

PULMONARY TUBERCULOSIS AND THE “CURVATURE OF VAN PESCH.”

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(With 2 Text-figs.)

IN 1885, the Dutch vital statistician, Prof. Van Pesch¹ drew attention to a peculiarity of the curve of death rates at ages which he first noticed in the Netherlands' statistics of 1870–79 and subsequently again found in the three following decades.

This peculiarity, sometimes called the “curvature of Van Pesch,” consists in an inflection of the generally concave arc especially prominent in the curve of death-rates of males at or about the 22nd year of life, less distinct and beginning one or two years earlier in the curve of female mortality which, owing perhaps to the incidence of diseases at the age of procreation, returns more gradually to the general trend. As will be seen from Fig. 1, this inflection is not peculiar to the Dutch statistics, but is present in greater or less degree in those of other nations².

I have ascertained that, at least in the statistics of the Netherlands, the curvature is due to mortality from phthisis.

Phthisis mortality statistics show two maxima, one between the ages of 20 and 30, the other between 50 and 65. The latter is most accentuated in urban populations, being in the curve of male mortality even absolutely greater than the young adult maximum; the curve conforms to Brownlee's Old Age Type³. In rural populations, the maximum for males at older ages is also found but is smaller than in urban populations, the curve is intermediate in type between Brownlee's old age form and his young adult type.

The course of mortality from phthisis amongst women conforms still more closely to the young adult type, especially in rural populations.

Undoubtedly in both sexes an increase of the mortality from phthisis between the ages of 10 and 30 exists and corresponds fairly well both in degree and position to the “curvature of Van Pesch.” The latter disappears if we

¹ A. J. van Pesch (1885), *Bijdragen van het Statistisch Instituut*, No. 3. Haarlem.

² Its greater prominence in the male mortality curves of countries having compulsory military service has been emphasised by certain military writers, e.g. O. v. Schjerning (1910), *Sanitätsstatistische Betrachtungen ueber Volk und Heer*, Berlin: Hirschwald, pp. 86 *et seq.* See, however *Journ. Roy. Statistical Soc.* LXXIII. 253.

³ Brownlee, J. *Medical Research Council, Special Report Series*, No. 18 of 1918 and No. 46 of 1920.

Pulmonary Tuberculosis

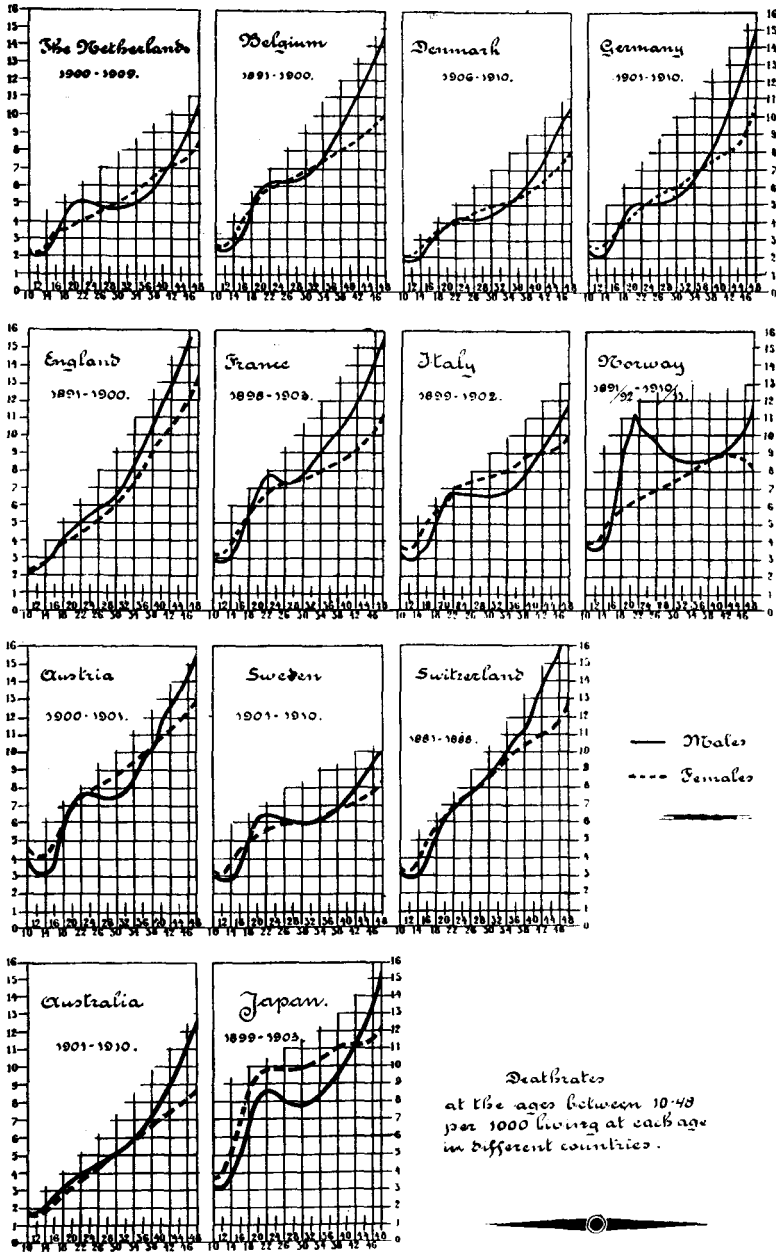


Fig. 1.

subtract the phthisis death rates from the general death rates, as will be seen in Fig. 2 which illustrates the general mortality curve both inclusive and exclusive of phthisis for males in the age-grouping customary in Dutch statistics, viz. 5-13, 14-19, 20-29, 30-39, 40-49 and 50-64 years.

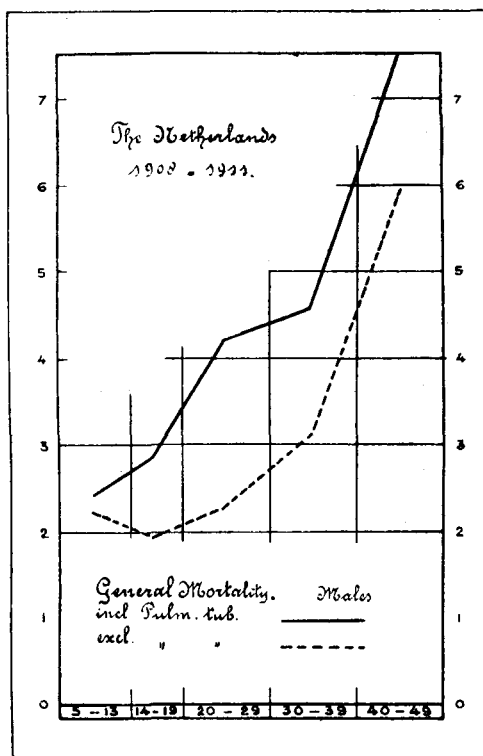


Fig. 2.