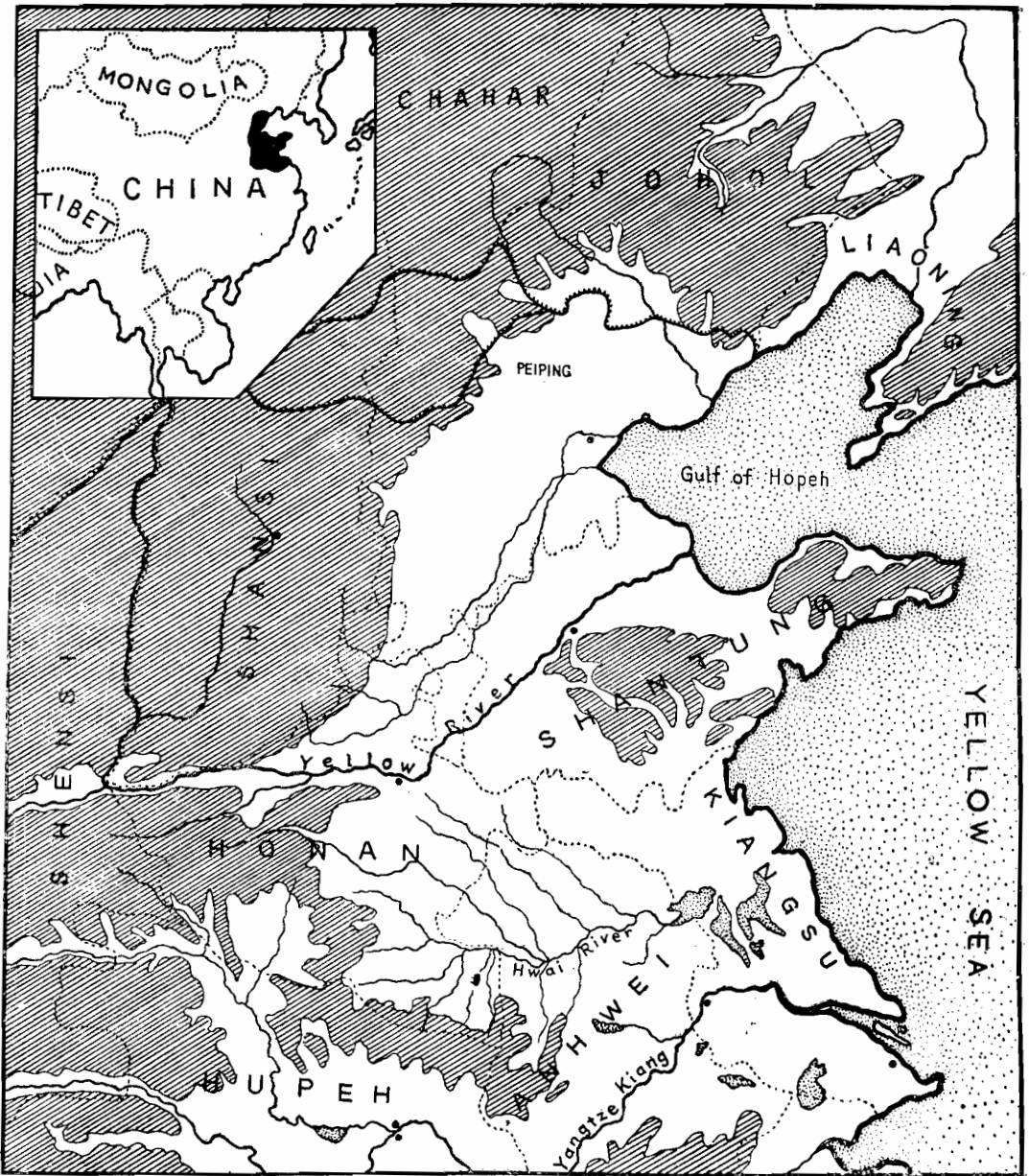


## GEOGRAPHIC AND ETHNOGRAPHIC CONSIDERATIONS

The specific region of China whose population is the subject of the present study is usually designated as the Great Plain of North China, or, more simply, the North China Plain. It lies between  $34^{\circ}$  and  $40^{\circ}$  north latitude and extends approximately from  $114^{\circ}$  to  $118^{\circ}$  east longitude. The area in question is one of the most clearly defined geographic regions of all eastern Asia; its boundaries being well marked by either mountains or sea on all sides, except on the southeast where it merges topographically with the Yangtze delta plain of Central China. It comprises in the main a gigantic alluvial plain built up of the soil deposited by the shifting courses of the lower Yellow River and of several lesser streams draining the loessic highlands to the west. Roughly crescentic in shape, curving around the western edge of the Shantung massif, the area embraces almost the whole of the province of Hopei (Chihli), the western part of Shantung, all of Honan and the extreme northern portions of Anhwei and Kiangsu. The region may be characterized as one of cold dry winters and hot summers, a land of limited and uncertain rainfall suffering from recurrent famines due to alternate droughts and floods. Despite the precariousness of its agriculture, this 125,000 square miles of the earth's surface, considerably smaller than California, supports a population of 80,979,000 people; a population density of 648 persons per square mile.



This North China Plain shares with the smaller Wei River Valley which joints it on the west the distinction of playing a dominant role in the ethnic and cultural history of the Chinese people. Operating in this area for at least five thousand years have been those formative influences—ethnic, cultural, and political—which have welded together one of the largest of the several groups into which the human family is divided. In a very real sense this area may be considered the home in which the Chinese people developed their distinctive type. From this early center, chiefly in response to the pressure of an expanding population and mainly in directions determined by rigid adherence to a specialized agricultural technique,\* the Chinese subsequently spread throughout adjacent areas, finally to dominate in a cultural or political sense the entire area now known to the world as China. The region still holds a high place in Chinese regard not only as the home of Confucius and the sages but also as the seat of several of the great dynasties and ancient capitals of Chinese history.

Although the identity and character of the original ethnic elements occupying this important region in pre- or proto-historic times are as yet unknown still we may envisage something of the nature of the forces that have operated therein toward the development of the present population. Gradual incorporation of the non-Chinese tribes originally occupying the region, and the subsequent absorption of other groups that have from time to time invaded it, have constituted the basic processes that have been at work throughout historic times producing the sturdy racial amalgamation known as the Chinese people. The present day Chinese, as with few exceptions is true of distinctive peoples the world over, thus represent a blending of originally more or less heterogenous ethnic elements. Most of these have at one time or another been drawn in from the periphery by the attraction of a superior Chinese social organization and culture. Subsequently, under the leveling impress of a common mode of existence, the fate of these originally diverse groups has been coalescence into a population which today appears to be a unit when viewed as a whole.

It is not intended to speculate here concerning the possible distinctive attributes of a hypothetical primary Chinese racial stock, or to attempt an appraisal of the kinds and degrees of influence exerted on such an earlier population by the

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\*Stevenson, Paul H., Notes on the Human Geography of the Chinese Tibetan Borderland. *Geographical Review*, Vol. XXII, pp 599-616, 1932.

various ethnic elements that have successively merged with it. Certain it is that Turki, Tartar, and Tungusic strains, brought from the west and north by the early Chins and the later Kitans, and subsequent invading ranks of Nuchens, Mongols and last of all the Manchus, are all amalgamated into the composite blend which today is designated by the term "Chinese."

For many centuries the general direction of ethnic movements in this part of Asia has been from north to south. Population movements in other directions, less extensive though perhaps more conspicuous at the time, have also had their origin in the area in question. These minor movements, usually under the influence of specific political or economic factors, have been mostly toward the less populous regions to the west or the north. The last quarter of a century has witnessed such counter movements north-westward and north-eastward, resulting in the arable regions of Inner Mongolia and Manchuria today being populated rather extensively by recent migrants from the North China Plain.

The distinctness of whatever lines may be drawn between the population of the area in question and the surrounding peoples is therefore extremely variable. Especially is this true in the region where the North China Plain merges with the Yangtze delta on the south. Here, in spite of more or less distinctive changes in climate, soil, and agriculture, it is questionable whether any significant physical differentiation can be detected between the peoples to the north and those to the south of this rather indefinite transition zone. Nutritionists claim that the hard cereals of the north—wheat, millet and corn—afford a more adequate growing diet than the rice of the central and southern portions of China, and they attribute chiefly to this factor the sturdier and relatively larger physiques of the northern Chinese as compared to those of Central and South China. The fact that individuals of central and southern Chinese stock even when born and reared in North China fail to attain the adult stature of the native northerners, however, would seem to indicate that genetic factors are also involved in the distinction. With respect to the questionable location of the dividing line between the Northern and the Central Chinese, we shall in the present instance treat the population lying to the south of the Hwai River in Anhwei and of the old Yellow River course in northern Kiangsu as belonging, together with the population lying immediately to the south of the Yangtze, to the group known as the Central Chinese. That some anthropometric justification is to be found for such a differentiation, on the basis of heights and

weights at least, is suggested by certain relevant data already at hand.\* When a detailed analysis of the Central Chinese is made, however, it is altogether possible that the inhabitants of that portion of the Yangtze delta to the north of the present course of the river will be found to be more closely related to the population of the North China Plain than to the peoples to the south of the great river.

## MEASUREMENTS AND INDICES

As mentioned in the introductory paragraph, the scope of the measurements embraced in the present study is somewhat more comprehensive than that required of an ordinary racial anthropometric survey. The number of characters measured may appear to be unnecessarily large. Aside however from the author's desire to provide for himself and others as comprehensive as possible a baseline for subsequent detailed comparisons of other relevant material, the deliberate decision to err if necessary on the side of excess rather than paucity of characters measured was made in the light of a certain amount of biometric experience of the sort implied in the following statement of Morant:

"The physical characters which can be most profitably used for the purpose of investigating racial identity or divergence are determined primarily from experience of data collected for them . . . . Their choice becomes modified as our knowledge extends . . . . Experience has shown repeatedly that no single character, or group of a small number of characters, is capable of providing any solution of this problem which can be considered at all reasonable and the fact that such limited evidence is likely to mislead entirely can easily be demonstrated. If a number of characters known to be of racial significance are used in the comparison of samples drawn from two widely divergent racial populations—a Western European and an Oriental, say—then it will usually be found that several, if not the majority, of the chosen characters will fail to distinguish the two samples and the evidence for dissimilarity will depend entirely on the few remaining. But if these few had been omitted it might have been concluded that the two samples represented the same race, which would be a highly unreasonable result. The same will be found in a similar comparison of another pair of samples drawn from any other two widely divergent populations, but the incidence of distinguishing and non-distinguishing characters will be different. The inter-racial correlations between the characters believed to be of greatest racial significance are usually not high, and pairs of such characters may be found which are quite uncorrelated interracially. This observed state of affairs emphasizes the essential need, which is often not appreciated, for basing racial classification on the evidence provided by a considerable number of characters. It is usually found that the results become more reasonable according as the number of characters, considered in conjunction, on which they are based is increased." †

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\*Stevenson, P. H., Collected Anthropometric Data on the Chinese. *China Medical Journal*, Vol. 39, No. 10, 1925.

† Morant, G. M., *A Biometricians View of Race in Man*, Man, 1934, 126.