lar quality developed to a specified degree will appear in a pre-indicated or random-selected offspring. The basis of such prediction is the degree of development of the selected quality in each of the several near blood-kin. The traits or qualities which can be thus predicted may be structural or functional, vital or insignificant, useful or injurious, but they must be measurable as entities in the individual, and they must show a definite tendency to "run in families." For all such traits, the formula of heredity works out mathematically: $K = f(M, R)$. K is the probability that the pre-indicated or random-selected offspring, with a given M or prediction basis, will fall within the selected R or class range of offspring. The mathematical model of this formula is always a "skewed saddle."

Evidences of man's ancestral history in the later development of the child: C. B. DAVENPORT. It has long been known that man, in his foetal development, passes through many stages reminiscent of the course of the evolution of the human species. Thus tail, gill-slits, tubular heart, amphibian-like kidney, for example, are ancestral. It is less well appreciated that at birth the child is still far from an adult in proportions of parts, and has still to pass through a series of changes shown by adult primates. At birth of the child the chest is a cylinder of approximately circular cross-section. This is the shape of the chest of the foetus of other primates and many other mammals. It is the generalized, undifferentiated form of the chest. In running quadrupeds, like the gazelle and horse, the depth of the chest becomes greater than the breadth. But in man, the breadth becomes greater than the depth. The circular-cylindrical chest is rather characteristic of adult tree-climbers, and fits them for the undifferentiated movements required in climbing; for specialization in upright walking it is convenient that the arms swing free of the torso, and this result is attained in adult man's broad shoulders; but these broad shoulders are achieved relatively late in development. Again, the upper and lower segments of the leg of the human foetus are, in the early months, very unequal, since the thigh takes the initiative in rapid growth. This appears to be an undifferentiated condition. Later the lower leg grows rapidly so that it approaches equality with the thigh; that is, about 90 per cent. at eleven or twelve years. This is the condition that is rather characteristic of tree-climbers. After this pre-adolescent stage the femur forges ahead, and the leg index falls in the adult condition to about 84 per cent. This long thigh takes the adolescent out of the childish, ape-like class of climbing, jumping, romping animals into that of walkers and runners. The human foot shows remarkable adaptations to supporting the great weight of the body upon the spool-like talus and distributing that weight to the whole foot in the most efficient fashion. But the adaptive changes are completed only as adolescence appears. The infant has a rather low instep, like anthropoid apes. This instep increases to adolescence, and gives a valuable resilience to the step. The human fetal foot is at first long, as compared with the lower leg, just as in the anthropoid ape. This may be regarded as a generalized condition. In later months this foot index diminishes from 95 per cent. to 90 per cent.; in the adult boy to 65 per cent., while it remains at about 90 per cent. in the adult gorilla and chimpanzee. A long heel is a human characteristic. The foetus has a relatively short heel bone, a condition that is retained by adult chimpanzee and orang-utan, but the heel bone increases in childhood up to adolescence. The parallelism of ontogeny and the phylogenetic series is clearly due to the fact that the higher forms pass through the same embryological stages that the lower forms do, but they go beyond the point at which the less evolved species stop their development.

Racial aspects of the pathology of the ear: ALEŠ HRDLIČKA. The collections of the division of physical anthropology, U. S. National Museum, include now over 15,000 racial crania, over three fourths of which are American. This American material is largely precolumbian and comprises a number of series ranging from hundreds to several thousands of specimens, including the contents of entire large burial grounds, and these series are not only of great value to anthropology but also to the study of prehistoric American pathology. One of the most interesting categories of pathological conditions shown by the material comprises the defects and diseases of the bony ear structures. The present paper deals with the two most striking conditions of this nature, namely, a complete congenital absence of the external auditory meatus and apparently of the whole tympanic bone; and ear exostoses. In the present communication the speaker reports the results of personal examination for ear exostoses in 7,814 skulls, Egyptian, Eskimo, American Indian, Polynesian, Negro and Melanesian. The abnormalities are shown decisively to be most frequent in certain inland groups of the Indian, and next in the Polynesians. They are never congenital, and rare in childhood, developing essentially during the earlier half of the adult life. They are moderately to considerably more common in the males than in the females, more frequently bilateral than unilateral, and when unilateral they show a tendency to develop more commonly on the left side. They vary much in number, size and shape, and often show more or less symmetry on the two sides. They, the speaker concludes, are not incidental or chance formations, but represent a generalized pathological entity, an oto-exostotic diathesis, which manifests itself in different degrees in different racial and local human groups, according to local checking or favoring conditions.

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