

# ANNOTATIONS

## SELECTIVE MIGRATION<sup>1</sup>

THERE is abundant evidence that internal migration has had a marked effect in redistributing population. How far this spatial rearrangement has resulted in a qualitative sifting has, up to the present, been less clearly demonstrated. Lack of clear-cut evidence has not, however, operated as a check upon speculation about selective migration. Examination of the literature reveals four apparently conflicting hypotheses as to the direction of this selection, in so far as it concerns cityward migration from rural areas:

- (1) Cityward migrants are selected from the superior elements of the parent population;
- (2) Cityward migrants are selected from the inferior elements;
- (3) Cityward migrants are selected from the extremes, i.e., both the superior and the inferior elements; and
- (4) Cityward migrants represent a random selection of the parent population.

If we allow a certain latitude in the definition of superiority and inferiority, we can find some empirical evidence apparently favoring each of these hypotheses in turn. In order to cover a wide field in a short time, let us arbitrarily consider some of the evidence on selection of the physically fit as bearing on the superiority hypothesis, on selection of the mentally ill as bearing on the inferiority hypothesis, on occupational selection as bearing on the extremes hypothesis, and on intelligence selection as bearing on the chance hypothesis.

The four most adequate studies of the selection of the physically fit are

<sup>1</sup> Based on a report prepared by the author for the Committee on Migration Differentials and published in August, 1938, as Bulletin 43, Social Science Research Council, New York.

based on differential mortality. Two of these studies are by A. B. Hill<sup>2</sup> with English data, one by Dorn<sup>3</sup> with Ohio data, and one by E. P. Hutchinson<sup>4</sup> with Swedish data. Hill and Dorn both proceeded on the assumption that migration to the cities is selective of young adults, and within these young adult age groups, of females. Age and sex specific death rates for rural areas, which had lost by migration, were then compared with similar rates for urban areas, which had gained by migration. The observed differential for the age-selected groups favored urban areas, in general, and especially females in urban areas, thus leading to the inference that at least part of this differential could be attributed to selective migration, and that therefore migrants to the cities represented, on the average, better physical risks than the residual population in rural areas. Both Hill and Dorn were careful to point out the indirect nature of this evidence and the impossibility of isolating migration from other important factors. In an attempt to throw further light on this hypothesis, Hill compared the same areas during periods of large and small net migration, and also correlated net migration with death rates for various areas. With the slackening of migration (or, more precisely, the diminution of net migration) the earlier observed differential tended to disappear for males, and actually to reverse for females. There being no evidence in favor of alternative hypotheses, one bearing on immunization, the other on occupational-environmental risks, Hill concluded that this situation could be accounted for by the slackening of migration and possibly by a change in the type of migrant, and that migration when extensive had been selective of the better physical risks. His correlation analysis further favored his hypothesis, since death rates were consistently negatively correlated with net migration. Hutchinson was able to control his variables better than either Hill or Dorn by dividing the Stockholm population dying from tuberculosis into natives and non-natives of the City for two years immediately following the 1920 census, correcting for post-censal change of residence, and relating these deaths by age to the appropriate census population bases. The observed differential was uni-

<sup>2</sup> Hill, A. B.: *Internal Migration and its Effects upon the Death-Rates: With Special Reference to the County of Essex*. London, Medical Research Council Special Report Series No. 95, 1925; also *The Recent Trend in England and Wales of Mortality from Phthisis at Young Adult Ages*. *Journal of the Royal Statistical Society*, 1936, Part II, xcix, pp. 247-296.

<sup>3</sup> Dorn, Harold F.: *The Effect of Rural-Urban Migration upon Death-Rates*. *Population*, November, 1934, i, pp. 95-114.

<sup>4</sup> Hutchinson, E. P.: *Internal Migration and Tuberculosis Mortality in Sweden*. *American Sociological Review*, April, 1936, i, pp. 273-285.

formly in favor of the residents born elsewhere than in Stockholm, that is, of migrants compared with presumable nonmigrants.

Regarding the selection of the "worse" elements, Malzberg's<sup>5</sup> studies of insanity may be cited, although they are concerned with interstate rather than cityward migration. These studies were based on rates of commitment to mental hospitals in New York State of native whites and of native Negroes born in New York and born elsewhere. The observed differential was markedly in favor of the nonmigrant groups, and so large that the inference that age differences in the two groups (which could not be allowed for) could neither account for the whole of the differential nor possibly reverse it, seems not unreasonable. Malzberg did not interpret these results in terms of selection of the originally unfit, but in terms of the environmental strains concomitant with migration. These results cannot, however, be accepted without reservations, an important one being the possible selective commitment to mental hospitals.

Regarding the selection of the extremes, in cityward migration, the studies of Zimmerman, Gee, and others, on the occupational adjustments of migrants are often cited. Zimmerman<sup>6</sup> compared the occupational distribution of children of farmers who had migrated to the cities with that of members of the farm families who had migrated from cities to the country, and found the greatest net losses to the country among common laborers and the professional classes. One of Gee's studies<sup>7</sup> indicated relative depletion of the upper and lower classes compared with the middle class in a rural area. Bearing in mind that these studies are based on very small samples, that important variables such as length of settlement after migration, age, etc., are not controlled, that occupations and social class are loosely defined, that strictly comparable data for nonmigrants do not exist, these results can be taken only as suggestive of selection of the extremes.

Regarding chance selection, or absence of any positive or negative selection, Klineberg's<sup>8</sup> studies of the intelligence of Negro migrants are

<sup>5</sup> Malzberg, Benjamin: Migration and Mental Disease among Negroes in New York State. *American Journal of Physical Anthropology*, January-March, 1936, xxi, pp. 107-113; also Rates of Mental Disease among Certain Population Groups in New York State. *Journal of the American Statistical Association*, September, 1936, xxxi, pp. 545-548.

<sup>6</sup> Zimmerman, C. C.; Duncan, O. D.; and Frey, F. C.: The Migration to Towns and Cities, III. *American Journal of Sociology*, September, 1927, xxxiii, pp. 237-241.

<sup>7</sup> Gee, Wilson: A Qualitative Study of Rural Depopulation in a Single Township: 1900-1930. *American Journal of Sociology*, September, 1933, xxxix, pp. 210-221.

<sup>8</sup> Klineberg, Otto: NEGRO INTELLIGENCE AND SELECTIVE MIGRATION. New York, Columbia University Press, 1935.

technically superior to other studies bearing on this hypothesis. Dealing first with the school marks attained, and with the age-grade retardation of Negro children who had left Nashville, Birmingham, and Charleston for the North, in comparison with similar measures for nonmigrant children, and standardizing these measures so that temporal, regional, and grade comparisons were valid, Klineberg concluded that the migrant children formed "an average group, containing good, bad, and indifferent members of the community." There was, however, evidence of differences between the cities studied, and of improvement in quality over a period of time. Klineberg also tested the hypotheses that previously observed differentials in the intelligence as measured by intelligence tests of Northern Negroes and Southern Negroes, which favored the Northern, were a function of the superior Northern environment. To this end, an elaborate series of standardized intelligence tests was given to more than 3,000 children in the Harlem public schools, with age and sex held constant, and the groups were divided into migrants and nonmigrants, the migrants being subclassified by length of residence in New York. The consistency of the results led Klineberg to conclude that intelligence, as measured by the tests was not "selected" in the process of migration, but that it increased after settlement in a superior environment and that the "rise" in intelligence is roughly proportional to length of residence in the more favorable environment." In spite of its general excellence, several objections to this study must be noted briefly: As Klineberg points out, he was not dealing with the initiators of migrations, but with children who presumably went passively with their parents. It must further be noted that the absence of differentials was determined largely on the basis of medians, which are unaffected by extremes, and that differentials may be expected to manifest themselves particularly in the extremes, that some of his samples were very small, that the variability of the measuring instrument is not negligible, and finally that his detailed results suggest that selection may actually have occurred in certain communities.

We have, then, evidence of a sort that migration selects the better elements, the worse elements, both the better and the worse, and also that it is unselective. Even though we may decide that the evidence cited is tenuous, it is not improbable that selection does operate positively, negatively, and randomly, at different times, depending on a variety of factors that, up to the present, have not been adequately investigated.

In the first place, the possibility that any observed differential merely

reflects an underlying demographic selection must be taken into account, and the operation of migration as selective in terms of age, sex, and civil status needs to be investigated in a more direct way than has been possible with existing American and English data. In the second place, it should be remembered that migration streams are not one-directional from country to city, and that while the net result of two opposing currents may be of slight significance from the point of view of selection, the differential between the incoming and outgoing streams may result in a major selective redistribution. In the third place, country and city, or rural and urban, are oversimplified classes for determining differentials. Much more detailed subclassifications, based on sociological and economic criteria, are needed if selection is to be adequately determined. In the fourth place, temporal factors need to be better controlled, for it is evident that the strength of selection may vary with time and it may even happen that the direction of selection may be reversed. But not only should long time trends be taken into account but short time variations corresponding to the phases of the business cycle are important. It is highly probable that apparently conflicting selective tendencies observed by different investigators are due to fortuitous timing. In the fifth place, distance spanned in migrations should be viewed as a possible modifier of the strength of selection. Finally, selection cannot be clarified unless more care is taken to determine the stage in migration experience at which the observed differentials appeared: Are migrants already differentiated from the parent population at the time of migration; do they become differentiated in the process of migrating; or do they become differentiated in the process of assimilation or adjustment in a new environment?

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## A SOCIAL STUDY OF PITTSBURGH<sup>1</sup>

THIS book is a report of the most significant community study that has yet been made. The study, begun in 1934 and completed in 1936, was

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<sup>1</sup> Klein, Philip and collaborators: *A SOCIAL STUDY OF PITTSBURGH—Community Problems and Social Services of Allegheny County*. New York, Columbia University Press, 1938, 958 pp. \$4.75.