The Human Future

The human future and improvement of mankind depends not on race or color but on saving genes for superior ability wherever they are found.

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No one knows what capacities, physical, intellectual or emotional, may be needed to fill all the niches in our complex and changing civilization. Ask any dozen people and they might describe a number of ideal types, but would probably give little thought to the real and perfect man who would have to function in this. Would certainly be putting the cart before the horse. Nature did not work that way.

In the long time during which the first living beings evolved into the complexity of man, nature was simply selecting the various stocks which survived from one generation to another. Man survived in many different environments, and both physical qualities and intelligence were factors in his survival.

With the coming of a more civilized life, the relationship between ability and survival became less direct. Social and psychological factors began to influence size of family. The risk of death was affected more by occupation than by personal characteristics.

We do not know what was the course of evolution during this recent period but there is no evidence that, on the whole today, human stocks are either superior or inferior in their genetic makeup to the people of 10,000 years ago. What has been added has been a social inheritance so complex that man’s capacity to handle it is stretched to the limit. If man’s genetic constitution should now deteriorate, his future would be dark indeed.

The Shape of Society

Today in the United States over 97% of all children born alive to be 30 or older. Death is no longer selective with respect to differences in intelligence or personality. In a eugenically oriented society, selection for these qualities must be effected by the differences in size of family as between people of different kinds of intelligence and different personal qualities.

In general, it appears that, with the exception of certain sterility problems, differences in size of family are not much influenced by differences in health or other personal characteristics but result mainly from a great variety of economic, social and psychological pressures which influence the number of children different individuals will have.

The interest of eugenics is in how these influences affect the decisions of different types of couples as to the size of their families.

Under what circumstances do intelligent people have more children than the less intelligent? Are the reactions of racial minority groups different from those of the white majority? Should people belonging to minority races be treated as a group, or on an individual basis? Are the public’s views on race based on the facts?

To answer these questions we must first ask what race is, and how the races differ in socially significant attributes.

Changing Attitudes Toward Race

At the end of the 19th century the idea that there was a hierarchy of races was widely accepted by many in the upper classes of Europe and Great Britain. After the liberte and egalite of the French Revolution it was comfortable for the well-to-do to feel that they belonged to a superior race, with their position justified and secured by nature.

Early in the century the new science of human genetics made it suddenly and abundantly clear that biological inheritance is not a blend of the qualities of the father and mother but a recombination of the thousands of their genes passed on by inheritance.

Each gene contributes specific characteristics and is passed on separately in its individual entirety. One particular quality may be passed on through the mother, another through the father. This is as true of the genes which contribute to the development of intelligence and personality as it is of those which determine eye color.

Except for identical twins, no two individuals have a similar set of genes. That two people have the same genes for skin color does not mean that they have the same genes for blood group or intelligence, or for any other quality. People called of one race because they have the same color and physical proportions are found to differ among each other in almost every other characteristic.

Race Ideas Resurrected

Following on this new and objective knowledge, unscientific doctrines of race superiorities appeared to be dying out. But quite recently the doctrine and even direct quotes from Hitlerian pseudoscientists have been resurrected to serve the cause of segregation.

Pamphlets have been widely distributed in the United States and even in the schools in some areas of the southern states to impose on the uninformed a quite distorted picture of the scientific thinking of today regarding racial differences.

Human beings have a deep emotional interest in their own kind. We tend to dislike people who are different in features, color or behavior. Huck Finn and Jim the runaway slave had a long discussion as to whether the two Frenchmen were people. It was decided that they were not, since Huck and Jim could neither understand them nor be understood.

Any of us, however generous our natures, who have ever associated with people entirely lacking in education, or with people stricken by poverty or by disease, must admit, I think, that our pity is not unmixed with a sense of superiority. If the human spirit is thus so protective of itself, we must approach the scientific findings on race with a detachment and objectivity which will tax our power.

Scientific Findings on Race

The first classifications of the races of man were made from visual observations of color and physical form. By the 19th century these were being supplemented by more careful measurements of physical characteristics and pigmentation.

Scientists reached general agreement on a broad division of most men into three main groups of races, Mongolian, Negro and white, or Caucasian. Theories were evolved to account for racial differences. Some held that inheritance was by “blood” and that a mixture of bloods “diluted” the strain, which was then no longer “pure.”

With the turn of the 20th century theories about race began to be tested against scientific facts developed by anthropologists in the field and by the new sciences of genetics and psychology. Today there is general agreement among scientists on a number of findings about race, some in
rather startling contrast to earlier theories.

The elaboration of these findings is be-
yond the scope of this article or the com-
petence of its author. For their significance
 to the progress of eugenics we need only
 list and briefly summarize those particu-
larly related to our subject.

**Differences Within Races Greater**

Differences within races are greater than
average differences between races for many
important characteristics.

The major races and the subgroups into
which they are sometimes broken down are
not composed of individuals all of whom
are alike.

Except for general similarities in color
and form of face and body, which are their
so-called racial characteristics, individuals
may and generally do differ widely, even
in their physical characteristics, while showing
every sort of variation in intelligence and
personal qualities. And on the borders of
every race there are individuals whose par-
ticular assignment is doubtful.

**No Superior Races**

There is no scientific evidence for "su-
peior" races.

Over the long past the physical differ-
ences between the races must have borne
some relation to the various environments
in which the differentiation took place. But
today it is hard to prove that the dif-
ferences are suited to particular environ-
ments, except in the case of some specialized
group like the Eskimo or the differences
between white and Negro in adaptation to
moist heat and cold.

All races produce individuals differing
widely in vitality, longevity, athletic ability
and endurance, with almost no measurable
differences in the average between differ-
ent races.

In test intelligence and personal traits,
development of which are greatly affected
by even small differentials in the environ-
ment, the average differences are no greater
than could be accounted for by known
differences in the environment.

**No Pure Races**

Studies in human genetics indicate no
pure races. Genes for various important
characteristics are found in different fre-
cuencies in populations all over the world.

The genes which determine the inher-
tance of blood groups and blood antigens
furnish an excellent example of the diversity
within each race. The different blood groups
are inherited as separate entities. The genes
for the four best known groups, A, B, AB
and O, are widely scattered through all the
major races. Yet type A is dangerous anti-
pathetic to type B and vice versa. A white
man of type A will be killed by a trans-
fusion of B blood from another white man
but is benefited by a transfusion of A blood
from a Negro just as much as by the A
blood of a white man.

**No More Primitive Race**

Of the major races, none is more "primi-
tive" than another. "Primitive" characteris-
tics are about equally scattered among
the major racial groups.

The thin lips of the white race, for in-
stance, are simian and compare to the
full nonominate lips of the Negro. But the
Negro has a fl ater, broad more simian nose
compared to the thin nonominate nose of
the white.

The list of such comparisons can be ex-
tended almost indefinitely. They show dif-
f erences between races, but do not give
 evidence on evolutionary "superiority."

Hereditary defect and susceptibility to
disease cannot be blamed on race as such.

Genetic defects are the results of muta-
tions, and the races do not differ in the
rules which govern their distribution. A
high incidence of a defect in small isolated
communities cannot be assigned to race
but to conditions which have brought about
and maintained a high concentration of
defect in a particular locality.

**No Race More Intelligent**

There is controversy on "racial intelli-
gence."

When people speak of one race being
"more intelligent" than another they are
usually implying that the difference in intel-
ligence is due to a difference in the genetic
or hereditary quality of the different races.
They are thinking of a sort of "racial intelli-
gence" as though intelligence was the prod-
uct of some inner force. But intelligence
develops only in a given environment.

A child kept from all human contacts
 grows up wholly disoriented and unable to
 take any intelligent part. Given superior
educational environments, children average
better intelligence than their friends with
less education.

There are differences in the hereditary
capacity for developing intelligence, but in
the process of development heredity and
environment are almost inextricably inter-
twined.

Identical twins have exactly the same
heredity. By studying identical twins sepa-
rated in early infancy and given different
kinds of homes and different amounts of
education, we find that test intelligence is
directly related to extent of education and
the twins may differ to a marked extent if
their education has been different. But in
a closely similar educational environment
the tested intelligence of identical twins is
usually extraordinarily alike, while non-
twin brothers in the same environment
show marked differences in test intelligence.

Such studies, give evidence that individ-
uals differ in genetic capacity for intelli-
gence but give almost no information on
whether the genetic difference or the en-
vironmental differences or a combination
of both are responsible for the differences
between any particular two individuals.

Races are composed of great numbers
of individuals, each differing from the next
in genetic capacities and in the environment
in which he has grown up.

To measure these individual differ-
ces and then get an average genetic ca-
pacity for a race as a whole would be of
course an impossible task.

The very nature of intelligence tests
makes them of little value for racial com-
parisons, because a test developed on one
race may not touch the experience of an-
other. You cannot test the intelligence of
a farm boy by asking him the questions
on the subway nor that of a city boy by
asking him which end of a cow gets up first.

Both inbreeding within small isolated
groups and outbreeding or race mixture
have been essential factors in the evolution
of man.

From the earliest times in human history,
migrations, wars or even sometimes tribal
customs have made for the mixture of dif-
ferent breeds. Recombination of hereditary
variations derived from many different an-
cestral stocks is a major factor in the physi-
cal variety of individuals within every race.

Scientific studies on race crossing do not
indicate that it necessarily causes deteriora-
tion. The quality of the mixture seems to
depend on the quality of the individuals
involved, rather than of that of the races.

**Human Changes Rapid**

The evolution of man took a long time.
However, as he became established in all
his variety, changes in the proportion of the
different varieties could take place rapidly.

Whenever the environment changed in
such a way as to help or to hinder the sur-
ival of an existing characteristic, then the
proportion of people with that charac-
teristic could be changed within only a few
generations. The introduction of birth con-
trol is an example of how rapidly new
conditions can make themselves felt.

The first result of the introduction of
birth control in the United States was a
reduction of birth among the more edu-
cated people with no corresponding reduc-
tion among the poorer and less educated.

The differential between these groups
reached its peak during the 1930's. In a
1935 study of a national sample of white
women, the variations in general fertility
from the average of 100 were, for college
women, 69; for high-school women, 95; for
7th-8th grade graduates, 125; for those who
left school before the 7th grade, 146 (Kiser,
1942).

Many social scientists were concerned by
such differentials in births. Whatever their
genetic effect, they were a handicap to edu-
cation and social advance.

Since World War II there has been level-
ing off of these differentials in the white
population, with little change among non-
whites.

In 1960 a study was made of a national
sample of white and non-white women
age 18 to 39. For the college women in
the group the number of children expected
was 3 for the white mothers and only 2.4
for non-white mothers. But for the
mothers with only a grade school education,
the white women expected 3.7 children and
the non-white women 4.7.

Among the whites the large differentials
of 1935 were much reduced, but among the
non-whites they were larger than ever.

Since the educational levels of children
tend on the whole to follow the level of

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the parents, these differentials must be a serious handicap to educational advances.
The non-white population still showed the old differentials and to that extent, they are handicapped in their efforts to improve the education of their children.

Births High When Education Poor
With today's public health and medical services the death rate everywhere is low. However, where there is poverty and where standards of education are poor, the birth rate stays high.

Among Negroes in the past death rates were high and birth rates were reduced by sterility. Thus, the proportion of Negroes declined from 19.1% of the total population in 1790 to 14.1% in 1860; 11.6% in 1900, to a low of 9.7% in 1930; and rose to 10.6% in 1960, and is still rising.

Net rates of reproduction 1905-10 were 1,339 for whites, 1,529 for non-whites. For 1935, whites 958, non-whites 1,108; for 1956, whites 1,660, non-whites 2,178; and for 1960, whites 1,664, non-whites 2,693.

Even more important, competent Negro families with a better education are now having smaller families than the correspondingly educated whites, while the marginal Negroes have more children than the corresponding whites.

This would be a dangerous trend if it should continue for long. The least educated parents have in turn the least educated children, and our efforts towards a

higher level of education can be largely or wholly offset by such differentials in births.

Birth control and differences in education are not the only factors which can bring about rapid changes in racial qualities. Migration can be selective, wars can change the composition of the group or race. These factors are selective of particular types of individuals within the group.

We know that differences between individuals in intelligence and personality are greater than the actual differences between racial groups, and it seems likely that selective changes brought about by the environment may change the average qualities of a racial group more rapidly and more fundamentally than changes brought about by race mixture.

Every racial group has a certain proportion of genes for high ability; their frequency will increase or decline according to the reproductive rates of its able stocks.

The effects of race mixture will depend on which family stocks intermarry and on the conditions for survival.

The lesson of the last 30 years is that in a group in which the great majority have a good education, good economic conditions and access to effective methods of birth control, the able stocks survive in about as great a proportion as the less able, and the group as a whole will have a relatively low birth rate.

However, in a group of people, whatever their race, among whom the great majority have a poor education, poor economic conditions and limited access to birth control there will be a high birth rate, with the less able stocks surviving in greater proportion than the able stocks.

It appears that ever since World War II, Negroes as a group have been increasing in numbers more rapidly than the whites, with a probable trend during this period towards producing relatively fewer able individuals than whites.

This is the kind of dyogenic situation which Eugenics aims to remedy.

Road to Eugenic Improvement

Eugenics is not concerned with color of skin, or facial or bodily characteristics, unless it is shown that these features of man are related to his genetic capacity for socially valuable qualities, such as intelligence and character. Such a relationship has never been proved and theoretically is highly improbable.

Eugenics is not much concerned with the unsolved question of whether the proportion of hereditary ability is greater in one race than in another.

Eugenics is concerned with saving the genes for superior ability wherever they are found, and increasing their frequency. It would do this by a return to a process of selection, different in method but similar in results to the selection practiced in nature in the past, and just as unconscious.

Death Not Selective
Since the death rate is everywhere uniformly low and deaths are no longer selective according to ability, selection in man must be by variations in births. Voluntary decisions of parents as to size of family, made in their own interests, must be on the whole of a sort to favor the interests of society and for the improvement of the next generation. To further such a white code of selection, the social environment must meet the following conditions:

1. An adequate education for all. (Where there is little education, there is a high birth rate)
2. Effective birth control available to all. (Where effective birth control methods are not made available, there is a high birth rate)
3. An easy road to selective job placement. (Unless individuals find jobs for which they are actually fitted, there can be no selection for diverse abilities)
4. Finally, a balance of psychological, social and economic pressures and rewards which would tend towards larger families among able stocks in every occupational group. (Such pressures and rewards are already evident in our society; they need only wider application).

For a good many years we have been moving toward a form of society which meets these conditions for the white population. The results are evident in the trend to a reversal of educational and socio-economic birth differentials which has been taking place among white people since the war. But we have moved slowly if at all to meet these conditions in our Negro population.

Inadequate Education

The Negro does not receive an adequate education; he is not provided birth control services; he is kept out of a variety of "white" jobs even when he is obviously fitted for them; for economic and other reasons. He is often moved among his white neighbors and thus has fewer opportunities for assortative mating; and finally the balance of social pressures is such that the able couples find less reason to have large families than do the corresponding whites.

As a result, the Negro population is now increasing faster than the white and socio-

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economic birth differentials among Negroes are still dyagenic, as they were among whites 25 and more years ago.

Eugenics requires that the conditions necessary to an eugenically effective form of society be met for all people and races in the American melting pot.

We cannot afford for long to countenance environments in which job opportunities and education are not equally available, in which subservience is necessary for survival, or staying on relief is the only means of supporting one’s children.

Negroes, because of their numbers, have more to contribute towards increasing the frequency of genes for ability than any other group. It is up to us to provide conditions which will make this contribution possible.

Dr. Osborn is one of the leaders in the study of how biology, sociology and culture affect tomorrow’s human population. He resigned his position as corporation executive in 1930 and became research associate in anthropology at the American Museum of Natural History, New York. Dr. Osborn was a general in charge of troop information and education during World War II.


**Nature Note**

**Big, Bad Hailstones**

* THE AVERAGE hailstorm just taps on your window or the roof of your car for a while and then goes away. In Moradabad, India, however, a hailstorm in the spring of 1888 killed 230 people, and an additional 30 in surrounding areas. Many were wounded by the storm, which hurled lumps of ice “as large as cricket balls.”

A decade later, a storm in Missouri killed hundreds of small animals, and chunks of ice went entirely through the roofs of houses. One house was stripped bare of its board siding on one wall. Another house, built of second-rate lumber, had all the knots in the boards beaten out, leaving walls full of holes.

Crops, especially, are subject to damage from hail. In the years from 1944 to 1953, Kansas suffered over $100 million in losses, mostly in corn and wheat. On Aug. 18, 1925, one storm, in southeastern Iowa, caused over $5 million in damage, forcing many farmers to abandon their homes and seek other employment.

Needless to say, all hailstones are not little pellets. One of the largest fell in Troy, N. Y., in April of 1949. It measured about five inches on a side and weighed four and a half pounds.

Finally, the worst hailstorm in recent years was perhaps the worst of all time. On June 23, 1951, a portion of Kansas from Sedgwick County to Allen County was inundated with a storm that cost $14,340,000 worth of damage to crops, homes and other property. That is about $7.55 for every man, woman and child in the state at that time.

AERONAUTICS

**Plastic Plane Takes Off From Streams or Roads**

* A NEW ALL-PLASTIC airplane has been designed that can take off from narrow roads or even streams.

- Designed for the U.S. Navy as a counter-insurgency (COIN) aircraft, the plane has less than two-thirds the wingspan of the smallest military plane now in use. Thus, it can be handled on aircraft carriers and freighters without the need for folding wings.

- The amphibious craft is pushed, rather than pulled, by two propellers facing backwards from the tops of pylons mounted above the wing. It has a top speed of 275 knots, but more importantly, it can take off in a mere 500 feet, clearing a 50-foot obstacle at the end, while carrying a 1,300-pound payload.

- The overhead position of the propellers enables the underside of the wing to be used for any sort of armament or cargo. Tip tanks at the ends of the wing give the fiber glass reinforced plane great enough range to fly from California to Hawaii with a “sizable” payload.

- The design for the plane was submitted to the Navy as a counter-proposal to several metal planes. It was developed by Goodyear Aerospace Corporation, Akron, Ohio.