

Population Histograms on Postage Stamps

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In my collection of statistical graphics on stamps, I have found many varieties – time plots (eg, Israel Sc 218, eradication of malaria), bar charts (Netherlands Sc 674, census) and even an occasional pie chart (Malaysia Sc 680, economic cooperation). My favorite, though, are population histograms (or ‘population pyramids’), but their appearance on stamps is preciously rare.

A population histogram conveys information about the age distribution of a population, sorted by gender. It essentially consists of two side-by-side bar charts, sharing a common vertical axis of age groups, typically 0-4, 5-9, 10-14, etc., with males on the left and women on the right. The horizontal axis may show numbers for actual population counts, or percentages for age distribution. Each half of the histogram (male, female) is a histogram with the complete distribution of the population for that gender. Aligning the two histograms vertically is very revealing. The shape of a population histogram tells a lot about a country’s history, tracing baby booms and busts as well as imbalances between male and female cohort sizes that are often due to war. Even more so, it allows us to imagine a country’s future, revealing by its shape whether a population is aging or is youthful.

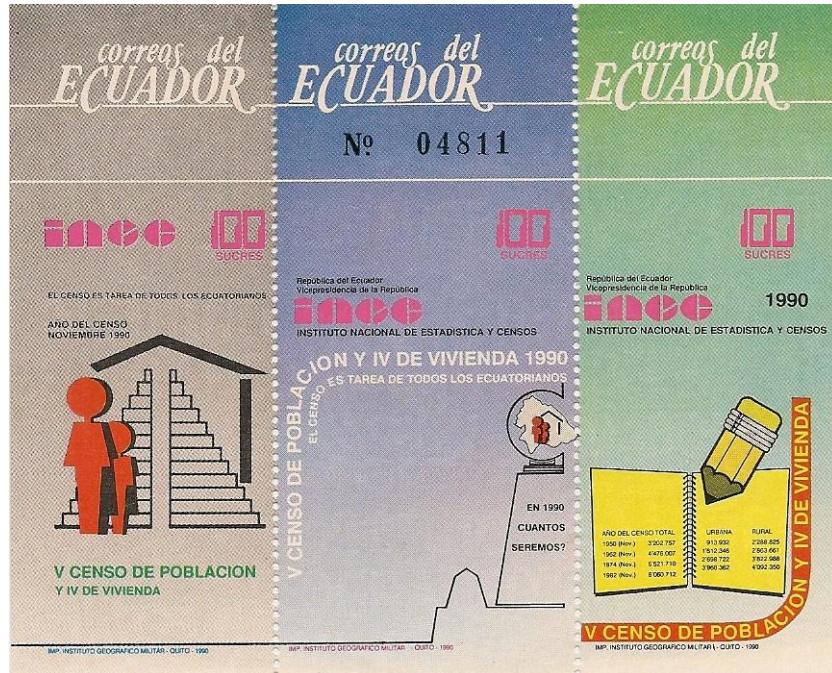
On the left, below, is a German stamp (Scott 1582) showing three population histograms; it was issued in 1989, honoring the Centenary of the Social Security Pension Insurance System.



The stamp depicts the age-distribution of the German population in 1889 and 1989, then provides a population projection with a histogram for 2000. The aging of the population is apparent by the increasing heaviness toward the top of the histograms, showing proportionately more older people, and the narrowing of the base where the younger ages are documented. The imbalance between the men and women is noticeable for a few distinct age cohorts. These would be Germans born around 1920, who would be in their late 60's in 1989 and of military age during World War II. There is greater representation of women than of men in these cohorts. Moreover, the bars for people around 50, representing wartime births, are relatively smaller than the bars for neighboring cohorts.

Austria issued a stamp in 1979 (Sc 1120) honoring the 150th anniversary of its Central Statistics Bureau, above right. An angel is depicted next to the histogram. As on the German stamp, bumps along the histogram reflect wars and economic trials that affect birth and death rates .

In contrast, a 1990 stamp from Ecuador (in a sheetlet, Sc 1248a-c, honoring the 5th Census) displays a more pyramidal pattern. The base of the histogram is wide, as seen in the first stamp, showing a relatively youthful population.



Sri Lanka (Sc 598, issued in 1981 for the Census of Population and Housing) also presents a population histogram. As is typical for mortality trends, there are relatively more older women than men, as women tend to enjoy lower mortality rates throughout their lifetimes. Cape Verde (Cabo Verde) honored their 1980 Census of Population and Housing on Sc 402a, b with a tiny population histogram incorporated in the design.



China issued a special sheet in honor of the 2010 Census; at its center is a population histogram.



Of special interest in China's histogram is the effect of the one child policy, reflected in smaller cohorts in some age groups and the favoring of male children at young ages. This sheet was a gift to me from a Chinese exchange student; I have not found it in the Scott catalogue. Any ideas?

A population histogram appears in a special cancellation in Japan, in honor of the 1995 Census. It is used on this cover to frank a stamp with symbols of the Census, Sc 2460, and is one of the most interesting population histograms available to demographers to understand how population trends track a nation's history and culture. An image of this histogram may be assessed online at www.populationpyramid.net/japan/1995, for those who wish to study it more closely. (More detailed population pyramids may be observed by searching for "Japan population histogram" or "Japan population pyramid", but the urls are harder to copy!)



As seen before, the effect of wartime conflicts is apparent. The larger proportions for ages 45-49 correspond to years 1946 to 1950 and document a postwar baby boom; these would include births delayed due to wartime. A noticeable dent appears at ages 35-39; these would be births from 1956-1960, when birth rates declined. The baby boom ‘echo’ – evidence of the large postwar cohort themselves having babies – is represented among the 20 to 24 year olds. These are, approximately, the children of the large 45-49 year old cohort.

Looking closely at the cancellation, you might detect an unusual dent in 1966, a year of very low birth rates. This corresponds to a special year on the Japanese calendar, the *hinoeuma* (Fire Horse) year. It is considered an unlucky year for births, and correspondingly, you can see that Japanese couples delayed their childbearing.

All this on a special postage cancellation!