to 25 minutes. Then, translating from questions I had prepared in Portuguese, my counterpart would ask questions in Crioulo, but write the responses in Portuguese, thus enabling me to follow item by item the conversation and to add further questions when needed or to correct occasional misinterpretations of the questions. In most instances, there was an initial problem in maintaining privacy because fellow community members would gather at the windows to listen, or walk in and seat themselves. Our polite explanation that we were asking very personal questions was sufficient, however, for them to honor our request for privacy. After the first day in the first community, several community members approached the Responsável, asking that their names be placed on our list to be interviewed. I interpreted this to mean that we

were not offending community members. In households where there was both a male head of household and his wife or de facto wife, we indicated in our initial introduction that we would wish to interview each separately, without the other present; and we met with no difficulty.

Emigration by Age Cohort in Santiago

As indicated above, data from other sources indicate that in 1980 emigration from Santiago was down to 1.4 percent of the population, below the average of 1.5 percent for the islands as a whole, and well below the national 3.4 percent of the decade of the 1960's (see Tables VI and XIV). Lump sum figures such as 1.4 percent of the total population obscure the extent to which emigration affects certain age and sex cohorts. In Santiago in 1980, the population in the age cohort 5 to 14 years reached 41,734 persons, but fell to 24,121 persons in the cohort 15 to 24, and continued to fall until the age cohort 55 to 64, when it increased to 8,755 persons over the preceding 10-year cohort population of 8,318 (Table XV), thus indicating that, for whatever reasons, including emigration, population in the productive years from 15 to 55 was on a downward tilt.

Emigration by Sex in Santiago

At the same time, the sex differential appeared to increase, markedly from the age of 20 on to 39. In 1980, the national male sex ratio was 56.2 men (for every 100 women) in the age cohort 35 to 39 (Table II). Of all the islands in Cape Verde, Santiago may have the most extreme male sex ratio (Table XVII), with a total

of 65,845 males and 80,078 females in 1980. Richard's study (1983) of six zones in rural Santiago shows that 30 percent of all males emigrated in 1981-2, whereas only 16 percent of females emigrated. In the age group 15 to 29, 40 percent of males emigrated; in the age group 30 to 44, 66 percent emigrated; and by the age of 45 to 59, 70 percent had emigrated (Table XVIII).

Profile of the Emigrant

In Richard's study (1983), 43 percent of all emigrants departed the first time at ages 15 to 20; 23 percent at ages 21 to 29; and 21 percent at ages 30 to 44 (Table XIX). The profile of the emigrant in our study closely parallels Richard's findings. In our study, 27 men for whom we have information and two women emigrated (Table XII). Of the total, 44.8 percent were 20 years of age or less; 20.7 percent were at ages 21 to 29; and 24.1 percent were at ages 30 to 44 (see Table XX). Twenty-one was the modal age. (For a histogram of ages at first departure in our study, see Figure 4.) Almost all emigrants in our study went to Portugal. The exceptions were two who went to France by way of Portugal, two who went directly to France, and one who went to Cuba by way of Angola. In keeping with Carreira's figures (Table VI) and the known severe drought of 1972, 30 percent of emigrants in our study left Santiago between 1970 and 1973 inclusive, but 55 percent of those returned during the next three years.

Emigration, Remittances and Marital Status

Certain patterns of emigration relating to marital status emerged in our study. We found that young men below the age of 30 were almost always single at the time of emigration. If they

subsequently married someone in Cape Verde, during a vacation or by proxy, their wives were almost always successful in persuading them to return to Cape Verde. If, on the other hand, married men in their 30's or 40's emigrated, their wives were usually intent that the husbands remain overseas because the perceived need for their remittances was so great. Although the remittances of some sons to their parents were quite regular, on the whole the remittances of married men to their wives were larger and usually more regular (see Tables XXI and XXII). It is possible that married men, being older, held jobs that commanded higher wages or that they were more settled in their lifestyles and could therefore save more of their wages.

Among the households studied, those headed by solteiras were less likely to receive remittances than those headed by all other categories (male heads of household, wives of emigrants, widows). Although households headed by solteiras accounted for 37.5 percent of all households, the portion receiving remittances was only 4.2 percent of households (see Table XXIII).

Volume of Remittances

Remittances have been important to the economy of Cape Verde for many years. Just as a household in need of food has two choices if it is to be self-sustaining: it may grow its own food, or it may earn currency with which to buy food; so, too, a country may either produce its own needs or gain the foreign exchange with which to purchase necessities. As early as 1917, the government of Cape Verde launched a literacy campaign with the goal that emigration to the United States continue unabated

and thereby prevent "appreciable damage to the economy to which the proceeds of emigrant labour to North America make a very valuable contribution" (Carreira 1982: 62). Currently, remittances passing through the Bank appear to be diminishing. Antero Barbosa, Secretaria de Estado de Cooperacao e Planeamento, has provided the following figures (personal communication):

Year	Millions Cape Verde Escudos	Value in U.S. $ October, 1984
1980	1,609.6	$ 18,034,602
1981	1,538.7	17,240,210
1982	1,505.7	16,870,465

Not all remittances pass through official channels. Remittances may be clandestine or may take the form of gifts sent to the homeland or brought there by returning emigrants. Some observers have speculated that as much as 50 percent of all remittances enter the country clandestinely. Nonetheless, the fact that officially recorded remittances are dropping could possibly signal, in the absence of other information, that all remittances may be dropping.

Dependability of Remittances

In our study, we found that not all emigrants send remittances home (Table XXI). Usually, no remittances at all can be expected in the first year or two after departure because the emigrant is repaying a relative or friend, or both, who lent him money for his passage. In our sample, two fathers did not send remittances for the care of their daughters: one daughter was 13 years old, but presumed to be cared for by a fictive husband; the

other was 16 years old, but living with a grandmother. Brothers only rarely sent remittances to sisters. Some sons were very regular in their remittances to parents; some sent no remittances at all. According to responses to our questions 41 percent of all fathers, sons or husbands who had been emigrated for one and one half years or more sent no remittances to their respective children, parents or wives.

The Buying Power of Remittances

The value of remittances may have changed. As indicated, Portugal has been the preferred destination for emigrants from Santiago Island. Richard found that 79.3 percent of emigrants from selected rural areas in Santiago had gone to Portugal (1983: 16-7). In our study we found that, where destinations were known, 82.8 percent went to Portugal. Prior to independence, the Portuguese escudo was the currency of Cape Verde; now the currencies are not tied, and 100$ Banco de Portugal was worth only about 52$75 Banco de Cabo Verde[1] at the time I was there, or only slightly more than half the value of the Portuguese escudo. In the time available, I was not able to study the inflation rates of the two currencies, and I would hold that out as a caveat; nonetheless, it was clear that some recipients perceived that they were receiving fewer Cape Verde escudos than previously. It is possible that the problem is further aggravated by the fact that Portuguese workers who had migrated to northern Europe for jobs are now returning to Portugal in

[1]Notation for the Cape Verdean escudo places the $ sign where the decimal point would appear for the U.S. dollar.

record numbers (Jornal de Notícias, Lisbon, August 20, 1984, p. 6), and some may be displacing some Cape Verdean workers in Portugal. Additionally, some Portuguese businesses which had provided company housing are now reportedly raising rental rates (Voz di Povo, May 26, 1984, pp. 6-7). Thus, because of the close ties in emigration patterns from Santiago to Portugal, it may be that recipients of remittances on Santiago Island are disproportionately experiencing a diminution of remittances.

How Remittance Money is Used

The extent to which money earned overseas is used for investment varies widely. Three men saved enough money while overseas to be able to return with the money and buy houses or set up housekeeping (Case numbers 8, 11, 23, Table XXI), and one purchased a sewing machine (Case number 20). But of twelve households in Cape Verde to which remittances were sent, 67 percent indicated that most remittance money was spent directly on food. According to responses to our questions, very few households use remittances for any kind of investment or other income-generating activity. Overwhelmingly, according to respondents, they spend their money on food. To test the association between household wealth and income from overseas, I used household animals as an indicator of wealth. Animals are a form of investment, and other indicators, such as land holdings or access to land, present difficulties in equating values. I assigned three units to large animals (cows, mules, etc.), two units to small animals (pigs, sheep, goats) and one unit each to fowl. Of those households which received any income from

overseas at all during the past ten years, the average number of units of animals per household was 15.8, whereas households receiving no income from overseas averaged 6.3 units (see Table XXIV). On the other hand, only three households, or one third of the households in the first group, accounted for three-fourths of the animals. With those households removed, the remaining averaged only 5.8 units per household. Of the three "wealthy" households, two were headed by returned emigrants and only one was headed by an emigrant's wife who was receiving remittance money. In sum, it can be said that if a household had large animal holdings, it had received some income from overseas; on the other hand, the receipt of overseas money, whether from remittances or from a returned emigrant, was not necessarily an indicator that families would own animals.

Among the wives of emigrants whom we interviewed, responses indicated they were currently saving no portion of their remittances nor investing independently in any resource that could generate income; one said that she plans to start saving next year for a house in the city.

Three Households of Returned Emigrants

Among male heads of household, cases vary widely. Three male heads of household were emigrants in Portugal for four years from about 1971 to 1975. One, who had saved enough money to buy his wife a sewing machine, appears now to be dependent upon his children for income and remittances. He rents five litros of land (1 litro = about 0.1 hectare), which do not currently produce. He owns one cow and one hen. The second emigrant saved

24,000 Portuguese escudos to buy a house and sent home 20,000 escudos each year. When he was not talking with us, he was busy doing farm work. He rents three litros of land and sharecrops ten litros. He owns three cows, one goat, three hens and ten chicks. The third emigrant worked full time, nights and weekends in Portugal. When he returned, he bought two houses in Praia: one for 60,000$ and the other for 100,000$. Today he rents these houses for a total of 66,000$ per year; he also sells aguardente for 37,600$, potatoes for 45,000$ and manga for 2500$. He owns two houses in the country: one for his children and one for his de facto wife. He rents ten litros of regadio land and 24 litros of sequeiro. He owns two cows, eleven goats, three pigs and three hens. With an annual income before expenses of 151,000$ (about $1700 U.S.) from his personal efforts, he was by far the "wealthiest" householder we met. Thus it appears that, for whatever contributing reasons, personal differences in money management, entrepreneurship and work habits may play a role (see Eder 1982: 72) in determining present day economic assets.

Wants and Desires

When asked what they would do with more money (Table XXV), the respondents in our survey overwhelmingly gave food their first priority. The following order of preference emerged:

Buy more food
Reconstruct house
Buy animals
Buy clothes
Buy furniture
Save
Buy land
Buy rental property
Buy a truck
Buy dishes

Effects of Emigration on Household Agricultural Labor

As indicated previously, emigration in our sample tended to be bimodal by age and by household role. The largest group was comprised of sons of heads of household. These were usually the eldest, unmarried sons in their early 20's. Although they were the most numerous, their remittances, as indicated, were smaller and usually less regular than those of husbands. The other group was comprised of married men who emigrated in their early middle years to help support the families they left behind. In either case, whether their leaving created problems for the persons remaining at home depended on whether there were remaining sons in the household old enough to do heavy agricultural work. Usually, there were such people. Indeed, one of the "push" factors which operates to trigger emigration concerns the number of people per household who are permitted to work in the public works projects. Those in charge of administering the public works projects usually permit large households to have only up to two workers per household. Thus, if there are three or more people capable of adult work, it makes sense for at least one to emigrate even though his remittances may be less than he would earn in salary in Cape Verde. If, however, emigrants left and there were no or insufficient adult workers left behind, then households, especially women-headed households, felt the absence of agricultural hand labor.

Division of Agricultural Labor by Gender

There is a tendency toward division of agricultural labor by gender in Cape Verde. The division is not a firm one and is

frequently crossed when needed. The division seems to stem more from the difficulty of the labor than from a cultural determination. Men tend to work more in the regadio than women. Men therefore tend to cultivate sugar cane and manioc more than women. A 26-year old solteira said that, after her brother emigrated, she could not arrange for anyone to work in the regadio and, even though she has access to five litros in the regadio, performing the agricultural chores was difficult after the emigration of her brother. A returned emigrant said that his wife "lacked knowledge of the way to organize work" in the regadio. Another returned emigrant said that, before he left, he planted milho, feijão, bongolon, sapatinha, batata and manioca; after he left, his mother did not plant mandioca and batata because those required strength. In the sequeiro men tend to dig the holes and women to plant the seeds. One informant was more precise: men or women plant; men or women do the first, second and third weeding; but women re-weed by hand. Another said men plant and care for sugar cane, potatoes, manioc, couve, cabbage, onions and carrots; women plant and care for potatoes, beans and corn. Whatever the variation, it was generally agreed that sugar cane and manioc are, conceptually, men's crops; and corn and beans are, conceptually, women's crops.

Emigration and Birth Rates

The government of Cape Verde is knowledgeable and concerned about its population growth rate (see Primeiro Plano Nacional de Desenvolvimento 1982-85, Vol. 1:41-9), and is taking vigorous steps to control the problem. The PMI/PF, a project of the

Ministry of Health and Social Service, began its work in 1979 in the northern islands, and began in Santiago in the southern islands only in 1983. Despite the late start, it has made progress in Santiago. The PMI/PF furnishes both (1) maternal and infant care, and (2) counselling and modern methods of birth control. Its mobile units visit the various zones once each month, and a unit was present at one occassion during our visit to a community. In 1983, the program added 3,722 women to its statistics for first-time birth control pill users, and increased its follow-up visits to 19,427, increases since the start of the program of 433 percent and 619 percent, respectively. The I.U.D. insertions numbered 509, with follow-up visits totalling 1596 (Table XXVI). The government hopes to reduce the population growth rate so that the population, 296,000 in 1980, will not exceed 4200 by the year 2000 (Primeiro Plano Nacional:133).

In 1980, the crude birth rate was 37.4 (Table IX). This is considerably lower than the birth rate of 46.9 for all of Africa (McNamara 1984:1109-11), but greater than the crude birth rate for "developed" countries, which was 15.9 between 1975 and 1980. After discounting for emigration, Cape Verde authorities estimate their country's actual annual growth rate is currently 2.2 percent per year; this is the same figure as the average for all developing countries worldwide for the period 1950 to 1970. During the same period, all "developed" countries averaged 1.1 percent (McNamara 1984:1109-11). To reach its population goal of only 420,000 inhabitants by the year 2000, the government of Cape Verde estimates that it will need to reduce its rate of natural increase to 1.7 by the year 2000 (Primeiro Plano Nacional:71).

Talks with women in rural Cape Verde reveal that a beginning in controlling the birth rate has been made. Fifty-five percent of women in our sample (n = 22) had heard of PMI, although a number were uncertain about the nature of the services. Only one had gone to PMI, and that was for a vaccination; however, two young married women, ages 19 and 27, indicated that they wanted only three children and two children, respectively, and they volunteered that, after achieving the number of children they wanted, they intended to go to PMI for help. The first had four years of education and the second had three years of education. Questions concerning ideal numbers are notorious for yielding misleading answers, but, for what it is worth, the women in our study gave the average of 4.3 as the ideal number of children for a family. When asked how many children they wanted, they gave an average answer of 5.5 children. Women with completed fertility averaged 7.1 children (see Table XXVII). Of those, married women averaged 7.3 children and solteiras averaged 6.5 children (Table XXVIII).

Emigration probably works to lower the birth rate. Our study was not designed to test this question thoroughly; nonetheless, we found that wives did not bear children during periods of absence of their husbands, and solteiras, as indicated above, averaged fewer children than wives. It is probable that the disproportionate emigration of young males is influential in creating the institution of the solteira. In 1980, the sex ratio for all Cape Verde was 60.6 males for every 100 females in the age cohort 25-29 (Table II); the sex ratio can, of course, be

even lower in selected locations. Some social scientists have argued that a low sex ratio, per se, has the effect of weaking marital commitments (for a discussion of its effects on contemporary white Americans, see Guttentag and Secord 1983: esp. 190-6). In the Cape Verde Islands the desire for children acts as an additional reason for unmarried women to form households. Thus, emigration seems to work two ways to lower birth rates: first, the absence of husbands reduces the number of children wives bear, and, second, solteiras, who are a creation of the emigration system, seem to bear fewer children than wives.

Why Do Women Want Large Numbers of Children?

Worldwide, attempts to understand why women want large numbers of children have been perplexing. Some of the answers commonly given do not seem to apply to Cape Verde. In recent years wide acceptance has been given to theories concerning the economic value of children. Social scientists have not overlooked the emotional and enrichment rewards of having children, but have reasoned that smaller numbers of children seem to satisfy those needs as well as larger numbers. At the same time social scientists have recognized an association between large numbers of children and the rural poor, who perform a great deal of hand labor in agricultural pursuits. A number of studies have been completed which seem to suggest that the food which children consume is worth less than the market place value of their labor. Additionally, it is pointed out that children have value as insurance that parents will be cared for in their old age.

The child labor argument seems to lack logical credence in Cape Verde. In Cape Verde, the plots appear to be small (see page 15), and, even though a great deal of labor is spent in planting and re-planting, still there seems to be a great deal of under-employment. The government of Cape Verde also recognizes the existence of large numbers of unemployed, under-employed and inactive persons (Primeiro Plano Nacional: 50). In such a situation, the value of child labor seems insignificant.

Women in Cape Verde recognize the economic costs of large numbers of children. When asked how their lives would be different if they had only two children, 66.7 percent (n = 18) responded that it would be economically easier with only two children. Of the total, 55.5 percent (n = 18) specifically mentioned that two children would be easier to feed. Of those taking contrary views, 22.2 percent thought that the costs and benefits of children were equal, and 11.1 percent thought the economic benefits outweighed the costs (see Table XXIX).

In keeping with findings from other studies conducted in Africa, many women seemed to have ungrounded notions about the amount of land or education they would be able to offer their children. Seventy-six percent of all women in the study (n = 22) said they expected to offer land to all their boys and all their girls. Of those who had completed fertility and who said they wished to give land to all their children, the average number of children was 7.66; the average amount of land, rented or owned, <u>regadio</u> or <u>sequeiro</u>, by those same persons was 9.08 litros. Thus each child would have access to 1.19 litros, or less than 1/3 acre (see Table XXX). Most <u>solteiras</u> would be able to offer even

less (see Table XXXI). In education, only 23 percent of the households (n = 22) seemed to be giving their children the amount of education they had said they planned to give their children.

Answers to education questions seemed to vary by ecological zone, with a trend toward more education in the higher, wetter zone. The presence of an intermediate school in a nearby village would account for greater interest in schooling in the wettest zone, but proximity to intermediate facilities would not seem to account for what appeared to be a greater interest in education in the semi-humid zone than in the dry zone.

If women in Cape Verde recognize the costs of children and value education for them, what accounts for their wish, generally, to have large numbers of children? One explanation might be that they value children for the help children will give them in their old age. Every woman, without exception (n = 22), said that the help children give their aged parents is more important than the labor children contribute when they are young. With minor variations, the reasons given was always the same: when mothers are young, they are able to work for food, but, when they grow old, they are no longer able to do so. There were some variations in the care women expected in their old age, but no patterns emerged. Generally, they expected to be provided with food; they expected to live in their own house or in that of a child; they expected help in washing their clothes and expected financial help. In terms of living arrangements, there was perhaps a slight tendency to favor living with sons.

A logical problem exists in using "help in old age" as an explanation for large families. Small numbers of children can as easily help as large numbers. Informal discussions with educated young people in Praia indicate a strong preference for families of only two or three children. A need exists for a larger scale study of the relation of sex and birth order to those household activities which operate to reduce risk in an uncertain economic environment. If large numbers of children have little value as labor, if large numbers of children are difficult to feed, if a small number of children can provide help in old age and also satisfy emotional and enrichment needs, then people whose primary emphasis is on security may find in large numbers of children the possibility that diverse roles,--some emigrating, some in government public works projects, some in agriculture,--may help to reduce economic risk. This question has not yet been adequately pursued by population theorists.

Evidence exists from a number of historical and contemporary societies that larger households, per se, may be associated with greater wealth (Netting 1982). Among the households I studied in Cape Verde, and using the measurements which I did, I did not find that to be the case. I applied the Spearman Rank Correlation Coefficient test to four different sets of variables (see Tables XXXII, XXXIII, XXXIV, XXXV). In the first, to measure the correlation of household size to wealth per person, I operationally defined size as the number of persons currently living, i.e., being fed, in a household, counting those 10 years of age or under as 1/2 unit; I used as a measurement of wealth the number of animals owned by the household, applying the same

unit measurement as given on pages 25-6. This test resulted in a negative correlation of -289. Reasoning that many households in the previous test had not completed their fertility and that results might show a greater correlation if only households with completed fertility were used, I ran the test with those households and again found a negative correlation, this time -245. Although I believe the data on income which I received from some respondents was not wholly reliable, I thought that perhaps spendable income in a society in which hunger is endemic might be a more informative variable than wealth. I therefore ran the test using the correlation of income per capita in households with completed fertility measured against the number of persons currently living in the households; this test resulted in a negative correlation of -121. It was only when I tested the correlation of income per capita with the number of children ever born to householders with completed fertility that I reached a positive correlation, but even it was a correlation of only 0.14, a figure, which, at n=11, is well below that need to be significant at the .05 level. If large numbers of children are useful in coping with risk in an uncertain economic environment, and if the mechanisms for coping with risk were better understood, such findings could lead to different public policies for dealing with rapid population growth than are currently being considered throughout the world.

Ecological Zone and Household Wealth and Income

In planning this research, I had expected income and wealth to increase consecutively as we went from Community A, to B, to

C, from the driest area to the wettest. We found, instead, that both income and wealth were greater in the mid-range area. Wealth was measured in animals, by the procedure previously given (see Table XXXVI). To measure income, household incomes were totalled, then averaged according to the number of persons in the household, counting one unit for those ten years of age and older and 1/2 unit for those under ten. The highest and lowest figures were eliminated in order to avoid anomalies. The remaining figures were averaged by community. The results showed a per-person annual income in the driest community of 6799$96 Cape Verde; in the mid-range area, 9013$30; and in the wettest community, 7672$50 (see Table XXXVII). It was also the case that, in the mid-range area, many households reported that they produced almost all of the food they consumed, whereas in the wettest area almost all families reported that because their land had not yielded sufficiently, they produced little or none of the food that they consumed (Table XXXVIII). A possible explanation for this situation, advanced by a knowledgeable Cape Verdean, is that the alluvial soils of the mid-range area may be superior to the soils of the more mountainous area, where they tend to wash off.

The Control of Financial Decision-Making by Gender

A second surprise concerned family decision-making. From verbal reports we had expected domestic decision-making to be substantially male dominant. We interviewed husbands, then wives, separately, without the other in the room. We asked substantially the same question five times, in different ways.

We found that 40 percent of husbands and wives both agreed that they made joint decisions concerning the spending of money. The same percent agreed that the husband has final authority. One married couple were in agreement that the wife makes the decisions concerning the spending of money; and one couple were in disagreement: he said that he makes the final decision, and she said that she does (Table XXXIX). To see whether previous emigration to Portugal affected the roles of husbands and wives in family decision-making, I looked at responses solely from returned emigrants and their wives and found no correlation. Furthermore, there seemed to be no age correlation to the answers. One of the youngest couples, aged 24 and 27, agreed that the husband makes the decisions. Those who made joint decisions were in their 40's and 50's, as were most of those who indicated that the husband makes the economic decisions.

The Periodicity of Household Spending

When asked whether there was a time of year when households bought more food than at other times, 58 percent replied that they bought more food during the August-September rainy season because that was the time of planting. The remaining answers appeared to be idiosyncratic. It was not a part of this study to examine farm systems, but there appears to be an exchange of labor during planting time, with the host household providing the food. Inasmuch as August and September are the months when people appear least likely to work in the government work projects, households may find August and September a time of short money supply, a fact which may have some usefulness for the

U.A. Food Crops Research Project. Additionally, in our study, only one household spent money for commercial fertilizer; in that instance 520$00 Cape Verde were spent to fertilize ten litros of land in the *regadio*.

Emigration, Remittances, Women in Cape Verde: A Discussion

Emigration, in summary, has some beneficial effects. Remittances, if they are sent, help households to purchase food and may help the government of Cape Verde to acquire some foreign exchange. At the same time, in the true Malthusian sense, emigrants, by their leaving, lessen the demand on local food supplies. Returning emigrants often bring substantial savings and some of these are converted into investments in housing and in animals. Furthermore, by their leaving, emigrants seem to have an effect on depressing the rate of population growth. On the other hand, it seems clear that the government of Cape Verde must invest in education and social services for young people who, in their most productive years, will be working abroad, many of them to return only in later years when they may once again become, at least to some extent, dependent upon their own households of origin or the state. If the emigrants are married men at the time of their leaving, their wives and children are deprived of the values of husbands and fathers. If the emigrants are young, unmarried men at the time of their leaving, then their leaving may create even more serious social consequences. Both statistically and in this study most emigrants are indeed young, unmarried men, and their leaving creates a sex imbalance such that in some age cohorts there are fewer than 60 men for every

100 women. Because most women seem to want children, and for possible other reasons not examined in this study, many women become solteiras, single women heads of household.

The impact of the differential emigration of young males in creating the role of the solteira seems to be the most serious disadvantage of the current pattern of emigration. Households of solteiras are smaller, and they frequently lack adult male income earners. In our study, e.g., no male sexual partners contributed financially to the households of solteiras. Help from adult males, when it was present, came from sons or grandsons or, to a lesser degree, from fathers. When solteiras have only small children, their income potential is very limited. The average per person income in households of solteiras, estimated according to the procedure given previously, was 5965$47 Cape Verde per year,or about $66.84 U.S. The average per person income for all other households was 11,647$67 per year. or about $130.51 U.S. (see Table XL). Households of solteiras, therefore, had an income per person of only 51 percent of all others. Thus, one could extrapolate that, probably because of extensive emigration, more than one third of all households in Cape Verde live at a poverty level of half that of all others.

A Case History

Maria (not her correct name) is a 24 year old solteira. At the time we interviewed her she had four children, daughters ages 7 years, 4 years and 2 years, and a 16 month old baby boy. When Maria was 15 years old her father emigrated, and sent for her mother a year later. Maria was left a house and access to five

litros of rented sequeiro land, only one litro of which is currently worth planting. No other provision was made for Maria because she had a de facto husband and was presumably cared for. The man now has a different wife. The father and mother of the solteira now have had more children in Portugal and have sent for their two sons in Cape Verde. According to Maria, she would have liked to have emigrated with her parents and would still like to do so today, but, she says, Portuguese authorities will not grant her family permission because of overcrowded housing. Last year Maria worked eight weeks for the Ministry of Rural Development's public works program, earning 2880$00 Cape Verde, but work outside the home is difficult. If a woman has only two children, she can leave them with a neighbor, Maria says, but there is no one who wishes to care for her four children. So Maria collects lenha, firewood, and sells it to the local aguardente operation three times per week at 150$00 Cape Verde each time. If she averaged three times a week for 44 weeks, which is unlikely, she earned 19800$00 selling firewood, or a total of 22680$00 for the year or about $255.00 U.S. In our discussion, she said that she would be cared for in her old age by her son. Two days later the son died of malnuitrition.

Some Concerns for the Future

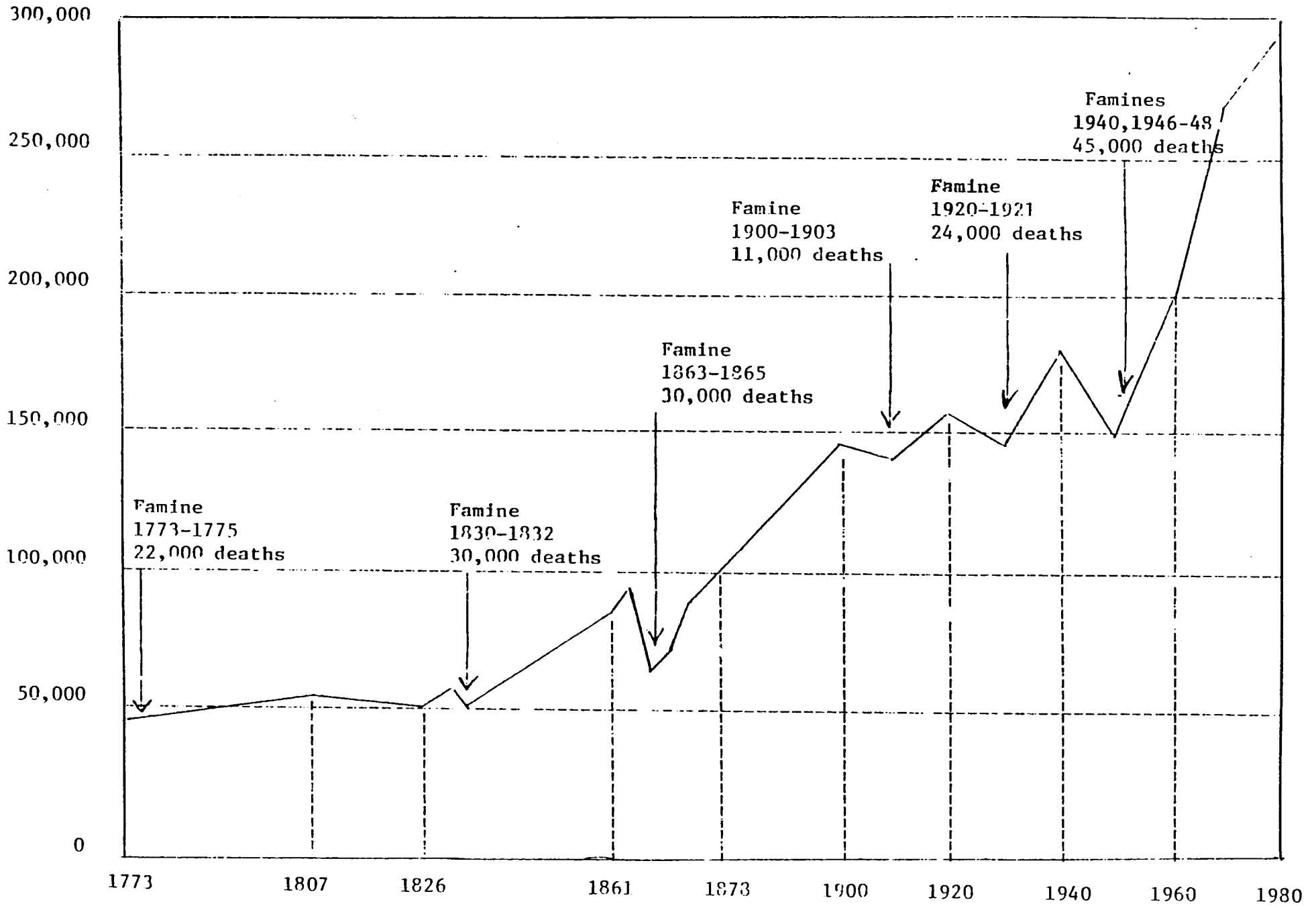
Households headed by solteiras comprised more than one third of all Cape Verdean households in our study, data which can be considered representative of a general pattern in rural Cape Verde. Thus, if emigration is a major causal factor in creating the institution of solteiras, then a sizeable percentage of all

households could be helped by reducing the need for emigration.

To lower emigration, the people of Cape Verde will need to continue to receive international food aid until such a time as they can, through programs such as the University of Arizona Food Crops Research Project and others, either grow sufficient food to supply their people or earn the foreign exchnage to buy food through the development of exports or activities to attract more foreign exchange into the country. Meanwhile, as the population increases in size, so do the problems of producing adequate food supplies and/or acquiring foreign exchange. A next step, therefore, for concerned social scientists is an examination of the roles large numbers of children have in enhancing household economic security. Answers about why large numbers of children are useful at the household level in an under-employed, uncertain environment may help appropriate leaders in Cape Verde to formulate their own policies to reduce population growth. Until population growth is brought into balance with food aid, the development of local food production and/or the acquisition of foreign exchange, continued emigration seems likely,--with its attendant effects on the well-being of one third of the households of Cape Verde, those of the solteiras.

FIGURES

Figure Number 1. Effects of famine on population growth, Cape Verde 1773-1980.



Source: Custodio Conim, Aspects Genereaux de la Demographie au Cap Vert, Sixième Réunion sur le Programme de Recherche Démographique pour le Sahel, Praia, June 29 - July 4, 1983, P. 7.

Figure 2. Map, Cape Verde Islands.

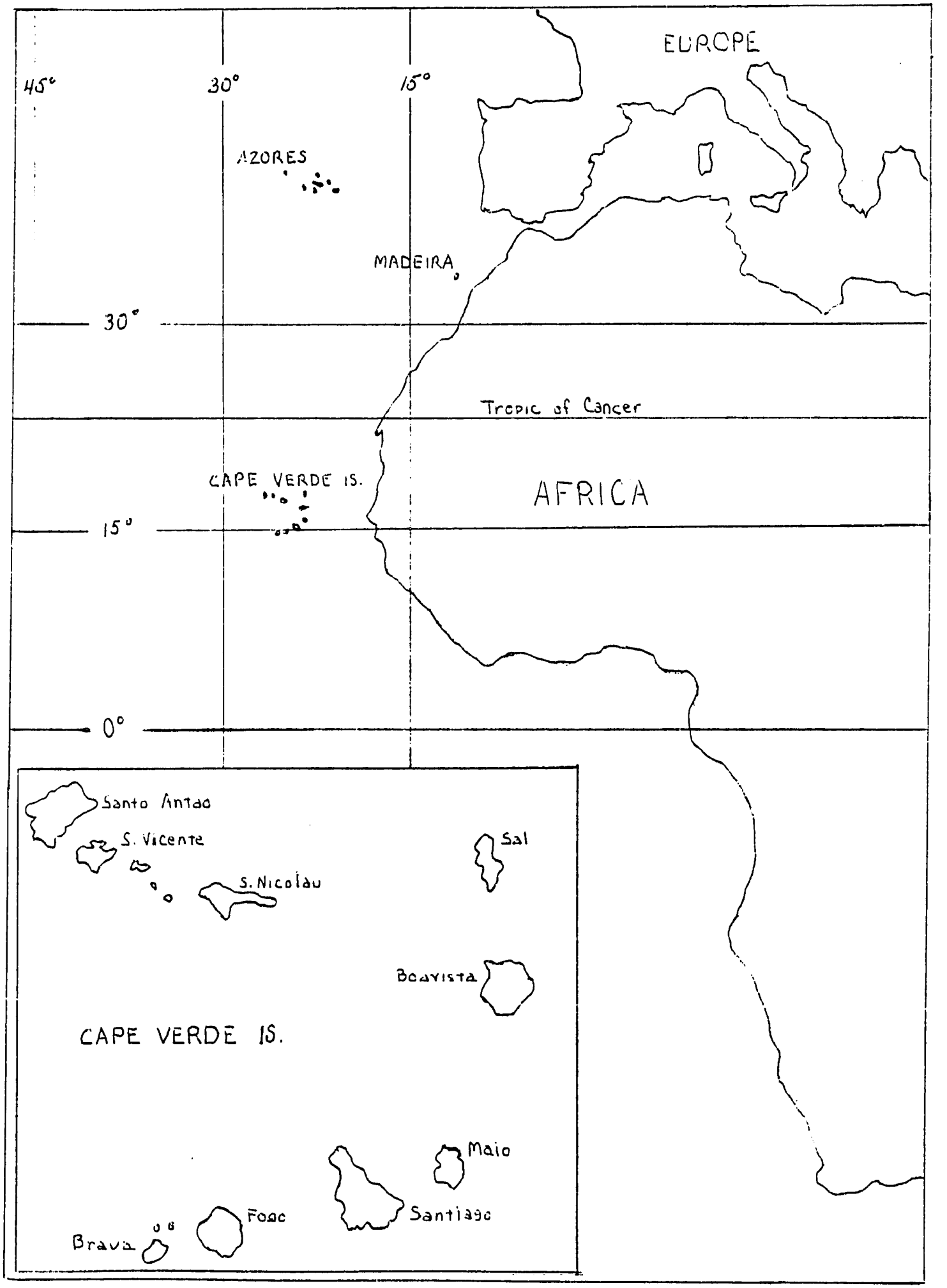
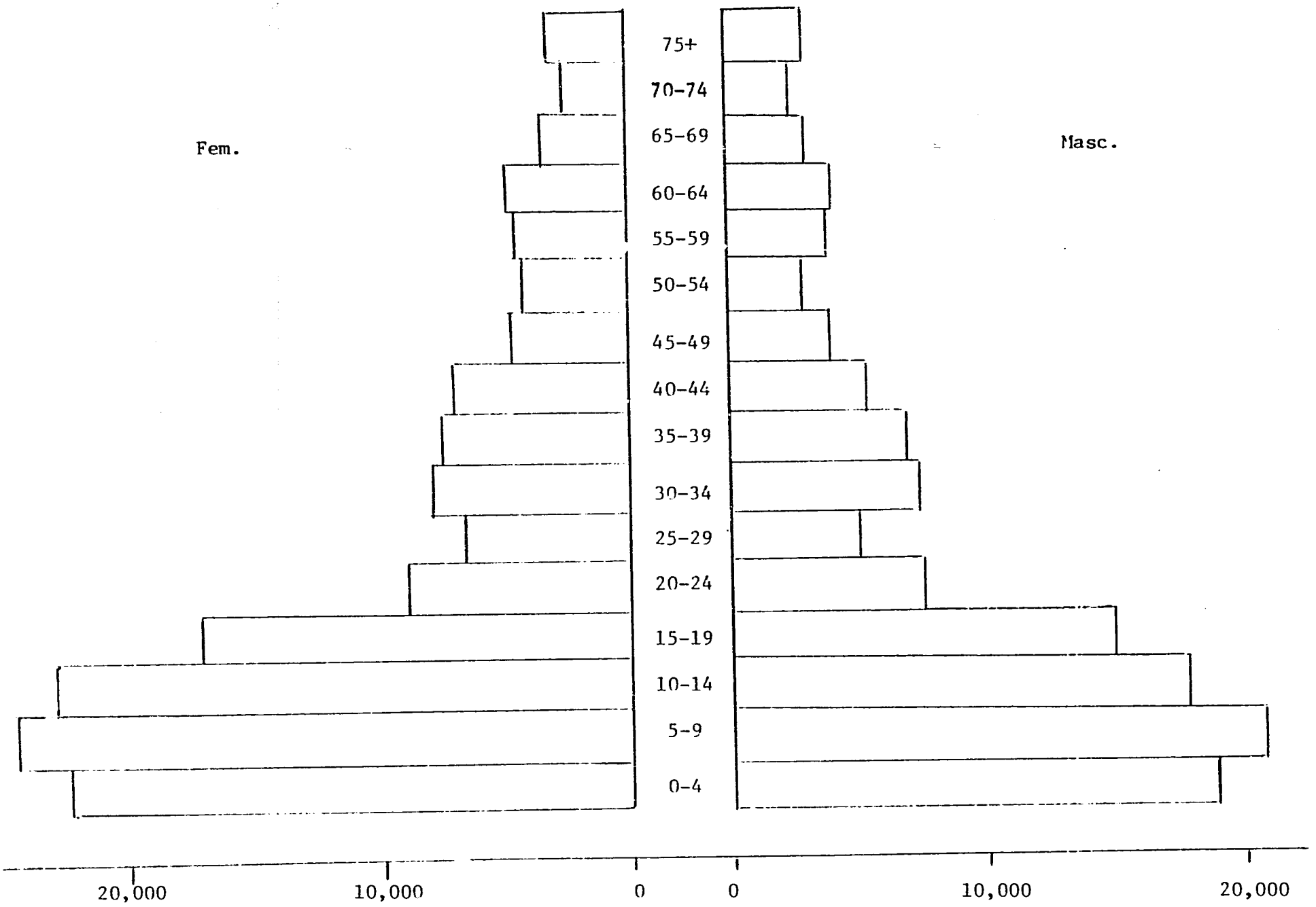
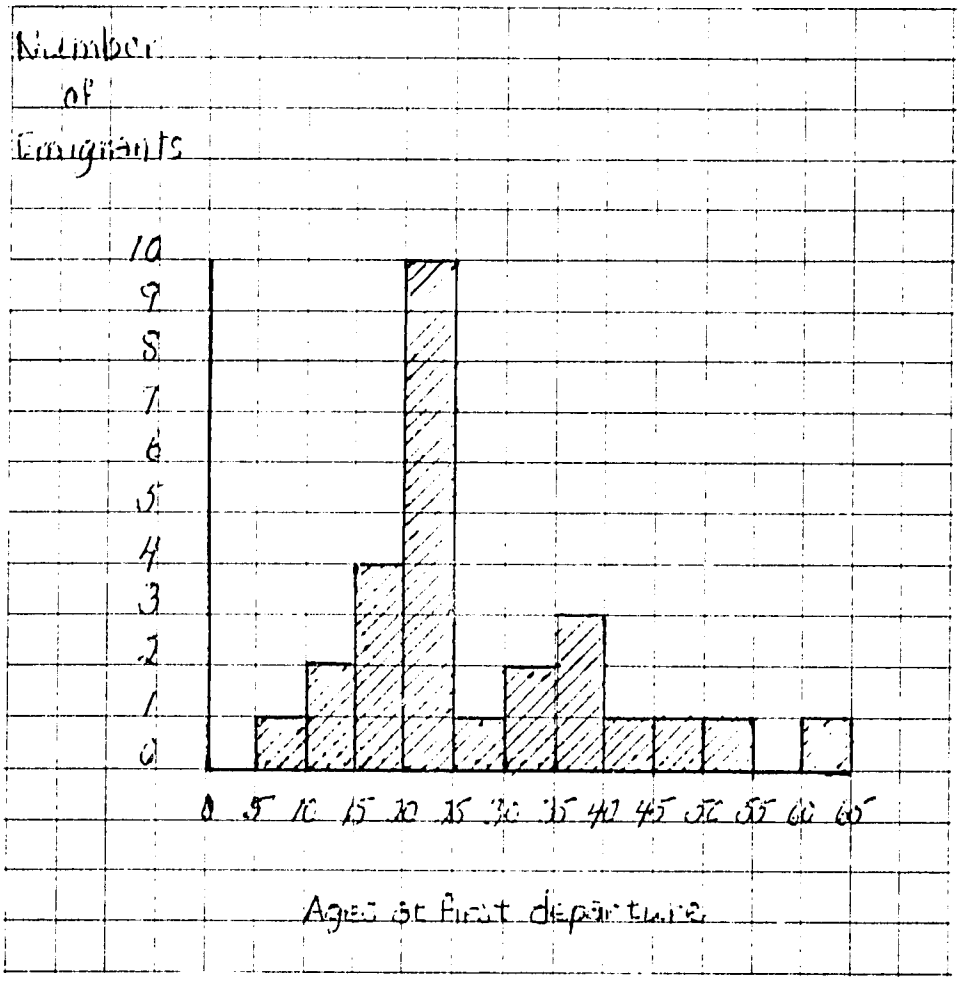


Figure Number 3. Population pyramid, Cape Verde, 1980.



Source: Boletim Estatístico "Termos de Referência", Volume I, 1982, p.9

Figure Number 4. Histogram of male emigrants by age at first departure, where known, from a random sample of households in three rural communities. Santiago Island, the Cape Verde Islands, August - October, 1984.



TABLES

(Those tables whose subscriptions indicate that the material is "adapted" from another source contain data which have been rearranged or manipulated in order to be more meaningful to the reader in the context of this report.)

Table Number I. Population by age group by sex, 1950, 1960, 1970 and 1980, Cape Verde.

Age Group	DATE 1950 Males	1950 Females	1960 Males	1960 Females	1970 Males	1970 Females	1980 Males	1980 Females
0 - 4	7,802	7,887	19,146	19,324	21,176	21,401	24,478	25,563
5 - 9	7,326	7,700	15,509	15,548	22,821	22,791	20,650	20,906
10 - 14	9,729	10,336	8,339	8,457	20,121	20,396	21,928	22,419
15 - 19	9,043	9,985	6,854	7,529	14,782	15,407	19,737	20,463
20 - 24	7,253	8,574	7,447	9,456	8,167	7,381	11,408	15,231
25 - 29	4,337	5,100	6,379	8,111	4,804	6,395	5,671	9,352
30 - 34	3,929	4,865	5,743	7,021	5,776	8,017	2,914	4,586
35 - 39	4,560	5,553	3,876	4,497	5,921	7,854	2,833	5,042
40 - 44	4,842	5,414	3,753	4,511	5,474	6,433	4,281	7,248
45 - 49	2,730	3,670	4,098	4,761	3,622	4,078	4,432	6,498
50 - 54	1,709	3,268	4,617	5,311	3,202	4,187	4,173	5,545
55 - 59	1,031	2,187	2,525	3,488	3,871	4,444	2,665	3,285
60 - 64	1,139	2,553	1,562	2,858	3,969	4,646	2,802	3,387
65 - 69	764	1,504	997	1,886	2,000	2,782	2,927	3,523
70 - 74	567	1,272	851	1,801	1,226	2,046	2,644	3,123
75 +	541	1,361	1,095	2,652	1,952	3,757	2,152	3,737
	67,302	81,029	92,691	107,211	128,984	142,015	135,695	160,008

Source: Custodio Conim, Aspects Genereaux de la Demographie au Cap Vert, Sixième Réunion sur le Programme de Recherche Démographique pour le Sahel, Praia, June 29 - July 4, 1983, pp. 38, 39.

Table Number II. Sex ratios by age group, adapted from census reports of 1950, 1960, 1970, 1980, Cape Verde.

Age Group	YEAR 1950	1960	1970	1980
0 - 4	98.9	99.1	98.9	95.8
5 - 9	95.1	99.7	100.1	98.8
10 - 14	94.1	98.6	98.7	97.8
15 - 19	90.6	91.0	95.9	96.5
20 - 24	84.6	78.8	110.6	74.9
25 - 29	85.0	78.6	75.1	60.6
30 - 34	80.8	81.8	72.0	63.5
35 - 39	82.1	86.2	75.4	56.2
40 - 44	89.4	83.2	85.1	59.1
45 - 49	74.4	86.1	88.8	68.2
50 - 54	52.3	86.9	78.9	75.3
55 - 59	47.1	72.4	87.1	81.1
60 - 64	44.6	54.7	85.3	82.7
65 - 69	50.8	52.9	71.9	83.1
70 - 74	44.6	47.3	59.9	84.6
75 +	39.8	41.3	52.0	57.6

Adapted from: Custodio Conim, Aspects Genereaux de la Demographie au Cap Vert, Sixième Réunion sur le Programme de Recherche Démographique pour le Sahel, Praia, June 29 - July 4, 1983, pp. 38, 39.

Table Number III. Resident population, Cape Verde, 1773 - 1980.
(Figures from 1773 through 1874 are estimates.)

Dates	Estimated Resident population	Dates	Resident population
1773	50,000	1878	99,317
1807	58,400	1890	127,390
1826	55,600	1900	147,424
1832	60,000	1910	142,552
1834	55,800	1920	159,675
1862	89,310	1930	146,299
1864	97,009	1940	181,740
1867	67,357	1950	149,971
1871	76,053	1960	199,902
1874	90,710	1970	270,999
		1980	295,703

Source: Custodio Conim, Aspects Genereaux de la Demographie au Cap Vert, Sixième Réunion sur le Programme de Recherche Démographique pour le Sahel, Praia, June 29 - July 4, 1983, p.6.

Table Number IV. Early emigration according to countries of destination, 1900 - 1952, Cape Verde.

Destination	1900 - 1920	1927 - 1945	1946 - 1952
U.S.A.	18,629	1,408	538
Brazil, Argentina Uruguay, Chile	1,968	1,203	86
Guine	2,247	1,197	901
Angola, Mozambique	366	352	6
S. Tomé, Principe	1,532	132	2
Senegal, Gambia	1,428	1,772	251
Portugal	1,232	3,336	3,933
Other countries	363	719	1,087

Source: António Carreiro, 1984, Cabo Verde, p. 162.

Table Number V. Estimates of net migration to foreign countries from Cape Verde, 1906 through 1973.

Time Period	Number Out-Migrants	Number Return Migrants and In-Migrants	Balance
1906 - 18	31,399	6,593	24,806
1919 - 32	15,615	3,123	12,492
1933 - 42	7,147	6,958	189
1943 - 52	38,425	13,612	24,813
1953 - 62	48,988	32,481	16,507
1963 - 73	117,511	73,128	44,383
1906 - 73	259,085	135,895	123,190

ource: António Carreira, 1982, The People of the Cape Verde Islands: Exploitation and Emigration, Archon Books, Hamden, Conn., page 184.

Table Number VII. Infant mortality rate (per 1000 births)

Cape Verde, 1971 -1980.

Year	Infant Mortality Rate
1971	128.8
1972	91.9
1973	111.9
1974	79.3
1975	108.6
1976	99.6
1977	85.4
1978	93.9
1979	59.7
1980	60.0

Source: Boletim Estatístico "Termos de Referencia", Volume I, Ministério da Saúde e Assuntos Socias, República de Cabo Verde, 1982, p. 25.

Table Number VIII . Crude birth rates and death rates, 1931 - 1980, Cape Verde.

Time Period	Crude Birth Rate (per 1000)	Crude Death Rate (per 1000)	Rate of Natural Increase
1931 - 35	42.4	24.3	18.1
1936 - 40	43.7	22.7	21.0
1941 - 45	32.7	49.0	-16.3
1946 - 50	31.1	50.0	-18.9
1951 - 55	49.0	16.3	32.7
1956 - 60	47.2	13.8	33.4
1961 - 65	42.6	12.0	30.6
1966 - 70	38.7	10.9	27.9
1971 - 75	31.4	11.4	20.0
1976 - 80	33.2	9.3	23.9

Source: Custodio Conim, Aspects Genereaux de la Demographie au Cap Vert, Sixième Réunion sur le Progreamme de Recherche Démographique pour le Sahel, Praia, June 29 - July 4, 1983, p. 12.

Table Number IX. Birth rates, death rates and rates of natural increase (per 1000 population) Cape Verde, 1961 - 1980.

Year	Population	Live Births	Crude Birth Rate	Deaths	Crude Death Rate	Rate of Natural Increase
1961	205,540	8,181	39.8	2,543	12.4	27.4
1962	212,033	8,940	42.2	2,346	11.1	31.0
1963	218,515	9,671	44.3	3,189	14.6	29.6
1964	225,951	9,783	43.3	2,287	10.1	33.1
1965	233,086	9,638	41.3	2,498	10.7	30.6
1966	240,241	9,621	40.0	2,466	10.3	29.7
1967	247,781	10,160	41.0	2,650	10.7	30.3
1968	255,515	10,131	39.6	2,395	9.4	30.2
1969	242,924	9,671	39.8	3,452	13.2	25.6
1970	272,571	9,847	36.1	2,883	10.6	25.5
1971	274,923	9,968	36.2	4,248	15.5	20.8
1972	277,276	9,643	34.7	2,878	10.4	24.3
1973	279,627	8,815	31.5	3,463	12.4	19.1
1974	281,979	8,650	30.6	2,667	9.5	21.2
1975	284,331	8,346	29.3	2,994	10.5	18.8
1976	286,684	9,863	34.4	2,869	10.0	24.3
1977	289,035	9,965	34.4	2,564	8.9	25.6
1978	291,338	10,060	34.5	3,207	11.0	23.5
1979	293,740	10,230	34.8	2,469	8.4	29.8
1980	296,093	11,083	37.4	2,211	7.5	29.9

Source: Boletim Estatístico "Termos de Referência," Volume I, Ministério da Saúde e Assuntos Socias, República de Cabo Verde, 1982, pp. 19, 22, 23.

Table Number X. Distribution of the population by age groups, with estimated dependency ratios, Cape Verde 1960, 1970, 1980.

	1960		1970		1980	
Age	Population	%	Population	%	Population	%
0 - 14	85,618	42.96	127,863	46.91	126,251	42.63
15 - 65	102,956	51.66	130,998	48.06	137,952	46.59
65 +	10,722	5.38	13,023	4.77	17,852	6.02
unknown			687	0.26	14,038	4.74
TOTAL	199,296	100.00	272,571	100.00	296,093	100.00
Estimated Dependency Ratio	93.6 dependents/ 100 of working age		107.5 dependents/ 100 of working age		104.5 dependents/ 100 of working age	

Adapted from: Boletim Estatístico "Termos de Referência," Volume I, 1982. Ministério da Saúde e Assuntos Sociais, República de Cabo Verde, page 10.

Table Number X. Distribution of the population by age groups, with estimated dependency ratios, Cape Verde 1960, 1970, 1980.

	1960		1970		1980	
Age	Population	%	Population	%	Population	%
0 - 14	85,618	42.96	127,863	46.91	126,251	42.63
15 - 65	102,956	51.66	130,998	48.06	137,952	46.59
65 +	10,722	5.38	13,023	4.77	17,852	6.02
unknown			687	0.26	14,038	4.74
TOTAL	199,296	100.00	272,571	100.00	296,093	100.00
Estimated Dependency Ratio	93.6 dependents/ 100 of working age		107.5 dependents/ 100 of working age		104.5 dependents/ 100 of working age	

Adapted from: Boletim Estatístico "Termos de Referência," Volume I, 1982. Ministério da Saúde e Assuntos Sociais, República de Cabo Verde, page 10.

Table Number XI. Emigration of Cape Verde residents to foreign countries, according to the country of destination, 1979, 1980, 1981.

	YEAR		
Country	1979	1980	1981
Portugal	1,459	1,387	1,695
Holland	1,302	846	689
Angola	600	712	824
France	495	453	446
Senegal	189	248	345
U.S.A.	146	163	218
Italy	135	154	274
Greece	128	102	69
Luxembourg	118	101	71
Germany	98	96	77
Spain	97	59	55
Sweden	43	17	15
Guine Bissau	30	30	33
Norway	23	17	29
England	22	15	15
Switzerland	21	26	15
Belgium	17	5	11
Mozambique	9	2	3
Gabon	8	3	1
Denmark	7	4	2
Ivory Coast	5	11	5
Nigeria	3	1	2
Canada	3	3	0
Morocco	2	0	0
Argentina	2	2	2
Brazil	2	9	7
Japan	2	2	4
South Africa	1	2	3
Egypt	1	1	7
Liberia	1	3	4
S. Tomé	1	2	0
Venezuela	1	1	0
Saudi Arabia	1	0	1
Philippines	1	0	0
Israel	1	1	2
Yugoslavia	1	0	1
Algeria	0	1	1
Malta	0	1	4
Indonesia	0	0	1
TOTAL	4,975	4,480	4,930

Adapted from: Boletim Trimestral de Estatística, 1981, Ano II, N.1., Direcção Geral De Estatística, Cabo Verde; Boletim Trimestral de Estatística, 1982, Ano III, N. 1, Direcção Geral De Estatística, Cabo Verde; Boletim Trimestral de Estatística, 1982, Ano III, N. 4, Direcção Geral De Estatística, Cabo Verde.

Table Number XII. Emigrants from a random sample of cases studied in three rural communities on the island of Santiago, the Cape Verde Islands, August-October, 1984, by relation to head of household, age at departure, method of financing trip, destinations and years.

Emigrants					
Case No.	Relation to Head of Household	Age at Departure	How Financed Trip, According to Head of Household	Destination	Years
1	Son	13	Uncle, also emigrating, lent him money	Portugal	1972-1980
2	Substitute husband	?	unknown	unknown	1973 - ?
4	Son	24	Saved money from public works wage	Portugal	1984 - present
	Son-in-law	?	Not Known	Portugal	1976 - present
5	Father	47	Father, a carpenter, built a house & sold it; thereafter, each member of the family lent money to the next	Portugal	1971-1974
	Brother	18		Portugal	1973 - present
	Brother	16		Portugal	1976 - present
	Brother	20		Portugal	1983 - present
6	Father	50	Father sold his furniture and animals; in Portugal, he earned money to pay passage for others	Portugal	1975 - present
	Mother	31		Portugal	1976 - present
	Brother	9		Portugal	1979 - present
	Brother	10		Portugal	1983 - present
7	Husband	20	His parents lent him money	Portugal	1974 - present

(continued)

Table Number XII (cont'd.)

Emigrants					
Case No.	Relation to Head of Household	Age at Departure	How Financed Trip, According to Head of Household	Destination	Years
8	Self	38	He sold aguardente, saved the money	Portugal	1971-1975
11	Self	21	Saved 500 escudos per month until he had necessary 3800 escudos	Portugal	1972-1974
12	Step-son	22	God-father already in Portugal lent money	Portugal	1983 - present
13	Husband	40	Brother-in-Law and God-father lent money	Portugal	1983 - present
	Unmarried sister	26	Father lent money	Portugal	1983 - present
14	Self	63	Saved money	Portugal	1975-1976
	Son	?	Father says he lent money for each of his sons to emigrate	Portugal	? -1966 (died)
	Son	?		Portugal	? -1967 (died)
	Son	20 29		Angola Cuba	1974-1983 1983 - present
	Son	15		Portugal	1973 - present
	Son	22		Portugal	1983 - present
16	Husband	33 35	Relatives lent money	Portugal France	1975-1977 1977 - present
	Son	18	Father paid	France	1984 - present

(continued)

Table Number XII (cont'd.)

Emigrants					
Case No.	Relation to Head of Household	Age at Departure	How Financed Trip, According to Head of Household	Destination	Years
20	Self	38	Saved money	Portugal	1972-1976
	Son	20 20	Father paid	Portugal France	1981-1981 1981 - present
	Son	20	Father and older brother paid	France	1984 - present
23	Self	33	Friend in Portugal lent money	Portugal	1971-1975

Table Number XIII. Emigration to foreign countries from selected rural zones in the islands of Santiago, Santo Antão, San Nicolau and Brava, Cape Verde 1981, 1982.

Destination	Santiago Number	Santiago % of Total	Santo Antão Number	Santo Antão % of Total	San Nicolau Number	San Nicolau % of Total	Brava Number	Brava % of Total
Portugal	292	79.3	203	31.6	149	21.6	57	41.9
France	34	9.2	62	9.7	11	1.6	1	.7
Holland	13	3.5	213	33.2	272	39.4	8	5.9
Angola	12	3.3	31	4.8	11	1.6	2	1.5
S. Tome	9	2.4	11	1.7	1	.1		
Spain	4	1.1	16	2.5	41	5.9		
Luxembourg	4	1.1	16	2.5		1.2	2	1.5
Italy			46	7.2	156	22.6	4	2.9
Greece			17	2.6	8	1.2		
Switzerland			9	1.4	1	.1		
Germany			7	1.1	3	.4		
Denmark			5	.8	2	.3		
Senegal			5	.8			7	5.1
Norway			1	.2	3	.4		
Guinee-Bissau								
Belgium					4	.6		
England					3	.4	1	.7
Brazil					16	2.3		
U.S.A.					7	1.0	53	39.0
Argentina					3	.4		
Ivory Coast							1	
TOTAL	368	99.9	642	100.00	691	101.1	136	99.2

Adapted from: Jaques Richard, Aspects de l'Émigration Rurale Dans l'Archipel du Cap Vert, 1983, pp. 16-17, 42-44, 70, 95-96.

Table Number XIV. Emigration of Cape Verde residents to foreign countries by island of birth, 1979, 1980, 1981.

Island of birth	YEAR		
	1979	1980	1981
Santiago	2,139	2,046	2,335
Santo Antão	1,058	766	780
São Vicente	754	586	627
Fogo	417	429	556
Maio	206	201	207
Brava	125	171	161
S. Nicolau	103	91	74
Boa Vista	41	28	30
Sal	15	8	19
TOTAL	4,858	4,326	4,789

Adapted from: Direcção Geral De Estatística, República de Cabo Verde:

Boletim Trimestral de Estatística, 1981, Ano II, N. 1, p. 5;
Boletim Trimestral de Estatística, 1982, Ano III, N. 1, p. 5;
Boletim Trimestral de Estatística, 1982, Ano III, N. 4, p. 5.

ble XV. Population by age groups by islands, Cape Verde, based on provisional data, 1980.

Age Group	Santiago	Santo Antão	São Vicente	Fogo	Sar. Nicolau	Brava	Sal	Maio	Boa Vista
year or under	3,648	1,079	1,045	778	339	175	150	103	85
1 - 4	16,839	4,984	4,823	3,591	1,567	806	693	473	392
5 - 14	41,734	12,354	11,952	8,899	3,882	1,997	1,718	1,173	972
15 - 24	24,121	7,141	6,908	5,143	2,244	1,154	993	678	562
25 - 34	13,425	3,974	3,845	2,862	1,249	643	553	378	312
35 - 44	13,367	3,958	3,828	2,850	1,243	640	550	376	311
45 - 54	8,318	2,461	2,382	1,774	774	398	342	234	194
55 - 64	8,755	2,593	2,508	1,867	815	419	360	246	204
65 - 74	5,691	1,685	1,630	1,213	529	272	234	160	132
years or more	3,108	920	890	663	289	149	128	87	72
TOTAL	145,923	43,198	41,792	31,115	13,575	6,984	6,006	4,103	3,397

TOTAL OF ALL ISLANDS 296,093.

apted from: Boletim Estatístico "Termos de Referência," Volume I, Ministério da Saúde e Assuntos Socias, República de Cabo Verde, 1982, p. 8.

Table Number XVI. Communities A, B, C by rainfall, altitude, inhabitants per square kilometer and average area of cultivation per household, Santiago Island, the Cape Verde Islands.

	Communities		
	A	B	C
Rainfall 1966	309.9 mm.	614.0 mm.	817.3 mm.
1967	442.5 mm.	1088.0 mm.	833.7 mm.
1968	102.6 mm.	69.9 mm.	237.7 mm.
1969	362.0 mm.	damaging	372.0 mm.
1970	42.7 mm.		124.7 mm.
1971	213.5 mm.	252.7 mm.	295.0 mm.
1972	0.0 mm.	14.4 mm.	0.0 mm.
1973	104.8 mm.	123.8 mm.	168.2 mm.
1974	127.0 mm.	130.4 mm.	
1975	569.9 mm.		
1976	427.8 mm.	217.9 mm.	363.6 mm.
1977			
1978	244.1 mm.		
1979	307.3 mm.		355.0 mm.
1980		106.8 mm.	
1981	53.0 mm.	163.6 mm.	254.7 mm.
1982	50.0 mm.	67.1 mm.	damaging
1983	53.0 mm.	322.0 mm.	257.5 mm.
Average rainfall 1981-1983	52.0 mm.	184.2 mm.	256.1 mm.
Altitude	300 meters	400-500 meters	500-700 meters
Inhabitants per square kilometer	41.1	136.9	157.1
Average area cultivated per household	1.14 hectares	1.38 hectares	1.5 hectares

Adapted from: Studies by the Centro de Estudos Agrários, Ministério do Desenvolvimento Rural; and the Gabinete de Inquéritos Rurais, Ministério do Desenvolvimento, República de Cabo Verde.

Table Number XVII . Population of Santiago Island, Cape Verde by sex, sex ratio and by concelho, 1980.

Concelho	Number of males	Number of females	Sex ratio	Total population
Tarrafal	10,288	14,175	72.58	24,563
Santa Catarina	17,963	23,238	77.30	41,201
Santa Cruz	10,638	12,425	85.62	23,063
Praia	26,956	30,240	89.14	57,196
TOTAL	65,845	80,078	82.23	145,926

Adapted from: Boletim Estatístico "Termos de Referência", Volume I, 1982, Ministério da Saúde e Assuntos Socias, República de Cabo Verde, page 7.

Table Number XVIII.

Emigration to foreign countries from six zones (Pilao Cão, Biscainho, Achada Igraja, Salina, Lagoa Gil, and Punta Achada) in rural Santiago Island, Cape Verde, by age group and by sex, 1981, 1982.

	Males			Females					
Age Groups	residents	emigrants	c/o emigrants of total males	residents	emigrants	c/o emigrants of total males	residents	emigrants	Total
14 and under	667	0	0%	584	0	0%	1251	0	0%
15 to 29	367	246	40%	643	22	3%	1010	268	21%
30 to 44	62	120	66%	245	12	5%	307	132	30%
45 to 59	46	109	70%	194	9	4%	240	118	33%
60 and over	88	51	37%	149	5	3%	237	56	19%
TOTAL	1230	526	30%	1815	48	3%	3045	574	16%

Adapted from: Jacques Richard, Aspects de l'Émigration Rurale Dans l'Archipel du Cap Vert, 1983, p. 12.

Table Number XIX.

Age of first departure to foreign countries from six zones (Pilao Cão, Biscainho, Achada Igraja, Salina, Lagoa Gil, and Punta Achada) in rural Santiago Island, Cape Verde, by sex, 1981, 1982.

Age Group	Males	% of Total	Females	% of Total	Males and Females	% of Total
15 to 20	236	45%	12	25%	248	43%
21 to 29	108	20%	22	46%	130	23%
30 to 44	117	22%	6	12%	123	21%
45 to 59	46	9%	5	10%	51	9%
60 or more	19	4%	3	7%	22	4%
Total	526	100%	48	100%	574	100%

Adapted from: Jacques Richard, Aspects de l'Émigration Rurale Dans l'Archipel du Cap Vert, 1983, p. 14.

Table Number XX. Age at first departure of emigrants from a random sample of households in three rural communities, Santiago Island, the Cape Verde Islands, August-October, 1984.

Age Group	Males	Percent of total emigrants	Females	Percent of total emigrants	Males & Females	Percent of total emigrants
Under 15	3	10.3%			3	10.3%
15 - 20	10	34.5%			10	34.5%
21 - 29	5	17.2%	1	3.4%	6	20.7%
30 - 44	6	20.7%	1	3.4%	7	24.1%
45 - 59	2	6.9%			2	6.9%
60 or more	1	3.4%			1	3.4%
Total	27	93.0%	2	6.8%	29	99.9%

Table Number XXI. Remittances, where known, by marital status, of emigrants from a random sample of households in three rural communities, Santiago Island, the Cape Verde Islands, August-October, 1984.

Emigrants unmarried to heads of household in the Cape Verde Islands during the period of their emigration:

Case No.	Relation to Head of Household	Age at Departure	Years	Remittances ($ = escudos)	Sent to	Used for
1	son	13	1972-1980	8000$/mo.	4000$ to father; 4000$ to mother	rent on land, labor;2 cows 3 goats
4	son	24	5 mos.,1984	none		
5	father	47	1971-1974	none		
5	brother	18	1973-pres.	5000$ once	sister	1876$50=food 760$00=clothes
5	brother	16	1976-pres.	none		
5	brother	20	1983-pres.	none		
6	father	50	1975-pres.	none		
6	mother	31	1976-pres.	none		
6	brother	9	1979-pres.	-		
6	brother	10	1983-pres.	-		
12	step-son	22	1983-pres.	none		
13	sister	26	1983-pres.	30,000$/yr	sister	foods, clothes
14	son	?	? -1966	none		
14	son	?	? -1967	none		
14	son	20	1974-pres.	none		
14	son	15	1973-pres.	5000$ once	father	to repay cost of trip and to buy food
14	son	22	1983-pres.	7000$ four times (or 28,000$ total)	"	
16	son	18	1984-pres.	none (in school)		

(continued)

Table Number XXI (cont'd.)

Case No.	Relation to Head of Household	Age at Departure	Years	Remittances ($ = escudos)	Sent to	Used for
16	husband	33	1975-pres.	90,000$/yr	wife	80% for food; 20% for clothes and household
20	self	38	1972-1976	not remember	wife	food; brought back sewing machine)
23	self	33	1971-1975	5,000$/yr 24,000$ once	wife wife	food to construct house

Table Number XXII. Remittances by fathers, sons and husbands (who had emigrated for 1 1/2 years or more) to their respective children, parents (either or both) and wives. Taken from a random sample in three rural communities of Santiago Island, the Cape Verde Islands, August-October, 1984.

Emigrants			
Case No.	Relation to Head of Household	Remittances Sent	Remittances Not Sent
1	son	x	
2	substitute husband (and father)		x
5	father		x
6	father		x
7	husband	x	
8	self	x	
11	self	x	
14	self		x
	son		x
	son		x
	son		x
	son	x	
	son	x	
16	husband	x	
20	self	x	
	son	x	
23	self	x	
		N = 10	N = 7

58.8 % sent remittances home
41.2 % sent no remittances home

Table Number XXIII. Remittances to households headed by solteiras, compared to households headed by all others (men or women, married or widowed), from a random sample of households in three rural communities, Santiago Island, the Cape Verde Islands, August-October 1984.

Households					
Headed by solteiras			Headed by others		
Case No.	Received remittances within past 20 years		Case No.	Received remittances within past 20 years	
	yes	no		yes	no
2		x	1	x	
3		x	4		x
5	x		7	x	
6		x	8	x	
9		x	10		x
15		x	11	x	
18		x	12		x
22		x	13	x	
24		x	14	x	
			16	x	
			17		x
			19		x
			20	x	
			21		x
			23	x	
Total	1	8		9	6

11.1% of all solteiras received some remittance money

60.0% of all other households received some remittance money

Households headed by solteiras comprised 37.5% of all households, but accounted for only 4.2% of households which received any remittance money within the past 20 years.

Table Number XXIV. Animal units per household, with cows and mules assigned 3 units; pigs, sheep and goats, 2 units; chickens, 1 unit. From a random sample of households in three rural communities, Santiago Island, the Cape Verde Islands, August-October, 1984.

Animal Units per household			
Case No.	Received remittances within past 10 years	Case No.	Received no remittances within past 10 years
1	0	2	2
5	4	3	2
7	2	4	6
8	37	6	0
11	38	9	1
13	33	10	13
14	?	12	17
16	10	15	7
20	5	17	11
23	14	18	8
	143	19	8
		21	7
		22	2
		24	4
			88

Average number of units for those households which received remittances: 15.8

Average number of units for those households which received received no remittances: 6.3

If eliminate cases 8, 11, and 13, average number of units for remaining households: 5.8

Table Number XXV. Wants and desires of heads of households, with units 4, 3, 2, 1 assigned in descending order of preference, from a random sample of households in three rural communities, Santiago Island, the Cape Verde Islands, August-October 1984.

If your household received more money, what would it do with it?

Case No.	Buy Food	Improve house	Buy animals	Buy clothes	Buy furniture	Save	Buy land	Buy rental property	Buy truck	Buy dishes
2							4			
3			4							
4							3	2	4	
5			4		3					
6			4							
7		4								
8								4		
9	4									
10			4							
11	2	4			3					
12	4	3								
13	3	4								
14	4									
16						4				
17	4	2		3						
18	4			3						
19		2			1	4				3
20	3	4								
21	4	2	3							
22	3	4		2						
23	4	3		1	2					
24	4			3						
Total	43	32	19	12	9	8	7	6	4	3

Table Number XXVI. Family planning programs, Cape Verde, 1979 - 1983.

Family Planning Programs	1979	1980	1981	1982	1983	% Change since start of program
1st consultation	1,237	1,806	2,514	3,031	3,582	+ 290 %
follow-up visits	5,712	7,835	11,662	16,994	23,888	+ 418 %
1st time pill users	859	1,618	2,268	2,706	3,722	+ 433 %
follow-up visits	3,139	4,864	9,310	14,788	19,427	+ 619 %
I.U.D. insertions	315	163	396	380	509	+ 161 %
follow-up visits	1,095	843	946	1,176	1,596	145 %
Injectables use	0	194	147	122	105	- 54 %
Female sterilizations	68	40	132	180	144	+ 211 %
Interruptions of Pregnancy	47	30	48	273	216	+ 460 %

Adapted from: Direcção Geral da Saúde, Ministério da Saúde e Assuntos Socias. Relatório das Actividades do Projecto de PMI/PF Referente ao Ano de 1983 e Perspectivas para 1984, Mindelo, São Vicente.

Table Number XXVII. The demand for children, from a random sample of households in three rural communities, Santiago Island, the Cape Verde Islands, August-October, 1984.

Responses by female heads of households or wives of male heads of household.

Case No.	Marital state	Age	Ideal number of children	How many do you want	How many do you have	Number of children your mother had
7	wife of emigrant	19	3	3	1	9
8	fictive wife	23	5	6	2	4
6	solteira	24	2	4	4	7
5	solteira	26	2	1	1	10
19	wife	27	2	2	1	9
2	solteira	29	13	13	5	3
11	wife	29	?	6	5	9
22	solteira	30	2	4	3	7
13	wife of emigrant	33	4	6	6	6
3	solteira	34	2	2	7	8
24	solteira	34	?	5	5	3
21	wife	38	6	4	9	12
15	solteira	40	5	3	7	5
16	wife of emigrant	43	2	5	5	4
20	wife	45	3	9	9	4
23	wife	47	3	7	7	4
4	wife	50	4	10	10	6
10	wife	51	?	9	9	12
12	wife	53	?	-	4	?
17	wife	60	4	5	5	7
18	solteira	76	6	6	6	3
9	solteira	78	10	-	7	5
			Average 4.3	Average 5.5	Average of women age 45 or more 7.1	

Table Number XXVIII. Completed fertility, wives compared to *solteiras*, from a random sample of households in three rural communities, Santiago Island, the Cape Verde Islands, August-October, 1984.

Case No.	Completed fertility, wives age 45 or more	Case No.	Completed fertility, *solteiras* age 45 or more
4	10	9	7
10	9	18	6
12	4		
17	5		
20	9		
23	7		
Average number of children	7.3	Average number of children	6.5

Table Number XXIX. Attitudes of women toward having small numbers of children, from a random sample of wives and female heads of household in three rural communities, Santiago Island, the Cape Verde Islands, August-October, 1984.

Responses of women: How would your life be different if you had only two children?

Case No.	would miss agricultural labor of children	would be no different	would be economically easier	would be easier to feed
2		x		
3			x	x
4		x		
5			x	
6			x	
10			x	x
11			x	x
12			x	x
13			x	x
15			x	x
16	x			
17			x	x
18		x		
20	x			
21		x		
22			x	x
23			x	x
24			x	x
	11.1%	22.2%	66.7%	55.5%

Percentages reflect portion of women giving that response. Because some women gave more than one response, the total of responses totals more than 100%.

Table Number XXX. Numbers of children of women with completed fertility, the expectation to offer land to all their children and the amount of land to which they currently have access, from a random sample of wives and female heads of household in three rural communities, Santiago Island, the Cape Verde Islands, August-October, 1984.

Responses by women with completed fertility who expect to offer land to all their boys and all their girls.

Case No.	number of children	amount of land, rented or owned, regadio or sequeiro, to which they have access		total number of litros	number of litros per child
4	10	rent	3 litros	8.	0.8
		sharecrop 10 litros =	5 litros		
10	9	own	10 litros	16.5	1.8
		sharecrop 13 litros =	6.5 litros		
17	5	rent	8 litros	8.	1.6
18	6	rent	8 litros	8.	1.3
20	9	rent	5 litros	5.	0.5
23	7	rent	4 litros	9.	1.3
		sharecrop 10 litros =	5 litros		
			Average litros per child		1.2

one litro = 1000 m2 = 0.1 hectare
one hectare = 2.471 acres
1.2 litros = 0.3 acres

Table Number XXXI. Current numbers of children of solteiras, expectation to offer land to all their children, and the amount of land to which they currently have access, from a random sample in three rural communities, Santiago Island, the Cape Verde Islands, August-October, 1984.

Responses of Solteiras

Case No.	Expect to offer land to all your children?	Current number of children	Number of litros of land to which you now have access?	Number of litros per child
2	yes	5	3	0.6
3	yes	7	3	0.4
5	yes	1	20	20.0
6	no	4	5	1.3
13	yes	6	2	0.3
15	no	7	4	0.6
18	yes	6	8	1.3
22	yes	3	0	0.0
24	yes	5	1.5	0.3
			Average litros per child	2.75

(If we remove the most and least numbers, 20 litros and 0 litros, which appear to be anomalies, the average is 0.7 litros per child; 0.7 litros = 0.17 acres. If we also remove from consideration those who do not expect to offer land to all their children, the average is 0.58 litros per child.)

Table Number XXXII. Spearman Rank Correlation Coefficient Test measuring the correlation of household size to wealth per person, from a random sample in three rural communities, Santiago Island, the Cape Verde Islands, August-October, 1984.

Case No.	Animal units* per household	No. persons currently in household (10 and under = 1/2)	RANKS Wealth in animals X	RANKS No. persons per household Y	RANK DIFFERENCE x-y	RANK DIFFERENCE (x-y)2
2	2.0	2.0	4.5	1.5	3.0	9.00
3	2.0	4.0	4.5	9.5	-5.0	25.00
4	6.0	10.5	10.0	21.0	-11.0	121.00
5	4.0	3.5	7.5	8.0	0.5	0.25
6	0.0	3.0	1.0	5.5	-4.5	20.25
7	2.0	2.5	4.5	3.0	1.5	2.25
8	37.0	4.5	21.0	11.5	9.5	90.25
9	1.0	2.0	2.0	1.5	0.5	0.25
10	13.0	12.0	17.0	22.0	5.0	25.00
11	38.0	4.5	22.0	11.5	10.5	110.25
12	17.0	5.0	19.0	14.0	5.0	25.00
13	33.0	9.0	20.0	20.0	0.0	00.00
15	7.0	3.0	11.5	5.5	6.0	36.00
16	10.0	7.0	15.0	17.0	-2.0	4.00
17	11.0	5.0	16.0	14.0	2.0	4.00
18	8.0	3.0	13.5	5.5	8.0	64.00
19	8.0	3.0	13.5	5.5	8.0	64.00
20	5.0	6.5	9.0	16.0	-7.0	49.00
21	7.0	8.0	11.5	18.5	-7.0	49.00
22	2.0	4.0	4.5	9.5	-5.0	25.00
23	14.0	8.0	18.0	18.5	-0.5	0.25
24	4.0	5.0	7.5	14.0	-6.5	42.25
						717.00

$$r = 1 - \frac{6 \sum (x - y)^2}{n (n^2 - 1)} = -289$$

*Animal units are defined as three units for each large animal(cow, mule), two units for each small animal (pig, sheep, goat), and one unit for each fowl.

Table Number XXXIII. Spearman Rank Correlation Coefficient Test measuring the correlation of household size in those households in which the female head of household or wife had completed fertility to wealth per person, from a random sample in three rural communities, Santiago Island, the Cape Verde Islands, August-October, 1984.

	VARIABLES		RANKS		RANK DIFFERENCE	
Case No.	Animal units per household	No. persons in household with completed fertility	Wealth in animals X	No. persons per household Y	x-y	(x-y)2
4	6.0	11.0	2.0	10.0	-8.0	64.00
8	37.0	6.0	11.0	5.0	6.0	36.00
10	13.0	12.0	8.0	11.0	-3.0	9.00
12	17.0	5.0	10.0	3.5	6.5	42.25
15	7.0	4.0	3.5	2.0	1.5	2.25
16	10.0	7.0	6.0	7.0	-1.0	1.00
17	11.0	5.0	7.0	3.5	3.5	12.25
18	8.0	3.0	5.0	1.0	4.0	16.00
20	5.0	6.5	1.0	6.0	-5.0	25.00
21	7.0	8.0	3.5	8.5	-5.0	25.00
23	14.0	8.0	9.0	8.5	0.5	0.25
						233.00

$$r = 1 - \frac{6 \Sigma (x - y)^2}{n (n^2 - 1)} = -245$$

*Animal units are defined as three units for each large animal (cow, mule), two units for each small animal (pig, sheep, goat), and one unit for each fowl.

Table Number XXXIV. Spearman Rank Correlation Coefficient Test measuring the correlation of income per capita with the number of persons at present in households whose female heads or wives had completed fertility, from a random sample in three rural communities, Santiago Island, the Cape Verde Islands, August-October, 1984.

	VARIABLES		RANKS		RANK DIFFERENCE	
Case No.	Income per person in C.V. escudos	No. persons currently in households with completed fertility	Income X	No. persons in household Y		
4	6,036.000	11.0	3	10.0	-7.0	49.00
8	27,472.725	6.0	11	5.0	6.0	36.00
10	8,713.600	12.0	8	11.0	-3.0	9.00
12	6,600.000	5.0	4	3.5	0.5	0.25
15	7,999.080	4.0	7	2.0	5.0	25.00
16	12,458.760	7.0	10	7.0	3.0	9.00
17	6,900.000	5.0	5	3.5	1.5	2.25
18	6,000.000	3.0	2	1.0	1.0	1.00
20	1,453.850	6.5	1	6.0	-5.0	25.00
21	7,068.750	8.0	6	8.5	-2.5	6.25
23	10,225.000	8.0	9	8.5	0.5	0.25
						163.00

$$r = 1 - \frac{6 \sum (x - y)^2}{n (n^2 - 1)} = -121$$

Table Number XXXV. Spearman Rank Correlation Coefficient Test measuring the correlation of income per capita with the number of children ever born in households whose female heads or wives had completed fertility, from a random sample in three rural communities, Santiago Island, the Cape Verde Islands, August-October, 1984.

	VARIABLES		RANKS		RANK DIFFERENCE	
Case No.	Income per person in C.V. escudos	No. children ever born to householder women with completed fertility	Income X	No.children Y	x-y	$(x-y)^2$
4	6,036.000	8	3	7.5	-4.5	20.25
8	27,472.725	11	11	11.0	0.0	0.00
10	8,713.600	8	8	7.5	0.5	0.25
12	6,600.000	4	4	1.0	3.0	9.00
15	7,999.080	5	7	2.0	5.0	25.00
16	12,458.760	6	10	4.0	6.0	36.00
17	6,900.000	6	5	4.0	1.0	1.00
18	6,000.000	6	2	4.0	-2.0	4.00
20	1,453.850	9	1	9.5	8.5	72.25
21	7,068.750	9	6	9.5	-3.5	12.25
23	10,225.000	7	9	6.0	3.0	9.00
						189.00

$$r = 1 - \frac{6 \sum (x - y)^2}{n (n^2 - 1)} = 0.14$$

Table Number XXXVI. Average number of animal units per household (assigning 3 units each to cows and mules, 2 units each to sheep, goats and pigs, and 1 unit each to chickens), by ecological zone, from a random sample in three rural communities, Santiago Island, the Cape Verde Islands, August-October, 1984.

	number	coefficient	units		No. of households	Average animal units per household
Community A						
large animals	3	3	9	=52	9	5.78
med. animals	18	2	36			
small animals	7	1	7			
Community B						
large animals	2	3	6	=114	6	19.00
med. animals	29	2	58			
small animals	50	1	50			
Community C						
large animals	7	3	21	=64	9	7.11
med. animals	14	2	28			
small animals	15	1	15			

Table Number XXXVII. Income per person, by ecological zone, from a random sample in three rural communities, Santiago Island, the Cape Verde Islands, August-October, 1984.

Case No.	Income per year in C.V. escudos	No. persons (1 = 10 yrs.+) (1/2 = under 10)	Income per person	Average income per person, eliminating highest and lowest to avoid anomalies
		Community A		
2	7,000	1.5	4,666.67	
3	35,360	4.0	8,840.00	
4	60,360	10.0	6,036.00	average: 6799$96
5	8,600	3.5	2,457.14	Cape Verde escudos
6	5,480	3.0	1,826.66)elim.	
7	30,000	2.5	12,000.00	
8	151,100	4.5	33,577.77)elim.	
		Community B		
10	95,850	11.0	8,713.60	
11	55,000	4.5	1,222.20)elim.	
12	33,000	5.0	6,600.00	average: 9013$30
13	111,400	9.5	11,726.30	Cape Verde escudos
15	53,200	3.0	11,733.30)elim.	
		Community C		
16	87,211.33	7.0	12,458.76	
17	34,500.00	5.0	6,900.00	
18	18,000.00	3.0	6,000.00	average: 7627$50
19	27,240.00	3.0	9,080.00	Cape Verde escudos
20	9,450.00	6.5	1,453.85)elim.	
21	56,550.00	8.0	7,068.75	
22	21,000.00	3.0	7,000.00	
23	276,660.00	8.0	34,582.50)elim.	
24	26,000.00	5.0	5,200.00	

Table Number XXXVIII. Portion of household food produced at home, by ecological zone, from a random sample in three rural communities, Santiago Island, the Cape Verde Islands, 1984.

Of the food which your household eats, how much do you produce?						
Case No.	all	almost all	some	almost none	none	Community
2					x	A
3					x	A
4			x			A
5			x			A
6					x	A
7					x	A
8		5 mos.		7 mos.		A
9					x	A
10			x			B
11		x				B
12		x				B
13		x				B
15		x				B
16	x					C
17					x	C
18					x	C
19				x		C
20					x	C
21					x	C
22					x	C
23					x	C
24					x	C

Table Number XXXIX. Household decision-making, by sex, from a random sample in three rural communities, Santiago Island, the Cape Verde Islands, 1984.

	Responses by			
Case No.	Male head of household	Wife of male head of household	Solteira head of household	Wife of emigrant
2			solteira	
3			solteira	
4	male head	male head		
5			solteira	
6			solteira	
7				wife
8	male head	male head		
10	male head	wife		
11	wife	wife		
12	both	both		
13				wife
15			solteira	
16				wife
17	male head	male head		
18			solteira	
19	male head	male head		
20	both	both		
21	both	both		
22			solteira	
23	both	both		
24			solteira	

Table Number XL. Annual income per person in households of solteiras, compared with all others, from a random sample of households in three rural communities, Santiago Island, the Cape Verde Islands, August-October, 1984.

Income per person			
Case No.	Households of solteiras	Case No.	All other households
2	4,666$67	4	6,036$00
3	8,840$00	7	12,000$00
5	2,457$14	8	33,577$77
6	1,826$66	10	8,713$60
15	11,733$30	11	1,222$20
18	6,000$00	12	6,600$00
22	7,000$00	13	11,726$30
24	5,200$00	16	12,458$76
		17	6,900$00
		19	9,080$00
		20	1,453$85
		21	7,068$75
		23	34,582$50
Average income per person = 5965$47		Average income per person = 11,647$67	

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