

for each standard, the percentage of children attaining a comparable stage of development at different ages, had been given. Then we could T-score or Z-score individual knee ratings instead of just saying that at 12 years 0 months Willie had a Pyle-Hoerr skeletal age of 10 years 0 months.

But Doctors Pyle and Hoerr do state "the standards in this atlas, . . . if our reasoning is correct, if our methods are trustworthy, and if our judgment is adequate, are the most representative of the levels of development attained by the children in our Research Series."

No exception can be taken to this statement and we are confident that they have performed this extremely laborious task ably and well.

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THE PHYSICAL ANTHROPOLOGY OF IRELAND. By Earnest A. Hooton and C. Wesley Dupertuis. WITH A SECTION ON THE WEST COAST IRISH FEMALES. By Helen Dawson. No. 1, Text, pp. xix + 304; No. 2, Tables and Half-tones. Papers of the Peabody Museum of Archeology and Ethnology, Harvard University, Vol. 30, 1955. \$10 (cloth, \$13).

One hardly knows how to begin a review of this large, complex work comprising one volume of 510 tables and 47 half-tones, and another of detailed analyses in text and figures. Perhaps it may be well to begin with some words on the scope, method, and results, especially as these pertain to Ireland, and then consider the broader implications of the content.

The field work was initiated in 1934 and extended over a period of about two years. Measurements, morphological observations, and data on education, language spoken, and occupation, were obtained on some 10,000 men by Doctor Dupertuis in 426 villages and towns in all 32 counties of Ireland. Like material was obtained on nearly 2,000 Irish women by Doctor Dawson. The late Professor Hooton was responsible for the organization and interpretation of the material as a whole. The work is divided into 4 major parts. Part 1, "Catholics by County Subgroups," compares the sociological data, measurements and indices, and morphological observations, among the several counties with predominantly Catholic populations and also by groups of these counties or "geo-ethnographical regions." Part II is a "Comparison of Catholics and Protestants." In Part III, a long section titled "Morphological (Subracial) Types," the material is sorted on

the basis of hair color, cephalic index, and eye color, and secondarily on occasion by the additional factors of nasal index and stature. By this sorting method (initially devised in about 1930 for "dividing up American criminals then being studied, into subracial or ethnic types"), the total male series was divided into 8 "subracial types," namely, Nordic Mediterranean (28.9%), Keltic (25.3%), Dinaric (18.6%), Nordic Alpine (18.4%), Predominantly Nordic (6.8%), East Baltic (1.1%), Pure Nordic (0.6%), Pure Mediterranean (0.3%). These "types" are compared one with the other with regard to all the sociological, anthropometric, and morphological observations at hand, and in turn are correlated with archeological finds; with legendary, historical and linguistic data; with historical events and conquests; and the like. Part IV is a detailed analysis of the Irish females more or less following the male pattern, but providing in addition a valuable summary of male vs. female comparisons for each character.

As regards Ireland, the sum of the diverse analyses seems to be that ". . . in both Ireland and Wales the proportionately strongest morphological type is what we call Nordic Mediterranean — long-heads with dark hair and mixed eyes. This seems to be the fundamental type of the British Isles. It probably incorporates in both countries the bulk of the descendants of Paleolithic settlers (present in Britain only), of the Mesolithic inhabitants, of the Neolithic and Megalithic peoples, with some reinforcement from later comers. The morphological type second in strength in both countries is what we have called the Keltic type — long-headed with pure light eyes" (p. 235). And, "We can be certain that the Norman conquest introduced no subracial or morphological types that were not already represented in the population, and the same can be said of further colonization by the English and whoever else arrived subsequently in sufficient force of numbers to count in the present day population of Ireland" (p. 223). It should also perhaps be noted at this point that Doctor Hooton takes sharp issue with Professor Carleton S. Coon's interpretation of the present Irish data in the latter's book "The Races of Man" (Coon, '39). "The principal point at issue is Coon's hypothesis of the 'survival' or 'reemergence of Upper Palaeolithic' types. . . ." in Ireland, a position which Professor Hooton finds untenable (p. 239).

There can be little question about the logic of the above conclusions on the basis of the given evidence. What may be questioned, it seems to me, are some of the methods pursued and statements made in the

study. Thus, after 16 large double-column pages of text, one finds that (p. 120):

Anyone who has read carefully the foregoing attempt at dividing Ireland into geo-ethnological areas will conclude that the areas thus delimited are, in nearly every instance, composed of county blocks which do not cohere anthropologically in any satisfactory way. In other words, the attempt was a failure.

Professor Hooton's intellectual honesty is refreshing, but why publish what in effect are work-sheets?

Even though in Ireland the religious groups are largely equivalent to geographical entities — Protestants in the North and Catholics in the South — the comparison of Irishmen on the basis of religious affiliation seems to me of dubious merit. Doctor Hooton himself apparently had some qualms about this procedure, for in comparing hair-form of Protestants and Catholics he notes, "Every grade of curved hair is more heavily represented in the latter [Catholics], but especially low-waved and deep-waved hair. The differences are ethnic and regional rather than religious, of course." Why the subdivisions by religion, then? This uncritical tendency to associate sociological phenomena with physical characters occurs elsewhere in the report, e.g. an attempt to relate extent of illiteracy with "subracial types," i.e. Pure Nordic, Predominantly Nordic, East Baltic, and the like (p. 149). As a matter of fact, by and large the Irish men are found to be a pretty homogeneous lot metrically and morphologically. One indication of this circumstance is the fine subdivisions resorted to in order to obtain "differences" among them. For example, mean stature in the counties ranged between 170 and 174.9 cm and was divided into 5 categories of 1 cm intervals; mean head length and mean head breadth were divided in 5 and 4 groups of 1 mm intervals; mean cephalic index is divided in 6 groups (77.5 to 80.4) by *one-half* index point intervals.

Apparently more persons with dark eyes, dark skins, curved varieties of hair, and pigmented moles, were found in the young than among the old in the present male series. Doctor Hooton explains this peculiar situation by postulating a theory of "selective survival of light-eyed persons and of progressive elimination of dark-eyed persons throughout the older age groups," although, "Of course, this explanation raises the presumption that most of the dark-eyed Irish either die early in life or marry light-eyed mates and leave only mixed-eye progeny" (p. 201). Professor Hooton refers one to a previous publication for a more extensive treatment of the subject of age and "selective survival" in the Irish (Hooton and Dupertuis, '51). Going to the latter, one finds that Professor Hooton recognized the pitfalls

of his position, and states: "Almost none of these curious age regressions shows, in the case of the age surviving and predominating variation, a simple and obvious advantage that would make for a favorable selection of its possessor. Thus we can see no reason why a dolichocephal should more easily and prematurely enter the Kingdom of Heaven than a brachycephal. . . . If a morphological or a metrical variation has some survival advantage, it is probably because it is linked to some physiological or other constitutional variant not quickly apparent, but in reality the causative factor in the situation" (Hooton and Dupertuis, '51, p. 127).

Not a shred of evidence is given for the above concept. Professor Hooton himself candidly admits in the earlier report that his views on the matter were purely speculative, that "Often this [assignment of a trait to age change or to selection] amounts to a mere guess based upon sheer ignorance" (p. 129). In this regard, also, as tabulated below, the female series does not show the aforementioned age differences in hair color or eye color, or to any considerable extent even in prevalence of straight compared with wavy hair, or occurrence of moles (tables XXXI-4, 5, 10, 11; pages in the volume of tables are not numbered).

AGE	HAIR COLOR: PER CENT			EYE COLOR: PER CENT		HAIR: PER CENT STRAIGHT	MOLES: PER CENT ABSENT
	Black	Dk. br.	Light ¹	Brown ²	Blue		
15-19	2.3	41.1	1.6	3.0	13.2	44.2	89.2
55 +	2.4	56.5	1.9	5.2	12.0	47.8	88.4

¹ Includes golden, ash brown, and ash.

² Refers to dark, dark-light, and light brown.

Indeed, considerable morphological divergences occur between the Irish males and females. Although Professor Hooton's manifest loyalty to each of his co-authors makes him initially reluctant to consider the possibility that such differences could be the result of varying techniques, he later does acknowledge such a likelihood (p. 287). As remarked by Professor Hooton, the theoretical scale of reference in morphological observations as to size, at Harvard is supposed to be that of the modal Northwestern European male, and such judgments, even those for color and texture, are more or less subjective and liable to personal variation. Pertinent in this connection are the substantial differences in the proportion of males with light and dark eyes, and with black and light hair, as found by Dr. Dupertuis and by several other observers of the Irish (tables V-45, 47, 49, 50).

Another matter of obvious relevance is the justification for dividing a population into several morphological or "subracial types" by

means of a rigid sorting method such as that noted at the beginning of this review. Plainly, such a method might well place members of the same family in different subraces. The method, too, seems to question the fact of normal variability within any racial or subracial group. Yet, if the premise is correct that an original "pure" subrace within the white stock refers, for example, to a geographical group *all* of whom had fair hair and skin, blue eyes, a relatively long head, and were tall in stature (Nordic), or a population *all* of whom were medium or short in stature and had dark hair, dark eyes, and relatively long heads (Mediterranean) — then it seems to me the sorting of a population on the basis of the aforementioned criteria should be valid and differentiate "subracial" components (assuming the criteria are accepted as indicative of race). To be sure, how far back one must go to reach the "pure" groups, is not clear. Indeed, there may well be some question whether any such "pure" subraces ever existed. In any event, the sorting method is rigorously objective and descriptive albeit it appears to be based on this assumption of original "pure" groups in the sense noted above.

Many thought-provoking passages occur in the present work. Some of these have been noted. To mention only two or three others, Professor Hooton's observation of a "tendency of the women to preserve better the ancestral racial types, and of the males to vary away from these types in the direction of blended, composite, or hybrid types. . . ." (p. 284), would seem to merit further attention, especially since it is not uncommon for physical anthropologists to consider males only in racial analyses and classifications. A section devoted to Professor Coon's analysis of the Irish, mentioned previously, is also a pertinent critique of subjective methods in racial classification (pp. 239-243). Indeed, according to Professor Hooton (p. 121):

The whole method of attempting to describe races or groups by combinations of isolated arrays of means and measurements and modes of attributes is, in our opinion, obsolete, fallacious, and downright erroneous. It results in the setting up of hypothetical and entirely supposititious racial or group abstractions, so that a population is described in terms of a non-existent individual characterized by fictional average dimensions and combinations of modal morphological features which in reality may never occur together.

We had thought that physical anthropology was through with this hoary sinner — the fictitious average type — but unfortunately such is not the case. There has arisen a group of geneticists who are interested in physical anthropology, but know little about it, and another group of physical anthropologists who are interested in genetics without knowing much about that, who have revived the old idea of talking about "populations" as if they were races or subspecies. These workers concern themselves

with isolated variables and attributes because they are afraid to study individual combinations allegedly for fear that they will "mistake phenotypes for genotypes." Actually they are afraid to use the term "race" in any except the most generalized application, lest they be accused of "racial discrimination" or of being "racists." They are willing to have "races," but they are loathe to assign any individual to a race, because they think of "races" as being "populations" or "groups." This is absurd. If there is a Negro race, there must be Negroes. The same thinkers, if they can be so designated, are equally opposed to individual constitutional "types"—and for the same reasons.

Whether or not one agrees with all that Professor Hooton has written, there can be no denial that much of it is stimulating and provocative, and hence broadly useful, if read critically. In sum, the present massive work, in the reviewer's opinion, is a definitely valuable contribution. It provides a wealth of information about the Irish, and in many ways (some of them indicated in the preceding, it is hoped) should be of substantial interest to the general field of anthropology.

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FRANÇOIS JOSEPH GALL ET SA COLLECTION. By Erwin H. Ackerknecht and Henri V. Vallois. *Mémoires du Muséum National d'Histoire Naturelle*, n.s. Sér A, t. 10, fasc. 1, pp. 92, 2 pl. Paris, 1955.

PHRENOLOGY: FAD AND SCIENCE. A 19TH-CENTURY AMERICAN CRUSADE. By John D. Davies. 203 pp. Yale Univ. Press, New Haven (*Yale Historical Pubs., Miscellany 62*), 1955.

Phrenology was the 19th Century's practical psychology, offering answers to every problem from the selection of a wife or a railroad trainman to the rehabilitation of criminals and the education of the blind. In its heyday it attracted scientists and charlatans, physicians and preachers, writers and reformers. To the 20th Century it left a varied legacy, including octagon houses, educational theories, cranial