

Professor Philipps, of Amherst College, is quoted by Stanley Hall in his book on "Adolescence" as stating, "The young women in American colleges to-day are almost certainly an inch taller and four or five pounds heavier than they were ten years ago. The young man of to-day," he says, "at every age is taller and heavier than the man previous to 1894, the difference, as a rule, amounting to an inch in height and three pounds in weight."

In considering probable factors which have influenced the growth and development of New Zealand children since 1913 we recognize the following :—

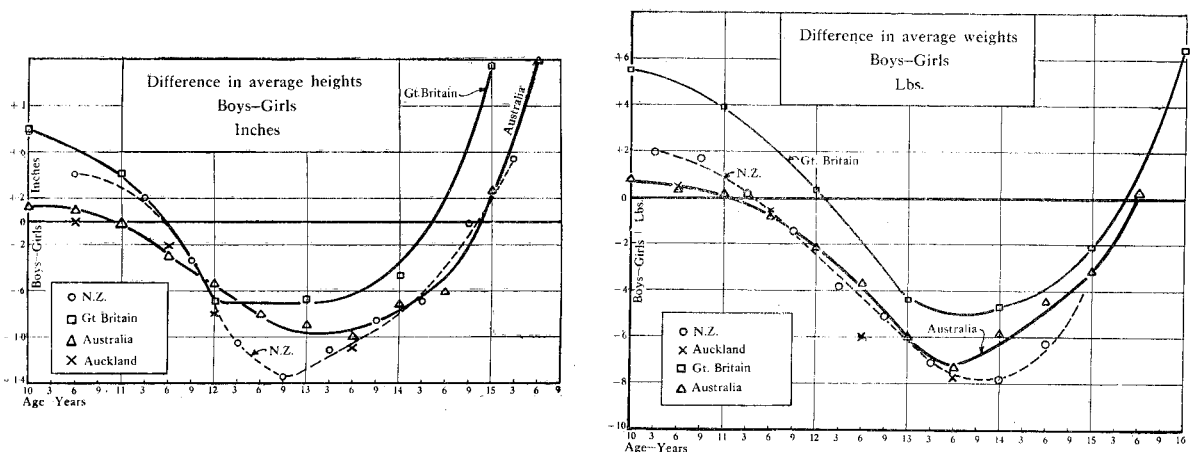
- (1) Improved methods of child welfare ; expansion of the Royal New Zealand Society for the Health of Women and Children ; work of the school medical service, &c.
- (2) Reorganization and development of system of physical education in schools.
- (3) Better schools in regard to general hygiene and furniture ; adoption of more suitable clothing.
- (4) Improved sanitation in the home and abroad ; adoption of more suitable clothing.
- (5) Decreasing birth-rate.
- (6) Increased ratio of children of New-Zealand-born parents.

RATE OF INCREASE IN HEIGHT AND WEIGHT : BOYS AND GIRLS.

In height we find a fairly-well-marked maximum rate of increase for girls at a little under 12 years and approximately at the same time a definite minimum rate of growth for boys.

In the case of weight a pronounced maximum rate of increase is shown for girls at a little over 12 years, while for boys the rate of increase does not show a pronounced maximum or minimum between the ages of 11 and 14, and is fairly constant between $12\frac{1}{2}$ and 14 at $9\frac{1}{2}$ per cent. These results suggest the advisability of a differentiation of educational curriculum for boys and girls between the ages of 11 to 14, and no doubt have a bearing on the fact that the percentage of boys who win Junior National Scholarships (age-limit, 13 years) is twice that of girls. The present survey also showed diversity of interests of boys and girls at this stage, the boys securing 20 per cent. higher scores than the girls in geography and history, although the girls scored equally or higher in reading and comprehension, there being very little difference between the sexes shown in the total score.

It is interesting to note the age at which the girls attain superiority in height and weight in the various countries. This gives an indication of the period of the commencement of growth-acceleration of the girls. In Australia this occurs approximately at 11 years of age, in New Zealand at $11\frac{1}{2}$ years, and in Great Britain at $11\frac{1}{2}$ years in the case of height and 12 years in the case of weight. It is worthy of note, however, as will be seen from the figures for the Auckland District, which are indicated by crosses on the diagram, that the conditions in Auckland approximate more nearly to those in Australia. In general, however, it should be noted that the maximum excess of girls both in height and weight over boys is considerably larger in New Zealand than in Great Britain or Australia. These results are shown in the following graph, which shows the period of onset and amount of differentiation in growth between boys and girls.



It would appear that climate is not without influence on the period of differentiation of development, as in Graph Z, the indication being that in Australia and in the northern part of New Zealand differentiation occurs at approximately the same period. An interesting comparison will be possible when data for Maoris, Rarotongans, and other native races are available.