———————o———————

A NEW METHOD OF ANALYSING THE AGE AND SEX COMPOSITION OF A POPULATION

LEO A. HAAK, University of Tulsa, Tulsa

The population pyramid has been generally accepted as a concise, graphic method of presenting the data on the age and the sex composition of a population. It is the purpose of this paper to point out certain limitations of this traditional method and suggest another, and what is believed to be a more satisfactory, graphic method of presenting the same facts.

The data used in this paper for purpose of illustration are for Tulsa, Oklahoma, 1940 United States census[1] (see Fig. 1). We are not interested in Tulsa, or in any particular population for that matter, but are only concerned about a satisfactory graphic method of presenting certain data. The data for any other population could have been used just as well for this purpose.

Any person who has had experience in interpreting population pyramids would conclude that in terms of a stationary population there are (1) fewer children, (2) more adults, 24-45, and (3) more females, 15-39. Why this is true and what the significance of these facts are, likewise is not important for the purpose of this paper.

In order to arrive at the first two conclusions, on age distribution, it is necessary to examine both sides of the pyramid and summarize. Likewise, in order to draw the third conclusion, on the sex composition, it is necessary to consider the differences in relative percentage of males and females, respectively, in each age group. In as far as pyramids are not regular and symmetrical conclusions must be drawn with great caution and with due care because of the possibility of optical illusions.

---

[1] P. 153, Table B-35, Population, Second Series, Characteristics of the Population—Oklahoma, U.'S. Census, 1940.
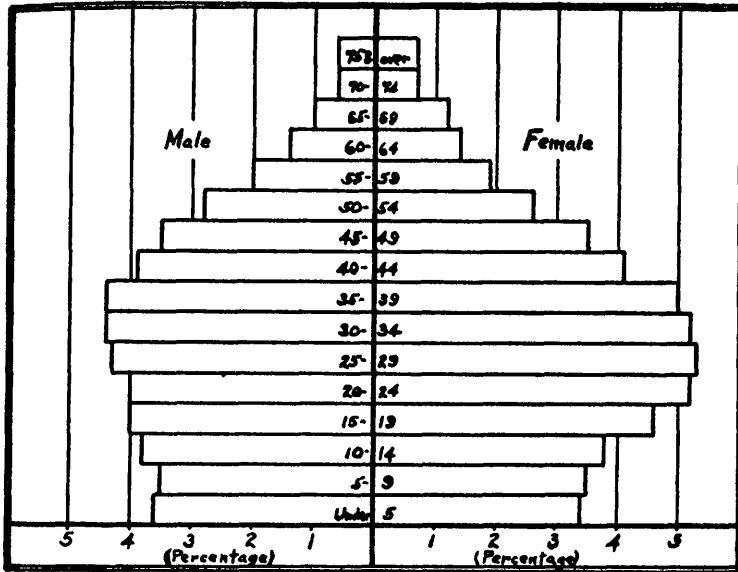
Fig. 1. Percentage distribution of the population by sex and five year
age groups, Tulsa, Oklahoma, 1940.

Contrast the ease and preciseness with which the same conclusions
can be drawn on the basis of Fig. 2 in which the age and sex data are
presented in two related charts. The sex data are given in terms of sex
ratios because it is customary to analyse sex composition of a population
in this manner.

The writer believes that it is easier to analyze the age and sex com-
positions of a population on the basis of inspection of Fig. 2 in which the
data are plotted on two related charts than of Fig. 1 in which the data
are fused in the traditional population pyramid. Not only is it easier
but it is also possible to state conclusions with more precision. Probably
the conclusions are easier to "see" as well. If a name is needed for this
graphic method, possibly the *Population Age and Sex Profiles* would be
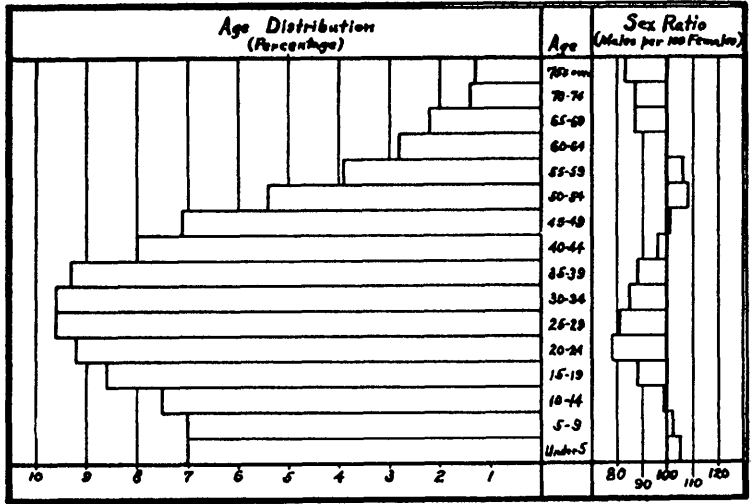satisfactory.

Fig. 2. Percentage distribution and sex ratio of the population by
five year age groups, Tulsa, Oklahoma, 1940.