

# The Geography of INTELLECT



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**Nathaniel Weyl and Stefan Possony**

\$7.95

*"His form is ungainly—his intellect small—"*

*(So the Bellman would often remark)*

*"But his courage is perfect! And that, after all,*

*Is the thing that one needs with a Snark."*

—LEWIS CARROLL

Until the publication of the *The Geography of Intellect*, the study of human intelligence, its distribution and causes, has been confined to inaccessible scholars' journals. With the recent publication of related works by Carleton Coon, Ernst Mayr and others—dealing with the evolution of man and his various sub-groups—has come a rising popular interest in the findings of anthropological science.

*What has made man? Why do his civilizations rise and fall? How can we make certain that our current rate of material progress is maintained or increased, that we do not fall into the graveyard of civilizations wherein are buried Periclean Greece, Imperial Rome, Post-Inquisition Spain, Islamic civilization and the monstrous Nazi regime?*

The authors do not attempt solutions for the current problems faced by man's most precious resource of human intelligence; they merely indicate what those problems are and the direction in which they are leading us. In addition, they sketch a theory of history based on the factors that shape man's brainpower: e. g. climate, social and religious institutions, systems of government and beliefs, the leadership of scholarly elites, radiation, the effect of month of birth—all interwoven into the fascinating pattern of forces that creates human diversity and progress.

*Jacket design by Gordon Martin*

**THE  
GEOGRAPHY  
OF  
INTELLECT**

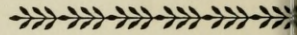
**by**  
**NATHANIEL WEYL**

*and*

**STEFAN T. POSSONY**

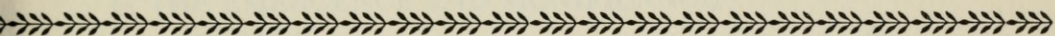
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# The Geography



HENRY REGNERY COMPANY

# of Intellect



*by*

NATHANIEL WEYL

*and*

STEFAN T. POSSONY



Chicago 1963

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## P R E F A C E

One of the most significant developments of the present century is the progress that has been made in disintegrating merely material barriers to human well-being. Virtually infinite energy resources are at present a technological possibility. As this possibility becomes a reality, energy can be directed at will to the synthesizing and shaping of structurals and foodstuffs. Barring a continued and indefinite population explosion, the problem of human want has become soluble.

The elimination of want presupposes, however, that the societies faced with the challenge have the requisite brain-power either to innovate in science and technology or else to apply the techniques which others have invented. The available evidence suggests that brain-power of this sort does not exist, either actually or potentially, in the requisite quantities among all nations, peoples and races.

The resource which seems most critically in short supply on a global scale is human intelligence, the capability of utilizing science and technology, organizing productive processes rationally, creating and maintaining those institutions vital to an orderly and dynamic society and sweeping aside those ideologies, superstitions, tabus and obsessions which serve as impediments to the attainment or preservation of modern civilization.

Needless to say, the presence of brain-power in a society is of little advantage if it is used improperly. A people which has the necessary mental resources, but which suffers from social institutions that bestow leadership on the mediocre, the incompetent and the non-rational, faces decay and disintegration.

As societies reach the peaks of civilization and material progress, they face the threat of application of a pseudoegalitarian ideology to political, social and economic life—in the interests of the *immediate* advantage of the masses who, for political reasons, are showered with the semblance of power and are told that if all men are equal in capacity, all should be equally rewarded. The resources of the society will be thus increasingly dedicated to the provision of *panem et circenses*—either in their Roman or their modern form. Simultaneously, excellence is downgraded and mediocrity must fill the resulting gap. As the spiritual and material rewards of the creative

element are whittled away, the yeast of the society is removed and stagnation results. As a supposed cure for this consequent lack of dynamism, even more drastic medication, based on ideological blueprints, is prescribed.

In recent centuries at least, the creative achievements of mankind have been concentrated in specific areas of the globe and have been primarily the work of a minority. The pre-eminently creative element has been the inhabitants of Europe west of the Vistula and north of the Apennines, together with their overseas descendants. Over millennia, these people were shaped by the stresses of cold and abrupt climatic change. To the extent that they were Protestants, they benefited from the biological stimulus of a fertile priesthood and the advantage of being recipients of refugees from political and religious persecutions aimed preferentially at the intellectual classes. In proportion to their numbers, the greatest contributions to the total intellectual life of the modern world seem to have been made by the Jews.

Discovery of the differences in intellectual potential of the various races, peoples and regional groupings of mankind is vital to any serious investigation of the future of the human race, or to any constructive effort toward social reform and human betterment. It may or may not be politically expedient for Western spokesmen at the United Nations to treat the races of man as "equal" in genetic resources, but science has no business joining in that pretense. Its obligation is to examine the facts with all the objectivity and lack of passion of which it is capable. It can no more honestly uphold ideological dogmas for reasons of expediency than Galileo could with good conscience deny that the earth moved.

We are concerned here with the way in which intellectually competent elements have been shaped in the history of mankind and with some of the generalities that can be derived from those processes. In these pages, we are not presenting any political, social or economic program for the United States in the 1960's. Nevertheless, certain political inferences follow from our findings and it seems desirable to state briefly at this point what we are and what we are not stating by implication.

The assertion that races, peoples and classes are unequally endowed genetically with mental resources in no way conflicts with the equal right of all mankind to freedom and justice. As Thomas Jefferson once remarked concerning the Negroes, "whatever be

their degree of talent it is no measure of their rights," adding, "Because Sir Isaac Newton was superior to others in understanding, he was not therefore lord of the person or property of others."<sup>1</sup> If we oppose the creed of *prima facie* equality of talent, and the resulting cult of mediocrity and deliberate destruction of elites, it is not due to any lack of concern for the welfare of the masses of mankind. On the contrary, the richness or poverty of their life will be largely determined by the presence or absence of creative minorities able to enrich mankind with spiritual insights, scientific discoveries, the wonders of art and the gifts of material well-being which make the enjoyment of leisure possible.<sup>2</sup> When the Nazis exterminated the Jews, they impoverished all of Europe. The Soviet policy of systematic *aristocracide*<sup>3</sup> liquidates most of the creative minority and thus condemns the masses to misrule by the brutish, insensitive, incompetent and stupid. The inciting of the Arab and Negro masses of Africa to race conflict against the white minority not only has resulted in the perpetration of unspeakable crimes against the only technologically and managerially capable element on that continent, but is condemning the Negro and Muslim masses to a future of chaos, havoc, hunger, savage dictatorship and regression from order and freedom.

In asserting that genetic factors play a major role in the rise and fall of civilizations, we are not inferentially denying that environmental influences are also present and important. The environmen-

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<sup>1</sup> Thomas Jefferson to Henri Gregoire, Washington, February 25, 1809. This is reproduced *inter alia* in *Basic Writings of Thomas Jefferson*, editor Philip Foner, (Garden City: Halcyon House, 1950), p. 682.

<sup>2</sup> In a contribution to the Summer 1961 issue of *Daedalus*, *Journal of the American Academy of Arts and Sciences*, devoted to "Evolution and Man's Progress," James F. Crow, Professor of Medical Genetics at the University of Wisconsin, made some pertinent comments on this point. In an article entitled "Mechanisms and Trends in Human Evolution," Crow stated that the experience of animal breeders suggests that it probably would "be easier, by selection, to change the intellectual or other aptitudes of the population than to change the incidence of disabling disease or sterility." Dr. Crow added: "Since society owes so much to a small minority of intellectual leaders, a change in the proportion of gifted children would probably confer a much larger benefit on society than would a corresponding increase in the population average. These potential leaders would probably produce enough change in cultural and other environmental influences to be worth considerably more than the contribution of their genotypes to the genetic average. It has frequently been suggested that when artificial insemination is used, because of sterility or genetic disease in the husband, the donors might be selected from men of outstanding intellectual or artistic achievement." *Daedalus*, *op. cit.*, 429-430.

<sup>3</sup> By this, we mean, not the destruction of the artificial aristocracies of birth, but the liquidation of the *aristoi* (that is to say, the best). We have in mind Thomas Jefferson's distinction between the traditional aristocracy and the "natural aristocracy of virtue and talents." v. Thomas Jefferson to John Adams, October 28, 1813, in Foner, *op. cit.*, pp. 714-715.

talist generally affirms that race differences in intelligence are *solely* due to differences in environment. The hereditarian takes the broader view that *both* genetic and environmental factors operate causally.

Our implied view of mankind's future is not one of dire pessimism or of passivity. The Western World has a moral and survival obligation to try to alleviate the lot of the hundreds of millions of human beings who live under conditions of virtual hopelessness, stultifying labor and the ever-present threat of hunger. Humanitarian considerations justify aid to all human beings in distress. When such economic aid is part of a long-range program designed to build viable, self-reliant, advancing societies, however, it is absolute folly to refuse to consider the human, as well as the material, potential of the countries or peoples to be assisted.

The Western World is becoming increasingly conscious of the threat of demographic explosion, of the headstrong advance in human numbers in areas so deficient in material resources that their present populations live like animals. We would suggest, in addition, that the population explosion has both a quantitative and a qualitative dimension. We are suffering not merely from overpopulation in absolute terms, as far as the majority of mankind is concerned, but from the rampant reproduction of groups mentally incompetent to utilize the potentialities of their habitat, unable to make bricks without straw, increasingly subject to the danger of becoming economically submarginal as the productive system becomes more complex and dispenses with human muscle in the search for brainpower.

Man's material progress has been enormous in the last few centuries and the rate of scientific discovery and technological advance seems to be exponential in relation to chronological time. Yet, man's genetic capacity has not only failed to grow in relation to this challenge, but, rather, has probably deteriorated. Thus, Ernst Mayr, Professor of Zoology at Harvard University, has pointed out that brain size increased from 650 cc. to 1,500 cc. during the 300,000 to 400,000 years separating *Australopithecus* from modern man. "This was an extraordinarily rapid rate of brain evolution, but then the curve suddenly flattened out and in the last 50,000 to 100,000 years, there has been no increase in brain size at all."<sup>4</sup> Professor Mayr has dwelt on the current genetic crisis of man in his recently published

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<sup>4</sup> *Daedalus*, *ibid.*, 467.

*Animal Species and Evolution*, wherein he states that, "The denial of genetic difference among human beings with respect to intellectual and character traits is based on fallacy. This ideology is particularly pernicious when applied to education. The widely preached principle of 'the same education for everybody' denies equal opportunities because differently endowed pupils would undoubtedly obtain different kinds, rates, and degrees of education if truly given 'equal opportunities.' Educational identicism is antidemocratic. According to the concepts of true democracy, as developed in the period of the Enlightenment, the free spirits of young men and women should not be shackled by the leveling restrictions of a false identicism. Every school class is a variable population and true equality [of opportunity] for the pupils can be achieved only by making allowance for these differences, not by suppressing them."<sup>5</sup> It thus seems obvious that one of the great challenges for the coming generation will be to devise means for the progressive improvement in man's mental and moral endowment which are consistent with the principles of a democratic and free society. Perhaps the voluntary artificial insemination of women with the sperm of geniuses (as has been proposed by Professor H. J. Muller of Indiana University and others) will eventually arrest the genetic impoverishment of the human race.

We wish to acknowledge the invaluable assistance of Professor Paul M. A. Linebarger of the School of Advanced International Studies at Johns Hopkins University, who worked on the manuscript at a very early stage, and of Professor Robert Gayre of Gayre and Nigg, editor of *The Mankind Quarterly*, for generously permitting us to quote extensively from a letter to one of the authors.

Our wives, Regina Possony and Sylvia Castleton Weyl, have been generous with research and valuable critical comments. None of the people mentioned is responsible for the book, for its errors or for its ideas and conclusions.

Nathaniel Weyl

Delray Beach, Fla.

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Stanford, Cal.

July 22, 1963

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<sup>5</sup> Ernst Mayr, *Animal Species and Evolution* (Cambridge: Harvard University Press, 1963), p. 649.

The Study of Intellect

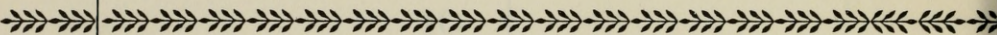
in History

THE  
GEOGRAPHY  
OF  
INTELLECT

The word now has a special meaning, and is used to denote the study of the geographical distribution of the various sciences and peoples of civilized nations. It is the study of the geographical distribution of the various sciences and peoples of civilized nations. It is the study of the geographical distribution of the various sciences and peoples of civilized nations.

It is a study of the geographical distribution of the various sciences and peoples of civilized nations. It is a study of the geographical distribution of the various sciences and peoples of civilized nations. It is a study of the geographical distribution of the various sciences and peoples of civilized nations.

All the early civilizations were founded in a study of geography. It was a study of the geographical distribution of the various sciences and peoples of civilized nations. It was a study of the geographical distribution of the various sciences and peoples of civilized nations. It was a study of the geographical distribution of the various sciences and peoples of civilized nations.



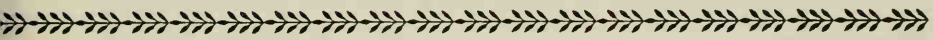
*“The wise man has his eyes in his head, but the  
fool walks in darkness; and yet I perceived that  
one fate comes to all of them.”*

—ECCLESIASTES, 2:12 (RSV)



I

# The Study of Intellect in History



**T**HE SUBJECT of this book is the distribution of human intellectual ability in space and in time. This is a topic of vital importance to the survival of a civilization based upon the freedom of the individual, yet it is one to which very little serious and systematic thought has been directed. Hence, there are both major gaps in our knowledge and areas which have been rendered virtually impassable by jungles of prejudice and the ideological fanaticism of both the left and right.

Ethnopsychology, the study of the mental attributes of the various races and peoples of mankind, was one of the first humanist subjects to engage the attention of Western thinkers. This early start did not give it any permanent lead over the other branches of the social sciences; on the contrary, it fell miserably behind them.

All the early civilizations were infected, to a lesser or greater extent, by ethnocentric attitudes (attitudes in which one's own group is the center of everything, and all others are scaled and rated with reference to it). Precisely because it is different and often incomprehensible, the very language of foreigners frequently evoked derision or anger. Thus, according to The Oxford English Dictionary, the Greek word *barbaros* meant, not only "non-Hellenic," but "uncivilized, rude, savage." The Sanskrit word *barbara* from which it is derived meant not only non-Aryan, but also stammering. Similarly,



the Russian word for *German* has the same root as the word for *deaf* or *mute*. It is sometimes said that *barbaros* derived from *baa, baa* and certainly to many peoples the talk of foreigners could be equated to sheep talk. Today, *ethnocentrifugal* forces are at least equally potent emotional factors distorting objectivity. These are prevalent primarily among the more civilized and cultivated peoples—those whose anxiety not to seem parochial makes them prone to deprecate the accomplishments of their own group and to magnify the accomplishments of alien and semi-civilized elements into imaginary mountains. The ethnocentrifugal attitude, when assumed by modern Western man, makes the absolute equality of all peoples in innate intellectual endowments not a question for science to answer, but an article of faith and an ideological imperative.

### Hippocrates

From the time of the Greeks to the present, intelligent men have taken the differences between themselves and foreigners as emotionally and morally neutral and have attempted to describe the character, temperament and intelligence of each alien group dispassionately. Xenophon, Thucydides and other Greek thinkers were concerned, as are thoughtful men today, with finding the extent to which mental differences between peoples are hereditary or environmental in origin. The Greeks developed speculative theories of the causes of these mental differences. Lacking the tools to measure and define them, they relied on observation, generalization and non-quantitative description.

Among the Greeks, Hippocrates is outstanding for his daring speculations concerning the relationship between climate and racial character. In his work, *On Airs, Waters and Places*, the father of modern medicine wrote:

“We have now discussed the organic and structural differences between the populations of Asia and Europe, but we have still to consider the problem of why the Asiatics are of a less warlike and a more tame disposition than the Europeans. The deficiency of spirit and courage observable in the human inhabitants of Asia has for its principal cause the low margin of seasonal variability in the temperature of that continent, which is approximately stable throughout the year. Such a climate does not produce those mental shocks and violent bodily dislocations which would naturally render the temperament ferocious and introduce a stronger current of irrationality

and passion than would be the case under stable conditions. *It is invariably changes that stimulate the human mind and that prevent it from remaining passive.*"<sup>1</sup>

The perceptiveness of these statements of Hippocrates is remarkable when one considers that they were made 26 centuries ago at a time when scientific resources were scanty. Hippocrates, in fact, seems to anticipate the current theory of the relationship between intellectuality and cyclonic storms, developed by the late Professor Ellsworth Huntington of Yale. The generalization that Asians are less spirited and warlike than Europeans would be echoed by Hegel two thousand years later, would form a significant element in Spengler's portrait of the *fellaheen* society and would be re-echoed by contemporary analysts of the character structure of the passively fatalistic peoples of Islam.

The Mongols, who were perhaps the most warlike people who ever lived, were, of course, Asians, but they came from a part of Asia that was unknown to Hippocrates, from a region of the most violent contrasts of temperature. It was precisely these contrasts, according to the physician-philosopher, that stimulated "spirit and courage."

Hippocrates added that climate shapes man's physical structure, bodily proportions and character. He thought that the inhabitants of "mountainous, rocky, well-watered country at a high altitude, where the margin of seasonal climatic variation is wide, will tend to have large bodies constitutionally adapted for courage and endurance, and in such natures there will be a considerable element of brutality."<sup>2</sup> (These high-altitude peoples, as we now know, adapt to the rarefied air by developing large lungs. Hence, the denizens of such ranges as the Himalayas, the Andes and the Alps are generally deep-chested and quite short.)

He seems to have realized that stagnant waters cause malaria and that malaria destroys the ability of man to fight, for he wrote: "If there are rivers in the country which drain it of the stagnant water and the rainfall, the population will be healthy and in good condition; while, if there are no rivers and if their drinking water comes from stagnant lakes and marshes, their bodies will run to spleen and incline to be pot-bellied."<sup>3</sup>

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<sup>1</sup> Translated by Arnold Toynbee and reproduced in his *Greek Historical Thought* (New York: New American Library, 1952), pp. 143-4. Our emphasis, N.W. and S.P.

<sup>2</sup> Toynbee, *ibid.*, p. 145.

<sup>3</sup> *Ibid.*

On the Greek side, Strabo, Plato, Aristotle, Herodotus and others and, on the Chinese side, the vast and mysterious compilation of the *Shan Hi Kuan* provided ample evidence that it was possible to describe the distinctive characteristics, not merely of the geographical regions of the then-known earth, but of the minds and psychic traits of the people who inhabited them. Both the Chinese and the Greek writers on the subject habitually described ethnic differences in terms of such adjectives as excitable, melancholic, voluptuous, fearful, disciplined, avaricious, fond of the sea, greedy or generous.

Judgments of this sort are obviously not scientific, but it does not follow that they are necessarily arbitrary or irrational. They are the qualitative verdicts of philosophers, scientists, statesmen and explorers—men trained in weighing evidence and seeking objective conclusions. Many of their descriptions of the psychic qualities and temperaments of the various races of mankind have stood up rather well over the centuries despite the vast and revolutionary changes that have occurred in the human condition:

#### Charles de Montesquieu

In Europe, the Middle Ages brought no improvement over antiquity. Marco Polo saw much more of the world than Hippocrates, Herodotus, Tacitus and Plutarch, but his judgments concerning the character and mentality of peoples were considerably shallower.

Charles de Montesquieu marks the close of an era of more or less aimless observations and speculations, and the dawn of a much more modern approach. His great work, *The Spirit of the Laws*, is a treasure house of insights and challenging theories. In Book XI of that work and in his unpublished *Essai sur les causes qui peuvent affecter les esprits et les caractères*, Montesquieu outlined challenging areas for future intellectual exploration, some of which have not even yet been charted. Like Hippocrates, he believed that climate alone does not shape man, but that social institutions and climate act jointly on character.

“Mankind are influenced by various causes: by the climate, by the religion, by the laws, by the maxims of government, by precedents, morals and customs; whence is formed a general spirit of nations.

“In proportion as, in every country, any one of these causes acts with more force, the others in the same degree are weakened. Nature and the climate rule almost alone over the savages; customs govern the Chinese; the laws tyrannize in Japan; morals had formerly all

their influence at Sparta; maxims of government and the ancient simplicity of manners once prevailed at Rome.”<sup>4</sup>

Montesquieu was not merely concerned with pithy, epigrammatic comments on the qualities of nations, but with tracing the relationships between the physical environment of peoples, their national characters and their political and social institutions. “The customs of an enslaved people,” he wrote, “are part of their servitude, those of a free people are part of their liberty.” In discussing slavery, which he abhorred, Montesquieu observed that “the Muscovites sell themselves very readily; their reason for it is evident—their liberty is not worth keeping.”<sup>5</sup> One of the origins of slavery was climatic conditions:

“There are countries where the excess of heat enervates the body and renders men so slothful and dispirited that nothing but the fear of chastisement can oblige them to perform any laborious duty: slavery is there more reconcilable to reason; and the master being as lazy with respect to his sovereign as his slave is with regard to him, this adds a political to a civil slavery.”<sup>6</sup> Montesquieu rejected Aristotle’s doctrine of a natural slavery, based on the unfitness of various groups of men to be anything more than hands directed by the will and mind of another, with the sole qualification that the Negroes may fall into that category.<sup>7</sup>

Montesquieu was a shrewd observer whose findings included both remarkable predictions and egregious errors. He predicted that China would not become Christianized. He was also one of the forerunners of the theory of Nordic racial superiority which has had such fateful consequences in the history of the modern world.

## David Hume

Also writing in the pivotal 18th century, David Hume believed that national character was determined almost exclusively by “moral” causes. He argued that the Chinese character structure was uniform despite the enormous variations in physical conditions and that this was due to a single, authoritarian government, which for centuries had imposed its institutions upon the people. On the other hand, the peoples of small, neighboring European countries had radically different temperaments.

<sup>4</sup> *The Spirit of the Laws* (New York: Hafner, 1949), pp. 293-4.

<sup>5</sup> *Ibid.*, p. 239.

<sup>6</sup> *Ibid.*, p. 240.

<sup>7</sup> *Ibid.*

"And indeed," wrote Hume, "there is some reason to think that all the nations which live beyond the polar circles or between the tropics, are inferior to the rest of the species, and are incapable of all the higher attainments of the mind."<sup>8</sup> The inferiority of the African Negro, Hume thought, was a fact abundantly proved by history.<sup>9</sup>

### Thomas Jefferson

Washington, Adams, Hamilton, Jefferson, Madison and most of the other leaders of the American Revolution believed that men and races were fundamentally unequal in capacity. Jefferson's secret hope was that the "natural aristocracy among men," which was "the most precious gift of nature, for the instruction, the trusts, and government of society," would rule in the American republic.<sup>10</sup> Despite the propaganda of a tiny abolitionist minority, it was perfectly clear that the authors of the Declaration of Independence did not have Negroes and Indians in mind when they wrote about man's "unalienable rights" and "the blessings of liberty," any more than Madison was considering these racial elements as part of American society when he penned the Bill of Rights.

In his *Notes on Virginia*, Jefferson attempted a comprehensive biological, emotional and psychological analysis of the Negro, which proved to be a landmark in the investigation of race psychology. In his use of physiological hypotheses and in his historic comparison of the Negro's response to the challenge of slavery with that of the bondsmen of Rome, the Virginia philosopher was far ahead of his time. His conclusion was:

"To our reproach it must be said, that though for a century and a

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<sup>8</sup> David Hume, *Essays* (London: Ward, Lock & Co.), *Essay xx: Of National Characters*, p. 122.

<sup>9</sup> "I am apt to suspect the Negroes to be naturally inferior to the Whites. There scarcely ever was a civilized nation of that complexion, nor even any individual eminent either in action or speculation. No ingenious manufacturers amongst them, no arts, no sciences. On the other hand, the most rude and barbarous of the Whites, such as the ancient Germans, the present Tartars, have still something eminent about them, in their valor, form of government or some other particular. Such a uniform and constant difference could not happen, in so many countries and ages, if nature had not made an original distinction between these breeds of men. Not to mention our colonies, there are Negro slaves dispersed all over Europe, of whom none ever discovered any symptoms of ingenuity, though low people, without education, will start up amongst us, and distinguish themselves in every profession. In Jamaica, indeed, they talk of one Negro as a man of parts and learning; but it is likely he is admired for slender accomplishments, like a parrot who speaks a few words plainly." *Ibid.*, 123 fn.

<sup>10</sup> Thomas Jefferson to John Adams, October 28, 1813. See *Basic Writings of Thomas Jefferson*, Philip S. Foner, ed. (Garden City: Halcyon House, 1914), p. 715.

half we have had under our eyes the races of black and of red men, they have never yet been viewed by us as subjects of natural history. I advance it, therefore, as a suspicion only, that the blacks, whether originally a distinct race, or made distinct by time and circumstances, are inferior to the whites in the endowments both of body and mind. *It is not against experience to suppose that different species of the same genus, or varieties of the same species, may possess different qualifications* [Italics added]. Will not a lover of natural history then, one who views the gradations in all the races of animals with the eye of philosophy, excuse an effort to keep those in the department of man as distinct as nature has formed them? This unfortunate difference of colour, and perhaps of faculty, is a powerful obstacle to the emancipation of these people. . . . Among the Romans, emancipation required but one effort. The slave, when made free, might mix with, without staining the blood of his master. But with us a second is necessary, unknown to history. When freed, he is to be removed beyond the reach of mixture."<sup>11</sup>

### The Materialists

During the first half of the 19th century, a few bold thinkers attempted to found a psychology of races and peoples on a materialistic basis. Ludwig Feuerbach (1804-72), one of the young Hegelians who influenced Karl Marx and whom Marx later denounced, advanced the somewhat crude hypothesis: "*Der Mensch ist, was er isst*" (Man is what he eats). In elaborating this theory, he attributed the supposed lack of pugnacity of the Irish to their potato diet!

A far more significant figure was the chess genius, Henry Thomas Buckle, whose untimely death in 1862 at the age of 41 came when he had finished only the first two volumes of his impressive *Introduction to the History of Civilization in England*. Buckle believed that all previous historians had concentrated on secondary matters and had overlooked those massive social phenomena which define and reveal the character of a people. He considered that the rise and fall of civilizations was determined by inexorable material forces and

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<sup>11</sup> In other words, deported. See Foner, *ibid.*, pp. 148-49. Throughout their lives, Jefferson and Madison urged emancipation provided the slaves were immediately deported to territories not part of future American territorial expansion. Lincoln held the same views and took practical steps to get free Negroes to colonize Haiti. (See Carl Sandburg, *Abraham Lincoln: The Prairie Years and the War Years* [New York: Harcourt, Brace & Co., 1954], pp. 316-17; also Nathaniel Weyl, *The Negro in American Civilization* [Washington, D.C.: Public Affairs Press, 1960], pp. 75-78.)

that the laws of history and of ethnopsychology could be ascertained by the inductive method. In his system, climate, soil, food and the aspects of nature were the causes of human mental progress: the first three by determining the production and distribution of wealth; the fourth by its direct impact on the mind.

Where natural phenomena are sublime and terrible, Buckle argued, the imagination is stimulated, but the power of reason is numbed. Where the aspect of nature is mild, even and moderate, men develop rational understanding at the expense of imagination. Thus, to Buckle, the exuberant superstitions of Hindu civilization were the natural result of a physical environment which inspired awe and dread. In the Greek landscape, by contrast, man was able to look at nature without terror and seek to understand her.

Buckle believed that Europe was the only continent in which man had proved himself stronger than nature, had subdued her to his service and hence had created a civilization which was dynamic, progressive and universal. In the Buckle scheme of things, skepticism was the dominant trait of civilization, superstition that of uncivilized societies.

### **Aryan Racism**

A lesser, but unfortunately far more influential, thinker was Count Joseph Arthur de Gobineau, a French diplomat who founded a whole racist philosophy of history with the publication in 1853-55 of his *Essai sur l'inégalité des races humaines*. "The history of mankind," Gobineau asserted, "proves that the destinies of peoples are governed by racial law."<sup>12</sup>

Gobineau postulated that the three races—white, yellow and black—were the descendants of the three sons of Noah—Shem, Ham and Japheth. Concerning this premise, Gobineau's fellow racist and anti-Semite, Houston Stewart Chamberlain, commented:

"Such a gaping void in capacity of judgment in the author suffices, in spite of all his documentary support, to relegate his work to the hybrid class of scientific phantasmagorias. With this is connected Gobineau's further fantastic idea, that the originally 'pure' noble races crossed with each other in the course of history, and with every crossing became irrevocably less pure and less noble. From this we

<sup>12</sup> Quoted by Howard M. Sachar, *The Course of Modern Jewish History* (Cleveland: World, 1958), p. 233.

must of necessity derive a hopelessly pessimistic view of the future of the human race."<sup>13</sup>

The Semitic languages had been classified in the previous century. A generation before the appearance of Gobineau's work, Franz Bopp had traced Romance, Germanic and Slavic tongues to a common Aryan source. From this, other writers invented an Aryan race. While this confused linguistic with ethnic identity, it is clear that the Aryan languages arose very early in time, probably within the Nordic group, spreading to both Nordic and non-Nordic elements. The identification of race and language was an egregious error, but the assumption that there is no relationship between the two is almost equally erroneous.

Gobineau not only perpetuated this error, but made it the cornerstone of civilization and history. He believed that the Aryans, whether in India, Persia, Egypt, Mesopotamia, the Graeco-Roman civilization area or modern Europe, were invariably the innovating, constructive, psychically powerful, dominant groups. The Aryans encountered and mastered the lesser breeds, thus creating civilizations. Then, the latter became numerically preponderant and corrupted the master race with their inferior blood. This process was well advanced in Europe, Gobineau thought, and he considered the French Revolution of 1789-96 to have been not merely the triumph of social *sans culottes*, but simultaneously of racially mixed and debased, non-Aryan elements. Gobineau believed that miscegenation had advanced to such an extent that only Central Europe could claim to be Aryan in his time. From this, it was but a short step to the doctrine of Teutonic superiority, a step which many of the most eminent German professors eagerly took during the era between Bismarckian nationalism and Nazi cataclysm.

Gobineau believed that the yellow races were mediocre and that the Negroes formed the lowest stratum of mankind and were mere creatures of animal appetite. He accused the Jews of repeatedly degrading the Aryans by injecting Negro blood into their veins. There are reasons to believe that Marx had read Gobineau and privately accepted his main theses. At least, Marx held in his correspondence that the Asiatics were outside civilization, that the Jews were tainted with, and historically carriers of, Negro blood, that the

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<sup>13</sup> Houston Stewart Chamberlain, *Foundations of the Nineteenth Century* (New York: John Lane, 1912), I, p. 263.



Negroes were infra-human and that race mixture between whites and Negroes produced undesirable and freakish types.

Contrary to popular belief, Gobineau did not originate the term *anti-Semitism*. This "distinction" belongs to Wilhelm Marr, the son of a Jewish actor, who published a scurrilous tract in 1879 which announced that the Jews were perpetually at war with the Germans, that the Jews were winning and that Jewry was plotting for world domination.<sup>14</sup>

Gobineau won more acclaim in pseudo-scientific than in scientific circles. In Germany, his ideas found an echo in the Aryanism of the historian, Leopold von Ranke, and in the anti-Semitism of Richard Wagner. The emigré Englishman, Houston Stewart Chamberlain, became the connecting link between Gobineau and the race doctrines of the Nazis. In his *Foundations of the Nineteenth Century*,<sup>15</sup> Chamberlain asserted that Jesus had been an Aryan, that the Jews had not written the Bible and that the historic mission of Jewry was to "produce a herd of pseudo-hebraic mestizos, a people beyond all doubt degenerate physically, mentally and morally."<sup>16</sup> The task of Germany was to prevent this, to impose the will of the master race on the world and to end the processes of miscegenation.

Even scholars of the stature of Max Scheler and Werner Sombart dabbled in a pseudo-scientific nationalist approach designed to inflate the German militaristic spirit. In *The Treason of the Intellectuals*, the French philosopher and scholar, Julien Benda, discussed the prostitution of history to nationalism, chauvinism and racism by German scholars. " 'A true German historian,' declares a German master, 'should especially tell those facts which conduce to the grandeur of Germany.' The same scholar praises Mommsen (who himself boasted of it) for having written a Roman history 'which becomes a history of Germany with Roman names.' Another (Treitschke) prided himself on his lack of 'that anemic objectivity which is contrary to the historical sense.' Another (Giesebrecht) teaches that: 'Science must not soar beyond the frontiers, but be national, be German.'"<sup>17</sup>

As Benda readily conceded, the intellectuals of French monarch-

<sup>14</sup> *Der Sieg des Judentums über das Germanentum*. See Howard M. Sachar, *op. cit.*, pp. 233-35, a valuable and unusually objective study.

<sup>15</sup> The original title was *Die Grundlagen des neunzehnten Jahrhunderts*.

<sup>16</sup> Quoted by Sachar, *op. cit.*, p. 235.

<sup>17</sup> Julien Benda, *The Treason of the Intellectuals*, in *The Intellectuals*, George B. de Huszar, ed. (Glencoe: Free Press, 1960), p. 223.

ism emulated their German masters in this odious perversion of truth to the interests of nationalist politics.

Jacob Burckhardt has written about the menace of the "terrible simplifiers." From the stupid, but comparatively innocent, exaggerations of World War I sprung the monstrous, antiscientific racist doctrines of German Nazism. From the beginning, the Nazis made an elaborate pretense of using scientific method. Not until the Nuremberg trials did the outside world realize the extent to which the Nazi leadership believed its own propaganda.<sup>18</sup>

In the United States, the sociologists influenced by Gobineau were considerably more moderate and rational than the German racists. The main concern of such American writers as Lothrop Stoddard<sup>19</sup> was that unrestricted immigration from southern and eastern Europe, coupled with miscegenation between Negroes and whites, would cause dangerous deterioration in the mental and moral qualities of the American people.

### Eurocentrism

The center of the stage soon moved to the philosophers of history. Since they were concerned with the structure of the creative process, they dealt of necessity with the leaven of civilization—with that element which Thomas Jefferson termed "the natural aristocracy of virtue and talents," which Arnold Toynbee called "the creative minority" and Vilfredo Pareto the "elite." An historian may merely chronicle events; a philosopher of history must attempt to find meaning and harmony in the rise and fall of civilizations and in their evolving structures.<sup>20</sup> He is concerned with their underlying causes, their dynamics and the real or imaginary cycles of their rise and decline. The historian of civilizations must concern himself with the geography of intellect.

While Christianity imposed a universalist and ecumenical view

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<sup>18</sup> The relationship of Nietzsche to the ideology of national socialism was ambivalent. While he refused to be part of "the mendacious race swindle," he glorified the "blond Teutonic beast" and demanded the "transvaluation of all values" and the overthrow of Christian morality. He was regarded as the spiritual father of German racism and later of Nazism. As Nietzsche's mind progressively disintegrated under the influence of syphilis of the brain, he became increasingly unable to differentiate between his own views and those of "intellectuals" who claimed to be his followers.

<sup>19</sup> *The Rising Tide of Color Against White World Supremacy* (New York: Scribner's, 1920).

<sup>20</sup> Oswald Spengler, *Untergang des Abendlandes (The Decline of the West)* explicitly discarded the concept of causality in history and substituted that of structure (or morphology).

of the world, Christian history was parochial in the sense that it concentrated on the Jews, as the formerly Chosen People. It was obviously teleological, for the world was moved by Divine intervention toward the Second Coming and the Day of Judgment. The end of history lay outside of history, for it was part of the Kingdom of God.

With the spread of secularization, this attitude aroused wrath and even ridicule. Voltaire complained of the Judeocentrism of Jacques-Bénigne Bossuet (1627-1704), who had served as tutor to the Dauphin at the court of Louis XIV, had earned fame for his controversies with heretical Huguenots and had written *Discours sur l'histoire universelle*.

"Why should the world be made to rotate around the insignificant pimple of Jewry?" asked Voltaire. Why not consider China or one of the other great and populous empires of the East as the matrix of history?<sup>21</sup>

While the Christian theological interpretation of history was being buffeted by sceptics such as Voltaire, an historically unparalleled phenomenon was assuming shape. Instead of being one among many civilizations, European thought was becoming the sole living inhabitant of a cemetery of civilizations. Europe had substituted causality for teleology as the mainspring of the cosmos. Man had ceased to seem the end-purpose of history, but had become its shaper. The West had discovered and peopled the world. It was creating a new world of reason. This was not merely logically superior to the worlds of theology, magic and untested, chaotic speculation,<sup>22</sup> but immeasurably superior in such tangible terms as wealth and power. Science not only unlocked truth, but armed man with the tools with which the world could be transformed or subdued. In these circumstances, the Oriental civilizations seemed to

<sup>21</sup> Voltaire complained that Bossuet "seems to have written with the sole purpose of suggesting that everything in the world had been done on behalf of the Jewish people; if God gave the Babylonians authority over Asia, He did so to punish the Jews; if God sent the Romans, He did so to punish them once more. This may be, but the might of Cyrus or of the Romans has also other causes, and Bossuet himself has not failed to refer to them in discussing the spirit of nations. . . . When, as a philosopher, you begin to study all that pertains to this globe, consider first the Orient, the cradle of all the arts, which has given the West everything." Voltaire, *Essai sur les mœurs et l'esprit des nations* (1753-56). Quoted in Luis Diez del Corral, *The Rape of Europe (El rauto de Europa)* (London: Allen & Unwin, 1959), p. 11, a book that is scholarly, brilliant, rich with original insights and unjustly ignored.

<sup>22</sup> Taoism, and to a certain extent Confucianism, fall in this category. The conflict was less between science and religion than between science and arbitrary ideological systems, whether religious or secular.

consist of irrelevant and arbitrary beliefs, appropriate to the childhood of the human species, but not to its adult state. They were frozen in immobility. No progress, intellectual or material, had occurred in China, India or Islam; on the contrary, the general pattern had been one of retrogression.

The fact that the Oriental civilizations did not know either that they were dead or that their destiny would be to assimilate the ideas and techniques of the West and become part of the universal Western civilization<sup>23</sup> often served to make their pretensions seem ridiculous. In the time of Marco Polo, Cathay had been the richest and most powerful nation on earth. By the mid-18th century, David Hume was attributing the chronic dishonesty of Chinese traders to the poverty of the country and the desperate scramble for bare life. Yet, when George III proposed to Emperor Ch'ien Lung (1735-95) that their nations exchange envoys, he was refused on the grounds that:

“The Celestial Empire possesses all things in prolific abundance and lacks no product within its borders. There is therefore no need to import the products of outside barbarians in exchange for our own products.”<sup>24</sup>

### The Impact of Hegel

Europe soon replaced Jewry as the fulcrum of world history, but it did so, not as the reason for Divine intervention in human affairs, but as the creative and transforming force that was disintegrating the static and anachronistic civilizations of the Orient and drawing their peoples into its own rationalistic, cosmopolitan order. This conception was strongly reinforced by the doctrines of Adam Smith and other classical economists who predicted that the European solution of free trade and *laissez faire* would in time bring about a unified world economy.

<sup>23</sup> The extent and duration of this myopia naturally varied from country to country. Japan was the first of the great Asian states to face its situation realistically and transform itself into a projection of Europe. The brilliant success with which it made this transition was partly due to the fact that, like Athens, Venice, Holland and England, it was a seafaring and mercantile state. Continental empires tend to be tradition-rooted and bent upon uniformity, maritime ones ready to accept change and tolerant of diversity.

<sup>24</sup> C. P. Fitzgerald, *China: A Short Cultural History* (New York: Praeger, 1954), pp. 558-9. Arnold Toynbee gives a different, less elegant translation, in *Civilization on Trial* (London: Oxford University Press, 1948), p. 72: “Swaying the wide world, I have but one aim in view, namely to maintain a perfect governance and fulfil the duties of the state. I set no value on objects strange or ingenious, and have no use for your country’s manufactures.”

Hegel applied Eurocentrism to world history. "The history of the world," he wrote, "is none other than the progress of the consciousness of Freedom." The realization of freedom occurred through the dialectic of thesis, antithesis and synthesis.

Concerning the Far East, Hegel wrote: "The states of the Orient are dead and only remain standing because they are rooted in nature." And, expressed in a different way, "Enduringness as such is no evidence of superiority over the rose that withers in a day. On the contrary, these are inferior to the rose, and even more so to the animal and to man. The Persian Empire was able to succumb because it contained the principle of the freedom of the spirit in contrast to that of nature, the beginning of spiritual independence." Freedom reveals itself in change and "The Persians are the first historic people. Persia is the first empire to have succumbed."<sup>25</sup>

Hegel considered that Oriental civilizations were in a state of nature and hence incapable of having a history. To positivist Auguste Comte, they were simply mediocre. He protested the "needless display of sterile and misdirected erudition that nowadays tends to clutter the study of our own social evolution by wrongly confusing it with the history of peoples like the Chinese, Indians and others, who have never exercised any real influence on our past."<sup>26</sup> For Comte, as for Hegel, European history was "universal," not in a narrow, chauvinistic sense, but as revealing the path which the other peoples of the earth would have to follow or else remain in their more or less vegetable state in which progress was unknown and change was meaningless.

### **Karl Marx and Ethnopsychology**

Like Hegel and Comte, Marx thought in terms of progressive stages of historic development. In the 1850's, the notion of a specifically Asian form of despotism struck him forcefully and, following the lead of the English economists, Richard Jones and John Stuart Mill, "he systematically compared certain institutional features in the three major types of agrarian society ['Asia', classical antiquity, feudalism] and in modern industrial society."<sup>27</sup>

<sup>25</sup> The above quotations are from the *Vorlesungen über die Philosophie der Geschichte*. They are either taken from the J. Sibree translation *Philosophy of History*, London, 1857, or requoted from Díez del Corral, *op. cit.*

<sup>26</sup> *Cours de philosophie positive* (Paris, 1864). V, 8. See Díez del Corral, *op. cit.*, p. 14.

<sup>27</sup> Karl A. Wittfogel, *Oriental Despotism: A Comparative Study of Total Power* (New Haven: Yale University Press, 1957), p. 373.

Marx considered that "the general slavery of the Orient," in which the entire population was subordinated to the despotic state, should not be confused with feudalism. There were suggestions in both Marx and Engels that civilization depended on the presence of private property and hence that the "Oriental despotism" was a form of "barbarism."<sup>28</sup>

The power system of Asia is based on the need to control vast irrigation systems, according to Marx, and on peasant dependence on water. Marx also writes about the "dispersed" condition of the Oriental villages, which, in his opinion, explained age-long exploitation.

Czarist Russia was the western rampart of the terrain of Asian despotism. The ancient communes, including the Russian *mirs*, Engels thought, "have for thousands of years formed the basis of the most barbarous form of state, Oriental despotism, from India to Russia."<sup>29</sup> Marx claimed that, instead of destroying Oriental despotism in Russia, Peter the Great had "generalized" it. Although Marx insisted that the victory of the proletariat and of socialism on a world-wide scale was inevitable, he had no theories to offer as to how this victory was to take place in the terrain of the Oriental despotisms.

The inference that seemed to follow from this view of the Asian political pattern was that the peoples of Asia were passive, in a sense merely objects of history, certainly condemned to be outside its currents until their political system crumbled, presumably under the impact of European mercantile and financial penetration. John Stuart Mill had in fact warned in his *Principles of Political Economy* that the bureaucratic authoritarian states of Asia were "the government of sheep by their shepherd without anything like so strong an interest as the shepherd has in the thriving of his flock."<sup>30</sup>

Thus Marx, like Hegel and the English classical economists from whom he had derived many of his ideas, believed that world history was Europaeocentric. He conceived of the West as the leadership element that would embrace the entire earth in its dynamic economic system and bring it, through inbuilt stages of thesis, antithesis and

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<sup>28</sup> As Wittfogel points out, Engels was not consistent in his interpretation. He also shows that Marx made the mistake (perhaps following Hegel) of regarding the Asiatic despotisms as situations in which total power was concentrated in one man, thus ignoring the role of the bureaucracy of the irrigation state.

<sup>29</sup> Friedrich Engels, *Herrn Eugen Dührings Umwälzung der Wissenschaft. Dialektik der Natur* (1873-1882), (Moscow: 1935), p. 165.

<sup>30</sup> Quoted in Wittfogel, *op. cit.*, p. 387.

synthesis, to the state at which history essentially stops—the final social organization of communism.<sup>31</sup> The historic process was an inevitable movement toward a condition of perfection, the dimensions of which could be predicted with certainty. Like Hegel and the Christian philosophers of world history, Marx believed in a closed system with an inescapable terminal state.

Again like these predecessors of his thought, he believed in an elite element. This had been the Jews for Bossuet and the Prussian state for Hegel. For Marx, it was those nations which had moved into capitalism, which were exporting the capitalist modes of production to areas such as Asia, which had previously been outside the pale of civilization and which, precisely because of their immaturity in capitalist development, were closest in time to capitalism's supposedly inevitable downfall.

Marx did not believe that Asian society was "feudal" or "semi-feudal" or definable by any of the other catchwords which might be taken from a European historic experience totally alien to the actual course of development of the irrigation despotisms. This formulation would come later. V. I. Lenin would use it to inveigle the peoples of the non-Western world into the Communist orbit, to flatter their national self-consciousness and to make them believe that they were in the same track of history as the West and merely needed time to catch up with it. More ironic still was the fact that Western "liberal" political leaders would use the same tarnished pseudo-Marxian terminology and talk of the evils of "semi-feudalism" in Asia, not because they were Communists, God forbid! Being too ignorant and shallow to have read Marx and Lenin at first hand, they had merely absorbed the froth from the writings of non-Marxist popularizers and plagiarists.

Marx thought of history in terms of a Western elite engaged in making capitalist civilization universal and drawing the backward areas of the earth into the maelstrom. Hence, he paid little attention to non-Western areas (except as bones of contention) and scarcely disguised the low opinion he entertained of the character and capacity of their inhabitants. There are, for instance, hardly any references to Latin America in Marx's and Engels' writings. To the founder of "scientific socialism," the South American liberator

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<sup>31</sup> To say that history stops does not, of course, mean that nothing happens which historians can record; it means that nothing happens which can be integrated into a meaningful system of world historic development. This integration is impossible because the development has reached its terminus.

Simón Bolívar was "that coward . . . that vile and miserable swine."<sup>32</sup> He hailed the American military defeat of Mexico in 1848 as an opportunity for that country to get annexed by the United States and thus arise from its centuries-long stupor and be goaded into the stream of capitalist development and hence of history.<sup>33</sup>

Neither Marx nor Engels believed racial differences in temperament and intelligence to be non-existent or inconsequential. Marx's view of race was that it was a force shaping history, but one he did not propose to deal with because it lay outside the dialectics of capitalist development and cataclysm which was his primary area of interest. As a young man, he wrote:

"The first premise of all human history is of course the existence of living human individuals. The first fact to be established is therefore the physical organization of these individuals and their consequent relation to the rest of nature. We cannot here, of course, go into either the physical characteristics of men themselves or the natural conditions found by men—the geological, oro-hydrographical, climatic and other conditions. All historical work must start on the basis of these natural conditions and their modification in the course of history through the action of men."<sup>34</sup>

As revolutionary politicians, Marx and Engels wrote about the Negro in sympathetic terms and revealed strong sympathy with the Northern cause in the Civil War and with Lincoln's steps to emancipate the slaves. Their main interest seems to have been in prolonging hostilities to deprive the English textile industry of its raw cotton from the South and thus precipitate a revolutionary crisis in Great

<sup>32</sup> Karl Marx and Friedrich Engels, *Works* (Russian edition), XXII, 304.

<sup>33</sup> In this Marx was much closer to the truth than contemporary Latin and American "liberals" who expatiate on Mexico's "justifiable resentment" over American "theft" of her richest territories. Attorney General Robert Kennedy's recent apology for the U.S. invasion of Mexico is part of this bizarre collective masochism. The facts of the matter are that, when General Winfield Scott entered Mexico City as a conqueror, the leaders of the Mexican Liberal Party begged him to get President Polk to annex the whole country, as a generation of anarchy and plunder since independence had conclusively demonstrated Mexican incapacity for self-government. (See Justin H. Smith, *The War with Mexico* [New York: Macmillan, 1919], 2 vols.) A similar plea was made by the white inhabitants of Yucatán who faced extermination in a race war. On both occasions, the United States declined the offer largely because of belief that the Mexicans would be a burden and unassimilable. However, only the naïve believe that the Mexican masses gained from this refusal. A supposedly free people, they live in primitive isolation, ignorance, misery and squalor. There is even doubt as to whether the lot of the Mexican peasant is materially better today (1963) than it was in 1808 when Baron Alexander von Humboldt made his classic study (*Essai politique sur le royaume de la Nouvelle Espagne* [Paris, 1825], 4 vols.)

<sup>34</sup> Karl Marx, *Die Deutsche Ideologie* (1845-46). See *A Handbook of Marxism*, (New York: International, 1935), pp. 210-211.



Britain. Hence, Marx wrote well of Lincoln in his published writings, while, in private letters to Engels, he characterized him as a man whose actions “appear like the mean, pettifogging conditions which one lawyer puts to his opposing lawyer.”<sup>35</sup>

In their published articles, Marx and Engels wrote as friends of the Negro, but this was hypocrisy. Their secret attitude toward the Africans was one of hatred and withering contempt. Thus, in their private correspondence, both Marx and Engels used the English term of opprobrium, “nigger,” even though their correspondence was in German and the German word is the emotionally neutral one, “*Neger*.”<sup>36</sup>

In a letter dated July 30, 1862—in other words contemporary with Marx’s pro-Lincoln and pro-Emancipation articles in the *New York Daily Tribune*—Marx called his brilliant rival for the leadership of the German socialist movement “the Jewish Nigger, Lassalle.” He proceeded with the following comment:

“It is now entirely clear to me that, as his cranial structure and hair type prove, Lassalle is descended from the Negroes who joined Moses’ flight from Egypt (that is, assuming his mother, or his paternal grandmother, did not cross with a *nigger*). Now this union of Jewry and Germanism with the negro-like basic substance must necessarily result in a remarkable product. The officiousness of the fellow is also *nigger-like*.”<sup>37</sup>

Four years later, Marx wrote Engels to announce his discovery of a book by P. Trémaux which he hailed as “much more important and rewarding than Darwin.”<sup>38</sup> Trémaux’s great discovery was “that the common Negro type is a degeneration of a much higher type.”

Engels was deeply offended by the theory of the French writer that soil and climate can alter races. He stated that “stories about the nigger, Santa Maria, and the transformation of white men into Negroes are a farce,” adding that, if Trémaux’s theory were correct, “we Rhinelanders” would have become “idiots and niggers a long time ago . . .”<sup>39</sup>

<sup>35</sup> Karl Marx to Friedrich Engels, London, October 29, 1862. *The Correspondence of Marx and Engels 1846-1895*, (New York: International, 1935), pp. 139-40.

<sup>36</sup> This has been reported by Zygmund Dobbs, *Red Intrigue and Race Turmoil* (New York: Alliance, 1958), pp. 36-45. Dobbs is one of the few sources of the Marx-Engels private correspondence in English translation. The Library of Congress Edition, of which Dobbs has made photocopies, can rarely be found in libraries in its complete form. The letters quoted above are from the Dobbs photocopies.

<sup>37</sup> Marx to Engels, July 30, 1862. Italicized words were underlined in the original.

<sup>38</sup> Marx to Engels, August 7, 1866.

<sup>39</sup> Engels to Marx, October 2, 1866.

## Cycles of World History

Most 19th century philosophers of history saw human destiny in terms of progress. This progress was toward a closed and predetermined goal in the systems of Hegel, Marx and Comte; in the open systems devised by the great British philosophical radicals, the direction was evident, but the goal was unknown.

All of these thinkers assumed the presence of a leadership element or elite. This elite was the vanguard of the historic process: it was engaged in making Western civilization universal, to the extent that this was possible, and taking the leadership in the forward movement of world history. There was no implication that the leadership position of the West was based on racial qualities; rather it was assumed that special social forces and institutions had converged to make Europe the dynamo of modern man.

The philosophies of progress and of European leadership were reflections of the optimism generated by scientific, educational and material advance during the century of peace that stretched from the Congress of Vienna to Sarajevo. As this period of order drew toward a close, moods of pessimism and uncertainty moved toward ascendancy. These moods were reflected in various approaches to history and the psychology of peoples. Concerning this, Díez del Corral wrote:

“. . . between the two wars Europe was strongly drawn away from the universalist and progressive vision of history which had been traditional in the West since the time of St. Augustine's *De Civitate Dei* towards the cyclical conception characteristic of Antiquity, which had reappeared in the last decades of the nineteenth century in a thinker so profoundly influenced by Antiquity as Nietzsche, and which, even before the first war, had reached such thinkers as Sorel and Pareto. But was this a real revival of the cyclical concept of Antiquity? How far was it possible to renew the classical vision and adapt it to new circumstances? How was it possible that the idea of being in a state of decline and constituting only one more among so many cultures that had risen and fallen on the face of the earth should have arisen in Western culture as it reached the height of its development and was imitated and plagiarized everywhere?”<sup>40</sup>

The precursors of the pessimistic viewpoint had included Burckhardt and De Tocqueville. Nietzsche had written with a prescience

<sup>40</sup> *Op. cit.*, pp. 30-31.

that burst through the fantasies of incipient madness: "We must expect a long series of demolitions, ruins and cataclysms." He had forecast "wars such as the world has not seen," a Europe soon to be "enveloped in shadows." And again, "we shall witness the invasion of a dark tide." This would be nothing more nor less than "the advent of nihilism."<sup>41</sup> And in Russia, Fëdor Dostoyevsky saw the shape of coming events with an equally acute prophetic vision (in *Diary of a Writer*):

"The future Kingdom of socialism," he wrote, "will be a terrible tyranny of criminals and murderers. It will throw humanity into a true hell of spiritual suffering and poverty."

The publication of Oswald Spengler's *Untergang des Abendlandes*<sup>42</sup> in July, 1918 charted a new road into a sterile morass of anti-scientific thinking. Spengler's work was a prodigious achievement in scholarship, originality and boldness of thought. It had an immense immediate influence on the intellectuals of German chauvinism and militarism who were smarting under military defeat. Spengler's influence soon spread beyond the frontiers of Germany to become the fashionable philosophy of those European intellectuals who rejected liberalism, turned their backs on science and believed in blood, soil and instinct. For a brief period, Spengler was the idol of the German Nazi movement. If he refused to accept Hitler as one of the Caesars of the era of twilight and doom which he foresaw, it was both because he rejected the persecution of the Jews and because he considered the Fuehrer to be a man of wind rather than of iron.<sup>43</sup>

The intellectual audacity of Spengler was manifested in the opening pages of the *Untergang*, where he calmly announced that history had nothing to do with scientific method, that the principles of logic did not apply to it and that he proposed to substitute the method of *comparative morphology* for the principle of *causality*.<sup>44</sup> The relationship of Spengler to a pseudo-scientific sort of ethnopsy-

<sup>41</sup> Quoted by Díez del Corral, *ibid.*, p. 31.

<sup>42</sup> Published in English as *The Decline of the West* (New York: Alfred A. Knopf, 1926), 2 volumes.

<sup>43</sup> In 1933, shortly after Hitler had taken over the Reich, Spengler wrote: "This seizure of power—it is with misgiving that I see it celebrated each day with so much noise. It would be better to save that for a day of real and definitive successes, that is, in the foreign field. There are no other." Quoted by William L. Shirer, *The Rise and Fall of the Third Reich* (New York: Simon and Schuster, 1960), p. 208. Spengler died in 1936 and hence was spared the choice between support of the Nazis and opposition to them.

<sup>44</sup> "And just as he (Goethe) followed out the development of the plant-form from the leaf, the birth of the vertebrate type, the process of the geological strata—the Des-

chology is that he constructed total civilization patterns in which the human element in each great culture-civilization was defined in terms of the structural form of its spiritual world. The exposition of the traits of the Apollonian, Faustian and Magian souls opened new perspectives in the attempt to describe the human creators and creatures of the culture-civilizations.

Spengler's anti-scientific concept of culture-civilization cycles was appropriated by the English philosopher of history, Arnold J. Toynbee. The latter substituted the Christian ideal of human brotherhood and the hope of a universal society united by religion for the Junker ethos of his German teacher. Despite his acceptance of Spengler's morphological approach, Toynbee evaluated evidence according to the criteria of historiography, particularly in those interstitial and marginal areas of his magnum opus which are the most rewarding. The mainstream itself tends to be aprioristic, ponderous and preoccupied with theological issues.

Both Spengler and Toynbee contributed to cultural (but certainly not to racial) anti-Semitism. To Spengler, Judaism was a "fellaah religion" which had been lifeless for at least nine centuries. The modern Jew "follows the history of the present (which is nothing but Faustian Civilization spread over continents and oceans) with the fundamental feelings of Magian mankind, even when he himself is firmly convinced of the Western character of his thought."<sup>45</sup> To Spengler, the Jews were decadent because they were vestiges of a Magian culture-civilization which had long since exhausted its creative impulse. Western, or Faustian, man was proceeding, though with a lag of a few centuries, down a similar path of inescapable decay and sterilization of the creative impulse. Toynbee, for his part, discovered that the Jews were "fossilized fragments of the Syriac Civilization";<sup>46</sup> in other words, he appropriated Spengler's ideas, but changed his vocabulary.

### Democratic Nihilism

It is always easier to perceive vices alien to one's social milieu than those native to it; the faults of the past can be more easily excoriated than those of the present or impending future.

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*tiny in nature, and not the Causality*—so here we shall develop the form-language of human history, its periodic structure, its *organic logic* out of the profusion of all the challenging details." Spengler, *op. cit.*, Vol. I, pp. 25-26. Spengler acknowledged that Nietzsche and Goethe were the two thinkers who had most profoundly influenced him.

<sup>45</sup> *Ibid.*, II, p. 320.

<sup>46</sup> Arnold J. Toynbee, *A Study of History* (New York: Oxford University Press, 1939), V. 8.

In the West of today, social science is distorted, not by national arrogance and assertions of race superiority, but, on the contrary, by a nihilism of values, by the dogma of equality as applied to nations, races, peoples, histories, art forms and civilizations. To question the assertion that the historic and cultural heritage of the West African Negro is comparable in quality to that of the English, Jews, Greeks and Chinese is to be guilty of "racism." To assert the superiority, and in fact the universality, of Western civilization is to reveal oneself as naive, ignorant and bigoted. To challenge the notion that all peoples are equally capable of democratic government and that all colonial tutelage is stultifying is merely to reveal a reactionary temper. The enlightened man, to paraphrase Dumas, should inhabit the night where all cats are equally black.

A few have challenged these doctrines of democratic nihilism. For example, Ortega y Gasset:

"Since Europe is said to be in decline and is therefore ceasing to exert its authority, every nation and nationlet prances, waves its arms, turns somersaults or struts about, pretending to be a grown-up with the right to control its destiny. Hence, the almost bacteriological horde of nationalisms that swarm on all sides."<sup>47</sup>

Concerning this quotation, Díez del Corral comments pertinently: "The leaders are mounted on the hobby-horse of ancient resentments of the Asiatic peoples, whose representatives now occupy the pulpit in international assemblies and elaborate sovereign and mystical plans from the antagonisms of Western ideologies and wills; they use a European tongue without which their natives could not understand one another and speak in the name of a country whose pseudo-national political conscience and organization are parodied from Europe, throwing up magic formulas of compromise right and left, for all cats are grey and every kind will breed together once we turn our backs on the clear principles of truth and life that the predecessors of Socrates set up as the cornerstone for the whole Western world and that have served not only to erect those straight walls and lofty turrets that exotic peoples are now scaling, but also to make it possible for the structure to be criticized and even condemned by them with a certain precision and vigor."<sup>48</sup>

Characteristic of the new nihilism is the absurd statement of Northrop: "For the first time in history, not merely in war, but also

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<sup>47</sup> José Ortega y Gasset, *La Rebelión de las Masas, Obras*, Vol. VI, (Madrid: 1946), p. 237.

<sup>48</sup> *Op. cit.*, pp. 35-36.

in the issues of peace, East and West are in a single world movement, *as much Oriental as Occidental in character.*"<sup>49</sup> The world is unified, to be sure, in its scientific and rationalist attitude, but in what significant respect is it "Oriental in character"? Is there a single Asian concept, scientific discipline, technique or social institution which the contemporary West has been able to borrow and utilize? The answer is in the negative.

### Darwin and Genetics

In the mid-19th century, momentous scientific discoveries revolutionized man's knowledge of his own origin, of the modes of development of his psychic qualities and of the mechanisms by which ethnic differences arise and are stabilized. We can consider 1859 as the watershed year dividing the unscientific from the potentially scientific future of ethnopsychology, for it was then that Charles Darwin published *On the Origin of Species by Means of Natural Selection*, one of the very few books which has shaken the earth. Several related events in man's progress toward the Socratic goal of self-knowledge are worth mentioning. In 1866, the Augustinian prelate, Gregor Mendel, published the record of plant experiments which laid bare the basic process of alternative gene inheritance. This paper was ignored during Mendel's lifetime, but was discovered and corroborated by three scientists working independently in 1900.

Meanwhile the German biologist, August Weismann, postulated that the isolation of the germ plasm in the human body makes the inheritance of acquired characteristics impossible. Early in the 20th century, August de Vries enriched the theory of evolution by announcing his discovery of the process of mutation. At Columbia University, Thomas Hunt Morgan (1867-1945) discovered the gene and through experiments with fruit flies (*drosophila melanogaster*) worked out the fundamental mathematical laws of genetics.

The potential bearing of all this on ethnopsychology was very great. After 1900, nobody with a respectable scientific education, a clear mind and an honest character could talk about "race souls" or "the morphology of Faustian man." It was clear that human racial differences arose in the same manner as differences in the races of hummingbirds, hawthorns or hedgehogs. They were the result of the protracted exposure of a population, whether plant, animal or human, to specific environmental stimuli and challenges. In the

<sup>49</sup> F. S. C. Northrop, *The Meeting of East and West* (New York: Macmillan, 1949) p. 4.

course of this exposure, new types would arise by mutation: those that had a survival advantage would flourish; others would die out. Thus, primarily through natural selection and mutation, race differences would become set. This is a genetic *process* for the simple reason that mutation and natural selection operate arbitrarily to change the gene pool of each ethnic group. Thus, for the intelligent and well-informed, at least, the mysticism and mystery of race had been removed. The subject had been placed on a scientific foundation.

The other major scientific current was the work of Mendel and Morgan in revealing the laws of inheritance, laws which encompassed the congeries of all living things provided they had attained a minimum level of complexity of organization. It was soon discovered that the same laws of heredity applied to mental as to physical traits. No educated person would any longer assert that genius, amentia or dementia were solely the result either of heredity or of environment: the area of disagreement would be narrowed to the quantitative issue of the comparative importance of each.

The question of whether or not significant inherited differences existed between the mentality of various races was deemed by science to be open. It was to be "presumed on general grounds . . . that some of the racial groups will, if proper techniques and methods can be devised, be found to differ in average level of intelligence. . . ." <sup>50</sup> The reasons for this presumption were expressed cogently by Morant:

"There seems to be no reason why the general rule regarding variation within and between groups should not apply to mental, as well as to physical, characters. If variable characters of the former kind showed identical distributions for all racial populations, that would be a situation unparalleled, as far as is known, as regards any physical character in man or in any other animal. It seems to be impossible to evade the conclusion that some racial differences in mental characters must be expected." <sup>51</sup>

### Francis Galton

Meanwhile, in 1869, the publication of Sir Francis Galton's *Hereditary Genius* gave another powerful impetus to ethnopsychology. An

<sup>50</sup> Julian Sorel Huxley, *Man Stands Alone* (New York: Harper & Brothers, 1941), p. 53.

<sup>51</sup> Geoffrey M. Morant, *The Significance of Racial Differences* (Paris: UNESCO, 1952), p. 42.

infant prodigy and a first cousin of Charles Darwin, Galton had at first devoted his great energy to the exploration of southwest Africa. Returning to England, he became a meteorologist, made the first serious attempt to chart weather phenomena over a large area and developed and proved the theory of anticyclones. He became interested in criminology, invented the inaudible dog whistle and composite photography and made a major contribution to the classification and description of fingerprints for criminal identification.

Galton's most important scientific contributions, however, were in the fields of heredity, anthropology and eugenics—the last-named being a branch of the social sciences which he founded. In *Hereditary Genius* and other books and papers, Galton attempted to trace the influence of heredity upon genius by an examination of the lineage of the world's outstanding creative minds. He showed that, in modern industrial societies, fertility varies inversely with class, education, wealth and intellectual attainment. The dysgenic (anti-eugenic) reproduction of modern societies meant, in Galton's scheme of things, a progressive increase in human stupidity and a decline in national I.Q. from each generation to the next.

In this context, Galton discovered a very interesting social mechanism which managed to destroy the fertility of a large proportion of those men who rose from the lower classes because of outstanding character and intelligence. When they reached the top, they often married heiresses. Now one of the reasons heiresses were wealthy, Galton discovered, was that they came from low-fertility breed lines: it was for this reason that their family wealth had been concentrated, rather than being dispersed among numerous progeny in each generation. The biological infertility of the heiresses, Galton proved in a brilliant statistical investigation, prevented the outstanding men of lower class origin whom they married from reproducing at the normal rate. Hence, this particular sort of superior line tended to die out.

As early as 1865, Galton proposed that the unfit be sterilized and that society find means of stimulating reproduction by intelligent people of sound heredity. In 1884, he used the term *eugenics* for the first time, defining it as “the study of agencies under social control that may improve or impair the racial qualities of future generations, either physically or mentally.”<sup>52</sup>

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<sup>52</sup> “Galton,” *Encyclopaedia Britannica* (13th ed.).



Galton made at least two contributions to ethnopsychology which were highly original and provocative. He attempted a comprehensive analysis of the occurrence of genius among various national and ethnic groups. Although he was himself of English descent, Galton found that the Scots produced more outstanding minds in proportion to their numbers than any other group. Per million of population, Scotland produced four Class I geniuses to England's 1, 20 Class II geniuses to England's 14, and 330 Class III geniuses to England's 233.

Galton postulated a frequency distribution of intelligence corresponding to the normal curve of error and found that, for example, if one assumed 16 grades of mental ability between Aristotle and total idiocy, the Negro would rank about two grades below the average white. Galton's attempt to measure comparative ethnic intelligence in terms of genius production was subject to various methodological criticisms. Classifying geniuses is a rather subjective and somewhat arbitrary procedure. Moreover, Galton's method made it impossible to differentiate hereditary from environmental causal factors. However, in posing the problem and attempting a quantitative solution, Galton, as was often the case, broke new trails for posterity.

His second major contribution to ethnopsychology was to define the relationship of clerical celibacy to the innate intellectual resources of nations. In *Hereditary Genius*, Galton wrote:

"The long period of the dark ages under which Europe has lain is due, I believe, in a very considerable degree, to the celibacy enjoined by religious orders on their votaries. Whenever a man or a woman was possessed of a gentle nature that fitted him or her to deeds of charity, to meditation, to literature, or to art, the social condition of the time was such that they had no refuge elsewhere than in the bosom of the Church. But the Church chose to preach and exact celibacy. The consequence was that these gentle natures had no continuance, and thus, by a policy so singularly unwise and suicidal that I am hardly able to speak of it without impatience, the Church brutalized the breed of our forefathers. She acted precisely as if she had aimed at selecting the rudest portion of the community to be, alone, the parents of future generations. She practiced the arts which breeders would use, who aimed at creating ferocious, currish, and stupid natures. No wonder that club law prevailed for centuries over Europe; the wonder rather is that enough good re-

mained in the veins of Europeans to enable their race to rise to its present very moderate level of natural morality.”<sup>53</sup>

### The Twentieth Century

As the 20th century advanced, specialization of intellectual effort became the rule, and the study of the mental endowment, psychology and psychiatry of the various races and peoples of mankind was fragmented into many sub-disciplines. Great gains were made in knowledge, but at the expense of synthesis. Lack of space prevents even brief summaries of this work. In the pages concluding this chapter, all we shall do is indicate a few of the highlights, proceeding from the more to the less rigorously scientific areas.

Physical anthropologists made comprehensive measurements of the brain capacities of various ethnic groups, while statisticians and biometricians worked on the problem of the relationship of brain size to human intelligence. Other workers mapped the brain in terms of function. A very few analyses of the histology (microscopic anatomy) of the cerebral cortexes of different races were made to determine the extent to which they were equipped to engage in that complex cerebral activity which is apparently centered in the “new brain” and which is the *sine qua non* of creative and scientific achievement. Surprisingly little work has been done in the comparative brain histology of various ethnic groups. The outstanding studies of Kenya Negroes by Dr. F. W. Vint stand virtually alone.<sup>54</sup>

Electroencephalographic techniques were pioneered by Hans Berger in the mid-1930's and the science has been placed on a firm mathematical and technical-procedural foundation by the work of Dr. W. Grey Walter and others. This powerful engine of research has not been used extensively to analyze ethnic or national differences in brain development and function. Most of the comparative studies which have been made in this area concern African Negroes, an ethnic group which has been the recipient of a disproportionate amount of ethnopsychological investigation.

In a different area, Dr. Franz Josef Kallmann of the New York State Psychiatric Institute provided direct proof that mental illnesses, or at least the predisposition to them, are inherited. Kallmann's method was to compare the concordance of a mental affliction among

<sup>53</sup> *Hereditary Genius* (New York: Appleton, 1874), pp. 357-8.

<sup>54</sup> F. W. Vint, *E. Afr. Med. J.* 7 (1931), 349; *ibid.*, 9 (1932), 30; *ibid.*, 26 (1949), 58, and *J. Anat.*, London, 68 (1934), 216.

monozygotic (identical) twins, who are the same as to genetic heredity, with concordance among dizygotic (fraternal) twins, siblings and the general population. For instance, Kallmann found that, if one fraternal twin has schizophrenia, the probability that the other twin will have it during his lifetime is 14.5%. However, if one identical twin has schizophrenia, the probability that his co-twin will get it is 86.2%. Twin concordance studies have established that manic-depressive psychosis, homosexuality and schizophrenia are overwhelmingly conditioned by heredity; involuntal psychosis and epilepsy somewhat less so.<sup>55</sup> One of the possible conclusions suggested by Dr. Kallmann's research is that differences between the gene pools of different ethnic groups may cause differences in frequency of psychosis and neurosis.

Simultaneously, efforts were made to push the frontiers of intelligence testing backward in time to childhood. Arnold Gesell worked out developmental quotients (D.Q.'s), which measured the abilities of children to perform certain tasks in relation to the norms for their ages. Perhaps more important than Gesell's work, at least to ethnopsychology, were the procedures worked out by Thomas, Kopernick and others in Europe. These men elaborated methods by which the speed of kinesthetic learning—or, more specifically, the transition from uterine to infant patterns of muscular reflex and control—could be measured from birth to the first years of life. The speed with which these developmental milestones are reached by the newborn seems to be inversely correlated with the ultimate complexity to be attained by the mind and, in particular, by the cerebral cortex. Thus, neonatal kinesthetic development is much more rapid among gorillas than among chimpanzees and many times faster among chimpanzees than among human infants.

Gross discrepancies in the rates of neonatal kinesthetic development as between ethnic groups would, therefore, suggest fundamental innate differences in the structure of their brains. In 1956, Dr. Marcelle Geber made such studies of normal infants in Kampala, Uganda, for the World Health Organization. She discovered that developmental milestones were reached several times more rapidly by Negro than by white infants. On the other hand, the developmental pace of white and Asiatic Indian neonates was substantially the same.

Psychodiagnostic tests were developed and popularized shortly

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<sup>55</sup> Franz J. Kallmann, M.D., *Heredity in Health and Mental Disorder* (New York: Norton, 1953), pp. 124-9.

before World War II. Of these, the Rorschach (ink blot) test is the most widely used. The nature of the responses given provides a profile of the subject's character structure: it supposedly reveals, not merely intelligence, but sexual drives and repressions, integration of personality, spontaneity, infantilism, neurosis or psychosis. Henry A. Murray's Thematic Apperception Test uses cards with pictures about which a short story must be told. The responses are supposed to reveal hidden psychic needs, conflicts and repressions. In the Goodenough Draw-a-Man Test, the subject draws a human figure. The way in which this is done is supposed to be similarly self-revelatory. Another type of projective test was developed by the Hungarian psychologist, Lipot Szondi. Subjects are asked to rank photographs of institutionalized sadists, homosexuals, masochists, paranoiacs, catatonics, hysterics and manic-depressives in the order of like and dislike. This is supposed to reveal the affinities and tendencies toward specific sorts of mental abnormality among the persons tested.

A good deal of work has been done in the projective testing of various ethnic and national groups, including savages. The Rorschach Test and the TAT, probably the ones most frequently used in these comparative studies, are, to an undetermined extent, culture-bound. Thus, the late Ralph Linton told of giving the Thematic Apperception Test to a group of protein-starved Aloreses. One native "interpreted the evident distress of the pictured lad as arising from the fact that he had found a cave full of bats, but had forgotten to bring his sling-shot and was therefore missing a good dinner."<sup>56</sup>

The major disadvantage of projective tests as tools in ethnopsychology is that the interpretations are highly subjective and sometimes arbitrary. To the extent that a Rorschach interpretation requires insight on the part of the psychologist, it is more likely to be valid when tester and testee share the same culture than when they do not. As in the case of psychoanalytic interpretation, "insight" may mean simply that the interpreter has imposed on the subject or patient an interpretation which suits his own internal psychic needs. In any event, the psychodiagnostic tests fail in general to satisfy one of the most elementary and universal requirements of science, namely, that an experiment made by one investigator be subject to possible repetition by another.


Yet, in a variety of sciences and specialized scientific disciplines,

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<sup>56</sup> Ralph Linton, *Culture and Mental Disorders* (Springfield, Ill.: Charles C. Thomas, 1956), pp. 31-32.

rapid progress is being made toward providing definitive answers to basic questions concerning the psychic characteristics of the races and sub-races of mankind and the extent to which these characteristics are determined by heredity. In the culturally more backward countries, this quiet advance runs counter to a nativist bigotry which is more generally the product of resentment and a sense of inferiority than of arrogant racism. In the West, the forces that cry "Let there be darkness" include those of social scientists, today academically dominant, who prefer the imposition of politically profitable falsehoods to the disinterested search for truth. In that long run in which Lord Keynes cynically observed "we are all dead," the findings of science will doubtless displace the obscurantism of special pleading.






*“To them, the will, the wish, the want, the liberty, the blood, the toil of individuals is nothing. Individuality is left out of their scheme of government. The state is all in all. Everything is referred to the production of force; afterwards, everything is trusted to the use of it. It is military in its principles, in its maxims, in its spirit, and in all its movements. The state has dominion and conquest for its sole objects: dominion over minds by proselytism, over bodies by arms.”*

—EDMUND BURKE, second letter of the  
*Regicide Peace*

## II

# The Emergence and Significance of Race



ONE OF THE MOST unsettled questions of modern anthropology is the manner and time in which mankind divided into races. About a century ago, many anthropologists believed that the three primary races of mankind boasted entirely different lines of descent: Caucasoids from chimpanzees, Mongoloids from orangutans and Negroes from gorillas. Darwin rejected this theory on the grounds that the similarity of the different races was too great to be compatible with their convergent evolution from different species of great apes.

In the 1940's, the distinguished German emigré anthropologist, Franz Weidenreich, suggested a modification of the original assumption of divergent ancestry. He argued that the contemporary races might be descended from different groups of fossil men, with Peking man the progenitor of the Mongoloids and Rhodesian man probably the ancestor of the Negroes.<sup>1</sup>

Other anthropologists continue to advance the doctrine of *presapiens racion* in one form or another—the doctrine, in other words, that man became differentiated into races before he had advanced to the *Homo sapiens* level. Thus, A. H. Schultz has argued that great apes vary in color and structure as widely as do the races of mankind. From this he infers, to quote Carleton S. Coon's summary

<sup>1</sup> William H. Howells, "The Distribution of Man," *Scientific American*, C CIII, 3, (1960), 113-114.



of his findings, "that the early human forms must have possessed the capacities for these same variations, some of which can therefore be very ancient, and can go back to the earlier evolutionary stages. In other words, a Negro may have become black before he became a man, a Nordic's ancestor blond and blue-eyed while his brain was still half its present cortical size."<sup>2</sup>

In 1954, Professor Carleton S. Coon, curator of ethnology at the University Museum in Philadelphia and one of the most eminent living anthropologists in the world today, published a classic summary, *The Story of Man*, a work which has been translated into eight languages. In 1962, he published a second edition of this work, which was substantially revised because "great advances" since 1954 "in our knowledge of human evolution and man's differentiation into races and new discoveries in archaeology have changed some of our concepts of prehistory."

Dr. Coon, in this revised edition, associates himself with the school of physical anthropologists which calls all fossil men *Homo* and differentiates between *Homo erectus* and *Homo sapiens* who succeeded and supplanted him by evolution. The differentiation between these two successive species cannot be made on the basis of the bones of the body below the neck. *Homo erectus* has a skull "like a shallow, narrow dishpan turned upside down. . . ." The skull of *Homo sapiens* looks more like an inverted bowl. Where the brain of *erectus* ranges from 775 to 1,225 cubic centimeters, that of *sapiens* varies from below 1,100 to over 1,800 cc. As one advances on the evolutionary scale from the *erectus* to the *sapiens* specimens, the ratio of brain to palate size increases.

In other words, the vital element in the evolution of the genus *Homo* toward full humanity is seen by Coon and other physical anthropologists as the expansion of brain-size. In fact, as early as the 1930's, Dutch scientists worked out the theory that the brains of mammals have evolved through mutations, causing successive doublings of the number of gray cells. After allowance is made for the body-size of the animal, this process is revealed by the changes in the total size of the brain.<sup>3</sup>

<sup>2</sup> Carleton S. Coon, "Climate and Race," in *Climatic Change*, ed. Harlow Shapley (Cambridge: Harvard University Press, 1953), pp. 17-19. The article Coon summarizes is "The Specializations of Man and his Place among the Catarrhine Primates," *Cold Spring Harbor Symposium*, 15 (1950), 49.

<sup>3</sup> S. T. Bok, "Cephalization and the Boundary Values of the Body Size in Animals," *Proc. Kon. Ned. Akad. v. Wetenschap* (Amsterdam) 13 (1939), 512-525. Summarized in Carleton S. Coon, *The Story of Man*, (New York: Alfred A. Knopf, 1954), p. 16.

Racial features appear at a time when *Homo* is still *erectus* and not yet *sapiens*. The high cheekbones and flattish face of the modern Mongoloid were present in Peking man (*Sinanthropus*) who lived 360,000 years ago and fully 110,000 years before the first *Homo sapiens*.

*Homo sapiens* evolved from different types of *Homo erectus* and these fossils, from which the various races of mankind derived, already showed evidence of racial differentiation. The tempo of evolutionary development varied widely in the different regions of the earth. In the areas of bracing cold, subjected to the challenge of advancing and receding glaciers, the emergence of *Homo sapiens* from the more primitive and mentally undeveloped ancestor species occurred rapidly. In the warm regions and in the remote refuge areas of the southern hemisphere, this evolutionary development was sluggish and retarded.

"During the Pleistocene," Coon observes, "evolution proceeded more rapidly in Europe, west Asia and China than it did in Java and South Africa, and man was no exception. . . ." The first known *Homo sapiens* skulls derive from England and Germany and are 250,000 years old. (The Swanscombe skull is female and has a brain capacity of about 1,325 cc.; the Steinheim skull from Germany has a brain of only 1,160 cc.) There is no evidence that modern man appeared elsewhere in Eurasia. In China, we have skulls that reveal the emergence of *Homo sapiens* 150,000 years ago, but in north Borneo a fully human skull has been found by radiocarbon dating to be only 40,000 years old. The story of trans-Saharan Africa is similar. Coon writes:

"The oldest *sapiens* skulls from Africa were probably a set of four which Lewis Leakey excavated at Kanjera, Kenya, in 1932. . . . Racially, they seem to be Negro. . . . They are probably Upper Pleistocene and may be contemporary with Saldanha Bay man (40,000 years old), although this is not sure."

Thus, modern man emerged in Europe in substantially his present form 250,000 years ago, in China 150,000 years ago, but in Africa and north Borneo only 40,000 years ago. The Negro race, according to this evidence, differs by one to two hundred thousand years in evolutionary development. We find Rhodesian man, an African variety of *Homo erectus*, whose "facial configuration is an oversized caricature of the features of living Negroes," probably extant 30,000 years ago and thus co-existent with the Negro *Homo sapiens*.

Professor Coon considers the discovery of fire to be one of the

greatest milestones in human evolution, not only because it provides security against marauding beasts of prey, but because it is vital to social cohesion and communication. It is at the fireside that the tribe dances, re-enacts the hunt, converses and develops language. Coon reports that the "first sure evidence of fire" is in the Choukoutien caves near Peking 360,000 years ago. We next discover fire in Europe, at Swanscombe, England, and in Spain, 250,000 years ago. Although diligent search has been made, there is no sign of fire in Africa until 40,000 years ago. The East African site of Olororgesailie, excavated by Leakey, showed no evidence of fire despite the fact that it had been inhabited by humans over very long periods. Had the Africans discovered fire, we cannot doubt that they would have utilized it for protection against wild animals, in certain areas for warmth and for socialization. Tribes which discover fire do not forget the discovery or abandon its use.<sup>4</sup>

In his recent volume, *The Origin of Races*, Dr. Coon suggests: "However, it is a fair inference that fossil men now extinct were less gifted than their descendants who have larger brains, that the subspecies which crossed the evolutionary threshold into the category of *Homo sapiens* the earliest have evolved the most, and that the obvious correlation between the length of time a subspecies has been in the *sapiens* state and the levels of civilization attained by some of its populations may be related phenomena."<sup>5</sup>

### Human Hybridization?

In the 1920's and early 1930's, Alice Garrod and Theodore McCown uncovered several dozen skeletons in caves near Mount Carmel in Palestine. In the upper levels of these caves were genuine *Homo sapiens* specimens and also types combining the broad faces and big teeth of Neanderthal man with the high foreheads of modern men. An explanation that has been advanced for the presence of these mixed types is that miscegenation was occurring between wandering Mousterian Neanderthals from southeastern Europe and native types from the Sea of Galilee similar to Cro-Magnon man.<sup>6</sup>

In other words, different types of primitive men coexisted and

<sup>4</sup> The above quotations and paraphrases are from Coon, *The Story of Man* (2d ed.), pp. 28-38, 60-62.

<sup>5</sup> Carleton S. Coon, *The Origin of Races* (New York: Alfred A. Knopf, 1962) p. ix-x.

<sup>6</sup> E. Adamson Hoebel, *Man in the Primitive World* (New York: McGraw-Hill, 1958), p. 67.

probably interbred. When Cro-Magnon and other related modern human types swarmed over the continent, Coon conjectures, the subordinated Neanderthal element was to a large extent absorbed by interbreeding. "The implication is," he writes, ". . . that the two peoples met, and mixed. There is no valid anthropological or biological reason for some of the western Neanderthals not to have been absorbed into the immigrant populations . . . The Neanderthals became extinct; of that there is no question. But their extinction was probably that of the usual human form, extinction by absorption. Some of the physiological peculiarities of the Neanderthals probably became useful in the mixed population that followed, particularly with the advance of the second Würm ice sheet."<sup>7</sup>

These were not necessarily the only prehistoric hybridizations between different types of mankind at different stages of evolutionary development. Thus, Coon once suggested that miscegenation between *Homo sapiens* and Solo man of Java (a microcephalic, or small-headed, type with a brain capacity of only 1,100 cc., or about that of a two-year-old Caucasian child) may have produced the aboriginal Australoids with their sloping foreheads, small chins and sub-standard brain pans.<sup>8</sup> More recently, Coon has urged that the Australoids are one of the five primary races of man, that they descend directly from *Pithecanthropus erectus* and related skeletal finds and that, to the extent that these people have crossed the *erectus-sapiens* threshold, the cause is "gene flow from a Mongoloid source."<sup>9</sup>

Professor Robert Gayre suggests an alternate explanation. The Australoids in his opinion are a more developed form of that human stock which, when it proceeded to Europe, was to become known as Neanderthal man. This, Dr. Gayre believes, would account for the combination of very primitive with Caucasoid traits. "The late Professor R. Ruggles Gates found that Australoid color was due to one pair of genes and not four as in the case of the Negroid. The brows are Cro-Magnon in appearance and the hair is distinctly Caucasoid. I would say the Australoid is nearer to the Caucasoid than to the Negroid."<sup>10</sup>

In Africa itself, two types had developed by about 50,000 B.C.:

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<sup>7</sup> Carleton S. Coon, *op. cit.*, p. 549.

<sup>8</sup> Coon, *The Story of Man*, *op. cit.*, p. 73.

<sup>9</sup> Coon, *The Origin of Races*, *op. cit.*, p. 427.

<sup>10</sup> R. Gayre of Gayre to Nathaniel Weyl, March 23, 1963.

one reminiscent of the Australian aborigines, the other like the small-brained South African Bushmen. The Australoid type was represented by Rhodesian man with heavy brow ridges, sloping forehead and a massive face. His brain capacity of about 1,300 cc. was approximately equal to that of the contemporary African Negro.

These two African groups achieved a Middle Stone Age culture. "But from this time forward," writes Clark, "the men of Africa began to lag behind Europe and Asia in cultural and mental development. By the end of the Pleistocene, some 10,000 years ago, the stream of human progress had shifted to the Near East and western Europe, and lower Africa had already become a backwater. Indeed, in many parts of Africa, men were still living in a Stone Age culture up to only a few hundred years ago."<sup>11</sup>

In more generalized terms, racial diversity can be partially explained in accordance with the known or assumed evolutionary pattern. The *Homo erectus* species had different representative types in the various regions of the earth and these, in most cases, already revealed specifically racial characteristics. The dominance of *Homo sapiens* may have been brought about by evolution of *erectus*, invasion and extermination of *erectus*, miscegenation between the two groups or some combination of these causal factors. Thus, we have differences in the evolutionary raw material—that is in the prevailing types of *Homo erectus*. We presumably have differences in the mode and pace of evolution and differences in the extent to which each human race was forged by evolution, extermination or interbreeding. This view of the matter creates an extraordinarily powerful *prima facie* case for the hypothesis that the races of mankind are characterized, not only by physical differences, which are obvious, but by psychic differences perhaps of equal importance.

### **Climatological Boundaries of Racial Habitat**

We have quoted and paraphrased Coon at considerable length concerning the rapid pace of evolution to the *sapiens* stage and to the conquest of fire among Caucasians and Mongoloids, and concerning the sluggish and halting movement in both directions by the Negroid peoples inhabiting the tropics of Africa and Asia. A challenging theory of the rationale of that difference has been recently advanced by Professor Robert Gayre. (Notably in a letter from Dr.

<sup>11</sup> J. Desmond Clark, "Early Man in Africa," *Scientific American*, CIC, 1 (1958), 83.

Gayre to Nathaniel Weyl dated 10 January 1963, from which we quote and which we paraphrase with Professor Gayre's explicit permission. Dr. Gayre has published these theories in a work which is inaccessible to us as it is written in Hindi.)

"During one of the major interglacials," Gayre writes, "at one stage of the advance and retreat of the ice, the ancestors of the white-brown [Caucasoid] stocks would find themselves in much more northerly latitudes than is the general distribution of the majority of this stock today. At the same time, the Negroids would tend to spread northwards, and so might penetrate even to the Mediterranean. In the east, a similar phenomenon would occur, carrying the ancestors of the Mongoloids further north than they are today and bringing the Australoids northwards probably to Japan to become the ancestors, in part at least, of the Ainu.

"These movements of peoples in response to great climatic changes took place over long periods of time and it can be reckoned that several hundreds of thousands of years were involved. As I see it, the Caucasoids and Mongoloids acquired specific characteristics during these periods which differentiated them from the Melanoids (Negroes and Australoids), who continued always to inhabit equatorial and tropical, or near-tropical, lands. [This is not in contradiction to Dr. Gayre's previous statement that the Melanoids moved into Japan to help form the hybridized Ainu since, during the phase of glacial recession under consideration, Japan would have been subtropical or tropical.]

"If we study the geography of Eurasia, it seems clear that we have in the area of lowlands from the steppes of southern Russia and eastern Europe generally into eastern Asia, in a northeasterly direction and extending to the Arctic Ocean, north of the Central Siberian Plain, one vast, geographically largely homogeneous area, which must have been the area of racial characterization of the Caucasoids. To their east lay the uplands of the Central Siberian Plateau, bounded on the south by the great ranges of mountains which ultimately culminate in the Tibetan Plateau and the Himalayas. This is the region, I believe, which must in part, at any rate, have given the Mongoloids their specific racial characteristics during the great and prolonged interglacial period or periods.

"Even the physical build of these two major racial stocks is in accordance with this view. The long legs of the Caucasoids are what we should expect in races evolving in relatively lowland conditions,

whereas the short legs with strong calf muscles, characteristic of the typical Mongoloid, are what must have been produced by mutations in the course of adaptation to a hilly and mountainous environment. Even the narrow closed tendency of the eyes must be an adaptation to snowfields and winds of high velocity in the higher altitudes, for there is no doubt that this eye conformation protects against sun and wind in such an environment.

“Now for both these great racial stocks, which eventually found their habitat in northerly environments, as they followed the game and vegetation upon which they lived during its northward movement, periods of great stress would develop with a reversal of climatic trend and the onset of longer and colder winters. The amount of sunshine they would receive would lessen. By degrees, they would move south, but unwillingly and slowly, following the migration of animals and plants, but always tending to lag behind in such a movement, since men will try to hang on where they have been born and bred so long as they can make a living there.

“In such a period, which might involve anything from 2,000 to 6,000 generations, every mutation which was adaptive to these adverse conditions would be preserved. In a period of lessening meat supplies and diminished absorption of vitamin D from natural sunlight because of lessened solar radiation in the habitat of these hunters, rickets would be a major killer or debilitator. The consequence would be that, in both of these racial stocks, Caucasoids and Mongoloids, every mutation for albinism would be a decided advantage as it would allow an increased absorption of vitamin D from sunlight. This, in my opinion, was a principal factor in producing the two light-skinned stocks of mankind—the so-called White and Yellow races respectively. (Incidentally, it should be borne in mind that the bulk of the Mongoloids are not yellow, but white, although of a different and sallower shade of white than is found in the Caucasoids.)

“If this theory is correct, it is obvious that the color gradations will vary from north to south within these stocks. This is in fact what we do find, and so the southernmost Caucasoids, the Mediterraneans, who, with advancing glacial ice, were driven into the Mediterranean, the Fertile Crescent, North Africa and Arabia, were less in need of a light skin than the Atlantics, who lay to the north of them, and the Atlantics less than the Nordics and the Nordics in turn less than the East Baltics who lived even further north. Thus, we have the Medi-

terranians (sallow complexion, dark hair and dark eyes), the Atlantics (light complexion and eyes, dark hair), the Nordics (light brown to golden hair, light complexion and eyes) and finally the East Baltics (light platinum blond hair, light complexion and very light eyes). (The Alpines, Armenoids and Dinarics should be equated with the Mediterraneans in this schematic classification and interpretation of the cause of coloration.)

“Among the Mongoloids, these different belts of pigmentation as one proceeded northwards would not be so marked or clearly distinguishable, for, as one proceeds southwards in Central Asia, the habitat of the Mongoloids rises in altitude toward high plateaus and towering snow-covered Himalayan peaks, where the cold is as bitter and intense as in the north Siberian tundra. Hence, while the Mongoloids do reveal albinism, they do not disclose those clearly distinguishable gradations of pigmentation that one finds among the Caucasoids.

“On the other hand, where the most northerly Caucasoids held on to the Arctic coastlands, they were not held in thrall by this compelling relationship between sunlight, pigmentation and rickets. These folk were those of Chancelade and were ancestral to Arctic peoples of palaeolithic and neolithic times. Their blood may be found among many of the Old World tundra folk (the Lapps and others) to this day. These people ate large quantities of fish and the fish oils provided them with adequate supplies of vitamin D. Consequently, albinism offered them no advantages and, to this day, the people of the Arctic are brunette and not blond.

“The converse of all this is seen in the case of those Caucasoids (mainly Mediterraneans) who flowed into India, probably from Persia and Sumeria, to found ultimately the Indus Valley Cultures. This occurred long before the arrival of the Aryans (of a more Nordic provenance) in the second millennium B.C. The Mediterraneans in India, faced with a climate hostile to a light skin (where the incidence of skin cancer alone was bound to be far more severe for Caucasoids than for Melanoids), have survived only by a change of color to brown and even dark brown. This may in part be attributable to crossing with the indigenous Melanoids, but it is probably also due to mutations for nigrescence, enhancing survival probabilities. As a consequence, the bulk of the caste Hindus are Europeans in features and range in color from Mediterranean to dark brown.

“It is evident that the Ice Ages imposed on the races which in-



habited the zones of glacial advance and regression massive climatic strains and challenges of readaptation to ever-changing physical conditions. Among the northern men who inhabited this part of the earth, chances for survival would be greatest among those with an aptitude for technology and innovation. The men who had the sense to see the value of a cave (and later learned how to make a tent and then a hut), the men who learned the use of fire, of skins and their manufacture into clothing, who found the most sensible diet in terms of the foods that lay within reach, the discoverers of the most available and feasible means of transportation, ultimately culminating in the use of sledge, wheel and draught animals—these men had the best chances of survival.

“The men who were subjected to this selective process by a hostile nature were not the Melanoids, but the northerly races, the Mongoloids and the Caucasoids. Hence, it is not at all surprising that we owe to these two races the technological civilizations which developed in both the East and the West. Yet these civilizations could not have been created until the technologically competent races found themselves in or close to the habitat of Melanoid man, where climatic conditions made it comparatively easy to gain a livelihood and hence made leisure possible.

“We thus have the paradox that it is in Central America, the Mediterranean, the Fertile Crescent, Northern Africa, Arabia, Persia, the Indus Valley, China and Japan that we witness the growth of civilizations—in lands, that is, adjacent to, and sometimes formerly inhabited by, the Melanoids. Yet, in each case, the creators of these civilizations were either Mongoloids or Caucasoids. This paradox, as it seems at first glance, is, however, quite consistent with the theory I have just propounded. For civilizations to arise, two conditions were necessary: a special breed of men and a specific physical environment. The men were the representatives of those two northern stocks of mankind which, having suffered the challenges and catastrophes of encroaching cold, developed through evolution a thinking species, capable of innovation and technology. The necessary physical environment was the subtropical or tropical zone, generally with irrigable land capable of producing the necessary food surplus to sustain an elite element of scribes, scholars, priests or bureaucrats.

“In contrast, the Negro has had these civilizations on his doorstep and has learned from them, but failed to innovate. In religion, metal

working and civic life, the Egyptian influence penetrated tropical Africa, but, even after thousands of years, never reached its deepest hinterland. Nowhere in black Africa have the arts of civilization reached the level they attained in ancient Egypt, Libya or Carthage. Within limits, the Negro can imitate and borrow from the technologically competent races, but he has lacked the innate ability to create in this area as they have done. Consequently, one would assume, on *a priori* grounds, that [the *pure* Negro] will continue to have in the future that relationship to the Mongoloids and Caucasoids that he has always had. He is, in fact, competing in a form of society which is foreign to his evolution. Quite different paths of development are indicated for the Negroid and Australoid races than for those of the northern stocks of mankind. [These generalizations do not, however, necessarily apply to racially mixed populations, such as the American Negroes.]

“These racial differences are fundamental simply because the Melanoids had a comparatively easy time of it and, to use a phrase of Toynbee’s, rested on their oars in eras when cold was destroying the ancestors of the White and Yellow races in vast numbers, enabling only the most skillful technicians (primitive as they were in their technology), the most ingenious innovators and the most resolute and alert individuals to survive in order to pass on their genes to the next generation and with them the ability to continue to survive. Through the rigorously selective evolution of a hostile climate and environment, races of men were forged who were capable of creating complex economic orders, stable civilizations, brilliant efflorescences of culture and a world in which, to a greater extent than ever heretofore, reason flourishes and science shapes man’s future.”

Professor Gayre’s exposition is sufficiently clear to need little commentary. The relationship of rickets to racial pigmentation and the climatic boundaries of different races, however, may require some explanation. Vitamin D, which is absolutely essential for proper bone formation, is produced naturally in the human body by the interaction of ultraviolet light on ergosterol or certain other sterols. It can also be ingested by eating such foods as fish oils. Tropical sunshine yields abundant ultraviolet radiation, but this is not the case with winter sunlight in temperate zones or of sunlight which is filtered through clouds or through certain types of glass. Now this ultraviolet radiation, which in moderate quantities is so necessary

to proper bone formation, can be extremely dangerous when excessive, especially in the 2,200-2,800 Angström unit range. The most obvious danger from overexposure to ultraviolet light is skin cancer. The natural protection against this light is melanin, which gives the body its pigmentation, and the darker a race or an individual, the higher its melanin concentration.

These, then, are the basic causal factors that operate to relate skin color to climatic zone. In the Tropics, the dark skin of the Melanoid protects against ultraviolet damage to tissue, while enabling enough radiation to penetrate to synthesize human vitamin D requirements. As Melanoids move into more northern areas, regions of greater cloud cover or, for that matter, cities, they are exposed to rickets unless their diet is rich in foods containing vitamin D. "Negro children are singularly susceptible," the *Encyclopaedia Britannica* (1961 edition) writes in its article on "Rickets"; and another source recommends: "In Negro and Italian infants, with their marked predisposition to rickets, double doses [of vitamin D] should be reached. . . ."<sup>12</sup>

As we move northwards into areas of filtered or oblique sunlight, the ultraviolet shower becomes barely adequate and the blond (non-melanin) races are at a distinct advantage because virtually none of the radiation they receive is filtered out and practically all of it can be used to synthesize vitamin D. As we advance to the Arctic coastlands, however, we find an abrupt transition to dark-skinned peoples. The explanation is simple: they get their vitamin D requirements from eating fish and have no need for the efficient ultraviolet receiving agency of a light skin.

Rickets is most common toward the end of the first year and in the second year of life. It involves a breakdown of the normal process of ossification with consequent deformity. Bones grow curved instead of straight, so that the patient may seem knock-kneed or bow-legged, the spine may be twisted and the pelvis deformed. The female sufferer from rickets who survives to adulthood may bear children whose heads are deformed because of trauma caused by the malformed pelvic bones or else may produce merely stillbirths. Rickets and osteomalacia occur "among women of the higher classes in India, who practice *purdah* and are therefore confined indoors away from the sun."<sup>13</sup> To the extent that this causes extensive birth

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<sup>12</sup> H. Beekman, *Treatment in General Practice* (4th ed.; Philadelphia: W. B. Saunders, 1942), p. 12.

<sup>13</sup> Tom D. Spies *et al.*, "Vitamins and Avitaminosis" in *Diseases of Metabolism*, ed. Garfield Duncan, M. D. (4th ed.; Philadelphia: W. B. Saunders, 1959), pp. 388-407.

trauma to the crania of their children, it must have deleterious consequences for the average mental ability of that generation of the Indian elite.

The disease was known to the ancients. The bone damage it causes was described by Hippocrates, Galen, Celsius and the Arab physicians. Nevertheless, it was not common in its visible and recognizable forms. For this reason, readers may be inclined to question that it played the crucial role in defining the northward frontiers of racial settlement that Gayre suggests. What this forgets is that most rickets is invisible in the sense that it is not susceptible to ordinary diagnosis. Thus, in consecutive autopsies at Johns Hopkins of 230 children aged two through 14, it was discovered that 46½% showed "histological evidence of rickets."<sup>14</sup> Moore and associates found three signs of rickets in 90% of 943 American preschool children. In Portland, Oregon, with 2,194 average hours of sunshine yearly, 95% of the children examined had rickets. In San Diego, with 3,024 hours of sunshine, the percentage was 73%.<sup>15</sup> Thus, the disease in its incipient stages is most common even today, and it is entirely reasonable to suppose that it conditioned racial survival by producing bone-weak specimens who were unable to hold their own. (Parenthetically, the fact that a mere handful of Vikings was able to make conquests in an area stretching from Russia, France, Scotland and Ireland to North America in the West and Sicily in the South, striking terror wherever they went and imposing their rule at will, suggests that here again rickets may have played a key role. The Vikings fought at a time when the technology of war was primitive and this placed a premium on physical strength and hardihood. They had a natural advantage over most other inhabitants of northern Europe, for their plentiful diet of fish insured them against rickets and guaranteed the normal development of a powerful bone structure essential to victory in hand-to-hand combat with sword and battle-axe. Their enemies and victims, on the other hand, were the West Europeans of the Middle Ages, slight of build, as attested by their armor, and suffering from malnutrition. Rickets was no doubt an important element in their poor physical status. Moreover, when the Norman descendants of the Vikings left their northern habitat with its rich fish diet, they proceeded to deteriorate in physique.)

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<sup>14</sup> Folls, Jackson, and Park, *Am. J. Dis. Child.*, LXVI, No. 1 (1943) *passim*.

<sup>15</sup> C. Moore *et al.*, *Am. J. Dis. Child.*, LIV, No. 1 (1937), 227.

### **The Torpor of the Tropics**

Since the days of Hippocrates, it has been known that moderate cold stimulates the mind, whereas excessive heat enervates it. Obviously, the cold must not be excessive: the thinker cannot be "numb" with cold, nor can he be continuously aware of physical discomfort.

Most students of the subject have noted that the great civilizations tended to arise and flourish in regions which were temperate at the time. When we consider such exceptions to the rule as southern India, Ceylon, Java and Bali and the Khmer civilization of Cambodia, it often appears that the civilizing element consisted of immigrants from colder climates. Within the tropical zone, the carriers and creators of civilizations have tended to be primarily Mongoloid and Caucasoid intruders rather than Negroid or Bushmanoid natives. The significance of this is that the Mongoloids represent racial adaptation to cold climates, the Caucasoids to temperate or cold ones and the Negroids to torrid zones.

The comparative intellectual stagnation of tropical peoples is caused by a variety of factors. The most obvious of the environmental causes is that excessive heat lowers basal metabolism, inhibits mental activity and brings about a torpid state. Moreover, the tropics are fertile breeding grounds for disease-carriers of all sorts and tropical man, since time immemorial, has had his vitality sapped by malaria, yaws, fungoid infections and a large variety of other ailments which are much more prevalent in torrid climates than elsewhere.

There are also hereditary forces. In other words, there is reason to believe that hot climates shape human evolution in ways which inhibit, or at the very least do not adequately stimulate, the growth of mental capacity. There are several possible reasons for this. Tropical man is shaped by evolutionary forces to enable him to lose body heat by sweating; this dictates a specific somatic, or physical, structure and, accordingly, he is lean, attenuated and has a high ratio of skin surface to bulk. This tends to produce narrow pelves and heads with subnormal cranial capacity. In the case of the Negro, there is a good deal of evidence that the smaller brain capacity means a more than proportionate reduction in the capacity of the new brain, namely, those cortical areas which are specifically adapted to the higher processes of reasoning.<sup>16</sup>

<sup>16</sup> Vint, *op. cit.*

There are other and perhaps more important ways in which evolutionary adaptation to intense solar heat may inhibit the evolution of mental ability. Survival in great heat requires maintenance of thermal equilibrium by cooling the blood. Body temperatures should be kept at or near normal (98.6° F.). When outside temperatures remain below 81 degrees, the body can lose heat by radiation or convection. With greater heat, sweating becomes the main means of thermal control. At 93 degrees in a totally saturated atmosphere, the entire body surface must perspire. If the air is dry, it is only at 106 degrees that the entire body surface must sweat if thermal equilibrium is to be maintained.<sup>17</sup>

Once all the body surface is sweating, no further heat loss is possible, body temperatures will rise unhampered, the human organism will cease to function normally and death will in time ensue. As one of the writers pointed out in another context, the Negro is admirably adapted to the heat-loss requirements of the tropical environment, since he has an unusually large amount of skin surface in proportion to body mass and because of the length of fingers, hands and forearms, which contain about 20% of the human sweating potential. This is offset by poor ability to withstand the hazards of Arctic life. During the Korean War, the frost-bite rate among American Negro troops was seven times the national average. Studies of racial basal metabolism made at the Arctic Aeromedical Laboratory near Fairbanks, Alaska, in 1957 showed that the Negro's rate of energy production fell off more rapidly than that of other ethnic groups under conditions of extreme cold.<sup>18</sup>

The Negro is able to sweat more than most other races. When working in great heat, he sweats enough to impose heavy workloads on the heart. The brain may, in the process, be deprived of some of its oxygen needs. When outside temperatures rise above 83 degrees, according to Coon, "the emergency network supplies the sweat glands copiously, and thus the blood moving to the internal organs is cooled." When Caucasians are exposed to these conditions, "Little blood gets to the brain, which may be why it is difficult for some white men to do creative work in hot weather."<sup>19</sup>

One of us wrote in another book:

"These facts may provide a clue to the observed differences be-

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<sup>17</sup> Coon, *Climatic Change*, *op. cit.*, pp. 24-26.

<sup>18</sup> Weyl, *op. cit.*, pp. 163-4.

<sup>19</sup> Coon, *The Story of Man*, *op. cit.*, pp. 211-12.

tween the mental performance of Negroes, on the one hand, and Caucasians and Mongolians, on the other.

"The first and most important series of considerations follows directly from Coon's analysis of thermal equilibrium and the blood flow to the brain. Under normal temperature conditions, primitive man must have been generally subject to a type of natural selection which favored the survival of the more intelligent individuals. The keen-witted would have had the advantage in finding game, protecting themselves against animal and human enemies and making the right adjustments to changes in their environment. Proportionately more of them would have survived childhood and brought their progeny to maturity. Thus continuous improvement in the human gene pool with respect to brain power could have been anticipated.

"However, it seems very doubtful that any such processes would operate with comparable efficacy in tropical areas. For here the survival advantages of superior brain power would be either less or non-existent.

"In the Tropics, much of man's activity is conducted in intense heat. Hence, his blood circulation is often channeled along the emergency route to serve the sweat glands at the extremities rather than to meet the blood needs of the brain for effective thinking.

"Torrid climates, in other words, may prevent individuals with superior minds from using them efficiently, not only most of the time, but in such critical survival situations as hunting and war. The reasonable inference is that natural selection for intelligence would operate in the Tropics with vastly impaired efficiency.

"The hypothesis suggested is that in the Tropics climate destroys the normal social and survival advantages of superior brain-power. Hence the races exposed longest to torrid climates would be those in which least natural selection for intelligence had occurred. If this is so, such races should show, on the average, less cortical development than other ethnic groups. While they might produce some individuals of outstanding mental ability and even of genius, they would probably furnish fewer of them proportionately than the non-tropical races [which races allow such gifted individuals to contribute to the extent of their capabilities and multiply at a higher rate than in the tropical races].

"Moreover, under tropical conditions, an exceptionally active and well-developed brain may be a disadvantage in the struggle for

survival because of the exorbitant demands it makes on the heart. The human brain has evolved to the point where it uses up about 25% of the oxygen which man inhales. Anthropoid apes channel only about half that proportion to their brains. . . .

“Under tropical conditions, where the heart must also compensate for extraordinary fluid losses through the sweat glands, mentally superior individuals, who require abnormally large supplies of blood-borne oxygen and glucose, may be at a survival disadvantage. This handicap would follow from the inability of the heart to simultaneously perform all the duties demanded of it. Strain on the heart, heat prostration or, for that matter, inability to function effectively in stress situations, would be among the possible manifestations of this hypothetical survival disadvantage.”<sup>20</sup>

### Month of Birth and Intelligence

Important recent research on the relationship between season of birth and intelligence casts further light on the stupefying effect of a tropical climate. Mills found that children in Cincinnati latitudes who were conceived during the summer months had just about half as good a chance of entering college as those conceived in the winter months.<sup>21</sup> Only four out of 33 Presidents were conceived in the summer months and persons conceived in summer are significantly underrepresented in *Who's Who in America*. A study of mental deficiency reveals that proportionately more individuals conceived in the summer months become first admissions to institutions for defectives. Moreover, the first admissions rate for persons conceived in summer is markedly greater for those conceived in years of above-average summer temperatures.<sup>22</sup>

There can be no doubt of the validity and significance of these factual findings. The explanation proposed by Knobloch and Pasamanick is embryological. They suggest that excessive heat damages organs in process of differentiation and organization in the foetus and that the most critical period of damage for the central nervous system is before the eighth week of foetal life and for the cerebral cortex the period between the eighth and twelfth week.

Two later researchers, Herbert Barry, Jr., and Herbert Barry, III,

<sup>20</sup> Weyl, *op. cit.*, pp. 164-5.

<sup>21</sup> Clarence A. Mills quoted by Hilda Knobloch and Benjamin Pasamanick, “Seasonal Variations in the Births of the Mentally Deficient,” *Am. J. Pub. Health*, XLVIII (1958), 1201-1208.

<sup>22</sup> *Ibid.*



writing in the *Archives of Psychology*, found that season of birth has "important implications in psychiatric illness." Seven studies, covering 30,000 mental patients, showed that an excess of those hospitalized had been born in the first four months of the year, whereas minimum hospitalizations occurred among those born in the second third of the year. In other words, hospitalizations for mental disorders were proportionately greatest among April-through-July conceptions and least among August-through-November conceptions.<sup>23</sup>

Knobloch and Pasamanick suggest that a greater prevalence of viral infections among pregnant mothers and a lower dietary intake by them during the summer months may be the chief factors causing seasonality among neonatal mental defectives.

Regardless of whether or not this is the case, the negative correlation between mental ability and temperature during the third month of pregnancy seems established. This is another clue to the intriguing problem of the causes of mental differences between tropical and temperate man. In commenting on this problem, the authors of the paper suggest that tropical infectious diseases and sub-optimal diets are "acting not only on the present generation, but also on future individuals yet unborn to produce a whole series of neuropsychiatric disabilities."<sup>24</sup>

In a later paper, the same writers analyzed racial and class aspects of sub-lethal foetal damage. They found "an association between brain damage and the complications of pregnancy, particularly the chronic anoxia-producing ones of bleeding and toxemia, and prematurity."<sup>25</sup> Cerebral palsy, epilepsy, mental defect, behavior disorder and reading disability were all associated with birth prematurity and with complicated pregnancies.

In their study of premature and full-term infants in Baltimore, Knobloch and Pasamanick found that 50.6% of the Negro births were complicated as against only 14.6% of the births in the white lower economic fifth and only 5.0% of births in the white upper economic fifth. Comparing Negroes with the lower white economic fifth, Negro prematurity was 67% more frequent and Negro puerperal complications were twice as frequent on the basis of equal samples of each group.

<sup>23</sup> *Miami Herald*, September 5, 1961.

<sup>24</sup> Knobloch and Pasamanick, *op. cit.*

<sup>25</sup> Knobloch and Pasamanick, "Some Thoughts on the Inheritance of Intelligence," presented at the 37th Annual Meeting of the American Orthopsychiatric Association, Chicago, February 25-27, 1960. Mimeographed copy.

These abnormal births result in a much greater than average proportion of dull and mentally defective children and a much smaller proportion of gifted ones. The approach of the authors of these papers is environmental. They believe that the lower psychometric intelligence and Gesell developmental quotients of the Negro children are adequately explained by the far higher proportion of complicated births among Negro women and that this in turn is explained by inferior diet and underprivileged socio-economic environment.

This interpretation, however, is not supported by the data presented in these studies. By the age of three, the premature children had almost caught up to the full-term children of their own race as measured by general (adaptive) Gesell developmental quotients, which measure the rate of maturation of pre-school children. The lag of premature white toddlers was less than two points, that of premature Negro toddlers five points. By contrast, the premature Negro children were 10 points behind the premature whites and the full-term Negroes were  $13\frac{1}{2}$  points behind the full-term whites. This seemed to show conclusively that the fundamental differences were between the racial groups and not between the premature and the full-term.

Moreover, if an underprivileged environment could cause the very high proportion of complicated births (over half of them) and the high incidences of mental deficiency present among Negroes, then the same condition should be observable among the other minorities whose economic status is substandard. It should also have been present among the white population of the United States of a generation ago, whose economic standard was approximately that of the Negro of today. Thus, it seems clear that we are dealing with ethnic differences of a complicated character, the complete causes and interactions of which are at the present time unknown. These differences apply to the capacity of mothers to give birth in a normal way, to the embryological development of the foetus and to the comparative incidences of mental deficiency and intellectual gifts among the children of the two races studied.

### **Brain Sizes of Modern Races**

Generally speaking, the primitive Negroid and Australoid peoples of Africa, Asia and Oceania are microcephalic. Thus, adult male Bushmen have average brain capacities of from 930 cc. to 1,170 cc.,

based on three studies made in the 1930's. The male Australian aborigine averages between 1,000 and 1,150 cc.<sup>26</sup> When the brain is this small, some authorities maintain that conceptual thinking is impossible.

Other measurements of primitive partially Negroid groups give male Andaman Islanders 1,317 cc. By contrast, the primitive Ainus, who inhabit northern Japan and are archaic Caucasoids or Australoids, have average brain capacities of 1,383 cc.

Porteus administered a variety of supposedly culture-free intelligence tests to these primitive groups, including the Goddard Form Board and his own Porteus Maze. The indicated mental age of the adult primitives taking the tests ranged from an average of 7½ years in the case of the Bushmen of the Kalahari Desert to 13 years in the case of the Ainus.<sup>27</sup>

Several measurements of the brain capacity of the African Negro have been made. Vint studied 389 adult males, most of them Bantu, who had been free of known mental disease and had died in the native hospitals of Nairobi. The average weight of these brains was 1,276 grams, from which Vint concluded that their average volume must have been 1,230 cc.<sup>28</sup> In the same year, Gordon published measurements of the cranial capacity of a large number of Kenya males who were examined at the Native Labour Registration Office in Nairobi. He found their average brain capacity to be 1,346 cc.<sup>29</sup> This is an overstatement as he made inadequate allowance for the unusual thickness of the African Negro skull.<sup>30</sup> In a very detailed study of comparative brain anatomy, Connolly found an average weight for Malay subjects of 1,310 grams, of Germans 1,298 grams and of Negroes 1,198 grams.<sup>31</sup> The Negro sample consisted, as far as could be ascertained, of racially unmixed individuals. All the sub-

<sup>26</sup> R. Ruggles Gates, *Human Ancestry from a Genetical Point of View* (Cambridge: Harvard University Press, 1948), p. 160. We have converted Gates' figures from brain weight in grams to volume by using the standard figure of 1.037 for brain density.

<sup>27</sup> Stanley D. Porteus, *The Porteus Maze Test and Intelligence* (Palo Alto: Pacific Books, 1950), p. 20. Porteus tested and measured the cranial capacity of Bushmen, Bathonga from northern Transvaal, Wakaranga from Southern Rhodesia, Amaxosa from Cape Province, Mchopi and Shangaans from Portuguese East Africa, Ainu from Japan and primitive central and northwestern Australians.

<sup>28</sup> F. W. Vint, *J. Anat.*, LXVIII (1934), 216. Dr. Vint assumed the average density of the fresh brains was 1.037.

<sup>29</sup> H. L. Gordon, *Eugenics Review*, XXV (1934), 223.

<sup>30</sup> According to J. C. Carothers, *The African Mind in Health and Disease* (Geneva: World Health Organization, 1953), p. 76.

<sup>31</sup> Cornelius J. Connolly, *External Morphology of the Primate Brain* (Springfield, Ill.: Charles C. Thomas, 1950), p. 141.

jects were male. As Connolly points out, the weight differences found between the white (German) and Negro sample were almost certainly less than the true differences between the races, because:

"The average weight of the German brains is less than that usually given for the average of their population. This may be accounted for by the long period that these brains were in the preservatives before weighing. Another factor may be that unclaimed hospital subjects would represent the poorer, less nourished individuals. This may also be true of the Negro, though perhaps to a lesser extent."<sup>32</sup>

These studies suggest that the average brain of either male East African Bantu-speaking Negroes or of *racially pure* United States Negroes may be from 10% to 12% less than the average brain of the white adult male. This difference in average brain size may not seem to be impressively large. However, it would be well to remember that the average brain capacity of East African Negro adult males is less than that reported for 13-year-old Australian white school boys of the lower social classes.<sup>33</sup>

Moreover, comparisons of total brain weight probably understate the true racial differences between African Negroes and Caucasians for other reasons. In the case of the Negro, the frontal and occipital portions of the brain are somewhat smaller in proportion to the total and the parietal region is somewhat larger.<sup>34</sup>

It is the frontal portion of the brain which is the primary focus of advanced mental functions, including logical reasoning and visual-spatial synthesis. This neopallium (new brain or cerebral cortex) is "a correlation-mechanism of still more decisive and capital importance, destined in man to exceed in size the total rest of the central nervous system." It "brings together receipts from all the various species of receptors, distance receptors and others alike. . . . *In man it is the seat of all which is exclusively human in the mind.*"<sup>35</sup>

Vint has shown that the supragranular layer, which is the last portion of the cortex to evolve, forms 16% less of the Negro's cerebral cortex than of the European's. In an important paper on the brain histology of adult male Kenya natives, Dr. Vint reported that

<sup>32</sup> *Ibid.*

<sup>33</sup> Stanley D. Porteus, *The Psychology of a Primitive People: A Study of the Australian Aborigine* (London: Arnold, 1932), p. 331, reported this figure as 1,330 cc.

<sup>34</sup> Connolly, *op. cit.*, p. 146: "The frontal region, as measured by the projectional distance to midpoint of central sulcus, is, relative to the total length of the brain, larger in male Whites than in Negroes, while the parietal is larger in Negroes than in Whites."

<sup>35</sup> "Brain," *Encyclopaedia Britannica, op. cit.* Our emphasis, N. W. and S. P.

the main reason for the greater increase in the thickness of the cerebral cortex of whites, as compared with that of Negroes, was that, in the former case, embryonic nerve cells (neuroblasts) develop normally into neurones and are sheathed (myelinated). As a result of the failure of the Kenya Negro to develop cerebrally in this normal manner, his brain-age is considerably less than the 13-year-old level suggested by crude brain-volume comparison. As Vint put the matter:

“Thus, from both the average weight of the native brain and from measurements of its pre-frontal cortex, I have arrived, in this preliminary investigation, at the conclusion that the stage of cerebral development reached by the average native is that of the average European boy of between 7 and 8 years of age.”<sup>36</sup>

Returning to the broad question of brain weight and brain size in relation to climatic habitat, we find that East Asian Mongolians and Polynesians are large-brained, that Europeans exceed Asian Indians and Chinese exceed Japanese. Broad-headed peoples tend to have larger brains than narrow-headed peoples and hence the short Alpine has a larger brain than the tall Nordic.<sup>37</sup>

Martin and Saller found that 15 series of European males had cranial capacities, measured with shot, which ranged from 1,478 to 1,609 cc. Eight series of African males had means ranging from 1,317 to 1,570 cc.<sup>38</sup> Thus, there is a significant difference between the ranges of the two series, but a bit more than half of the total range in cranial capacity is shared by means of series of both races. Among the Africans, the Kaffirs are outstandingly large brained.

### Brain Size and Intelligence

Sociologists and psychologists, particularly those concerned with racial desegregation, have tended in recent years to minimize, or even entirely to deny, the association between large brains and high natural intelligence. David Wechsler, the designer of the Wechsler-Bellevue Intelligence Scale, dissents from this viewpoint. He points out that the largest undisputed brain weight on record is that of the

<sup>36</sup> Vint, *op. cit. passim*. He added that the native brain does contain a normal number of neuroblasts and that it is impossible to say how many of them might mature under “conditions of life and education different from those which normally obtain today”—a crucial distinction, with which we shall deal in another chapter.

<sup>37</sup> Alfred Louis Kroeber, *Anthropology* (New York: Harcourt, Brace & Co., 1948), p. 129.

<sup>38</sup> Rudolph Martin, *Lehrbuch der Anthropologie*, (3rd ed., revised by Karl Saller Stuttgart: Gustav Fischer Verlag, 1959) pp. 1,210-1,211.

Russian novelist, Ivan Turgenev (2,015 grams) and adds: "It is to be noted that 'heavy' brains have generally been those of men of genius and there would seem to be some correlation, though not a great one, between size of brain and mental capacity."<sup>39</sup> Brain weights of men of achievement exceed the average, according to Wechsler, by about 100 grams as a rule.

When we consider the area of inter-species relationships, the importance of brain size and structure to intelligence is accepted as axiomatic.

Physical anthropologists go to a great deal of trouble to estimate the brain capacities of prehistoric human and hominoid specimens because they assume that the growth of intelligence is associated with brain growth. We are all aware of the fact that brain growth parallels the development of intelligence in childhood and that, by the time mental growth has been completed, brain growth has also stopped. Another relevant fact is that the feeble-minded and mentally dull generally have small brains. While there are a few cases of men of genius with subnormally low cranial capacity, autopsies have often revealed special compensatory factors.<sup>40</sup>

Eleven studies have been made of the relationship between intelligence and such factors as cranial capacity, head length and head breadth. In all instances, the correlations have been positive, although small, ranging from .08 to .34.<sup>41</sup> However, when homogeneous human populations are considered, there are marked differences in intelligence between the group at the top of the range in brain size and that at the bottom. For instance, in 1916, Porteus and Berry of Melbourne University examined the relationship between brain size and intelligence in 9,000 individuals. They found that the advantage definitely lay with the large-headed. Thus, above-average intelligence was about five times more frequent in the top 10% of

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<sup>39</sup> Wechsler, *The Measurement of Adult Intelligence* (Baltimore: Williams and Wilkins, 1941), p. 89. Cromwell's brain is said to have weighed 2,231 grams and Lord Byron's 2,200 grams, but these figures have been rejected by Spitzka as unreliable.

<sup>40</sup> Anatole France's brain weighed only 1,017 grams, as against a normal weight of 1,360 grams for a man of his height. However, the cerebrum had marked asymmetry; the convolutions were long and tortuous, and the foldings were unusually complex. These and other peculiarities provided considerably more gray matter than the brain weight would indicate. L. Guillon *et. al.* *Bull. Acad. Méd.*, XCI (1927), 328-36. Moreover, he was eighty when he died, by which time normally a good deal of brain shrinkage has occurred.

<sup>41</sup> Leona E. Tyler, *The Psychology of Human Differences* (New York: Appleton-Century-Crofts, 2nd ed., 1956), p. 422.

the sample in terms of brain size and mental dullness about three times more frequent in the bottom 10%.<sup>42</sup>

Moebius compared the head sizes of 100 educated persons with those of 100 mentally deficient criminals. Ten percent of the convicts, but only 1% of the educated, had small brains; 40% of the educated, but only 3% of the convicts, had large brains.

A few provisional conclusions can be drawn from the foregoing. Human races vary widely in brain capacity. In some instances, these differences are correlated with body size and hence do not indicate differences in mental potential. As Jerison has pointed out, brain weight in humans is the sum of two units, one of which varies allometrically with body size, the other of which varies very little, if at all, with body dimensions. The first unit comprises only 10% to 12% of brain weight in man.<sup>43</sup> There are other instances in which the differences cannot be explained in this manner. Such brain-size variations may be due to the fact that not all races have identical antecedents: thus, the Bushmen may possibly be a cross between two types of prehistoric man discovered in Africa, neither of which represents a very advanced stage in evolution; the Australoids are believed to be the end-product of a different sort of miscegenation; elsewhere, the hybridization of modern man with Neanderthaloid man has probably occurred, but to an unknown extent. Another causal factor conditioning brain size and brain shape is that the necessity of adaptation to torrid or frigid climates forces racial specialization in somatic structure.

The observed variations in the brain sizes of living races have some relationship to mentality, but there is disagreement as to the importance of that relationship. Few measurements have been made of the size and structure of the cerebral cortexes of different racial groups and Vint's studies of the comparative histology of white and East African Negro brains unfortunately stand in splendid isolation.

A definite judgment concerning the mental potential of those races which are small brained in relation to size appears possible. Vint's studies in Kenya showed that the observed shortfall in aggregate brain size was magnified when comparison was made of European and Bantu cerebral cortexes and in particular the supragran-

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<sup>42</sup> Porteus (1931), *op. cit.*, p. 332.

<sup>43</sup> H. J. Jerison, "Brain to Body Ratios and the Evolution of Intelligence," *Science*, CXX, No. 3144 (1955), 447-9, quoted in Coon, *The Origin of Races*, *op. cit.*, p. 340.

ular layer of the cortex. Other evidence supports Vint's findings that the adult East African Negro brain corresponds in development to that of a small boy in Europe and that the African deficiency is most marked in the visual synthesis centers and in the capacity for logical reasoning. Moreover, most of the vanishing Stone Age peoples of the earth, such as the Veddas, Bushmen and Andamanese, are both small-brained and poorly endowed with native intelligence.<sup>44</sup> This picture, however, is complicated by infantilism.


A fundamental key to the logic of race difference in psychic qualities is the fact that *Homo sapiens* emerged a quarter of a million years ago in Europe, 150,000 years ago in temperate Asia, but only 40,000 years ago in tropical Borneo and in Negro Africa. The chronology of the discovery of fire shows a similar significant lag of the Melanoid racial stocks behind the northern Caucasoid and Mongoloid groups. Professor Gayre's hypotheses concerning the mental stimulation toward inventiveness and technological competence given these two light races by the alternating advance and recession of ice sheets, in contrast to the numbing torpor of the tropical areas inhabited by the Melanoid peoples, provides a causal explanation of the difference in the evolutionary timetables, both somatic and cultural, observed by Dr. Coon.

Thus, modern man appears to be diverse as to inheritance. Over the vast stretches of prehistoric time, racial differences have formed and crystallized in response to the different challenges presented by climate and physical habitat; these forces have caused ethnic differentiation, not merely in physical characteristics, but in mental capacity as well, and the readily observable tendencies of the Melanoid races to fall behind in the creative leadership of civilization are in part caused by forces that operated in the dark past of fossil mankind.

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<sup>44</sup> Stanley Porteus, *The Mankind Quarterly*, I, No. 3 (1961), 192.





*“There are countries where the excess of heat enervates the body, and renders men so slothful and dispirited that nothing but the fear of chastisement can oblige them to perform any laborious duty: slavery is there more reconcilable to reason; and the master being as lazy with respect to his sovereign as his slave is with regard to him, this adds a political to a civil slavery.”*

—CHARLES SECONDAT, BARON DE MONTESQUIEU,  
*The Spirit of the Laws*

### III

# Climatic Cycles and Civilizations

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THE CLIMATE and terrain of the Near Eastern cradle lands of early civilization were not dominated by desiccation as they are today. Cold air over Europe during the Ice Age shifted the Atlantic rain storms to a southerly course. The land belt from Morocco to Iran was at one time a fertile expanse of grasslands and park. Stone Age hunters depicted the bison and elephants they preyed upon on rocks and cliffs which stand in portions of the Sahara today incapable of supporting mammalian life.<sup>1</sup> Desiccation and faunal impoverishment were accelerated by the Romans, who scoured North Africa for lions and other wild animals for the sadistic spectacles of the circuses. First Berbers, then Arabs, overgrazed the land with camels and goats, thus impoverishing the grass cover and speeding up wind erosion.

With the recession of the glaciers, the climate of this region gradually became warmer and dryer. Yet Libya remained rich in cattle, vineyards and olive groves. The Egyptian civilization center was a region of marsh and park land where, "as late as the New Kingdom (1400 B.C.), man could hunt Barbary sheep, wild oxen, and asses, and a wide variety of antelopes with their attendant carnivores."<sup>2</sup>

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<sup>1</sup> Henri Frankfort, *The Birth of Civilization in the Near East* (Garden City: Doubleday, 1936), pp. 26-27.

<sup>2</sup> *Ibid.*, p. 38.

As for Mesopotamia, it was afflicted by raging spring tides in the Persian Gulf, southerly gales and the abnormal conditions caused by landslides and heavy ice melts in the Caucasus. Here rivers were untamed, liable to flood their banks, sweep away primitive villages and dikes or leave other settlements stranded by changing their courses.<sup>3</sup> The fact that these lands were far more wooded and better watered than today does not preclude the alternation of periods of desiccation with those of abundant rains, but it does suggest that the climate during the birth-millennia of the great irrigation civilizations was significantly colder and wetter than in the present period.<sup>4</sup>

The last of the early civilizations of the Middle East was the Harappa Culture which flourished between approximately 2500 B.C. and 1500 B.C. in northern India. Basham describes conditions in this region around 3000 B.C. as follows: ". . . the climate was very different. The whole Indus region was well forested, providing fuel to burn bricks and food for wild elephants and rhinoceros, and Baluchistan, now almost a waterless desert, was rich in rivers."<sup>5</sup> This is corroborated by the fact that about 2750 B.C. culverts were built at Mohenjo-Daru to drain off excess water. Mohenjo-Daru is on the west bank of the Indus in an area today desiccated.<sup>6</sup>

During the first millennium before Christ, the main locus of civilization shifted northward by about 10 to 20 degrees of latitude, moving from the alluvial river valleys south of the Mediterranean to the northern shores of that sea. Harappa civilization had flourished at about 20 degrees north latitude, Egyptian at 25 to 30, Mesopotamian at 30 to 35. By contrast, the Greek city-states in Hellas, Anatolia and Italy were in the 26 to 42 degree range and both Rome and Byzantium were somewhat north of that.

These new civilization and culture centers had a colder, wetter and more bracing climate. There was greater diurnal variation in temperature. In all probability, there were many more cyclonic

<sup>3</sup> *Ibid.*, pp. 52-53.

<sup>4</sup> We can infer a good deal about these cycles of rainfall and aridity from the settlements at Anau in arid Soviet Turkestan. Between 5200 B.C. and 50 A.D., we have a record of successive settlement and abandonment. Some of the abandonments were not due to conquest and are associated with symptoms of desiccation. However, the dates have not, to our knowledge, been checked by the Carbon 14 method. See C. E. P. Brooks, *Climate Through the Ages*, (2nd ed.) London, 1949, pp. 318-21.

<sup>5</sup> A. L. Basham, *The Wonder That Was India* (London: Sidgwick and Jackson, 1954), pp. 11-13.

<sup>6</sup> Brooks, *op. cit.*, p. 324.

storms and the atmosphere was more heavily charged with ozone. The climatological stimulus to mental activity was presumably greater in the Graeco-Roman civilization centers than in the terrain of the irrigation empires.

To be sure, Hellenistic civilization, centered in Alexandria, was scientifically more creative than that of Rome. During its early centuries of vitality, the intellectual center of Islam included Baghdad and Cairo (the former built near the ruins of ancient Anbar, the latter within a few miles of Memphis and Heliopolis). The southerly location of these great civilizations can probably be explained on the hypothesis that a more favorable climate existed then than does at present. Egypt, during the Hellenistic and Roman eras, for example, was more favorable than it is today. A long time ago, Fraas observed:

“An intellectual activity like that of the times of the Greeks, when Alexandria was the center of all the arts and sciences, a true world’s university, with the richest library on the earth; or as that which existed from the time of the Platonists up to the first Christian era . . . demands, as an absolute necessity, a different climate and a moister air, than that now prevailing in Egypt.”<sup>7</sup>

According to the remarkably reliable rainfall records kept by Claudius Ptolemaeus in the first century of the Christian era, the northern Egyptian summer, which is today dry, monotonous, torrid and stupefying, was then characterized by “cyclonic disturbances with frequent west winds and occasional thundershowers. . . .”<sup>8</sup> The Calendar of Antiochus and the observations of Ptolemy indicate that these favorable weather conditions prevailed until at least 200 A.D.

The climatic changes which have occurred in Egypt over the past 2,000 years thus provide at least a partial explanation for the change in the mentality of the people inhabiting the Nile valley and the Delta. The Greeks in Alexandria were able to do creative work in science which Western Europe would neither match nor surpass until the Renaissance some 17 centuries later, first, because they were Greeks and, second, because the climate stimulated their intellects. When this climatic stimulus was withdrawn and the Greek element in the population was diluted and dissipated, Egypt, and in

<sup>7</sup> Quoted by Ellsworth Huntington, *Mainsprings of Civilization* (New York: Wiley, 1945), p. 546.

<sup>8</sup> Ellsworth Huntington, *ibid.*, p. 543.

particular its Muslim inhabitants, <sup>9</sup> sank into a mental torpor so intense that the word *fellaheen* carries with it the notion of an almost vegetable existence.<sup>10</sup>

### Cycles of Rainfall and Desiccation

About the turn of the present century, a group of American scientists discovered that measurement of the annual growth rings of redwood trees provided reliable rainfall records of a continuous nature stretching back more than a thousand years in time. Such measurements on sequoias have been supplemented by other measuring techniques such as the shifting shorelines of inland seas, lakes and rivers; the formation of peat bogs; the advance and retreat of glaciers, and the succession of different types of flora as revealed by pollen counts and other means.

Huntington and others studied the relations between short-range cycles of moisture and desiccation and sunspot activity. When we are considering the influence of rainfall on civilization, however, we are concerned with climatic cycles of much greater duration. O. Pettersson has advanced the hypothesis that climatic variations, during the historical period, are due to changes in the circulation of the oceans caused by what he calls "tide-generating force." This in turn results from variations in the relative positions of sun, moon and earth. Pettersson found evidence of a major cycle of 1,700 years and of other and lesser cycles of shorter duration.<sup>11</sup>

Other hypotheses have been advanced to explain these long-term pulsations of wetness and dryness. Regardless of their causes, regardless of whether they are cycles or merely climatic alternations and successions, they are seemingly closely associated with the rise and fall of civilizations. The causal processes are complex and operate on several levels simultaneously.

In the first place, as Huntington and Toynbee have shown, the desiccation of steppe and desert is normally followed by an eruption of barbarian hordes into the areas of the settled and the sown. These

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<sup>9</sup> Both in Egypt and elsewhere in the world of Islam, the Muslim majority is almost invariably surpassed in energy, ability and intelligence by the Jewish and Christian minorities. For this reason, the latter are chronically persecuted and periodically suppressed.

<sup>10</sup> See Spengler, *op. cit.* Haiti, with its conception of the *zombie*, or walking dead, has surpassed even Muslim Egypt in conceptualizing the dementalization of man.

<sup>11</sup> O. Pettersson, "Climatic Variations in Historic and Prehistoric Time," *Svenska Hydrog.-Biol. Komm., Skriften* (1914), 5. Also see Brooks, *op. cit.*, pp. 143, 157, 357, 358, 368, 378.

outward radiations of nomadic peoples occur because the desiccating steppe and desert are no longer able to sustain their herds. Hence, the nomads may either invade arable lands immediately or else war among each other for the available pasturage. Where there is internecine war, the defeated nomads are ousted from their habitat and fall upon the zones of settled agriculture and their peasant populations with the brutality and fury for which they are notorious.

The most protracted and calamitous of these periods of desiccation began in the first century of the Christian era and ceased about 800 years later. This drought was a principal cause of the destruction of the Roman Empire, the spiritual triumph of Christianity and the military conquests of Islam. In a prolonged era of drought such as this, it is not merely the defeated nomadic tribes that are set into motion. Disaster and chaos spread over the entire desert region. One nomadic horde after another hurls itself against the sedentary regions. Civilized man is attacked by a succession of barbarians, and no sooner has he succeeded in assimilating and teaching one horde than he is attacked, looted and massacred by the next one. These periods are eras of *Voelkerwanderungen*, in which the peoples of desert and steppe move outwards in armed hordes.

The drought-caused barbarian invasion is not directed in a specific path of assault or against a single civilized and sedentary area. Rather it is an eruption at all points on the vast frontier that separates the grasslands from the sown lands. Such eruptions have battered simultaneously against the Mediterranean civilization areas, and against China and India as well. Three Eastern Hemisphere desert regions that have served as the generators of these explosions are the Sahara, the Arabian desert and, most important of all, the steppe-desert zones of central Asia, stretching from the Gobi to the Iranian frontier.

Toynbee has prepared an impressive compendium of all the known nomadic invasions in historic time and has sought to correlate them with prevailing climatic cycles.<sup>12</sup> His evidence strongly corroborates the theory that desiccation is generally the root cause, despite the fact that the conquest of most of the civilized world by the Mongols in the 13th century was neither caused by, nor associated with, adverse climatic conditions.

The successful invasion of sedentary areas by nomads and barbarians is one of the most frequent causes of the downfall of civiliza-

<sup>12</sup> Toynbee, *op. cit.*, III, Annex II, 395-455.

tions, and of catastrophic genetic deterioration of their inhabitants. To that extent, desiccation can act as a potent negative force in transforming the geography of intellect.<sup>13</sup>

The causes of nomadic explosions have been suggested; the reasons for their military and political success have not. It is worth noting that the nomadic eruptions of Asiatic origin have been directed primarily against three major civilization regions: the Mediterranean, the zone of Iran and India, and the northern frontiers of China. Without entering into details, the success of barbarian invasions has tended to be overwhelming against the first two regions, but far more limited against the third.

### **Mongols and Chinese**

The comparative immunity of China to being overwhelmed and destroyed by these agencies of nihilism can perhaps be attributed to two sets of factors. The first and most interesting is the natural military equilibrium between China and the desert-steppe regions of Manchuria, Mongolia, Turkestan and the Gobi. The military significance of these steppes and deserts was that they served as the breeding and feeding grounds for the Kirghiz horses and those of the Turkomens, animals admirably adapted for survival and war under the exigent conditions imposed by the environment of inner Asia. The spare Turkoman horses would frequently travel 650 miles over steppe land and mountains in five days. The Kirghiz horse, a much sturdier animal, could survive three to four days without water, live without food for a long time during snow storms and frost, withstand extremes of hot and cold, do 80 miles a day and live his whole life without tasting barley or oats. Both of these animals gave the nomads exceptional mobility and speed, enabling them both to raid without warning and to retreat into areas so desolate that ordinary cavalry could not follow. Hence, the capture of the horse-breeding grounds of northern and central Asia was a perennial object of Chinese policy, but one which seldom succeeded.

Similarly, nomad invasions of China could not succeed when they assumed the character of a full-scale war because of the well-organized Chinese bureaucratic state. The Chinese Empire was able to place enormous armies at threatened internal points, moving

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<sup>13</sup> For a critical reaction brilliantly expounded, see T. Peisker, Chapter XII (A) "The Asiatic Background" in *The Cambridge Medieval History* (New York: Macmillan, 1924), vol. I.

these troops by water along the excellent canal and river system of the Celestial Empire, and feeding them with the stored tribute rice which the bureaucracy regularly collected. This, of course, did not preclude nomadic conquests of China during the "times of troubles" when centralized order was dissolving, nor did it prevent nomadic utilization of internal schism or reliance upon surprise and the paralyzing effect of the swift and brutal blow. The normal state of affairs, however, was for China and the desert to maintain a fluid, shifting military equilibrium. Moreover, when nomads conquered China, they did not depopulate it, as they did Mesopotamia and Iran, but rather superimposed a new ruling minority on a pre-existing bureaucracy.

The second reason that China withstood the catastrophes from the desert more successfully than the other regions was the cold climate prevailing along the Chinese portion of the border territory between grasslands and arable lands.

This last point can be stated somewhat differently. In the warmer bands of the temperate zone, those with an essentially subtropical climate, desiccation brought economic weakness, the ravages of disease, sometimes famine and depopulation. Here, the wet eras were those of prosperity; the dry ones those of dearth. In the colder areas, such as the British Isles in Europe and north China in Asia, the reverse tended to be the case. Hence, the drought-caused explosions of nomads struck the warmer civilizations, such as those of the Mediterranean and Middle East, at periods of internal weakness and disintegration. By contrast, they struck northern China at times which were, climatically at least, periods of strength.

### **Malaria and Civilization**

There are several reasons for this difference and we may consider Rome as a typical example. The vigor and intensive cultivation of the early Republic, during the two centuries of sufficient rainfall after the middle of the 5th century B.C., were followed by progressive drought and agricultural decline. The scant rainfall was insufficient to keep the rivers and streams flowing. Stagnant pools formed during the hot summers. These became potent breeding grounds for *anopheles* mosquitoes. As malaria spread, the population of Rome became devitalized and less capable of working or fighting. Drought-caused malaria was conquered by the next cycle of moisture, which enabled the streams to resume their swift flow and overrun the stag-



nant ponds and marshes. The long dry cycle of the first seven centuries of the Christian era, however, brought in a new spread of malaria. (In the same way, malaria extinguished the brilliant civilization of Ceylon, though here the causation may have been different. Specifically, the irrigation works may have been destroyed in the course of wars, thus creating the stagnant waters necessary to the life-cycle of *anopheles*, spreading malaria and devitalizing the population to such an extent that it eventually lacked the will or the intelligence to extricate itself from its self-imposed impasse.)<sup>14</sup>

The northern countries were, of course, not immune from malaria, but it afflicted them with much less catastrophic force. Hence, the malarial aspect of the causal nexus between desiccation and the internal decay of civilizations can be regarded as primarily a phenomenon of hot countries.

### Cycles of Rainfall and Drought

The second set of causal processes has to do with the nature and problems of non-mechanized agriculture. In the Mediterranean, heavy rains make the deserts bloom, increase soil fertility and open up the normally desiccated hinterlands south of the North African coast. During wet periods, the Mediterranean civilizations supported dense populations largely on wheat, which was grown not merely in Italy and Spain, but in Africa as well. As drought ensued, the land was no longer able to yield wheat and the shift was made to olives and grapevines. These transitional periods were generally characterized by famine. Drought made the grain crops fail at a time when the olive groves and vineyards were not yet bearing. Moreover, dry land in olives and vines will not feed nearly as many mouths as well-watered land in wheat.

The eras of desiccation in the Mediterranean were characterized by philosophies of despair, otherworldly religions, social disintegration, acute depopulation and famines.

As the advance of drought destroys the agricultural potential, food shortage becomes general. The great cities tend to disintegrate and with that disintegration there is a decomposition of the elaborate division of labor and specialization of bureaucratic function characteristic of the well-articulated civilizations. Instead, society reverts to simpler, more primitive forms; the crudely self-sufficient feudal

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<sup>14</sup> At least, this is Toynbee's interpretation of the downfall of Indic civilization in Ceylon. See *op. cit.*, IV, 45-7.

manor displaces the metropolis; the brutish serf substitutes for the skillful and specialized slave. What has happened is that the terms of trade have shifted in favor of food and against manufactured products; hence, there has been a movement toward the soil in a literal sense, that is to say a withdrawal from civilization. At the same time, in these eras, order disintegrates: the miserable masses no longer have a stake in it, nor can they be easily intimidated, since few punishments are more terrible than starvation. Membership in the bureaucratic elite ceases to be an honor and becomes a burden; patriotism disappears; loyalty to the institutions of this world is displaced by preoccupation with the hereafter.

The alternation of drought and rainfall has had a very different impact on the history of northern Europe. There, the enemy of agriculture and hence of civilized existence was excessive moisture. The wet spells in the North meant that the peat bogs encroached on the forests, the forests on the pastures and the weeds on tilled land. The eras of cold destroyed the vines and olives of England. Heavy rains created a luxuriance of weeds on cultivated acreage which, given the primitive farming techniques which then prevailed, could not be coped with. Accordingly, there has been a general tendency over the past several thousand years for prosperity, economic and political power and, for that matter, civilization, to oscillate between the Mediterranean and northern Europe in accordance with the climatic cycle. The eras of wet and rain have tended to connote disaster for the North and to bring about golden ages in the South. In the periods of desiccation, by contrast, the North has flourished and the Mediterranean decayed.

Thus, the Age of Pericles (5th century B.C.) occurred at a peak of cold and moisture. Greece reached her pinnacle of civilization and prosperity. The impact in central and northern Europe was the reverse. A sudden rise in lake levels occurred, that of Lake Constance being in excess of 30 feet. The lake villages were, for the most part, abandoned; the Alpine settlements, including those devoted to mining and salt extraction, were also deserted. The rains and cold brought catastrophe to a population which had been moving toward sedentary civilization.<sup>15</sup> During the next five centuries, rainfall declined in central Europe and, at the time of Jesus, the shores of Lake Constance were approximately at their present locations. The curve

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<sup>15</sup> Brooks, *op. cit.*, p. 300.

of aridity rose for another five centuries. German settlements were made on low ground which is today marshy.

The civilization cycle in Ireland reveals a similar pattern. Around 1200 to 1000 B.C., there was considerable sea traffic between Ireland and Scandinavia, a fact which suggests that storms were infrequent and that the period was comparatively arid. A high civilization developed in both areas during the Bronze Age. As the pre-Christian era moved towards its close, there were centuries of great storminess, heavy rains and cold in northern and central Europe. Peat bogs formed on a large scale in France. There was a general recession of civilization in northern Europe and peoples inhabiting the North Sea area, such as the Cimbri and Teutons, were displaced and set into motion. There is some correspondence between this time of troubles in the North and the flowering of Greece and the emergence of the early Roman Republic in the Mediterranean, though the eras of desiccation in the latter area do not necessarily correspond completely to those of heavy rains in the former.<sup>16</sup>

From about 150 to 750 A.D., the Mediterranean was afflicted by the most severe and protracted cycle of drought in the historical era. The manner in which this phenomenon uprooted classical civilization has already been indicated. When one turns to the North, however, the impact is more or less reversed. The golden age of Irish civilization can be dated approximately 500 to 800 A.D., a period of marked desiccation. It is interesting that the brilliance of this era was such that two fearful outbreaks of pestilence in the 6th and 7th centuries, which forced the abandonment of Tara and allegedly destroyed one-third of the Irish population, could do no more than merely interrupt it.

The centuries in question are generally referred to as the Dark Ages and no honest student of the matter would suggest that they were an era of high civilization, either in northern Europe generally or elsewhere in the Western world.<sup>17</sup> They were characterized in fact by pestilence, poverty, famine to an appalling extent, superstition, ignorance and a large degree of anarchy. But in northern Europe at least, the general movement was forward during these centuries.

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<sup>16</sup> *Ibid.*, p. 302.

<sup>17</sup> A high civilization level did prevail during this period in China under the T'ang Dynasty (618 to 906 A.D.) and Japan similarly emerged from primitive society to imperial organization in the 8th century. The period 794 to 1192 A.D. is customarily referred to as the Golden Age of Japan, and Lady Murasaki's great novel, *The Tale of Genji*, was written about 1000 A.D.

The Benedictine monks<sup>18</sup> dedicated themselves to physical labor as well as to piety, and in northern and central Europe they and similar groups managed to reclaim large areas of land from bog and forest.

In England, a viable government and social organization had emerged under such leaders as Alfred the Great. France became a nation. She checkmated the advance of Islam at Tours in 732 A.D. and later in the same century the Franco-German empire of Charlemagne was born. Further north, the Vikings were on the move. A political consolidation and military offensive in the North seemed to be associated with chaos and retreat in the Christian areas of the Mediterranean. The dry period extended intermittently until about the 12th century. The fact that a shift in the locus of civilization had occurred became evident. The Roman Empire in the West became successively a French and a German creature. Italy was conquered by northern armies. Crusaders swept over the Mediterranean lands and pillaged them; the Normans conquered Sicily. The Vikings raided, conquered and established principalities along the oceanic crescent from Russia to the lands of the Mediterranean. Meanwhile the northern overland trade and maritime routes gained considerably in importance.

### Islam and Climate

The seeming exception to this pattern of the northward shift of power is the expansion of the Arabs under Islam. Certainly, the original Arab eruption combined characteristics of a nomadic invasion during drought with those of a universal religion. The achievement was both of the spirit and of the sword. The political unity achieved by Islam was brief. The civilization it carried and developed was primarily not the work of Arabs. The great creative minds of Islam were mainly Persians, Indians, Greeks, non-Arab Semites, converted Christians and Jews, or else Christians and Jews who made merely a pretense of conversion. All this was superimposed on a great tradition of Graeco-Roman civilization which had never been broken in the Mediterranean lands that the armies of the Prophet conquered. A large part of the intellectual attainment of Islamic civilization consists of commentaries and compendia on Graeco-Roman philosophy and science. Moreover, of the greatest thinkers who wrote in Arabic, many were branded as heretics by the fakirs, and had their writings regularly burned by the pious or by the state. The suggestion, by

<sup>18</sup> St. Benedict lived from 480 to 543 A.D.

the distinguished academician, Charles Bertrand, that the glorification of Islamic civilization by modern Western writers is not so much an act of historic justice as an oblique attack on Christianity deserves serious consideration.

Obviously, this is a very large subject and one which cannot be resolved in a few paragraphs. Nor would anyone care to deny that the Arabic language served as a new vehicle for human thought, still less that the religion, architecture, art and social organization of Islam were remarkable contributions to the traditions of Hellenism, Rome and the so-called-barbarian successor states. Thus, Islam can be viewed as primarily a continuation of the Graeco-Roman culture-civilization with some new ingredients. Considered in this light, we see the "Arab" synthesis as a new religion arising in a time of troubles, carried by warrior nomad hordes impelled from their pasture lands by desiccation and conquering an area where much higher civilizations had previously prevailed. The eventual, comparative stability of the Islamic states (and this stability and unity have been much exaggerated by Arabophile writers) probably resulted from the fact that the peak of desiccation had already been passed and the Mediterranean area was climatically capable of returning to order and prosperity.

As the Dark Ages came to a close, rainfall increased. The cycle of cold and wet reached a great peak (possibly a maximum for the entire historic era) about 1350 A.D. The civilization of Iceland and the outposts of settlement in Greenland were swept away by the ice floes, by the pestilence and by the victory of ice over forests. Northern Europe, in the throes of the Black Death, was swept by a cycle of violent social revolutions.<sup>19</sup>

### **Ozone and Civilization**

Ellsworth Huntington, a neglected pioneer investigator of the relations between climate and civilization, thought ozone was the key factor in human progress. The ozone charge in the atmosphere, he believed, had a direct influence on animal growth cycles, increased human reproduction and stimulated human intelligence. Over a long life, Huntington collected a great deal of evidence in support of the ozone theory. Since ozone is released by cyclonic storms, he con-

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<sup>19</sup> Jack Straw and Wat Tyler in England (1381); the Estonian revolt (1343-45); class war in the Rhineland and Swabia (circa 1354); the Jacquerie in France (1358), etc.

cluded that the storm zones were those of greatest human advance. In modern times, the pre-eminent areas of cyclonic storms have been Northwestern Europe, the United States and to a lesser extent Japan. The Eurasian hinterland is largely devoid of this stimulus.

Actually, ozone is a bluish, poisonous gas and an allotropic form of oxygen. Except in the Tropics, ozone concentrations vary diurnally, reach peaks in the spring and troughs in the fall and are concentrated westward of cyclonic storm centers. (Concentrations of cosmic ray showers might also shape civilizations, for these bombardments cause human mutations according to a linear equation. Because of the nature of the earth's field, cosmic ray showers are most intense at the poles and least at the Equator. With each ascent from sea-level, there is a rapid increase in cosmic radiation.)

### The Renaissance and After

As man developed more efficacious controls over nature, the correspondence between latitudinal concentrations of power and wealth and the oscillations of long-range climatic cycles became blurred. In the 14th and 15th centuries, we witness the rise of Genoa and Venice and the burgeoning of the Renaissance. A spectacular renewal of Mediterranean civilization occurs. The Eternal City ceases to be the prey of wolves and warring *condottieri*, as it was in the time of Cola di Rienzi; it again becomes a cosmopolis. Yet the 15th century was one in which a strong transition toward a dryer and warmer climate appears to have taken place in Europe. The Mediterranean resurgence of power continued throughout the 16th century, at which time Spain and Portugal became masters of most of the world. Thereafter, Iberia fell into a protracted economic and political decline. England and Europe north of the Bay of Biscay and west of the Vistula assumed, secured and consolidated their predominant position on the Continent. Yet this era, in which the North rose to pre-eminence, was essentially one of rains and cold, and in fact, the period 1600-1850 is sometimes referred to as the Little Ice Age.

It was in this period of inclement weather that Western Europe was impelled to conquer and colonize its overseas empires. Climatic change played a dwindling role in determining the pattern of power in space—a reflection of man's increasing capacity at that time to master his physical environment, both to adapt to it and to change it. The advance of agricultural techniques made it comparatively easy to control the spread of weeds in rainy years, to turn forests into pas-

ture and pasture into tillage. The twin problems of desiccation in the Mediterranean area, malaria and lack of water for grain crops, could largely be solved by developing the tools for effective hydraulic engineering. Thus, malaria could be curbed by drainage and small grain production maintained by irrigation.

The technological factors bearing on these particular areas are, of course, myriad. To give only one example: from classical times to about 800 A.D., draught horses were yoked to carts and chariots with the aid of what an eminent agricultural historian<sup>20</sup> appropriately calls a garotte strap. "As soon as the horse began to draw his load, the strap about his neck tightened, interfering with both circulation and breathing."<sup>21</sup> An effort to solve this problem by using a martingale to keep the garotte strap from the animal's windpipe failed, because the former chafed the horse's skin. The horseshoe was an equally essential prerequisite to the intelligent use of animal power. As long as draught animals were unshod and yoked in a manner that either strangled them or abraded their skin when they used their strength, almost any hard agricultural labor required a disproportionate amount of both man and animal power.

With the development of technology, the autocracy of climate was reduced. This applied particularly to man's ability to make his food production somewhat independent of the cycles of both heat and cold, drought and flood. However, the direct influence of heat and cold on human well-being was more durable. Independence from this limiting factor has been won only within this century, by a fortunate minority of the human race through such developments as thermostatically controlled heating and air conditioning. The influence of ozone, or oxygen concentration, however, has not been brought under human control, and it is possible that the bands of greatest human creativity will continue for centuries to come to correspond to the paths of electrical storms.

Thus, through most of man's history, the rise and fall of civilizations seem to have been conditioned by climatic factors. Excessive cold numbed the mind and sweltering heat produced torpor. Civilizations rose, as a rule, only in the bracing climates of the temperate zones. The cycles of moisture and desiccation shaped the culture-

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<sup>20</sup> Commandant Lefèbvre des Nöettes, *L'attelage et le cheval de selle à travers les âges* (Paris, 1931).

<sup>21</sup> E. Parmalee Prentice, *Hunger and History*, (Caldwell, Idaho: Caxton, 1951), p. 44.

civilizations in many ways. The centuries of drought were those of nomadic incursions and *Voelkerwanderungen* which all too frequently devastated the cities, institutions and techniques that man had so laboriously constructed. The arid centuries were also the times of stagnant waters and of rampant, endemic malaria which sapped man's energies and stultified his mind.

In the northern portion of Europe, the dry and warm phase of the climatic cycle was friendly to civilization, for it made the clearing of land less arduous; it was in these times that the forest retreated and that forest soil could be turned by the plow. In the Mediterranean world, however, the dry-hot centuries were times of famine and cultural regression, during which wheat lands were shifted to the production of the olive and grape. Thus, there appears a pattern of oscillation in civilizational leadership within the European continent closely associated with the climatic cycle.





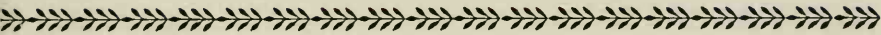
*“Wherever I found living matter, I found will  
unto power; and even in the will of the serving,  
I found the will to be master . . .*

*“And this secret did life itself utter unto me:  
‘Behold,’ it said, ‘I am whatever must surpass  
itself.’”*

—FRIEDRICH NIETZSCHE,  
*Thus Spake Zarathustra.*

## IV

# Scribes, Priests and Intellectual Elites



**M**AN DOES NOT move steadily from the worse to the better, from the simpler to the more complex, from bondage to freedom. The ascent toward civilization has been punctuated by catastrophic regressions, by eras of stagnation and brutish stupidity, by eras in which the little new that was created in no manner compensated for the cultural and intellectual heritage that was forgotten or misconstrued.

Applying this generalization to prehistory, Levi-Straus claims that there can be "no more striking example of regression than the descent from the peak of Levallois culture to the mediocrity of the Mousterian civilization. . . ." <sup>1</sup> His point is that Levallois culture, which may have reached its culmination anywhere from 70,000 to 250,000 years ago, attained a mastery of the art of chipping stone for tools and weapons which was not again equaled until a few millennia before the Christian era.

An even more striking instance of cultural retrogression is the descent from the cave art of the Aurignacian and Magdalenian to the crude and clumsy products of their successors. The Lascaux cave paintings in southwest-central France reveal that, during the Aurignacian period, when Cro-Magnon man appeared in Europe, he was already a master artist and, by the Magdalenian period, an

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<sup>1</sup> Claude Levi-Straus, *Race and History* (Paris: UNESCO, 1952), p. 39.

era of dry cold and slowly retreating glaciation favorable to reindeer hunting, he was making paintings that rank among the great esthetic achievements of mankind. This explosion of creativity may have continued, with intermissions and retreats, for as long as 20,000 years. The unsurpassed bison paintings discovered in a cave at Altamira in northern Spain by the 12-year-old daughter of Don Marcelino de Sautuola in 1879 are primarily Magdalenian, as are most of the other great cave paintings of northern Spain and the Dordogne valley in southern France.<sup>2</sup>

The climax of prehistoric art perhaps spanned the period 20,000 to 10,000 B.C. Later productions have been found in Algeria (6,000 B.C.), Morocco (5,000 B.C.) and Scandinavia (2,000 to 1,000 B.C.). For the most part, when compared with the great art of the Magdalenian cave dwellers, they seem to negate the entire concept of progress toward civilization.<sup>3</sup>

Another enigma is the spatial concentration of this florescence of art. Paleolithic caves with paintings in them have been found in southern Italy, in Sicily, in Yugoslavia, in Andalusia, in Bavaria, in Moravia. The esthetic quality of these fragments is poor and unimpressive.

Thus, the primary and, in fact, the exclusive region of great Paleolithic art, at least as measured by present (1963) discoveries, is the narrow area from the Garonne river to the French Pyrenees and their continuation into Cantabria. In addition, there are recently discovered rock paintings in the Sahara, but they are considered to be post-Paleolithic.

### **The Art of the Hunter**

The late Abbé Breuil, one of the greatest figures delving into prehistory, has suggested that the great art of this era was necessarily that of big game hunters. He wrote:

“At the base of such artistic creation, there must be a profound knowledge of the appearance of animals, which only daily experi-

<sup>2</sup> Herbert Kühn, *Die Kunst Alteuropas* (Stuttgart: Kohlhammer, 1954); also Geoffrey Bibby, *The Testimony of the Spade* (New York: Alfred A. Knopf, 1956), pp. 55-94.

<sup>3</sup> For visual evidence of this degeneration see Kühn, *op. cit.*, plates 18-25 inclusive. This distinguished German prehistorian advances the untenable theory that prehistoric art consists of cyclical movements between naturalism and symbolism; the “symbolism,” however, does not look like conscious abstraction, but rather clumsy and incompetent execution.

ence in the life of a big game hunter can give; if there is no big game hunting, there is no naturalistic wall art.

"The Cro-Magnon shell-fish eaters of the sea coasts usually lacked that basic psychology and experience: hunting periwinkles and snails did not create nor feed their artistic imagination, nor were they even clever workers.

"On the other hand, hunters of Rhinoceros, Mammoth, great Stags, Bulls, wild Horses, not to mention Bears and Lions, accumulated, during their dangerous lives, powerful and dynamic visual impressions, and it is they who created and developed the wall Art of our caverns, and that of the Eastern Spanish rock shelters and, at the other end of the world, that of the painted and engraved rocks in Saharian and southern Africa."<sup>4</sup>

Abbé Breuil wisely observed that an artistic tradition of this magnitude required socialization—that is to say, formalization of training, religious impulse and selection of an elite of artists or artist-sorcerers or artist-priests. He wrote:

"This is no longer the work of an individual, but a collective, social affair, showing a true spiritual unity, I am inclined to say, an orthodoxy, suggesting some sort of institution registering the development of this Art by the selection and instruction of those most highly gifted."<sup>5</sup>

The development of a specially privileged class of artists presupposes that the Cro-Magnon cave dwellers attached a tremendous importance to their art.<sup>6</sup> This view is in accordance with the commonly accepted theory that the purpose of the cave art was magical—that by depicting the animals customarily hunted, the artist-sorcerer would ensure their presence in abundance, that the females of the herd would be fecund and that the beasts hunted by man would fall victim to his arrows, spears or torches.

If this theory explains the motivation for the development of a special class of artist-sorcerers, it does not explain its economic possibility, for this is a pre-agricultural Stone Age society of hunters, seldom able to produce a social surplus and prey to the omnipresent danger of famine.

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<sup>4</sup> Abbé H. Breuil, *Four Hundred Centuries of Cave Art* (Montignac, Dordogne: Centre d'Études et de Documentation Préhistoriques, 1952), p. 22.

<sup>5</sup> *Ibid.*

<sup>6</sup> See also the superior new book by Paolo Graziosi, *Paleolithic Art* (New York: McGraw-Hill, 1960).

The economic mystery of the sustenance of the artists is suggested by the terrain of the cave paintings and its peculiarities; and this in turn suggests a reason for the spatial restriction upon the great tradition of Paleolithic cave art. The French Dordogne and the other valleys of the caves are bordered by table mountains. The tops of these are generally broad and only gently sloping. Their rims, however, are escarpments with perpendicular plunges of several hundred feet to the valleys below. These escarpments contain the caves, or else the caves lie at their bases.

One can readily visualize the large herds of grazing animals, followed by their predators, moving over these tablelands along the lines of glacial advance or retreat, avoiding the bottom lands because they were presumably still ice-covered and hence useless as pasturage. Cro-Magnon man, using his spears, bows-and-arrows and torches, would enclose this game with cordons and drive the stampeded animals over the cliffs to their destruction. This possibility may have created a virtually unique situation of food abundance in terms of the techniques of the Old Stone Age, thus making class differentiations and the creation of a specially trained, learned (or, in this instance, esthetic) priestly elite possible.

Under more usual conditions, prehistoric populations prior to the development of agriculture (7000 B.C.) and smelting (3000 B.C.) were sparse in the extreme and compelled to range over vast areas to assure their food supply, hence quite incapable of supporting a specialized class of priestly artists. Thus, two eminent authorities, Professors Herbert J. Fleure and Graham Clark, made independent estimates of the population of Britain in Upper Paleolithic times under a subglacial climate. They believed that it was in the range of 250 to 2,000 individuals and that it might have fallen to approximately 250 during rigorous winters.<sup>7</sup>

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<sup>7</sup> Cited in Ashley Montagu, *Man: His First Million Years* (Cleveland-World, 1957), p. 95. The construction of the "magic circle" of great stones at Stonehenge occurred several thousand years later and was made possible only by the immigration of waves of technologically more advanced groups, the so-called Windmill Hill People (circa 2300 B.C.), another invasion which occurred about three centuries later, and the Beaker People (circa 1700 B.C.). We now know, on the basis of very recent research, that the Beaker folk who built Stonehenge had a master architect who was familiar with Greek techniques and specifically with a carving of a hilted dagger made *only* at Mycenae and *only* between 1600 and 1500 B.C. The moving of the stone columns from quarry to construction site alone required, in the opinion of Professor R. J. C. Atkinson of University College, Cardiff, the labor of 1,500 men for a minimum of 5½ years. See Albert Q. Maisel, "The Mystery of England's Magic Circles," *Reader's Digest* (September 1961), pp. 193-200.

## Milestones of Man

The riddle of retrogression was a concept quite alien to the minds of those 19th century cultural anthropologists who sought to explain all of human prehistory as the forward march of man from one inevitable cultural category to the next. "It can now be asserted upon convincing evidence," wrote Lewis Morgan, "that savagery preceded barbarism in all the tribes of mankind as barbarism is known to have preceded civilization."<sup>8</sup>

Proceeding from this false generalization, anthropologists of the era set up arbitrary "milestones," such as fire, the bow and arrow, ceramics, domesticated animals, iron tools and phonetic writing, and they classified cultures accordingly. On this basis, the Mayans and Quechua-Incas belonged in Middle Barbarism, and were at a lower cultural level than the Pueblo Indians!<sup>9</sup>

The collapse of this simplified approach drove cultural anthropology into eclecticism, psychological and psychiatric approaches and the mere accumulation and classification of data, without any attempt at synthesis and lacking any apparent driving purpose.

At the University of Illinois, however, anthropologists are attempting to make a new evolutionary synthesis of man's prehistory. Instead of the railroad-track approach of the 19th century, they are setting up schematic models of various types of cultures. The models used in "the project to study cross-cultural regularities" are continuously being tested by examining real cultures and seeing whether or not they fit into the patterns.<sup>10</sup> Here, climate, terrain and geography appear as fundamental factors helping to determine whether a people will be kept at the level of predatory bands of horsemen or will advance to an irrigation theocracy or an irrigation empire.

## The Irrigation Civilizations

The record of civilization suggests that cultural creativity cannot arise until class differentiation has become the rule and, in particu-

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<sup>8</sup> Lewis Morgan, *Ancient Society* (1877), Friedrich Engels, the lifelong collaborator of Karl Marx, used the writings of the conservative railroad magnate, Morgan, as the basis for his *The Origin of the Family, Private Property and the State*. Hence, Morgan's mistakes and, in particular, his conception of a necessary stage of primitive communism, have become part of the dogma of Marxism-Leninism and have done much to petrify Soviet cultural anthropology.

<sup>9</sup> Julian H. Steward, "Cultural Evolution," *Scientific American*, CXCIV No. 5 (1956), 69-84.

<sup>10</sup> *Ibid.*

lar, until a special class of scribes, artists or scholars, generally characterized by sacerdotal, or priestly, functions, has arisen. Normally, this social development comes into being only after the mastery of agriculture and irrigation—arts which create a social surplus—a consciousness of the importance of the calendar, astronomy and forecasting the weather, and a specialized administrative bureaucracy to allot irrigation water and to collect and store tribute grain.

The irrigation civilizations probably arose from inundation agriculture as practiced by such groups as the Hadendoa semi-Hamites of Nubia in the early 19th century.<sup>11</sup> The technique is to sow crops, without any previous preparation, on the alluvial silt deposited on the banks of the river. The sowing occurs when the inundation has reached or just passed its crest, but at a time when torrential rains will continue for several weeks. As practiced in Nubia, this method was wasteful and involved utilizing only about a fifth of the easily irrigable land area.

The importance of the irrigation civilizations to the geography of intellect is that they create the preconditions for the development of reasoning power, and for the selection of a bureaucratic or sacerdotal class with reference to knowledge and intellectual ability. Under irrigation, crop yields are a multiple of those obtainable where the farmer must rely on natural rainfall. Dense populations can easily be supported on the irrigated deltas or terraces of the rivers. Since the peasantry both creates a surplus and has idle time which need not be devoted to work in the fields, labor is available to build and wall cities; to erect palaces, fortifications, temples and tombs; to build a handicrafts industry; to man armies; and lastly to support a bureaucratic, priestly and scholarly class. This labor force is mobilized in part, and particularly the most unskilled brutish labor, by a *corvée* to which the peasantry is subject. The specialized activities of the irrigation city-state, ranging from the skilled professional soldier and artisan to the scholar, scribe and priest, are carried out by special people trained for these posts or acquiring them by hereditary right. The division of labor of the irrigation city-state rests on a foundation of tribute grain taken from the peasantry.

The irrigation civilization is not only able to support an intellectual

<sup>11</sup> Mentioned in Henri Frankfort, *The Birth of Civilization in the Near East* (2d ed.; Garden City: Doubleday, 1956), pp. 33-34. The original source is John Burckhardt, *Travels in Nubia* (2d ed.; London, 1822), pp. 348-50.

class; this class is necessary to its existence and development.<sup>12</sup> The most immediate reason for this is that an intricate irrigation agriculture presupposes the allocation of water by a centralized authority able to enforce its will. The timing of the water allocations is based on calendar records and the annals of inundation levels in previous years. The allocation of water and the collection, movement and storage of tribute grain presupposes records and hence generally, though not invariably, a method of writing and calculating and a class of scribes capable of both.<sup>13</sup>

It is probable that the scribes' concern with the calendar will lead to at least a protoscientific astrology and perhaps to navigation and mathematics as well. The religion of an irrigation civilization may be an elaboration of the priestly mysteries connected with the calendar, the timing of fertility sacrifices and propitiations, and the planets, stars and heavens. The fact that the scribes were necessarily concerned with hydrographic history sometimes led them to the writing of history proper. The function of irrigation-system management involved consideration of time, space and causality, thus providing a potential platform for the beginnings of science.

Much of the strength of the irrigation civilization stems from its mastery of the techniques of producing, collecting, transporting and storing grain surpluses. Tribute grain moves cheaply by water. That state which possesses warehoused grain in sufficient quantity can mobilize large armies and deploy them to any area which can be reached by ships or caravans bearing the tribute grain that feeds them. These armies are a powerful cohesive element to the extent that they can be moved rapidly and in superior force to suppress popular discontent and insurrection or to defend the irrigation state against invaders.

When such states are overthrown, therefore, one of two things generally happens: There is a coup d'état from within the ruling elite, an operation which may well do very little harm since it usually leaves the bureaucracy, the scribes, the priesthood and the social order intact. Or, alternately, adverse conditions, generally caused

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<sup>12</sup> In the context of this chapter, the intellectual class consists of those people who are specially trained to write and calculate (scribes), to serve as the custodians or un-ravelers of religious mysteries (sacerdotes), or to perform civil governmental and military functions involving command over written lore (bureaucrats).

<sup>13</sup> There are a few exceptions. The Incas used a complex knotted cord system as mnemonic aids to true writing.



by climatic change or overpopulation, may destroy the grain surplus, exposing the state to foreign invasion or internal military subversion.<sup>14</sup>

We might list the main irrigation civilizations as follows:

<i>Civilization</i>	<i>Approximate Starting Date</i>
Mesopotamian	4000 B.C.
Egyptian	3000 B.C.
Harappa (Indus Valley)	2500 B.C.
China (Shang Dynasty)	1500 B.C.

The great Amerindian civilizations can be characterized as hydraulic rather than irrigation. The Quechua-Incas, arising about 500 B.C., built vast aqueducts to supply drinking water; the Mayans in Yucatán, arising about 300 A.D., built hydraulic works for the same reason and used the locally available limestone *cenotes* for water storage.

In an important book, Karl A. Wittfogel has attempted a cross-cultural analysis of irrigation and hydraulic civilizations. He is concerned with the structure of these societies primarily in terms of their suppression of individual freedom. "The despotic character of hydraulic government is not seriously questioned," he writes. "The term 'Oriental despotism,' which is generally used for the Old World variants of this phenomenon, connotes an extremely harsh form of absolutist power."<sup>15</sup>

We are concerned here with the irrigation state (or, if one prefers, Oriental despotism) from a different standpoint—viewing it, not as the exterminator of freedom, but as the threshold of civilization. The emergence of class differentiation out of the more primitive non-surplus societies means the rise of an elite and hence the beginnings of law, letters, theology and science. We need not debate at length whether the other viewpoint—that advanced by Wittfogel

<sup>14</sup> An outstanding Chinese Communist scholar suggested that the history of China followed cyclical patterns based on the relationship between tribute grain, bureaucratic development, potential military deployment and the rise and fall of rice zones. The centripetal phase was approximately that outlined here. It was followed by a centrifugal one in which overpopulation led to class struggle and peasant wars, breaking down centralized authority. Since the thesis was highly original, it was not regarded as orthodox by the Communist International. Chi Ch'ao-ting, *Key Economic Areas in Chinese History* (London: Allen & Unwin, 1936).

<sup>15</sup> Karl A. Wittfogel, *Oriental Despotism, a Comparative Study of Total Power* (New Haven: Yale University Press, 1957), p. 101.

—is equally tenable, except to state that unfreedom is not the *necessary* concomitant of the irrigation state if we define freedom in terms of the criteria then current and not in our own terms.

Another tangential point, which may similarly be dealt with in passing, is the assertion by some historians, and even some philosophers of history, that the infusion of barbarian “blood” invigorates old civilizations which have fallen into “senile debility.” Thus, Will Durant argues that the overwhelming of the Roman Empire in the West by barbarian hordes was a beneficial process to the extent that it resulted in “the elimination of weak individuals and strains through war and other forms of competition; the compulsion laid upon everyone to develop strength, stamina, and courage, and the masculine qualities that long security had suppressed; the renewal, by poverty, of healthier and simpler habits of life than those which the doles and luxuries of the cities had bred.”<sup>16</sup>

The theory that incessant wars improve the genetic equipment of the race by natural selection is dubious. The crude selectivity of massacres, *melées* and ambushes gives the strongest and the shrewdest somewhat better than average chances of survival, but the process of conquest by barbarians (or for that matter by internal proletariats) is inherently dysgenic because it involves the extermination of a large part of the urban upper class and hence of the intellectual elite. Moreover, the simplified societary structure which almost invariably results from barbarian conquest does not require the elaborate managerial apparatus formerly provided by a learned priesthood, bureaucracy and class of scribes. These groups are at least partially displaced and discarded; special advantages that may have given them greater fertility than the mass tend to be withdrawn; to this extent, natural selection for mental qualities is impeded in eras of revolution and barbarian assault, or when crude successor states are imposed either by barbarians or by victorious insurrectionary proletarians.

### **The Literati and Human Progress**

In the irrigation civilizations, during their eras of stability, there was a continuous demand for intellectual ability, for force, judgment and for the charismatic qualities of leadership. Men with these qualities were frequently advanced from the lower classes (and even

<sup>16</sup> Will Durant, *The Age of Faith* (New York: Simon and Schuster, 1950), p. 43.

from the slave mass) to the highest echelons of bureaucracy and priesthood. Birth, caste and property status were obviously important considerations in determining which members of the society should be promoted to the class of scribes and literati, to the priesthood or the bureaucracy. But this does not at all preclude the parallel process of promotion of the intelligent and capable. This will almost always occur within the favored castes and, in many irrigation societies, it cut across caste and class lines, enabling men of exceptional ability to rise from the very bottom to the top.

The bureaucratic and intellectual elite groups in these irrigation and hydraulic civilizations probably reproduced more effectively than the masses. They had knowledge and wealth and with these were able partially to protect their progeny against the massive infantile mortality, the filth, congestion and contagious infections which decimated the lower classes. Except in those instances in which the priestly functions of the intellectual elite compelled it to practice celibacy or, in similar instances, where the ritual obligations of the elite compelled it to refrain from sexual intercourse for large parts of the year,<sup>17</sup> the elite would normally be more potent, fertile and fecund than the general population. Thus, the perseverance of the stable irrigation theocracy or empire normally served as a preferential breeding ground for the mentally superior minority.

The efficacy of the irrigation and hydraulic civilizations in finding and promoting the most gifted members of the society so that they should govern it varied a great deal. In some of them, the avenues of upward advance for talented men of humble origins were reasonably open; in others they were clogged, and in caste societies they were closed. The irrigation societies were generally autocratic and were often presided over by god-kings. The subjects were not free in any modern sense. To judge the upward mobility of talent in these states in terms of American criteria of equality of opportunity would obviously involve a distortion of time and historical perspective.

In the Egyptian Old Kingdom, according to Frankfort: "There were no castes, and men of simple origin might rise to the highest posts. The life-story of one Uni under three successive kings of the Sixth Dynasty shows that even lower officials, without influential relations, could rise to the highest offices once their ability and integrity had been recognized. The talented and industrious were

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<sup>17</sup> As among the Chinese literati and during the Yucatecan phases of Mayan civilization.

not frustrated by a rigid class distinction or by a color bar. A Nubian, frankly calling himself Panehsi, 'the Nubian' or 'Negro,' might be found in the highest places. The educated men were assigned by Pharaoh to whatever offices he thought fit. The common people were mostly tied to the land which they tilled for their own living and for the maintenance of the state."<sup>18</sup>

Schools for scribes soon developed in Egypt to swell the ranks of the literate bureaucracy so large that it was sometimes referred to as an "army." There was eager competition for the position of scribe since it brought exemption from forced labor and an assured livelihood. The schools taught, not merely hieroglyphics and later the hieratic script, but business correspondence, administrative regulations, standardized weights and measures, good comportment and, in some instances, literary composition and science. During the Old Kingdom at least, children of lower social classes were sometimes educated with the young nobles in the court schools; and Petrie points out that, in the 19th Dynasty, children born on the same day as the heir were brought up with him.<sup>19</sup>

In the imperial period, temple schools for the priestly class arose in three Egyptian cities, where mathematics, medicine, surgery and other sciences coexisted with a large body of superstition.<sup>20</sup> The power and numbers of the scribe class can be attributed to the Egyptian mania for recording transactions of all sorts, and to the fact that reed pen and ink on papyrus were an easier method of writing than the Mesopotamian technique of incising cuneiform characters on clay tablets which were preserved by baking.

The Mesopotamian civilizations became truly urban at a much earlier date than the Egyptian.<sup>21</sup> Their rulers were not living gods. Their *Weltanschauung* was not timeless, nor did it deny the possibility of creation and novelty. The Sumerian civilization, which in a sense determined the pattern of its successor cultures, was rather democratic in concept. Even the priests had to till their allotted land in Sumeria; the agricultural work of the temples was directed by

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<sup>18</sup> Frankfort, *op. cit.*, pp. 107-8.

<sup>19</sup> W. M. F. Petrie, *Social Life in Ancient Egypt* (London: Constable, 1923), p. 125.

<sup>20</sup> William A. Smith, *Ancient Education* (New York: Philosophical Library, 1955), pp. 41-8.

<sup>21</sup> Until about 1500 B.C., Egypt had no permanent capital. Each Pharaoh took up residence near the site chosen for his tomb and, during most of his reign, watched the construction of the pyramid. On his death, his successor would move the "capital" to a new tomb site.

guilds. And the first city-kings of Mesopotamia ruled only during emergencies, after which power reverted to the assemblies of free-men.

While the educational institutions of Sumerian civilization were primarily temple schools, they taught not only religious mysteries and rituals, but also the standardization of weights and measures essential to bureaucratic administration. The temple schools, with their impressive libraries, were the intellectual centers of the cities between the rivers. The content of education expanded to embrace mathematics, a certain amount of science, alchemy, astrology, historical, legal and liturgical lore.

### The Amerind Civilizations

The great Amerindian civilizations, although preliterate, also had powerful priestly classes, which combined sacerdotal, scholarly and administrative responsibilities and were trained in temple schools. In Mayan civilization, the priesthood was versed in astronomy and master of a calendric system more advanced than that of medieval Europe. It was "probably the most powerful single group in the state, more so even than the nobility."<sup>22</sup> The Mayan priesthood was a hereditary order composed of the sons of priests and those second sons of lords who had an inclination for the calling and were hence placed under sacerdotal tutelage from infancy.<sup>23</sup>

The Incaic caste system perpetuated those blood or gene differences which existed between the rulers and the ruled. The Inca's harem consisted almost exclusively of his half-sisters. Accordingly, the basic racial difference, posited by some, between the allegedly white ruling class and the non-white masses, would not have been erased by intermating. Another possibility is that the Caucasoid *appearance* of some of the ruling elements of the Amerindian peoples was due to natural selection from Mongoloid stock. Elites are almost universally taller than non-elite populations; lighter skin might have evolved with better shelter and less exposure to the elements over generations; in most of the world and over most of man's history, ruling classes have been lighter complexioned than ruled classes. The records of the fecundity of the Incas are readily avail-

<sup>22</sup> Sylvanus Griswold Morley, *The Ancient Maya* (Stanford: Stanford University Press, 1946), p. 174.

<sup>23</sup> Bishop Diego de Landa, *Relación de las Cosas de Yucatán*, 1566 (Mexico, D.F.: 1938 edition).

able in William Prescott's classic *Conquest of Peru* (1847); their quality as an elite is indicated by the intellectual achievements of such of their descendants as Garcilazo de la Vega (1503-36), the great historian of the downfall of the Incaic Empire.

Less is known concerning the reproductive patterns of the Mayan elite. The sexual activity of the priesthood was apparently severely restricted by the requirement of continence before and during the administration of certain religious ceremonies, feasts and sacrifices. These occurred every month and lasted for protracted periods. However, it is not clear what proportion of the priesthood was engaged at any one time in celebrating them. The reproductive pattern was also influenced by homosexuality, which was prevalent in both the Mayan and Aztec areas. Fray Bernardino de Sahagun deals with the matter in his *Historia de las Cosas de Nueva España*, a contemporary account. Bernal Díaz del Castillo, the historian-soldier of Cortés tells in his *True History of the Conquest of New Spain* (published in 1632) how the Spanish troops destroyed native sculptures of men engaging in buggery.

When we consider the decline of the Amerindian civilizations, the decimation of the priestly elite, either shortly prior to the Spanish conquest or by the Conquistadores and the Christian religious orders, plays a major role. The case of Mayan civilization raises intriguing problems.

Perhaps a century or two before the Spaniards arrived, Yucatán had fallen into a state of primitive political fragmentation which was associated with aesthetic and religious decline, probable depopulation, and abandonment of the cities. The antecedent and causal events are not clearly known, considering the lapse of time. Various natural disasters are described in the contemporary account by Bishop de Landa, which we have already cited, and in the codexes. It appears that the importation of Mexican mercenaries to the peninsula, the corruption of the Mayan religion by the cult of Kukulcan (Quetzalcoatl) and by such other Aztec institutions as the ball courts and massive human sacrifice—that all this led to the rebellion against Mayapán, the depopulation of the cities and the vanishing of all central authority.

Prouskouriakoff argues that this cycle of degeneration was associated with a sort of "Protestant reformation," in which the mediating role of the sacerdotés between the gods and mankind was rejected as superfluous—the evidence for this hypothesis being the discovery

of large quantities of crudely fashioned images of household gods for use in the individual huts of the people. These were distinct from the magnificent sculpture and bas-relief likenesses that earlier generations had placed in the temples for the collective worship of the populace as mediated through the priesthood. She writes:

“Tiny shrines are found everywhere in Mayapán, in temples and in colonnades and in houses, as well as standing alone on small platforms. They do not occur in any number in Chichén Itzá or in earlier Mayan cities, and attest a new form of worship—that very idolatry with which Kukulcan was charged. Fragments of idols in the form of large pottery figures, painted and elaborately adorned with ornaments, are found in great numbers. They are usually attached to large censers and probably represent gods—not the former great gods approachable only by priestly ritual, but private gods to whom offerings of copal incense had to be made and who looked after the welfare of the worshippers. Each vocation now probably had its own gods: the merchants worshiped a god of travelers; the bee-keepers a god of bees; the farmers, gods of corn and rain.”<sup>24</sup>

And, referring to the shoddy construction of Mayapán, Prouskouriakoff remarks:

“It is as if the people of Mayapán took no pride in craftsmanship and had lost all sense of enduring quality, of permanence and of integrity. They built only what would serve the purpose, impress the populace, and above all save unnecessary costs.” This plausible and attractive hypothesis of Prouskouriakoff would explain other matters as well. This Yucatecan “Lutheranism” would not merely have debased worship, but would have destroyed the function and hence the power and prestige of the Mayan intellectual aristocracy. If such a destruction actually occurred (and the abandonment of the cities after the destruction of Mayapán is further corroboration), then the state was indeed as a result laid open to Spanish conquest, for the processes of dysgenic reproduction had been operative long enough to destroy both the leadership elite and its civilization.

### **India and Caste Elite**

While all complex irrigation civilizations had an upper class of priests, scholars and bureaucrats (and all had institutions which trained the youth selectively for these roles) the civilizations differed in that some were open and others closed in terms of promotion into

<sup>24</sup> Tatiana Prouskouriakoff, “Mayapán, the Last Stronghold of a Civilization,” *Archaeology* VII, No. 2, (1954), 101.

the elite. The closed societies, like Mayan civilization, had a strictly hereditary priesthood; the open ones, like China, promoted men of lower class origin on the basis of intellectual ability.

India, with its caste system, is the supreme example of the closed society. The Hindu word for caste is *varna*; it means *color*. The apparent origin of the caste system is the reluctance of the Aryans, who invaded India in the second millennium before Christ, to mix with the pre-Caucasoid tribal elements. The three leading classes of scholars (*brahmans*), warriors and governors (*kshatriya*), and merchants (*vaisya*) were twice-born: first when they came from the womb, later when they were given the sacred thread and initiated into the Aryan community. The *sudras* were not twice-born and their fate was to be "the servant of another, to be expelled at will, to be slain at will."<sup>25</sup> A *brahman* killing a *sudra* paid the same penalty as if he had killed a cat or dog.

In addition to the *sudras*, there were the untouchables or depressed classes, people who had to reside outside the Aryan settlements and who should be clothed in the garments of the corpses they cremated, eat from broken vessels and wear only iron ornaments. The untouchables have been outlawed from Indian society since at least several centuries before Christ. Probably, the origin of untouchability was the Aryan conquest of aboriginal tribes at a very low level of civilization.

Caste differences are partly genetic. A comparison between the blood-type frequencies of two caste communities in Bombay, reported by Dunn, revealed differences similar to those separating Negroes and whites in the United States:<sup>26</sup>

	O	A	B	AB
C.K.P. Community	34.5%	28.5%	28.5%	8.5%
K.B. Community	51.0%	24%	20%	5%

An investigation of the psychometric intelligence of members of different religions and castes in the United Provinces by Sohan Lall<sup>27</sup>

<sup>25</sup> According to the *Aitareya Brahmana*. See A. L. Basham, *The Wonder That Was India*, *op. cit.*, p. 143. Basham points out that *slain* can also be rendered as *beaten*.

<sup>26</sup> L. C. Dunn, *Race and Biology* (Paris: UNESCO, 1951), p. 31. The two groups are the Chandraseniya Kayash Prabhu and the Koknasth Brahman. The second group is obviously *brahman*, but Dunn gives the reader no information as to what the first group is. He credits the tabulation to "two Indian investigators," but neither identifies them nor gives the reference. In short, the treatment is as slovenly with respect to routine procedures of scholarly presentation as are most of the contributions to the UNESCO series on race.

<sup>27</sup> Sohan Lall, "The Distribution of Intelligence in the U. P., India," *Brit. J. Educ. Psychol.* (1944), 1,495-98.



showed significant differences. The average spread between the twice-born *brahmans* and the lowly *sudras* was 5½ points. Unfortunately, Lall did not make any comparisons between the higher castes and the untouchables. A much earlier study by Rice maintained that caste differences in I.Q. were not of significance.<sup>28</sup>

In caste societies, division of labor follows caste lines and despised occupations are reserved for the lowest groups. For reasons which are not always clear, hunters, fishermen, sweepers, leather workers, basket makers and chariot makers were untouchable.<sup>29</sup>

Needless to say, the compelling desire of the Aryans to remain apart from the Dravidian *sudras* and to keep the latter in a wholly subordinate position restricted the development of education and of a scholarly elite. Indian education was not institutionalized to the same extent as Egyptian or Mesopotamian. It was almost entirely religious in content and consisted primarily of memorizing some, at least, of the *Vedas*. The belief that Aryan power had a magical foundation encouraged the priesthood to discourage writing. The *Vedas* were handed down from generation to generation in *brahman* families. For a *sudra* to learn anything about the content of these sacred texts would have been regarded as a disaster and when it occurred it was punished with revolting tortures. For a *sudra* who "arrogantly teaches *brahmans* their duty," the penalty prescribed in the *Arthashastra* was to pour boiling oil into his mouth and ears. While the Brahmi script was known in India as early as the 8th century B.C., we have no manuscripts until 12 centuries later. This is abundant evidence of the success of the *brahman* policy of driving the alphabet underground and keeping it there.

Caste manifestly is a potent force preventing the promotion of the most gifted individuals in the lower classes to the elite, where they are better able to reproduce and raise their offspring to maturity than the population as a whole, and in this manner improve the gene pool of the nation, race or civilization. Caste arises and persists (it has persisted in India for over 20 centuries) only under special conditions. The basic precondition of a caste society is conquest of one ethnic group by another. The subjugated group must be numerous and useful enough to be put to work on a menial basis rather than exterminated. When the conquered are adapted to hard physical

<sup>28</sup> C. H. Rice, *A Hindustani-Binet Performance Scale* (Princeton: Princeton University Press, 1929).

<sup>29</sup> Basham, *op. cit.*, p. 145. Some of these occupations were probably reserved for the degraded castes because of *brahman* antipathy to war and killing; the objection to the sweepers was that they also sold alcoholic beverages.

work in their habitat, whereas the conquerors are not, common sense will dictate that the former be kept alive and exploited. In the case of India, the Aryan (or Indo-European) language groups were Caucasoids and as such adapted to temperate climates. Hence, in all of India except the cool mountainous and plateau regions, the Dravidian stock was probably better adapted for labor than its Aryan conquerors.

For a caste system to persevere, the racial differences must seem important to the ruling group and the latter must feel itself immeasurably superior to the people it has subjugated. Thus, the caste system in the American South rests on a majority conviction among the whites that they are inherently superior to the Negroes and that this superiority is so marked that miscegenation between the two races would be for them a catastrophe.

The Mongol conquerors of Russia and China had no comparable feeling of superiority. Within a few decades of their bloody conquests, Mongols in Russia married native women, while in China the Mongol emperors who ascended to the throne were thoroughly absorbed by the higher civilization that had fallen victim to their superior military prowess.

### The Chinese Literati

In Asia, if India is the paramount example of a closed society, China is the outstanding instance of an open one. "For twelve centuries," wrote Max Weber, "social rank in China has been determined more by qualification for office than by wealth. This qualification, in turn, has been determined by education, and especially by examinations. China has made literary education the yardstick of social prestige in the most exclusive fashion, far more exclusively than did Europe during the period of the humanists, or as Germany has done."<sup>30</sup> Even during feudal times, a class of Chinese literary scholars, known as *puo che* or *living libraries*, emerged and exerted influence because of its knowledge of rituals.

The Chinese literati, however, are essentially a product of the consolidation of China as a centralized autocratic state and the founding of the Ch'in Dynasty in 222 B.C. The development of China into the most powerful, ramified and opulent irrigation civilization the world has ever known presupposed the destruction of the inde-

<sup>30</sup> Max Weber, "The Chinese Literati," in *From Max Weber*, ed. H. H. Gerth and C. Wright Mills (New York: Oxford University Press, 1958), p. 416. The German reference is *Konfuzianismus und Taoismus*, in *Gesammelte Aufsätze zur Religionssoziologie*, I, 395-430.

pendent power of the land-holding aristocracy. This aristocracy was replaced in some of its most important functions by the literary bureaucracy, a new managerial element selected largely on the basis of outstanding success in competitive literary examinations. The Chinese literati may have been recruited largely from the upper classes, but their power and influence derived from the bureaucratic status the Emperor conferred upon them. Being totally dependent on the irrigation state for position and power, they were its most loyal agents and supporters.

Authoritarian systems, ruling complex and civilized states, tend to supplant aristocracies by managerial bureaucracies. In many instances, these bureaucracies are recruited, in part at least, from the lower classes, from despised minorities, from aliens, even from heretical religions or sects. The reason for doing this is that the ruler or, for that matter, the authoritarian system itself, considered in terms of its institutional continuity, is safest when served by people who owe everything to the state, have no independent source of power, would be annihilated should the state collapse, and cannot themselves seize supreme power because they belong to some group which is low in status or is generally detested. When the Claudian and Julian houses destroyed the Roman aristocracy in order to build the Empire, it was not accidental that they advanced newly freed slaves and even Syrians and other non-Roman people to commanding posts in the bureaucracy. In Islam, treachery was so prevalent that it was common for a ruler to blind his brothers as prophylaxis against usurpation. Here Mamelukes and Janissaries, that is to say propertyless slaves and Christians by birth, were sent to command armies and rule nations.

In the Chinese case, the literati were primarily Confucian and the Confucian emphasis on moderation, preservation of order, and deference to tradition and to age created a class of intellectuals admirably suited to the management of a non-dynamic irrigation autocracy with minimum disruption of continuity and maximum strengthening of the imperial authority.

While the Chinese civil service examination system is rooted in the remote past, it was not until the T'ang Dynasty (618-906 A.D.) that the status of the literati was regularized, colleges were established for scholars, and competitive examinations were made "the main means for recruiting administrative officials."<sup>31</sup> After the brief

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<sup>31</sup> Paul M. A. Linebarger, Djang Chu, and Ardath W. Burks, *Far Eastern Governments and Politics* (New York: Van Nostrand, 1954), p. 15.

disturbance of Mongol rule, the examination system was reinforced and extended by the Ming Dynasty (1368-1644 A.D.), and after 1370 A.D. only people who had passed the examinations could lay claim to public office.<sup>32</sup>

The examinations stressed memory, knowledge of the Confucian classics, ability in formal literary composition of a highly stylized sort and penmanship. The percentage failing at all stages in the examination system was extraordinarily high and, of those passing all the examinations, only a minority was rewarded with public office. Success in the examinations, however, brought rewards of a different sort. The literati enjoyed prestige in their communities, were customarily honored with offices in the guilds and other voluntary societies, had their names posted on honorific lists, wore honorific buttons on their hats and were immune from corporal punishment.

The Chinese literati were instilled with an education which was secular and devoid of any element of ecstasy, Dionysian frenzy or mysticism. The subject matter concerned manners, morals, statecraft and the literary arts more than anything else. The norm of the Chinese literary gentleman stressed calm, dignity, reasonableness, conformity, moderation, reverence for the past, and the absence of any emotional display or loss of self-control. Aggressive courage and pugnacity were not among the virtues of the literati.

The political significance of the system and its indoctrination is that it made the intellectuals powerful champions of order, tradition and legitimacy. Thus, it contributed incalculably to the political stability of China during almost the entire Christian era. This political continuity is historically unprecedented in the sense that no comparable area or comparable population on the surface of the earth has enjoyed, for such a long period, centralized government, institutional durability, an unbroken cultural tradition and, at the economic level, irrigation systems and defensive barriers continuously maintained and manned.<sup>33</sup> (For example, the contemporary American elite-selection follows an almost obverse equation.)

From the standpoint of the geography of intellect, it is clear that

<sup>32</sup> Weber, *op. cit.*, p. 424.

<sup>33</sup> There were interregnum periods in Chinese history during which the centralized state broke down or provinces detached themselves from it. These have been attributed by some students to overpopulation and consequent famine and internal rebellion. The point is that the continuity of Chinese civilization, prior to the impact of Western industrialism upon it, was never broken in the sense that the barbarian *Voelkerwanderungen* destroyed the continuity of Roman civilization, or the Mongols that of Islamic civilization.

the civil service examinations and the institutionalized status of the literati brought a highly intellectual element into the Chinese elite. Whether or not this resulted in a progressive genetic improvement of the Chinese population in terms of mental ability depends on whether or not the literati reproduced more effectively than the masses and, because of superior knowledge and wealth, brought a larger proportion of its progeny to full maturity.

The evidence on this vitally important question is suggestive, but not conclusive. The Confucian ethos does not consider celibacy a virtue. Sons are necessary to a man to honor his memory after his death. The successful literary scholar would not be compelled by poverty to practice female infanticide; he would be more able to afford concubines than the average man. In pre-scientific societies, population growth is held back principally by high death rates rather than by lack of fertility. It can be assumed that the death rates of the children of scholars were much lower than those of the Chinese population in general, since the former were better educated and richer.

We have a good deal of evidence that the upper and better educated classes were reproducing at a greater rate than the poor and ignorant during the 1930's. As Herbert D. Lamson put it after a survey of the available literature:

"I shall try to show that in China the upper economic classes have more children per family than the lower economic classes; that modern education tends to *increase* rather than to *decrease* the number of offspring per family."

And again: "These general remarks are intended to propose the thesis that *one* of the reasons for the favorable and eugenic differential reproduction rates among the upper, educated classes in China is to be found in an innate biological superiority, including greater reproductive power, of the upper economic classes over the lower. Differential reproduction at present seems to be eugenic in China."<sup>34</sup>

The evidence supporting these assertions is varied. In 1932, Dr. Lennox found that 4,000 lower-class married Chinese males, although married an average of 12.2 years, averaged only 1.4 living children. By contrast, 171 modern Chinese physicians, married an average of 11.1 years, averaged 3.46 living children.<sup>35</sup> Six studies of the parents of children in Chinese middle schools and colleges

<sup>34</sup> Herbert D. Lamson, "Differential Reproduction in China," *The Quarterly Review of Biology*, X, No. 3 (1935), 308-22.

<sup>35</sup> W. G. Lennox, *China Medical Journal* (Shanghai, 1919), 325, and *China Medical Journal* (Shanghai, 1932), 277-83.

showed that their parents averaged from 3.98 to 5.03 living children, despite the fact that the reproductive age-span of these parents had in many instances not been completed. By contrast, studies dealing with the Chinese poor show comparatively small families. Lamson found that the mothers of *amahs* averaged 2.77 living children; Griffing found an average of 2.99 living children among the rural uneducated population; Gray found an average of 2.3 living children for charity hospital patients.<sup>36</sup>

Thus, the Chinese upper and educated classes averaged a significantly larger number of live births and brought a significantly larger number of infants to adulthood than the Chinese urban or rural poor as revealed by studies made between 1919 and 1935. This sort of fertility pattern is the reverse of that which prevails in most modern industrial nations. It would be unsafe to assume on this evidence alone, however, that the fertility and survival differential in China either has consistently operated to favor the educated classes during the thousand-year period of domination of the bureaucracy by the literati, or that it so operates within the Chinese Communist frame of reference. The presumption, however, would seem to be in favor of the thesis that differential reproduction has favored the scholarly class historically and that hence a progressive improvement of the gene pool of the Chinese people has been occurring over many centuries, raising the intellectual ability of the Chinese.

### The Case of Jewry

The closest analogy to the Chinese institution of civil service examination is the Jewish rabbinate from the time of the Diaspora to the breakdown of Jewish communal life in Europe. The time-span of this phenomenon is approximately 100 A.D. to 1800 A.D.

Even in the classical world, rabbis were often selected on the basis of rigorous and exhausting scholarly competition. This became more marked during the Middle Ages and in the centuries preceding Jewish emancipation in Europe. While the dispersed Jews were not able to offer state power to their scholars, the rabbis became the leaders of the Jewish communities in every respect, enjoying all the honors and power which were available to bestow. Unlike the Chinese, the Jews placed tremendous stress on eugenic reproduction. The direction of eugenics was intellectual and, to the Jewish

<sup>36</sup> For sources, see Lamson, *op. cit.*, p. 322. Fourteen articles are listed, most of which appeared in Chinese publications.

mind, scholars were the equivalent of an aristocracy. Hence, young rabbis or Talmudic scholars were regarded by European Jewry as ideal bridegrooms for a wealthy girl. There was intense competition for such husbands and the marital alliance of rabbinical and rich merchant families was so prevalent as to be frequently the standard pattern.

Young Jewish scholars were often married at, or even before, puberty. The commandment to be fruitful and multiply applied to the rabbinate as well as to Jewry in general. Nevertheless, a variety of forces combined to give the scholarly class a very distinct advantage in fertility and differential reproduction.

The children of scholars married into merchant families were better fed, clothed and housed than the ordinary Jews. They were less exposed to the congestion of the ghetto and its contagious diseases. Most rabbis knew something of medicine and it was not uncommon for rabbis to be practicing physicians as well.<sup>37</sup> Finally, the merchant-rabbi group was better informed and more likely to have connections with other Jewish communities. This meant that this element would be more likely to be forewarned of impending persecutions and pogroms and in a better position to evacuate with family intact before the storm broke.

All these considerations suggest that the history of Jewry, in Europe at least, can be considered as an immensely successful experiment in selective breeding for intelligence conducted over a time-span of about 17 centuries. The component elements of this institutionalized system were: a theocratic community which placed religious scholarship above other virtues; universal male education; the selection of the rabbinate from an open competition in learning and intelligence; the bestowal of such rewards on the victors in this competition that most mentally capable Jews would be inclined to enter it; the marriage of rabbis and scholars into rich merchant families at puberty; the encouragement of reproduction as a religious duty; and a series of social conditions and circumstances which made the scholar-merchant unions more fertile than average and ensured that a larger proportion of the progeny of these than of other unions would survive to adulthood.<sup>38</sup>

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<sup>37</sup> Maimonides is perhaps the best known example of the rabbi-physician.

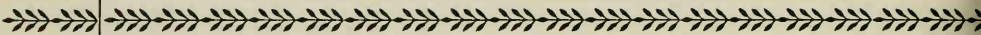
<sup>38</sup> Another phase of the same process was that rich merchants would try to marry their sons to the daughters of eminent rabbis or religious scholars. The motivation again was to improve the blood line and enhance the prestige of the merchant family.

Thus, both the Chinese and the Jews rewarded an intellectual elite chosen by competitive examinations or competitive scholarship. In both cases, this elite seems to have been more fertile and more effective in reproduction than the people as a whole. Hence, the systems were eugenic and tended to improve the genetic stock, in terms of intelligence at least, of both ethnic groups. The major differences between the two systems are perhaps worth brief comment. First, Chinese education was secular, Jewish education religious. Second, the Chinese examinations were primarily tests of memory, ability in formalized literary composition and penmanship, whereas the Jewish schooling called for both memory and dialectical skill. Third, the Chinese examination system was formalized, while the Jewish was not.

The most significant aspect of the great irrigation and hydraulic states was, not that they were despotisms, but that they were civilizations. The bearers of civilization have been shown to be a specialized class of priests, scribes, scholars and administrators. They arise when and only when there is a potential social surplus which can support them and a degree of societary complexity which makes them economically necessary.

Civil strife, wars and social upheavals are socially dysgenic; they are the enemies of civilization. Order and complexity of social organization are its friends. The trend from serfdom to slavery is progress; that from slavery to serfdom is retrogression. The mark of a civilization is the presence of an intellectual elite which is part of the ruling class. While some of the early civilizations rested upon hereditary stratification of occupations and classes (India, with its caste system, is the most impressive example of this approach to the problem of social promotion), China and Jewry, by contrast, are the supreme instances of civilizations which set up elaborate and ingenious institutions to select men of exceptional mental ability and promote them into intellectual elite groups of more than average fertility. Accordingly, it is at this point in man's development that selective breeding for intelligence becomes a major force in human affairs. And as we have shown, selective breeding is most effective during eras of social order and stability, least in periods of turmoil, internal proletarian revolt or external barbarian invasion.





*“All who have taken it upon themselves to rule over others have incurred hatred and unpopularity for a time; but if one has a great aim to pursue, this burden of envy must be accepted, and it is wise to accept it. Hatred does not last for long, but the brilliance of the present is the glory of the future, stored up for ever in the memory of men.”*

—THUCYDIDES, *History of the Peloponnesian War*, Pericles' Funeral Oration



# Greeks, Romans and Jews



**T**HE GREEKS and the Hebrews were perhaps the most universally creative peoples of the ancient world and the parallels between them are noteworthy. Professor Cyrus H. Gordon, head of the Department of Mediterranean Studies at Brandeis University, predicted in 1958 that the consideration of these two civilizations, which comprise the fountainheads of the intellectual experience of the West, as “each a separate miracle in a vacuum” would soon become obsolete and that the two would be studied “as parallel structures built on the same East Mediterranean foundation.” Dr. Gordon announced that he had deciphered tablets containing the Minoan Linear A script and had identified it as Akkadian, a Semitic language. He pointed out that in Canaan the Akkadian language was firmly established as the vehicle of diplomacy, law, government, business and literature long before the Jews were able to write in Hebrew. According to this theory, which is supported by Dr. Maurice Pope of Capetown University and other scholars, Greek and Jewish civilization were offshoots of a common Semitic Akkadian civilization complex with its center in Crete. This “sure establishment of a common background of early Greeks and Hebrews” seemed confirmed by similarities in attitudes to human sacrifice, by the strong development of legalism and by other institutional and cultural analogies.<sup>1</sup>

<sup>1</sup> *New York Times*, January 13, 1958. Dispatch from Athens by A. C. Sedgwick.

Three years later, Gordon resumed excavations in two sites: the coast of Israel and the south central plain of Crete. He found linguistic similarities between Hebrews and Cretans, such as the word for *wheat* and the term *Da-we-da*, or David, meaning chief in most Semitic languages.

Further investigations in 1961 and 1962 of stone cult objects with inscriptions, jar fragments and epitaphs enabled Dr. Gordon to translate entire phrases of Eteocretan texts and identify them as Semitic. In a mimeographed letter to colleagues, Gordon pointed out:

“Herodotus repeatedly mentions the Phoenicians as active in the Minoan World. Homer tells us that the mother of King Minos was a Phoenician princess. Early Greek tradition informs us that the Phoenician Cadmus founded Thebes and introduced Phoenician script to Greece.

“Unfortunately, we tend to underestimate the value of tradition. . . . I have come to realize the correctness of the ancient Greek traditions to the effect that prior to around 1500 B.C., the dominant factor throughout the entire East Mediterranean, including Crete and the Aegean, was Phoenician. Accordingly, during the last few weeks I re-examined the Eteocretan texts which date from the sixth to the third centuries B.C. Since they are in the Greek alphabet, there is no difficulty in pronouncing them. Three Eteocretan texts from Praisos, Crete, turn out to be tombstones. They all contain the word *mit* (which means ‘died’ in Phoenician) after the name of the deceased in the opening line. One tombstone records that the deceased was a ‘benefactor’ who had been ‘mayor over Praisos’ and a ‘mighty ruler of Praisos.’ Another tombstone, after recording that the lamented had ‘gone to sleep and died,’ invokes the curse of exile on anyone who desecrates his grave. The third text requests kind treatment from everyone ‘be he lord of a city or any man at all.’ The remaining Eteocretan text is a building inscription from Psychro, Crete, opening with the words ‘the house which I have donated.’

“The language of the Eteocretan inscriptions is no more different from the Phoenician dialects of Byblos or Carthage than the latter are from each other.

“Like the Greeks, so too the ancient Egyptians recognized the unity of the entire East Mediterranean prior to 1500 B.C., for they apply the name ‘Keftiu’ to its various component parts prior to that date.

“When the Mycenaean Greeks wrested Knossos from the Semitic Minoans during the 15th century B.C., the beginning of the end had come for the earlier population. Minoan enclaves survived into classical Greek times to leave us a few Eteocretan inscriptions. But the Indo-Europeans were destined to displace the Semites in the Aegean, Crete, Cyprus and Asia Minor. This historic fact may well be what Genesis 9:27 expresses as Noah’s prediction that Japheth (the traditional ancestor of the Greeks and other Indo-Europeans) ‘shall dwell in the tents of Shem.’ ”<sup>2</sup>

### Genetic Path of Greece

If there are parallel cultural and linguistic influences on Greeks and Jews, there is a sharp contrast in the destinies of these peoples. The genetic path of Greece was one of assimilation and eventual infertility; that of Jewry was one of biological exclusiveness and fecundity. Quite aside from the incalculable influence of Greek thought, the Greeks themselves, the living Greeks, provided intellectual leadership to the Mediterranean world for at least a thousand years after the disaster of the Peloponnesian War. Conquest, biological intermixture, spatial expansion, and selective immigration were among the processes by which Hellenic civilization was carried from Transoxania to Spain.

At the end of this lengthy period of creative leadership, Greek energy was spent, the Greeks themselves were overwhelmed and interbred by successive waves of barbarian peoples. As a result, very little was left of this supremely creative people. The inhabitants of modern Greece do not include many equals of Aristotle and Euripides.

The Greek population never compared in size with that of Persia or Egypt, and one of the astounding achievements of Greece is that so few should have done so much. Classical population estimates are, of course, subject to immense margins of error. Outside of China, the census was virtually unknown. The cumbersome number system of the Greeks made arithmetical computations difficult in the extreme. The fact that the Greek word *myrias*, meaning ten thousand, became *myriad* and came to mean any number so large that it could not be counted testified to Greek inability to estimate or manipulate large magnitudes easily.

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<sup>2</sup> Cyrus H. Gordon, mimeographed letter to colleagues dated 1 March 1962.

With these qualifications, a few estimates of the population of the Greek cities can be offered. In 480 B.C., Corinth is believed to have had a population of 50,000 freemen and 60,000 slaves; a century later, the island of Aegina had 30,000 citizens and 470,000 slaves (according to Aristotle); in 431 B.C., Chios claimed 30,000 freemen and 100,000 slaves. Sybaris at the peak of its prosperity may have had 300,000 inhabitants. For Syracuse in Sicily, the population estimate is half a million.

Turning to Athens, the salt of Greece, there were 43,000 citizens in the age of Pericles, 28,500 metics (or resident aliens) and 115,000 slaves. The total population, including women and children, was about 315,000. Approximately a century and a half later, in 310 B.C., Demetrius of Phalerum took a census of the city and counted 21,000 citizens, 10,000 metics and 400,000 slaves. Total population had more than doubled while the number of freemen had fallen by half.<sup>3</sup>

In Attica, soil erosion had disintegrated the traditional subsistence and diversified farming system as early as the beginning of the 4th century B.C. In the *Critias*, Plato attributes this process to "violent deluges which stripped off all the rich, soft soil," leaving "a country of skin and bones." Plato noted that the lofty, forested mountains had become so stripped of trees that many were fit only for the cultivation of bees; he added that aridity had set in, for the rainfall glided over the denuded surface, fell to the sea and was lost to agriculture.<sup>4</sup>

The Athenian response to this challenge was an agricultural revolution, based on specialization and production for export. The denuded hills now supported olive trees; the oil pressed from the olives was packed in jars and sent overseas in Attic ships and sold to foreigners by Attic merchants. "Bad harvests due to atmospheric conditions fall with crushing weight upon even the strongest land-powers," wrote an anonymous Athenian economist of the early fifth century B.C., "while sea-powers surmount them easily. Bad harvests are never of world-wide incidence, and therefore the masters of the sea are always able to draw upon regions in which the harvest has been abundant."<sup>5</sup> The anonymous Athenian saw that the wealth of

<sup>3</sup> The figures for Athenian population in the Periclean age are from A. W. Gomme, *The Population of Athens in the Fifth and Fourth Centuries B. C.* (New York: Oxford University Press, 1933), pp. 21, 26, 47; the other estimates were culled from a variety of sources by Will Durant, *The Life of Greece* (New York: Simon and Schuster, 1939), pp. 91, 95, 150, 160-1, 173, 254-5, 561.

<sup>4</sup> Arnold J. Toynbee (trans.), in *A Study of History, op. cit.*, I, 39.

<sup>5</sup> Toynbee, *ibid.*, I, 41.

Athens sprang from navigation and trade; her culture, her broad, cosmopolitan view and her exacting standards of aesthetic excellence were stimulated by the fact that her society was maritime and her wealth drawn from the ocean.

The demographic decline of Athens thus was not caused by soil erosion. The impoverishment of the land was, on the contrary, a stimulus, for it prevented Attica from sinking into the bovine, brutish stupidity of a peasant society and forced her to turn to navigation, seaborne trade, agricultural specialization and the development of great handicraft industries for export.

The decline was caused, to a large extent, by the internecine military struggles between the city-states and by the fact that the citizens fought the wars of their cities instead of pursuing the perhaps wiser Roman policy of hiring barbarians for this purpose. It is generally assumed that the Roman policy was folly because some of the barbarians turned on their masters during the upheavals of the *Voelkerwanderungen*. Yet it is worth recalling that the Roman Empire in the West persisted for about five centuries and that in the East for 15. The political achievement of Rome, considered in terms of the organization of state power, rather than any actualization of individual freedom, is more impressive than that of Greece.

Depopulation in Greece seems to have been caused by institutional factors and by political and psychic decadence. Polybius describes the process cogently as it operated during the 2nd century B.C. In Boeotia, he observed, "the administration of justice in the country had remained in abeyance over a period of nearly twenty-five years"; civil and criminal law were systematically thwarted by the proclamation of states of siege and by arbitrary executive action; a welfare state was created by politicians who won votes by giving relief to the poor and releasing convicted debtors and criminals. "The effect of these measures was reinforced by another obsession of an unfortunate kind," Polybius added. "Persons dying childless began to abandon the habit which had formerly prevailed in Boeotia of bequeathing their property to their relatives in the next generation, and to spend it instead upon entertainment and drinking, in which they shared it with their friends. Even persons leaving families began, in many cases, to earmark the greater part of their property for legacies to the clubs, until there were many individuals in Boeotia entitled to more free dinners a month than there were days on which to eat them."

The same, or a similar, situation existed elsewhere in Greece. "In our own times," Polybius wrote, "the whole of Hellas has been afflicted with a low birth rate or, in other words, with depopulation, through which the states have been emptied of inhabitants with an accompanying fall of productivity—and this in spite of the fact that we have not suffered from any continuous wars or epidemics.

"The fact is that the people of Hellas had entered upon the false path of ostentation, avarice, and laziness," the historian continued, "and were therefore becoming unwilling to marry or, if they did marry, to bring up the children born to them; the majority were only willing to bring up at most one or two,"<sup>6</sup> in order to leave them wealthy and to spoil them in their childhood; and in consequence of all this the evil had been spreading rapidly before it was observed. Where there are families of one or two children, of whom war claims one and disease the other for its victim, it is an evident and inevitable consequence that households should be left desolate and that states, precisely like beehives, should gradually lose their reserves and sink into impotence. On this subject there is no need whatsoever to inquire of the gods as to how we are to be saved from the cancer. The plain man will answer that, first and foremost, we must save ourselves, either by changing our obsession or alternately by making it illegal not to bring up every child that is born."<sup>7</sup>

### Roman Demography and Decline

Infanticide, abortion and drastic family limitation are understandable measures in impoverished countries. But this was not the main motive in either Greece or Imperial Rome. Yet in each of these civilizations, the upper classes led the way in a refusal to reproduce. Moreover, wealthy Greeks and Romans spent their accumulated wealth on people and institutions who were not blood relatives: in the Greek case, in legacies to convivial clubs which provided free dinners; in the Roman instance, on sycophants who served and flattered the rich in the expectation of legacies.

The Belgian scholar, Willems, computed that in 179 B.C. there were 88 patricians from 17 *gentes* in the Roman Senate. Due to the barrenness of the aristocracy, this number had shrunk by 55 B.C. to

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<sup>6</sup> This and the concluding sentence are references to infanticide, a practice which was legal in Greece.

<sup>7</sup> Polybius, Book XX, Chapter 6, 1-6 and Book XXXVI, Chapter 7. Arnold J. Toynbee (trans.) in *Greek Civilization and Character*, *op. cit.*, pp. 72-3.

43 patrician senators from 12 *gentes*. As for the Emperors, neither Julius Caesar nor Augustus left a male heir; Tiberius had a son, but he was murdered; Nero and Caligula left no direct heirs; Galba, Otto, Vitellius and Titus produced no children; Domitian, Nerva, Trajan, Hadrian and Antoninus Pius left no sons. While Marcus Aurelius had a large family, the average Emperor "was either childless or he left only a daughter."<sup>8</sup>

Plautus, writing in the days of the Republic, has one of his characters explain that he can live happily without children, surrounded by attentive friends who are interested only in his money. "Before daybreak they are at the door asking if I have slept well." Pliny the Younger and Juvenal wrote bitterly about an upper class which produced no children, but lived surrounded by obsequious and avaricious flatterers. The exceptions to the general rule of sterility were regarded as remarkable men. Thus, Asinius Rufus, who lived around 100 A.D., was praised for raising children. "Even in this, he acted the part of a good citizen; in that he was willing freely to undertake the responsibilities entailed upon him by the fruitfulness of his wife, in an age when the advantages of childlessness are such that many people regard even one son as a burden. He scorned all these advantages and even became a grandfather."<sup>9</sup>

The adoption mania that prevailed among the Roman upper classes was another aspect of the fashion of childlessness. Most of the Antonines chose their successors in this manner and many members of the upper classes rewarded sycophants in the same fashion. As a rule, the persons adopted were adults. This institution was another aspect of the Graeco-Roman attitude toward children, one which, by our standards, can be described as ranging from indifference to aversion.<sup>10</sup>

Probably, the prevalence of homosexuality was one of the main reasons for Graeco-Roman indifference to children and to familial continuity. This implied a dissociation of the sexual impulse and its emotional concomitants from reproduction. A man whose sexual pleasures were sterile would be unlikely to become attached to his children or to wish to go to the trouble to rear them. Pederasty and

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<sup>8</sup> William Stearns Davis, *The Influence of Wealth in Imperial Rome* (New York: Macmillan, 1910), pp. 296-7.

<sup>9</sup> Quoted by Davis, *ibid.*, p. 306, from an unidentified contemporary source.

<sup>10</sup> Roman attitudes toward children, perhaps at their worst, are illustrated by the episode in Petronius' *Satyricon* in which the guests amuse themselves by watching the small boy, Gito, deflower the seven-year-old girl, Quartilla.



sodomy were social evils, in the classical world as elsewhere, primarily because they disrupted the family, the consciousness of biological continuity and, therefore, both the roots of the individual and his sense of civic duty.

The Greek biogenetic debacle was a product of infanticide, abortion, childless marriages, homosexuality, pacifism, wars of conquest, and the destruction of the free citizenry in internecine wars. In the Roman case, the same sexual factors operated, but the upper classes were physically decimated by class wars, proscriptions and political murder rather than in military conflicts between leagues of city-states.

### **Lead Poisoning and Roman Decline**

Since these pages were written, one of the authors has had the privilege of being in correspondence concerning the relation of lead poisoning to the Roman decline, with Dr. S. Colum Gilfillan, associate of the late Ellsworth Huntington and author of the theory of "the coldward course of progress." Dr. Gilfillan advances a highly original explanation of the demographic decadence of the Roman upper classes, one which stresses not withdrawal from reproduction, but involuntary infertility. His argument is briefly that around 150 B.C. Greek cookery was introduced into the homes of the Roman upper classes and simultaneously the rule against women drinking wine was relaxed. The wine had a heavy lead content and Grecian culinary methods involved poisoning of foods with lead. Gilfillan points out that lead in women and children produces sterility, abortion, stillbirths and heavy child mortality.

In support of this theory is the fact that both the course of lead poisoning and the demographic crisis were class-selective. Beginning about 100 B.C., the Roman aristocracy died out with extraordinary rapidity, each generation bringing about a third of its number to adulthood. The chief cause of this decline was small families, though other factors contributed. At the same time, Rome as a whole maintained or increased its total population. This gears in with the theory that the decline was caused by lead poisoning, since Greek cooking methods and wine-drinking by women were introduced into the upper classes only.

Gilfillan suggests further that the biological extermination of the upper classes was one of the primary causes of the extinction of Roman inventiveness and scientific discovery. "When everyone who

could make, marry or mate with money went on a lead diet and exterminated his race in a generation or two or three at most," he writes, "we can well imagine what this would do to the native intelligence of the race, first to the patricians and then to the lower ranks, whose ablest or handsomest members were continually promoted to replenish the decimated plutocracy. The diet of the lower Roman classes was not so poisoned, and they maintained the gross population. What happened to ancient culture, especially in art, science, and progressiveness in general, is familiar, and can be verified by Darmstaedter's statistics. His data indicate that the rate of scientific discoveries per century fell to 20 per cent, comparing 500 B.C.-200 A.D. with 201-600 A.D., while the rate for technological developments, depending more on the artisan class, fell to 43 per cent, in spite of population increase (L. Darmstaedter, *Handbuch*, from P. Sorokin, *Social and Cultural Dynamics*, Vol. II, Table 5.)."<sup>11</sup>

Dr. Gilfillan's highly original theory of the biology of Roman decline and fall can be easily related to the subsequent relapse of the Empire into a tradition-bound, arteriosclerotic bureaucracy. It can be argued that every static bureaucracy of status rises on the corpse of a natural aristocracy of intellect which has committed suicide. That is to say, as long as a society contains a powerful element of resourceful, self-reliant and intellectually superior people, it will be able to resist the straitjacket of omnipotent bureaucracy, regardless of whether this appears in the guise of a garrison nation, a welfare state or a communist beehive. A verdict on Dr. Gilfillan's hypothesis concerning the role of lead poisoning must, however, await the publication of his completed research.

The thinning out of Greek stock was partially compensated for by the spatial expansion of Greek culture. The Hellenistic and Roman expansions served to carry Greek and Roman civilization to Asian regions that had heretofore been hierarchic and despotic, and to European and African areas which had previously been barbarian or, at best, only partially civilized. Since neither the Alexandrian nor the Roman Empire considered ethnic origin fundamental, the

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<sup>11</sup> S. Colum Gilfillan, "The Inventive Lag in Classical Mediterranean Society," *Technology and Culture*, III, No. 1 (1962), 85-87. In this note, Dr. Gilfillan points out that the Romans put lead into their wine "in as many as seven different ways" since they were unaware that the metal was poison. He cites as references K. B. Hofmann, "Die Getränke der Griechen und der Römer vom Hygienischen Standpunkte," *Archiv für Geschichte der Medizin* (1883), 26-40, 269-289; R. Kobert "Chronische Bleivergiftung im klassischen Altertume," in P. Diergart, ed. *Beiträge aus der Geschichte der Chemie* (1909).

conquered peoples were absorbed into the new imperial communities and their more promising individuals were often incorporated into the elite elements of the empires.

Perhaps the amazing vitality and durability of Graeco-Roman genius, in the face of biological deterioration caused by the infertility of the freemen, can be explained in terms of the expansion of the area within which elite selection could occur, and the improvement of the mechanisms by which this selection did occur.

Slavery played a constructive role in the renaissance of the Roman elite. Hordes of war prisoners were brought to Rome during the periods of imperial vigor and victory. Much of this human material was wasted in the gladiatorial arenas and in sadistic spectacles entailing suffering without combat—for instance, the use of slaves as torches and the tying of slaves to posts to be eaten by wild beasts. A much greater wastage occurred in the use of slaves on the latifundia under conditions much harsher than those which the Negro ever faced in the American South.<sup>12</sup> Yet the more fortunate and intelligent of them were able to buy their freedom and acquire wealth.

Teaching, philosophy and other free professions were staffed, to a large extent, by Greek slaves and their descendants. Manumitted slaves from the regions which had formed part of the Alexandrian successor states and their descendants became merchants, bankers and powerful administrators of the affairs of the Empire.

The Julian and Claudian houses in particular relied on the emancipated slaves and their descendants to run the Empire. This was an entirely natural decision since, in the transition from aristocracy to despotism, it was politically necessary to break the power of the patricians. The freedmen were an ideal substitute. Of alien stock and speech and having no social status of their own, they were men whose loyalty could be relied upon since they were unable to become usurpers and too insecure to become traitors.

Thus, conquest had spread the Greek elite over the area conquered by Alexander of Macedon and, several centuries later, slavery served as the vehicle which collected the remnants of the same Greek elite (and of the Hellenized subjects of the Alexandrian

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<sup>12</sup> Cato advised farmers to sell old oxen, old wagons, old tools, old and diseased slaves and everything else that has become useless (*De Re Rustica*, Chap. 2). In Rome itself, old slaves could not be put to death, but could be exposed on an island in the Tiber to die.

Empire) and brought them to Rome to assist in ruling and civilizing a new world order.

The elite of classical Greece was ethnically coherent, that of Imperial Rome cosmopolitan. The Orientalization of the Roman Empire was a movement from contract to status, from individualism to arteriosclerotic collectivism. Alexander Severus (Imp. 222-235) transformed the guilds into closed corporations and destroyed freedom of labor. Under him, the decurionate (where one served in the colonial senate) became a crushing burden. In the fourth century, the process was further advanced and, as Pareto put it, the burdens of guild membership completely outweighed its privileges. Between the reigns of Theodosius and Honorius (395 to 423 A.D.), guild membership became a form of slavery and those who ran away from the guilds were arrested and brought back.

During these centuries of decline, Rome not only adopted an Oriental religion, but her elite became to a great extent Oriental as well. As this occurred, an aristocratic element was displaced by a bureaucracy of specialists, both in the military and the civilian spheres. "The development may be pictured roughly in these terms," Pareto wrote: "under the Republic obligation of actual military service on the part of members of the elite; in the early years of the Empire, a merely formal obligation, actual service not being forbidden; in the latter periods, complete legal disqualification from actual military service."<sup>13</sup> Arrius Menander added: "For a man to join the army when he has no right to do so is a serious crime . . ." Theodosius and Valentinian ordered that decurions found in the armed forces be returned to civilian life. This was to prevent the decurions or their progeny from "shirking the duty they owe to the country," namely to pay taxes.<sup>14</sup>

If the Greek system of having the freemen kill themselves off in the wars of the city-states was suicidal, the system which prevailed during the last centuries of Roman imperial decline was no less so. It was rational demographic and eugenic policy to have the legions manned by outsiders and barbarians, but it was folly to deter the Roman upper classes from holding the posts of military command.

Toward the fourth century of the Christian era, the Roman Empire in the West disintegrated under the successive shocks of barbarian

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<sup>13</sup> Vilfredo Pareto, *The Mind and Society* (4 vols.; New York: Harcourt, Brace 1935), 2601. (The references are to Pareto's paragraphs, not his pages.)

<sup>14</sup> *Ibid.*, 2550, 2608.

attack, while that in the East assumed a certain bureaucratic rigor mortis. To paraphrase Pareto again, the army became a horde of riffraff; the elite impotent; the movement within and among classes frozen. The production of wealth dried up because of the enormous fiscal burdens imposed by the state. What had emerged was a frozen system of guilds from which nobody could escape and within which no progress was possible.

A component of this general panorama of social disintegration was a flight from reproduction and a flight from taxes. The spread of monasticism was as rapid and startling as that of Christianity had been, particularly in the mild Egyptian climate where a debased neo-Platonism, which regarded the human body as morally loathsome, held sway. "In 390 there were 5,000 Antonian hermits in Nitria alone; the Pachomian monks of Egypt numbered some 7,000 in all."<sup>15</sup> The idle, masochistic monasticism of the Egyptian Christians (not to be confused with the working monasticism founded by St. Benedict) was, as the *Cambridge Medieval History* puts it, the product of Oriental ideas and of "the evils of the times." As to the latter: "It was in the close of the third century that the great impulse to monasticism began, the flight from the evil world, sinful, disordered, unjust, oppressed, extortionately taxed, where a more ordinary life of Christian austerity and renunciation seemed barely practicable."<sup>16</sup>

The monastic flight from family responsibilities, like the earlier homosexual withdrawal from reproduction, was most intense in areas of the Eastern Mediterranean that had formed part of the Hellenistic civilization structure. Monasticism, however, was not the only form which the flight from biological continuity assumed, and in 535 A.D. we find the Emperor Justinian writing the Praetorian Prefect of the East, John, against decurions who sought to avoid death duties which forfeited a fourth of their estate to the Senate. Justinian complained that "they started dissipating their property so as to die in poverty and to leave the Senate not the quarter due to it but a property completely bankrupt; next, having decided to deprive the Senate even of their persons, they formed the most impious plot of all, abstaining from lawful marriage and choosing rather to die childless from the legal point of view than to prove themselves useful to their race and to their Senate."<sup>17</sup>

<sup>15</sup> C. W. Previté-Orton, *The Shorter Cambridge Medieval History* (Cambridge: Cambridge University Press, 1952), p. 74.

<sup>16</sup> *Ibid.*, p. 72.

<sup>17</sup> Percy Neville Ure, *Justinian and his Age* (London: Penguin, 1951), p. 112.

These factors having contributed to the numerical decline and biogenetic deterioration of the Greeks and the Romans, a succession of barbarian invaders which overran the land and miscegenated with the population did the rest. In the case of Greece, these afflictions spanned the long period from the *Voelkerwanderungen* of the first centuries of the Christian era to the depredations of the Mongols and Ottoman Turks. The Greeks, at the height of their moral and intellectual powers, had successfully held their peninsula against the Persian horde. It is reasonable to suppose that, had genetic disintegration and adulteration of the Greek elite not occurred, Greece might have disposed of the later waves of barbarian invaders with comparable efficacy.

### Eugenics and Jewry

The Greeks and Romans shaped the world in their image, but in so doing lost their genetic identity by admixture with Oriental and other alien groups and, in time, sacrificed even their biological existence through a flight from reproduction and an addiction to homosexuality and masochistic monasticism. The Jews, by contrast, withdrew from the great and historically meaningful world to preserve an ingrown, theological, ethnocentric group existence. In this process and as a means of making the processes of withdrawal and group coherence possible, they emphasized heterosexuality and fertility. A variety of priestly tabus restrained intermarriage with Gentiles and with persons belonging to excluded ethnic and national groups. Within Jewry itself, a consciously eugenic reproduction policy was followed.

On this last point, Baron writes:

“The Tannaim did not tire of reiterating the advice that ‘under all circumstances should a man sell everything he possesses in order to marry the daughter of a scholar, as well as to give his daughter to a scholar in marriage.’ Only when he fails to find the daughter of a scholar to be his wife should he choose, in this order, the daughter of a magnate, an archisynagogus, a charity director, or an elementary teacher. Never should he marry the daughter of an illiterate man. . . .”<sup>18</sup>

The Jews, by and large, were not afflicted with the problems associated with wholesale conversion to their religion (and consequent automatic assimilation) of ethnically disparate groups. Mass con-

<sup>18</sup> Salo Wittmayer Baron, *A Social and Religious History of the Jews, Volume I: Ancient Times* (New York: Columbia University Press, 1952), II, 235.

versions did occur between roughly 100 B.C. and 200 A.D. These converts were primarily women, since adult circumcision in classical times was not only a painful operation, but sometimes a dangerous one. The fact that Jewish converts were bound by the exacting demands of the ritual law encouraged the philo-Judaic elements to take a shorter step and become, as it were, Jewish fellow travelers. Moreover, the spread of Christianity during its first three centuries occurred primarily "in countries where large Jewish settlements of partly Jewish ethnic character were in existence."<sup>19</sup>

Thus, the earlier processes of conversion and semi-conversion to Judaism were negated. Paul declared that Jesus Christ had redeemed all mankind and that henceforth men were not obliged to live by the Jewish law and could be saved by faith alone.<sup>20</sup> This gave Christianity a decisive proselytizing advantage among philo-Judaic populations. As Harnack has shown, the triumphant expansion of Christianity during the first centuries of our era occurred principally among those people who had been brought to, or close to, Judaism by conversion and who were not purely Jewish in an ethnic sense.

Jewish ethnic exclusiveness could not have been established, enforced and made a persevering institution without a religious basis, a view of life in which religion was of paramount importance and a form of government which was theocratic. The most obvious reason for this is that during the era of the decline of the Roman Empire, religion superseded nation, state or race as the primary mode of allegiance. The *congregation*, as Spengler has pointed out, emerged as the basic cellular unit of society.<sup>21</sup>

In the case of Jewry, the religious orientation of the age was emphasized by the fact that the state which ruled the Jews was alien to them. A series of Jewish rebellions against the state had been drowned in blood. The dispersion (or *diaspora*) of Jewry throughout the Mediterranean area had been accentuated by these defeats. The dispersed enclaves of Jewry were kept intact by a rabbinate which governed the people theocratically, which maintained their ethnic identity and its dominant position by enforcing the observance of every ritual, custom, duty and belief which stressed Jewish difference from the Gentile world.

<sup>19</sup> Baron, *ibid.*, II, 86, 164-5.

<sup>20</sup> "Therefore, we conclude that a man is justified by faith without the deeds of the law. Is he the God of the Jews only? Is he not also of the Gentiles? Yes, of the Gentiles also: Seeing it is one God, which shall justify the circumcision by faith, and uncircumcision through faith." (Rom. 3:28-31).

<sup>21</sup> Spengler, *The Decline of the West*, op. cit., Vol. II, p. 242-3.

The alternative would have been assimilation and disappearance. This was particularly true once Christianity became the official religion of the Roman Empire and its barbarian successor states. Those Jews who accepted Christianity either disappeared ethnically into the general Christian population or else were relegated to a degraded and suspect status. For instance, the Spanish word for *Jewish converts to Christianity* in the 15th and 16th centuries was *maranos*; it meant pigs.

The Jewish tradition, as represented by the Old Testament, was necessary to the Christian Church. The latter was in competition with various upstart religions with flimsy or non-existent pedigrees. In an era which was tradition-bound, historicity was important. The Old Testament provided this, giving a foundation and the sanction of prediction to the claims of Jesus to be the Messiah.

Yet how could the Christian world have been expected to accept the Scriptural view that the Jews were the chosen people or to conceive of its Messiah and his evangels as rabbis? Religions can validate an existing class or racial elite, but they cannot create one out of nothing. The Jews had little political and insufficient economic power. They were disliked for their religious observances and apartness and hated for their heroic, but foolhardy, efforts to shake off Roman rule and re-establish their parochial ascendancy in Palestine.

It was out of the question that the Jews should be given by the Christian world the elite status which the Old Testament accorded them and this would have been excluded even if the Jews had accepted the new religion. The solution of the problem was to transform the status of Jewry to a people which had once been chosen, but had fallen from grace by its denial of Christ. This was perhaps theologically dubious since the Gospels had declared that Christ's death was foreordained and the will of God.

In any event, this transformation of religious status accentuated a Jewish isolation which originally had been self-imposed or, more precisely, rabbinically-imposed. The external imposition of pariah status on Jewry in turn fortified the internal forces which favored accentuating the gulf between Jew and Gentile in order to retain the identity of the Jewish people.

Thus, in direct contrast to the Greek experience, Jewish ethnic identity was preserved, though at a terrible cost. The price paid included the persecutions suffered during the Christian era, all avoidable had the Jews chosen the path of conversion and assimilation.



It included also the isolation of the extraordinarily fertile Jewish mind from the main currents of civilization during a large part of the Christian era, its preoccupation with archaisms and its fixation of intellectual passion on the Jerusalem of the Old Testament—that is to say, on a compensatory milieu remote from the painful realities of life in both time and space.

### **Jewry as an Ethnic Subgroup**

Most educated people believe that Jewry failed in its efforts to maintain biogenetic identity. Inter-marriage, rape, the conversion of Jews to other religions and of ethnically disparate groups to Judaism are believed to have created a highly heterogeneous population, bound together by cultural, but not by biological, factors. In fact, it is frequently asserted that the Jews of any country are physically and biologically closer to the Gentile population of that country than to the Jewries of other nations.<sup>22</sup>

The question of whether or not the Jews have common inherited characteristics, which justify us in considering them a racial subgroup, has no necessary connection with anti-Semitism, for hereditary distinctiveness obviously does not mean inferiority. On the contrary, the Jews have displayed over the centuries, as will be shown later, intellectual qualities which rank them among the most creative of all the peoples of mankind, past or present. The problem of whether or not the Jews are a sub-race, then, involves the question of whether this creative power is the result of environmental challenge or genetic uniqueness.

A most important study of Jewish genetic homogeneity was carried out in Israel in 1957 by Sachs and Bat-Miriam.<sup>23</sup> This investigation covers the distribution of fingerprint whorls among representative samples of Jews who came to Israel from Bulgaria, Egypt, Germany, Iraq, Morocco, Poland, Turkey and Yemen. These groups were chosen because they represented different outward migrations of Jewry from its Palestinian homeland and varying degrees of isolation from the rest of the Jewish people. In all, 500 males in each of the eight population groups were measured, or a total of 40,000 individual fingerprints.

<sup>22</sup> A good deal of evidence in support of this view is presented by Juan Comas, *Racial Myths* (Paris: UNESCO, 1951), pp. 27-32.

<sup>23</sup> Leo Sachs and Mariassa Bat-Miriam, "The Genetics of Jewish Populations: 1. Finger Print Patterns in Jewish Populations in Israel," *American Journal of Human Genetics* IX, No. 2 (1957), 117-26.

All Jewish groups showed a remarkable similarity in fingerprint whorl indices, a characteristic which is, of course, inherited. The means for four non-Jewish groups inhabiting the Arab world ranged from 14.0 to 14.7; the means for the eight Jewish groups ranged from 13.30 to 13.98; the means for six Gentile European groups ranged from 11.9 to 12.6.

In other words, all of the Jewish populations studied occupied a single band in the fingerprint spectrum and none of the Gentile groups (with the single and revealing exception of the Egyptian Copts) was found close to the Jewish band of the spectrum. Moreover, the Jewish indices were much closer to the Arab than to the European, revealing their Mediterranean ethnic origin and the slight extent to which they have been genetically affected by residence of up to 2,000 years in Europe.

The significance of these findings becomes apparent when we consider the periods during which the Jewish populations which were studied left Palestine and settled elsewhere. The Yemenite Jews migrated to the southwest of the Arabian peninsula before the first destruction of the Temple (586 B.C.), and were virtually isolated from the rest of Jewry for the succeeding 25 centuries. The bulk of the Iraqi Jews are descendants of people taken from Palestine in the Babylonian Captivity (586 B.C.) who refused to return when Cyrus permitted the captive Jews to restore their Palestinian state (538 B.C.). The Bulgarian and Turkish Jews settled in these countries as early as the Alexandrian era, that is to say, the fourth century B.C. The other groups are the fruit of later migrations, notably, the Diaspora of 70 A.D. and the expulsion of the Jews from Spain in 1492. These other groups have been much less isolated from the rest of Jewry.

The Sachs study shows then that eight representative Jewish groups are genetically homogeneous, in respect to the genes determining fingerprint patterns at least, and that they are substantially identical genetically with Jewish populations which left Palestine at the time of Jeremiah and Isaiah.

What is the extent of this biogenetic invariance? To what extent has intermarriage between Jews and Gentiles changed the genetic pattern of the former? This study does not provide a precise answer, but it gives clues. Consider the case of the German Jews. Their fingerprint index is 13.65. The average for the purest and most archaic Jewish group, the Yemenites, is 13.79. The average for German Gen-

tiles is 12.6. We might conclude then that there is a spread of 119 points between Yemenite Jewry and non-Jewish Germany and that the German Jews are 14 points from the Yemenite and 105 points from the Gentile German position.

This suggests that the most probable genetic blend for the average German Jew would be 88% Jewish and 12% German. This is a surprisingly low rate when one considers that Jews first settled in Germany in the reign of Titus, or shortly after 70 A.D., and that intermarriage was heavy between the latter part of the 19th century and the Nazi conquest of power. Concerning mixed marriages, in a UNESCO study Professor Comas writes:

"It is calculated that in Germany, between 1921 and 1925, for every 100 Jewish marriages, there were 58 all-Jewish and 42 mixed. In Berlin, in 1926, there were 861 all-Jewish marriages and 554 mixed."<sup>24</sup>

The reliability of our calculation that the most probable genetic mixture is 88% Jewish and 12% German depends on the standard errors of estimate. That for the Jewish series is very low (.09 to .19), but that for the German study cannot be calculated on the basis of the data published by Sachs and Bat-Miriam.

Other evidence supports the view that the Jews are a special stock and that Jews living in different countries resemble each other more than they resemble the surrounding Gentile populations in respect to genetically caused traits. A comparison of Jews in Odessa with Jewish students and Protestant students at Ohio State with respect to A,B,O blood distribution bears this out:<sup>25</sup>

Group	%	%	%	%
	O	A	B	AB
Jews, Odessa	36.6	41.7	15.6	6.1
Jews, Ohio State	37.7	40.3	14.4	7.4
Protestants, Ohio State	47.6	38.2	9.8	3.4

Thus, the Jewish group at Ohio State is nine times closer to the Odessa Jews than to the Ohio State Protestants in respect to pheno-

<sup>24</sup> *Op. cit.*, p. 31. It is regrettable that Comas does not identify his source. In a savage review of this particular publication ("Comas' Chapter on Racial Myths: A Review," *Mankind Quarterly*, II, No. 1 [1961], 30-35), A. James Gregor accuses him of misquoting material, citing sources he has not read and relying actually on a secondary, inaccurate and valueless work, *Raza y racismo*, by Marcel Prenant, "a notorious Communist." However, we shall assume that Comas did not fabricate his data on mixed marriages.

<sup>25</sup> David C. Rife, *Heredity and Human Nature* (New York: Vantage, 1959), p. 142.

type O, two-thirds closer with respect to phenotype A and three times closer with respect to phenotype B.

Rife summarizes studies which show that Catholic students in the United States are the tallest and most dolichocephalic; Jews are shorter and more brachycephalic; Protestants are intermediate.<sup>26</sup> Jews are more lefthanded than Protestants. Differences between Jews and Gentiles in M, N blood systems are not significant.<sup>27</sup>

### The Enigma of the Copts

In discussing fingerprint patterns, we pointed out that the only non-Jewish group within the Jewish range was the Egyptian Copts. In considering the significance of this apparent exception, the first question to ask is: Who are the Copts? The conventional answer is that they are "the early native Christians of Egypt and their successors of the Monophysite sect, now racially the purest representatives of the ancient Egyptians."<sup>28</sup> The word *Copt* derives via Arabic and Greek from the word meaning "people of Egypt."

This explanation is repeated in one form or another by most writers on the subject. However, it is not entirely convincing. The noteworthy thing about the Copts is that, despite intense persecution and degradation by the Muslim majority, they are disproportionately represented in the jobs requiring skill, intelligence and ambition. Even Lane, who is monstrously prejudiced against them, admits this.<sup>29</sup> After pointing out that the Copts were forced "to wear heavy crosses and black turbans as an ignominious distinction" and adding that their churches were periodically defiled and destroyed, Griffith comments:

"In trades and professions, so long as the Copts had no foreign competition to contend against, they maintained their supremacy over the rest of the population. They filled government offices; in towns and villages they monopolized trades and professions requiring care and skill. They were the accountants, the architects, the goldsmiths, the carpenters, the land-surveyors, the bonesetters, etc."<sup>30</sup> The intellectual and economic superiority of Copts over Mo-

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<sup>26</sup> Both the Catholic and the Protestant student groups are from British and North-western Europe.

<sup>27</sup> Rife, *ibid.*, pp. 142-5.

<sup>28</sup> Francis Llewellyn Griffith, "Copts," *Encyclopaedia Britannica* (13th ed.).

<sup>29</sup> Edward William Lane, *The Manners and Customs of the Modern Egyptians* (London: E. P. Dutton), pp. 535-58. (Original edition 1836).

<sup>30</sup> Griffith, *op. cit.*

hammedan Egyptians persisted well into the 20th century and Lawrence Durrell's remarkable tetralogy on modern Alexandria clearly elucidates it.

If the Copts are the original people of Egypt why should they have such a marked ascendancy over the Muslim Egyptian masses? There seems to be no readily apparent answer to this question. Perhaps, however, the origin of the Copts and their ethnic identity will become clear from a quick glance at Egypt at the time of Christ.

During the 1st century B.C., Josephus expressed amazement at the growth of Egyptian Jewry. An outstanding modern authority estimates that 1,000,000 or more Jews lived in Egypt at the time and that Alexandria, with a population of 500,000 to 1,000,000, was two-fifths Jewish.<sup>31</sup> What happened to these Jews? We know that mass conversions to Christianity occurred, particularly during the persecutions which characterized the last centuries of Byzantine rule prior to the victory of Islam. Simultaneously, Egypt was laid waste and depopulated by Nubian raiders; climatological deterioration caused havoc; law and order crumbled as the Byzantine administrative machine broke down.

There are several reasons to assume that the solution to the mystery of the Copts is simply that they are largely the descendants of Jews who became converted to Christianity. If this is correct, they are ethnically Jewish to a considerable extent, though obviously not purely Jewish. The historic concentration areas of both Jewish and Coptic populations were Upper Egypt, Alexandria and the Fayum. There are obvious similarities between Coptic and Judaic institutions, such as circumcision, the tabu on eating pork, beginning the Sabbath at dusk, stress on universal male education and rule by patriarchs and priesthood.

A more decisive point is the early antagonism between Copts and Greeks, which seems to be a projection of the violent struggles between Jews and Greeks in Alexandria during the centuries of Roman rule. The hostility between Greeks and Jews was so intense that they lived in different quarters, that Greek agitators conducted vehement anti-Jewish propaganda and engaged in periodic mass assaults on the Jewish quarter while the Greeks in turn suffered from massive Jewish retaliation. On several occasions, these minor civil wars turned Alexandria into a shambles.

Hence, it would be predictable that if the Alexandrian Jews be-

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<sup>31</sup> Baron, *op. cit.*, I, 170-1.

came converted to Christianity, they would choose a sect or heresy which was anti-Hellenistic. This is precisely what occurred. The Egyptian Greeks became Melchite Christians; those Egyptians who hated the Greeks became Monophysite (or Jacobite or Coptic) Christians. As Gibbon puts it:

“They abjured, with a foreign heresy, the manners and language of the Greeks: every Melchite, in their eyes, was a stranger; every Jacobite, a citizen; the alliance of marriage, the offices of humanity, were condemned as a deadly sin; the natives renounced all allegiance to the emperor; and his orders, at a distance from Alexandria, were obeyed only under the pressure of military force.”<sup>32</sup>

The Alexandrian Christian Church produced such eminent theologians as Origen, Athanasius and Cyril. These men were Christians with intellectual roots in Greek philosophy. The Copts, on the other hand, were theological primitives; they were straitlaced about not eating pork and other dietary and ritualistic peculiarities; if they finally split with the main body of organized Christianity and managed to get themselves proclaimed heretics in 451 A.D., they did so in defense of a doctrine which theologians call paradoxical and self-contradictory. Other writers consider that Coptic separatism was less theological than racial: in other words, it was an expression of their hatred of the Graeco-Roman world and a desire to be politically and religiously independent of it.

The contrast between the genetic policies or histories of the Greeks and Jews, perhaps the two most creative peoples the world has known, is almost complete. Greece and its Roman extension provided the world with reason and law over a period of two millennia. The Greek biological force was rapidly dissipated in the process—through assimilation with peoples deemed barbarian, through the refusal to reproduce and possibly through involuntary sterility.

The Jews, by contrast, retreated from the world in order to keep their religious faith. In this process of retreat, they developed a theocratic society, which not only resisted assimilation, but bred consciously and in a selective fashion for both intellect and morals. The result of this historically unique process was that, when the Jews burst out of their *ghetti* during the 18th and 19th centuries, they made an extraordinary leap from religious archaism and medieval superstition to a role among the intellectual elite of Western Civilization.

<sup>32</sup> Edward Gibbon, *The Decline and Fall of the Roman Empire* (New York: Random House, 1932), II, 514.




*“Unto every one that hath shall be given, and  
he shall have abundance: but from him that  
hath not shall be taken away even that which  
he hath.”*

—THE GOSPEL ACCORDING TO MATTHEW,  
25:29 (RSV)

## VI

# The Winnowing of Intellect in the Post-Classical Era



THE GEOGRAPHY and ethnology of creative genius was in constant flux from the age of the Roman Empire of the West to modern times. For the first fourteen centuries of the Christian era, the outstanding source of data to chart the shifting of creativity is the three volumes of his monumental *An Introduction to the History of Science* which Professor George Sarton of Harvard managed to complete before his untimely death.<sup>1</sup> The geography of intellectual achievement in specific fields of discipline has been explored by Harvey C. Lehman in his challenging *Age and Achievement*<sup>2</sup> and in various articles. In addition, we have made certain tabulations and calculations of our own. In his first volume, which surveys science until 1100 A.D., Sarton lists the most important creative mind in science, philosophy or scholarship of every 50-year period. From 400 A.D. to 1100 A.D., 14 such thinkers are listed. Three of them are Chinese, three are Greeks, one is an Englishman and seven are Muslims. The intellectual domination of the world by Islam is depicted as extending continuously from 750 A.D. to 1100 A.D.

However, it would be quite wrong to think of these Muslim scientists as Arabs. Of the seven, two (the physician, al-Razi, and the

<sup>1</sup> Sarton, *An Introduction to the History of Science* (Washington, D.C.: Carnegie Institute of Washington, 1927-47). Volume I is from Homer to Omar Khayyam, 600 B.C. to 1100 A.D.; Volume II covers the period 1100 to 1300 A.D.; Volume III is devoted to the 14th century.

<sup>2</sup> Lehman, *Age and Achievement* (Princeton: Princeton University Press, 1953).



astronomer and mathematician, Abu-I-Wafa) were Persians from west of the Caspian, three others (the mathematician, al-Kwarismi, the panscientist, al-Biruni, and the mathematician and poet, Omar Khayyam) were from trans-Caspian Asia, that is to say, eastern Persia and Uzbekistan. Only two of the seven (the chemist, Ibn Gabirol, and the encyclopedist, al-Mas'udi) were from present-day Iraq and hence possibly of Arab origin. After 1100 A.D., however, leadership definitely passes to Western Christendom. Of 1,404 scientists and scholars listed by Sarton during the period 1100 to 1400 A.D., 797, or 57% were produced by Christian civilizations.<sup>3</sup> In each of the three centuries, about half of the scientists and servants enumerated came from Western Christendom and were at least ostensibly Roman Catholics.

In the 12th century, France produced more outstanding intellects than any other European country, but leadership passed to Italy in the 13th century and, by the 14th, Italian genius was twice as plentiful as French. The British Isles ranked a fairly poor third in Europe, followed, after a large lag, by Germany, Christian Spain and the Lowlands.

During the period 1100 to 1400 A.D., the Oriental civilization in aggregate produced about as many eminent scientists and philosophers as the Jewish people did. China accounted for about half of these creative intellects and ranked approximately with the British Isles. A word of caution is necessary in interpreting these figures. While Dr. Sarton was certainly not consciously ethnocentric, he was, like all of us, a prisoner of the time and place in which he lived. Any Western scholar is likely to underestimate the importance of Chinese, Japanese and Indian contributions simply because source material concerning these civilizations is less accessible to him and interpretation and evaluation are incomparably more difficult.

When we attempt to equate the distribution of scientific eminence in Europe during the period 1100-1400 A.D., we run into a major difficulty. The first even tolerably reliable estimates of European population by countries are those of Beloch for 1600<sup>4</sup> and Riccioli for 1661.<sup>5</sup> It is doubtful, however, whether there were significant changes in the *relative* distribution of population among Western European countries between the medieval and the post-Renaissance period.

<sup>3</sup> This list includes no Jews or Muslims living in Christian countries. All of these subjects professed Christianity and most of them were devout.

<sup>4</sup> Julius Beloch, *Die Bevoelkerung Europas zur Zeit der Renaissance*, 1900.

<sup>5</sup> Walter F. Willcox, *International Migrations*, Vol. II: *Interpretations, Population of the Earth* (New York: National Bureau of Economic Research, 1931), pp. 33-85.

Hence, we can get a rough indication of national scientific productivity by relating the Sarton figures for scientists to the Beloch data for population.

The following table presents in synoptic form the geographical domicile of the outstanding scientific and philosophical minds of the three centuries immediately prior to the Renaissance, as listed by Sarton.

SCIENTISTS, SCHOLARS AND PHILOSOPHERS LISTED BY  
RELIGION AND NATIONALITY: 1100 A.D. TO 1400 A.D.

(Source: George Sarton, *An Introduction to the History of Science*.)

Country or Religion	Number of Persons Listed Living in:			Total
	1100-1200	1200-1300	1300-1400	
Western Christendom:				
Italy	47	61	124	232
France	53	47	61	161
British Isles	25	32	54	111
Germany	19	7	39	65
Lowlands	ns	15	22	37
Spain	7	17	19	43
Other	13	32	17	62
Total Western Christendom	164	211	336	711
Total Eastern Christendom	24	28	34	86
Total Christendom	188	239	370	797
Eastern Islam*	44	64	ns	ns
Western Islam	26	19	ns	ns
Total Islam	70	83	127	280
Jewry†	36	70	56	162
China	23	37	ns	ns
Japan	7	10	ns	ns
India	12	8	ns	ns
Other	3	3	ns	ns
Total Eastern and Southern Asia plus miscellaneous**	45	58	62	165
TOTAL	339	450	615	1,404

\* All of Islam east of Mameluke-dominated territory.

† Figures for the 14th century, and perhaps for the earlier period as well, are a serious understatement because they exclude Jews writing in Arabic.

\*\* "Miscellaneous" means Samaritan and non-Muslim Iranian.

ROUGH ESTIMATES OF THE PRODUCTIVITY OF WESTERN  
EUROPEAN COUNTRIES IN SCIENCE DURING  
THE MIDDLE AGES

<i>Region or Country</i>	<i>1100-1400 A.D. Scientists (Sarton)</i>	<i>1600 A.D. Population millions (Beloch)</i>	<i>Scientists per 100,000 population</i>
British Isles	111	5.5	202
Italy	232	13	178
Spain*	135	10	135
Netherlands	37	3	123
France	161	16	101
TOTALS	676	47.5	146

\* Includes Muslims in Spain.

### Genius in Medieval Europe

Sarton's tabulation of medieval scientists shows that intellectual leadership was in European hands. Italy was by all odds the most important intellectual center. If we add her Muslim and Jewish to her Christian intellectual leaders, Spain rises from insignificance to third place in Europe; the total of eminent Spanish thinkers increases from 43 to 135.

The geography of genius in medieval Europe is characterized by a concentration in the western part of the Continent and a somewhat greater mental fecundity in the South than in the North. This latter conclusion does not contradict the climatic theories of Huntington, Wheeler and others. In the first place, the climate of Western Europe was unusually cold and stormy between about 1150 and 1400 A.D. Hence, a flourishing of Mediterranean civilization during this period does not contradict the climatological hypothesis that there is a strong positive correlation between creative mental accomplishment and bracing cold accompanied by electric storms.

Moreover, when we consider outstanding intellectual contributions *in relation to population and urbanization*, Northern Europe assumes leadership. At the time of the Black Death, the population of France was an estimated 20 million,<sup>6</sup> that of England probably not more than 5 million.<sup>7</sup> Yet the British Isles produced 70% as many

<sup>6</sup> P. Boissonnade, *Life and Work in Medieval Europe* (New York, 1927), p. 237.

<sup>7</sup> G. C. Coulton, *The Black Death* (New York: McBride, n.d.), p. 68.

great minds as France between 1100 and 1400 A.D. and 88% as many during the 14th century.<sup>8</sup>

When we consider urbanization, it is quite obvious that the overwhelming advantage lay with the southern portion of the Continent. Constantinople is believed to have had 800,000 inhabitants during the Middle Ages and Cordoba and Palermo each had half a million. By 1300 A.D. Paris had 150,000 inhabitants; Venice, Milan and Florence 100,000 each; except for Paris, the trans-Alpine cities were very small. Luebeck, Nuremberg and Cologne boasted populations of 20,000 each at the beginning of the 14th century. As for the British Isles, London had a mere 20,000 people in 1200 A.D. A century later, two other English cities, Norwich and York, attained populations of 10,000. The Lowlands were somewhat more urbanized than England; Scandinavia, Scotland, Wales and Ireland remained overwhelmingly rural.<sup>9</sup>

In absolute terms, the main sources of European genius between 1100 and 1400 A.D. were those parts of the Continent destined to remain Catholic. When genius is related to either population or urbanization, however, Northern Europe shows up much better. Of the 649 Christian Europeans of genius from countries specified in the preceding table, 436 came from Italy, France and Spain (destined to remain Catholic); 102 came from the Lowlands and Germany (destined to be split into two religious camps by the Reformation) and 111 came from the British Isles (destined to be predominantly Protestant).

### **Jews in Medieval Science**

Sarton's compendium analysis gives a revealing picture of the contribution of Jews to science and scholarship. During the first four centuries of the Christian era, 6.1% of the men listed by Sarton were Jews; in the Dark Ages (400 to 700 A.D.), the proportion fell to 2.6%. In the era of Islamic domination (700 to 1100 A.D.), Jews constituted 9.1% of the total. The Jewish participation was 11.4% in the 12th, 15.0% in the 13th and 10.9% in the 14th centuries. For the

<sup>8</sup> Most of the great minds of the British Isles during the period were English, rather than Irish, Scotch or Welsh.

<sup>9</sup> These population estimates were culled from a variety of sources by Will Durant, *The Age of Faith* (New York: Simon and Schuster, 1950), p. 642. Also see Henri Pirenne, *Medieval Cities* (New York: Doubleday Anchor, 1956). Needless to say, there is a very large margin of error in all these population estimates as medieval, and for that matter, Graeco-Roman, conceptions of large numbers were hazy in the extreme.

entire period of 1,400 years, Sarton lists 201½ Jewish scholars and scientists in a world total of 1,897. This results in a final average of 10.6%.

World Jewish population in 1200 A.D. was estimated at two million by Salo Wittmayer Baron in his classic history of Jewry. This compared to a European population, according to Beloch and Carr-Saunders, of between 35 to 59 millions. Thus, the Jewish contribution to science was several times greater than the statistical expectation. Moreover, as Sarton points out, Jews during the 14th century were restricted to "Southern France, Spain and Italy," where they were subjected to multiple "limitations, humiliations and vexations."

### Genius After the Reformation

Professor Harvey C. Lehman has made some very interesting compilations of national differences in creativity over roughly the last 300 years.<sup>10</sup> His method is to take all names listed in an authoritative history or encyclopedia of a specific science or art and then tabulate these listings by national origin. To minimize nationalistic bias, Lehman excluded contemporary scientific achievements. His tabulations all stop at various dates between 1911 and 1939. Lehman's findings show a general German pre-eminence in the sciences, with France and England normally following in that order and the United States usually trailing. They do not reflect the havoc wreaked on the European mind by Nazism and World War II, nor do they show the contemporary picture of American world supremacy in the sciences and arts coupled with an emerging Soviet threat particularly in the physical sciences.

In chemistry, Lehman found that 625 of 1,707 outstanding figures were German, 309 French, 305 English or Scotch and only 42 American. Of these 1,707 chemists, 1,142 came from preponderantly Protestant countries, 421 from preponderantly Catholic ones, 39 from other areas and 105 were of unknown provenance.<sup>11</sup> Great chemists were found to be overwhelmingly concentrated in the English-speaking world and Europe north of the Alps<sup>12</sup> and west of

<sup>10</sup> Harvey C. Lehman, "National Differences in Creativity," *American Journal of Sociology*, LII, No. 6 (1947), 475-88; also *Age and Achievement*, *op. cit.*

<sup>11</sup> The preponderantly Protestant countries were: Canada, Denmark, England, Finland, Germany, Holland, Scotland, Sweden, Switzerland and the United States. The preponderantly Catholic ones were: Austria, Belgium, France, Hungary, Ireland, Italy, Poland, Portugal, Santo Domingo and Spain. The countries which were classified as neither were Japan and Russia.

<sup>12</sup> But including Switzerland.

the Vistula. The Mediterranean countries furnished only 36 distinguished chemists (Italy 30, Spain five and Portugal one); the eastern European contribution was insignificant except for Poland with 30 notable chemists; non-European and non-English-speaking lands provided only three chemists (two of whom, curiously enough, came from Santo Domingo), and the Russian contribution was a mere 38 names.<sup>13</sup>

The table which follows shows the rank order of national leadership in the nine fields of intellectual achievement considered by Lehman. For countries ranking in five or more areas of achievement, we have drawn averages. Obvious intellectual eminence is indicated by low scores and dearth of outstanding mental achievement by high ones.

OUTSTANDING CREATIVE ACHIEVEMENT: RANK OF COUNTRIES IN NINE FIELDS OF SCIENCE AND ART\*

Rank in Specific Fields:

Country or Area	Chemistry	Genetics	Entomology	Mathematics	Pathology	Medicine	Philosophy	Opera Composing	Orchestral Composition	Average
Germany	1	2	4	2	1	1	1	2	1	1.7
France	2	4	3	1	3	2	3	3	3	2.7
England	3	3	2	3	2	3	2 <sup>o</sup>	7	6	3.4
U.S.A.	7.5	1	1	4	4	4	5	6	5	4.2
Italy	10.5	—	8	6	5	5	4	1	9	6.1
Netherlands	6	5	7	11	7	6	6	—	—	6.9
Switzerland	7.5	6.5	5	5	8	8	7	—	11	7.3
Scotland	5	—	10	7	6	7	<sup>oo</sup>	10	—	7.5
Russia	9	—	9	10	10	9	—	4	2	7.6
Austria	—	8.5	10.5	14	—	10	—	5	4	8.7
Ireland	—	—	10.5	8	9	14	<sup>oo</sup>	8.5	—	10.0

<sup>o</sup> From Lehman, *Am. J. Sociology*, *op. cit.*

<sup>oo</sup> Scotland and Ireland included with England.

In mathematics, Germany and France are about evenly matched over the whole period and lead all other countries.<sup>14</sup> The shift from

<sup>13</sup> Lehman took his names from T. P. Hilditch, *A Concise History of Chemistry*, (New York: Van Nostrand, 1911). Hilditch is, or was, English.

<sup>14</sup> Based on Lehman's analysis of the nationality of 1,442 great mathematicians listed in F. Cajori's *A History of Mathematics* (New York: Macmillan, 1922).

French to German supremacy occurred in the mid-19th century. Before 1850, France produced 215 great mathematicians to Germany's 119. Thereafter, Germany outproduced France two to one.

Lehman found that Germany led the world in chemistry, pathology, medicine, philosophy and composition of symphonic and orchestral music. France was ahead in mathematics, the United States in genetics and entomology, Italy in composition of grand operas.

### **Creativity in Relation to Population**

The nine compilations of extraordinary mental achievement listed by Lehman center at approximately the year 1865. Therefore, to arrive at a rough approximation of the frequency of occurrence of the creative imagination in the sciences and in musical composition, we have added the total listings for each country and compared them with the estimated population of that country in 1865. This procedure violates a statistical rule because it inevitably weights the importance of the various sciences by the number of listings in the history or textbook chosen by Lehman. The reason for proceeding without regard to this difficulty is that an examination of the number of listings for each science and art suggests that rough addition will provide a fairly good indicator of the prevalence of creativity or, at least, that a more refined procedure would not necessarily yield a better one.<sup>15</sup>

This table is enormously revealing in a number of ways. We note that Spain and Portugal, which were areas of great scientific importance and intellectual leadership during the late Middle Ages, had ceased to play any role of major significance in the creative work of Western Civilization by the end of the 17th century.

There were many reasons for the intellectual decline of Spain. In 1492, all Spanish Jews who adhered to their faith were expelled from the kingdom. More than 100,000 were driven out; a mere 50,000 embraced, or pretended to embrace, the Catholic faith. This elimination of an element which had made outstanding contributions to the intellectual, commercial and political life of the peninsula was followed, a decade later, by a similar decree which forced the Moslems

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<sup>15</sup> Readers can judge this for themselves. The total number of listings is: chemistry 1,707; genetics 249; entomology 828; mathematics 1,442; pathology 388; medicine 1,405; philosophy 1,066; grand opera 1,451; orchestral and symphonic music 965; total 9,501.

OUTSTANDING SCIENTISTS AND COMPOSERS  
BY NATIONALITY IN ABSOLUTE NUMBERS  
AND IN RELATION TO POPULATION  
(FROM THE RENAISSANCE TO THE 20TH CENTURY)\*

Country	Number of Important Thinkers	Population in 1865 (millions)	Thinkers per 100,000 Inhabitants	Rank
Switzerland	227	2.6	87	1
Germany	2,601	40.0	65	2
England and Wales	1,229	21.2	58	3
Scotland	177	3.2	55	4
France	1,662	37.0	45	5
Netherlands	138	3.5	39	6
Denmark	58	1.7	34	7
U.S.A.	920	35.6	26	8
Sweden	95	4.1	23	9
Norway	35	1.7	21	10
Ireland	94	5.6	17	11
Austria and Bohemia	268	19.7	14	12
Italy	721	34.0	11	13
Finland	18	1.8	10	14
Belgium	39	4.8	8	15
Russia	346	64.5	5	16
Hungary	65	13.0	5	17
Spain	25	16.0	2	18
Portugal	7	4.5	2	19
<hr/>				
TOTALS	8,725	314.5	28	
Other countries	776			
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WORLD	9,501			

\* Data from Lehman, *Am. J. Sociol.*, *op. cit.*

of Léon and Castile to choose between conversion and exile. This law was characterized by Cardinal Richelieu as "the most barbarous in history."

To make matters worse, the Spanish Inquisition raged with a fury and thoroughness unknown elsewhere, burning 31,000 and condemning another 290,000 to other penalties. Spanish Protestants and relapsed *Maranos* and *Moriscos* (that is to say, converted Jews and Moors respectively) were exterminated. Under Charles V, 50,000 persons were executed in the Netherlands and under Philip II, his



son, at least half as many.<sup>16</sup> During the 17th century, it is estimated that 300,000 Protestants were put to death and an equal number driven into exile. Moreover, the bloody Spanish wars of the 15th and 16th Century and the conquest and settlement of Hispanic America to a very large extent drained Spain of its aristocratic warrior element. Thus, persecution combined with war to bring about genetic impoverishment.

The innate differences in intellectual temper between the Jews and native Spaniards were not an undiscussed subject even during the Inquisition. On this matter, we quote the distinguished Spanish historian, Dr. Américo Castro, who believes, however, that the viewpoint he is describing is devoid of all scientific validity:

“In a trial before the Inquisition in 1572, the opinion came out that ‘Sebastián Martínez and his brothers . . . were descended from converts, to judge by the sharpness of their mind.’ This popular idea is found ‘scientifically’ demonstrated by Dr. Juan Huarte in his *Examen de ingenios* [*Inquiry into the Nature and Kinds of Intelligence*, 1575]: “The descendants of the people of Israel have not yet lost the temper and qualities which the manna introduced into their seed, nor will their diligence and sharpness of wit be for this reason soon exhausted.’ [Chap. xv.] So it was that when Francis I of France fell ill and was convinced of the ignorance of Christian doctors, he sent to Charles V begging him ‘to send him a Jewish physician, the best in his court. . . . Which request was heartily laughed at in Spain. . . . Whereupon the Emperor ordered that such a physician should be sought for . . . and when one was not found, he sent a *New Christian*.’ It happened, however, that this physician told the king of France that he was a Christian. Then Francis I ‘dismissed him . . . and sent to Constantinople for a Jew, and with nothing but asses’ milk the Jew cured him.’ [*ibid.*] The humorous tone of the anecdote possibly does not exhaust its meaning, nor does it reveal clearly what Huarte thought of Jewish physicians. But in any case, what he thought about the intelligence of Jews and their natural and biological motivations is not a joke. The agreement on this point between the ignorant populace and a learned scholar shows how deeply rooted the belief in the cleverness and knowledge of the Jews was in Spain.”<sup>17</sup>

<sup>16</sup> William Edward Hartpole Lecky, *Rationalism in Europe* (New York, 1866) II, 40-41.

<sup>17</sup> Américo Castro, *The Structure of Spanish History* (Princeton: Princeton University Press, 1954), pp. 472-3.

While the Jews were certainly a major creative element in the intellectual life of medieval and Renaissance Spain, it would be bad history to overemphasize their role. Their expulsion in 1492 was not followed by intellectual collapse, but rather by the "golden century" of Spanish creativity. This was perhaps brought into being by factors resulting from the unification of the nation and from overseas conquest and Christianization of the Americas. Any theory that Spanish intellectual life was entirely the result of Moorish and Jewish leadership collapses against the stubborn fact that both of these groups had been ousted by the early 1500's whereas, for example, El Greco lived until 1614 and Cervantes until 1616.<sup>18</sup>

Returning to a consideration of the table, it is interesting that Switzerland should have produced more important scientists and composers per 100,000 of population than any other country. Since the Swiss are preponderantly Alpine, this fact tends to explode the unscientific theories of Nordic supremacy advanced by Gobineau in the mid-19th century. Swiss pre-eminence is probably largely due to liberal policies under which the mountain confederation became a haven for Huguenots and other refugees from political or religious persecution. The fact that the English show up somewhat better than the Scots is unexpected. This is contrary to the findings of Galton and is negated by the rank of persons of Scottish origin in the American elite.<sup>19</sup> Lehman's findings may be due to the inclusion of Scots born in England as Englishmen.

Protestant countries seem to provide more promising terrain than Catholic or Greek Orthodox ones. Of the 8,725 eminent scientific

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<sup>18</sup> In Protestant lands particularly, Spanish history is often written from a pro-Muslim bias because this is by implication anti-Christian or, at the very least, anti-Catholic. The "black legend" of Spanish rule and Spanish colonization stresses the horrors of the Inquisition. It forgets that Spain Christianized (and to that extent civilized) Amerindians whom our ancestors segregated or destroyed.

<sup>19</sup> "The average standard of the Lowland Scotch and the English North-country men is decidedly a fraction of a grade superior to that of the ordinary English, because the number of the former who attain to eminence is far greater than the proportionate number of their race would have led to expect." Francis Galton, *Hereditary Genius*, *op. cit.*, p. 340. In the United States, Weyl found that Americans of Scottish descent make a consistently higher contribution to the leadership of the United States than Americans of English or, for that matter, Irish descent. In the physical, biological and social sciences, in scholarship, business leadership, engineering, Army officers and representation in *Who's Who in America*, Scots scored from 10 to 38 points higher than English and from 10 to 59 points higher than Irish (except for Army officers, in which category the Irish scored 12 points higher than the Scots). Since the score of bearers of the name *Smith* is taken as 100, these point differences are close approximations of percentage differences. Nathaniel Weyl, "Ethnic and National Characteristics of the U.S. Elite," *The Mankind Quarterly*, I, No. 4 (1961), p. 245.

and musically creative minds domiciled in the 19 countries listed in the previous table, 63% lived in Protestant countries, 31% in Catholic and 6% in Greek Orthodox ones. When the comparison is narrowed to the period 1850 on, Protestant countries still account for 63% of the outstanding minds listed. In aggregate, Protestant nations produced 48 eminent scientists and composers per 100,000 population, Catholic nations 21 per 100,000, and Greek Orthodox Russia 5 per 100,000.

When countries with different religions, but ethnically and culturally similar and geographically adjacent, are compared, analogous differences become evident. Thus, the genius rate for Protestant Scotland (as revealed by the table) is 55, that for Catholic Ireland 17. The rate for Holland is 39, that for Belgium only 8.

The table suffers somewhat from the fact that orchestral and operatic composers are included with scientists. The geographical distribution of the two groups is quite different. The Scotch, Dutch and Swiss produced hardly any musicians at all. On the other hand, 434 of the 721 eminent Italians listed are not scientists, but composers. Two-thirds of the Austrians, almost all of the Hungarians and about three-fourths of the Russians earned fame in music. There is, of course, no implication here that musical composition is a less exacting activity than original work in science. The point is merely that they are two different types of creative work.

### Mathematical Genius

In his stimulating *Men of Mathematics*, Eric T. Bell gives a good deal of biographical data concerning the 34 men and one woman who are, in his opinion, the greatest mathematicians the world has known.<sup>20</sup> Since Bell is a great authority in the field, his tabulation provides an area in which accurate study is possible. Moreover, we can endeavor to find out whether the geographical distribution of outstanding genius is parallel to that of merely eminent men of science. Finally, the field of mathematics is peculiarly rewarding for this sort of intensive study since it is one of the few areas of mental effort in which a great reputation cannot be acquired by an industrious or merely politically astute second-rater.

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<sup>20</sup> *Men of Mathematics* (New York: Dover, 1937). Actually, Bell devotes a chapter to the Bernoulli family, which produced eight important mathematicians in three generations. We assumed that only two of them, Johannes and Daniel, could be included among the really great.

Of these 35 mathematical geniuses, three were ancient Greeks. Of the remaining 32, no less than 12, or more than a third, were French. Germany accounted for eight, England for four, Russia and Switzerland for three apiece, Norway and Ireland for one each. Here, as in the larger tabulations, Swiss pre-eminence in the production of genius is self-evident. In absolute terms, France is well ahead of other countries. However, if we consider only mathematical geniuses born after 1800, Germany leads with six, followed by the British Isles with four and France with three. Five of the 32 non-Greek mathematical geniuses (Cantor, Jacobi, Sylvester, Kronecker and Dedekind) were Jews and a sixth, Lobachevsky, might as well be counted as a half-Jew since he is believed to be the son of converted Jewish parents.<sup>21</sup> The Jewish total is then  $5\frac{1}{2}$ , or 17% of outstanding non-Greek mathematical geniuses.

The negative influence of clerical celibacy and religious persecution on the production of genius is indicated by a study of these mathematicians. Of the 13 known or believed to have been born into the Protestant faith, three (Abel, Euler and Riemann) were the sons of ministers. On the assumption that Catholic priests on the average were as mentally gifted as Protestant pastors, this figure would suggest that clerical celibacy reduced the production of genius by about a fourth. Religious persecution drove the Bernouillis from Antwerp in 1583 where a massacre by Catholics, comparable to St. Bartholomew's Eve, was impending. They took refuge in Switzerland, "produced eight mathematicians, several of them outstanding, who in turn produced a swarm of descendants about half of whom were gifted above the average and nearly all of whom, down to the present day, have been superior human beings. No fewer than 120 of the descendants of the mathematical Bernouillis have been traced genealogically, and of this considerable posterity the majority achieved distinction—sometimes amounting to eminence—in the law, scholarship, science, literature, the learned professions, administration, and the arts. None were failures."<sup>22</sup>

In short, if these 13 outstanding Protestant mathematical geniuses had been of Spanish stock, only eight would presumably have been born or survived. The three who were sons of clergymen would, in

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<sup>21</sup> Cecil Roth, *The Jewish Contribution to Civilization* (Cincinnati: Union of American Hebrew Congregations, 1940), p. 201, makes this statement concerning Lobachevsky.

<sup>22</sup> Bell, *op. cit.*, p. 131.

theory at least, not have been conceived; the two Bernouillis would have been put to death for heresy. Whether a detailed analysis of the 9,501 important thinkers in science and music listed in an earlier table would show similar patterns as to race, religion, pastoral parentage and refugee status must remain an open question since the investigation would be not only time-consuming, but lifetime-consuming.

There is, however, other and collateral evidence bearing on the relationship between clerical celibacy and the production of men of outstanding genius. De Candolle made a study of the dysgenic effects of clerical celibacy in which he found that of the 101 scientists who were foreign members of the Academy of Sciences in Paris, 14% were the sons of pastors.<sup>23</sup> Similarly, a large proportion of eminent Jews were the sons of rabbis.

An analysis of influential men in English history showed that 1,270 were sons of ministers, 510 sons of lawyers, 350 sons of physicians.<sup>24</sup> One in every six of the foreign members of the prestigious Royal Academy was a parson's son. Visher, in a study of *Who's Who in America* for 1922-23, based on the 1870 Census, found that "clergymen fathered 2,400 times as many notables as did unskilled laborers in proportion to number."<sup>25</sup>

### The Decline of Irish Genius

The fact that Scotland contributed so much more to the intellectual life of Europe than her sister Celtic nation has been attributed to the influence of clerical celibacy, which in effect sterilized those individuals who, being mentally equipped and temperamentally suited for a life of scholarship, became churchmen.

The rather pessimistic view of Irish intellectual attainment suggested by this hypothesis is corroborated by statistical material presented in this and subsequent chapters. On the other side of the coin, we have the Irish Renaissance, a largely literary movement of the 19th and 20th centuries, of great vigor, originality and importance. However, as the distinguished Irish novelist, Sean O'Faolain has pointed out,<sup>26</sup> a very large proportion of the intellectual achievement of his country has been the work of the English and Scotch Protestant

<sup>23</sup> Augustin Pyrame de Candolle, *Histoire des sciences et des savants* (Paris, 1885), pp. 149-52.

<sup>24</sup> Hannibal Gerald Duncan, *Race and Population Problems* (New York: Longmans, Green, 1929), p. 135.

<sup>25</sup> *Am. J. Sociology*, XXX, No. 5 (1925), 551.

<sup>26</sup> In an article on the Irish temperament published recently in *Holiday*.

minority. This group, the so-called Supremacy, consists of the descendants of Protestants sent to Ireland by the Stuart kings to suppress the Catholic masses or at least to prevent them from rebelling. For religious reasons, this English and Scotch element did not as a rule intermarry with the Irish population, though this impediment was naturally of little importance in Ulster and did not affect members of the Supremacy who became Catholic converts.

Thus, if one considers a dozen or so great Irish intellects of the last three centuries—the names that immediately come to mind and not necessarily a comprehensive or representative list—an astonishing number turn out to be of English or Scotch descent. In philosophy, the outstanding figure is, of course, Bishop George Berkeley, an Irish-born Episcopalian of English stock. In satire, there is Jonathan Swift, also of English parentage. Then there is the towering figure in political science of Edmund Burke, Dublin-born of an Irish Catholic mother and an Irish Protestant father. Burke was Norman Irish, his name being a corruption of de Burgh. The Anglo-Scoto-Irish element of Norman ancestry differs racially from the Atlantic Cro-Magnon element which constitutes such a large component of the earlier Irish population. These racial differences may be associated with differences in character and capacity, the Atlantic strain being less forceful than the Norman.

Of Irish scientists, the greatest was William Rowan Hamilton. Dublin-born, he vehemently insisted all his life that he was Irish. Yet his mother bore an English name and his father had emigrated from Scotland in his youth. A more recent scientist, the 1948 Nobel Prize winner in physics, Patrick M. S. Blackett, has an English surname and an Irish given name. Perhaps the most notable of the historians produced by the Emerald Isle was also Anglo-Irish, that is to say, Irish-born, but of British stock. In fact, William Edward Hartpole Lecky studied to become a clergyman in the Irish Protestant Church.

The leaders of the turn-of-the-19th-century Irish Renaissance—"A. E." (George Russell), Edwin Martyn, George Moore, William Butler Yeats, Lady Augusta Gregory and John Middleton Synge—had surnames that were more English than Irish.<sup>27</sup> The same judgment applies to George Bernard Shaw, James Stephens and Elizabeth Bowen. Oscar (O'Flahertie Wills) Wilde, the son of an Irish surgeon and an Irish poetess, took a first at Magdalen College, Oxford, and was probably more of English than of Irish ancestral stock.

<sup>27</sup> We have taken the names listed in "Irish Renaissance" *The Reader's Encyclopedia*, ed. William Rose Benet (New York: Thomas Y. Crowell, 1948).

In the case of Joyce Cary, both names are Irish, but the origin is evidently English. On the other hand, James Joyce, Sean O'Casey and Sean O'Faolain are three towering figures in the world of literature who are Irish both as to surname and as to origin.

In considering name origins, one must never forget that there were powerful economic, social and political inducements for the Irish majority to adopt the surnames and lineage of the dominant English and Scottish minorities. There is also the obvious and undisputed fact that, during most of Irish history, educational advantages and intellectual opportunities were heavily weighted in favor of the Protestant ruling element. Even so, the preponderance of English and Scottish names in any listing of Ireland's greatest minds is quite disproportionate to the numerical strength of the Supremacy. Thus, even the large differences revealed by statistical tabulations between English, Welsh and Scotch production of genius, on the one hand, and Irish production of genius, on the other, seemingly understate the case.

### The Friars and English Intellect

The processes of sterilization of intelligence through sacerdotal celibacy were admirably elucidated by Dampier-Whetham, the historian of science, in his discussion of the monastic orders in England in the 13th century. What he had to say is worth quoting at length as it applies generally to the influence of chastity on genius:

"Now let us turn to the domestic annals of England for the sequel. The first Dominican friars landed in England in 1220; the Franciscans followed in 1224. 'Within five years,' we read, 'they had established themselves in every important city in England'; and in little more than thirty years the Franciscans alone 'had settled in forty-nine different localities, and had covered the country with a network of organizations directed to the furtherance of their founder's principles.'<sup>28</sup>

"And what were those principles? 'To teach men that religion was as compatible with a life of activity as with one of contemplation.' Excellent principles indeed, and therefore to be bred out of the race as quickly as possible. The earlier monastic orders withdrew from parenthood those who were inclined to a life of study and contemplation; the friars set to work to prevent the transmission of the qualities of all who wished to combine active life and social ardour—in

<sup>28</sup> Dampier-Whetham quotes from F. S. Stevenson's biography, *Robert Grosseteste, Bishop of Lincoln*.

fact, the philanthropists, the reformers, the philosophers of the day.

"We read with dismay that with few exceptions every really great man of learning who belonged to the Franciscan order came from the British Isles; and repeated applications were made from Denmark, France, and Germany for English friars, as superior to all others.

"'Nowhere,' continues the enthusiastic chronicler, 'has the order furnished so long a list of distinguished names.' Roger Bacon, philosopher and man of science; Adam Marsh, mathematician and trusted advisor of statesmen; Robert Grosseteste, the great administrator, Bishop of Lincoln and first Chancellor of Oxford; Duns Scotus, and Occam—'schoolmen of most original and profound genius'—and a host of others, not all absolutely of first rank, are passed in review; while the number of intellects in the second rank that were reduced to a life-interest only is left to the bewildered imagination. And then, after about a hundred years, 'the rest is silence,' or comparatively so, and England has to begin again slowly to create a fresh crop of great scholars and original thinkers."<sup>29</sup>

East Anglia furnished the bulk of these Franciscan friars who constituted, in Milman's phrase, the "democracy of Christianity." Of the first 18 masters of the Franciscan school at Cambridge, at least 10 were from Norfolk and the ratio at Oxford was similar. East Anglia was, for unknown reasons, particularly propitious soil for religious revival and scholarship. It was here that the Puritan movement of the 16th century was most intense. The East Anglican zealots of the 13th century were bred out by monastic celibacy; in the 17th century, they were thinned out by emigration to America.

### **The Counter-Reformation**

In Catholic Europe as a whole, a clerical celibacy which had lapsed into a certain desuetude in more tolerant and enlightened eras, was vigorously reimposed during and after the Counter-Reformation. At the same time, that part of the intellectual element which disagreed with the Church was persecuted and even exterminated. In Catholic Europe in general, and in Spain to an accentuated degree, one part of the mentally gifted elite was imprisoned, another part killed and a third part, in effect, castrated. The consequence of this profoundly thorough policy of genetic downgrading was eventually manifested in the loss of leadership by Catholic to

<sup>29</sup> William Cecil Dampier Dampier-Whetham, *The Family and the Nation* (London: Longmans, Green, 1909), pp. 152-3.



Protestant Europe and in the chloroforming of the once impressive Spanish intellect by ignorance and superstition. The ravages of the Inquisition eventually spread through all of Catholic Europe and Ibero-America.

The Protestant countries also engaged in repressive persecutions on a vast scale, primarily in witch hunts. Irrespective of whether the persecution of "witches" or the Holy Inquisition was more costly in human lives, the latter did the greater damage to future generations. (The victims of the witchcraft trials appear to have included a quite large proportion of unstable and demented people and hence it is not impossible that this blot on the history of Western Civilization had mildly eugenic, rather than dysgenic, consequences.)

### Nobel Prize Winners in Science

An immensely rewarding field of inquiry is the racial, regional and national provenance of Nobel Prize winners in science. With brief hiatuses, Nobel Prizes have been awarded continuously for 60 years. They have been bestowed on a merit basis without regard to nationality and with no discernible ethnic bias.<sup>30</sup> They are the most coveted of all awards and the most important international distinction that scientists can obtain.

Between 1901 and 1962 inclusive, 225 Nobel Prizes have been awarded for Physics, Chemistry and Medicine and Physiology. Of these, 103 were granted between 1901 and 1933 and 122 in the period 1934 through 1962. Since Hitler came to power in 1933, that year marks a convenient demarcation point in our analysis of the shifting geography of scientific genius. The fundamental change that occurred during this era was a dramatic and perhaps permanent shift of scientific leadership from the European Continent to the United States. The areas occupied by the Nazis and subjected to their policies of genocide and terrorism lost a large portion of their scientific elite and of their intellectuals in general. Consequently, the continental region ceased to produce Nobel Prize winning scientists in ratio-quantities at all comparable to the yield during the pre-Nazi period.

For example, in 1901-1933, Germany and Austria accounted for

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<sup>30</sup> Unfortunately, the same cannot be said for Nobel Prizes awarded in literature. On various occasions, mediocre writers have been given this award and there has been an evident, though probably unconscious, bias in favor of Scandinavian authors. By contrast, Nobel Prizes in science have never been bestowed upon unworthy people. However, it is widely believed that one of the world's outstanding living physicists failed to win the award because his political views were unpalatable to his Scandinavian judges.

over a third of all Nobel scientists by birth (36 of 103) and only slightly fewer by residence. In 1934-62, however, less than a fifth of the Nobel scientists were born there and less than an eighth lived there. In the earlier period, France produced 12 Nobel scientists; in the latter period only three.

Of the 122 Nobel Prize winners in 1934-62, 40 were born in the United States and 57 resided there. The English-speaking countries accounted for half of the scientists by birth and two-thirds of them by residence.

The Soviet-bloc contribution is, and consistently has been, unimpressive. A total of 20 Nobel scientists were born in countries now behind the Iron Curtain; only eight lived there at the time they won the award.

CHANGE IN PROVENANCE OF NOBEL PRIZE WINNING SCIENTISTS, BY BIRTH AND RESIDENCE<sup>31</sup>

Country	1901-33		1934-62	
	Born	Resided	Born	Resided
U.S.A.	5	9	40	57
U.K.	17	19	19	23
Other English-speaking	3	2	4	3
<b>TOTAL ENGLISH-SPEAKING</b>	<b>25</b>	<b>30</b>	<b>63</b>	<b>83</b>
Germany	30	31	17	12
France	12	14	3	2
Scandinavia	9	11	4	5
Benelux	9	7	3	3
Switzerland	2	2	4	4
Other free Europe	9	5	9	5
<b>TOTAL FREE EUROPE</b>	<b>71</b>	<b>70</b>	<b>40</b>	<b>31</b>
Eastern Europe	3	0	8	2
U.S.S.R.	3	2	6	4
Other areas	1	1	5	2
<b>TOTALS</b>	<b>103</b>	<b>103</b>	<b>122</b>	<b>122</b>

It is quite clear from the table that, during the first 62 years of the present century, creative work in science, as measured by Nobel

<sup>31</sup> The English-speaking countries comprise the U.K., Ireland, the United States, Canada, Australia and South Africa. While India is English-speaking, it is classified with "other areas."

Benelux means Netherlands, Belgium and Luxembourg.

"Free Europe" includes all European countries other than the Soviet-bloc nations, the U.S.S.R. and Yugoslavia.

Prizes, has been confined to a minority of the human race. Only six of the 225 Nobel scientists were born in the so-called underdeveloped areas (two of them in China and one each in Argentina, India and Japan). Neither the Muslim world nor Negro Africa produced any scientists of Nobel Prize stature.

Within the European Continent, the southern countries, despite the great cultural traditions of Greece, Italy and Spain, gave the world only seven of the 225 Nobel Prize winners. Eastern Europe and the U.S.S.R. together provided merely 20.

In other words, 199 of 225 Nobel scientists came from Western Europe, the British Isles and the overseas areas of English settlement. Over the entire period, the English-speaking world accounted for 88 Nobel scientists and the free Continent for 111. When residence rather than birth is considered as the primary criterion, the

NOBEL SCIENTISTS BY COUNTRIES OF BIRTH  
AND IN RELATION TO POPULATION

<i>Country</i>	<i>Birthplaces of Nobel Scientists 1901-62</i>	<i>Population (millions) 1938</i>	<i>Scientists per 100 million inhabitants</i>
U.S.A.	45	131	33
U.K.	36	48	68
Other English-speaking*	7	22	27
<hr/>			
ENGLISH-SPEAKING	88	201	40
Germany-Austria	58	76	76
Sweden	7	6	133
Denmark	5	4	100
Finland	1	4	25
Netherlands	9	9	111
Belgium-Luxembourg	3	9	33
Switzerland	6	4	175
France	15	42	31
Italy	4	44	9
Spain-Portugal	3	33	9
<hr/>			
NON-COMMUNIST			
EUROPEAN CONTINENT	111	231	48
Poland, Hungary and Czechoslovakia	10	59	15
Yugoslavia	1	14	7
U.S.S.R.	9	170	5

\* The population figure for "other English-speaking" excludes Negroes and other colored in the Union of South Africa.

share of the English-speaking world was 113, that of the free Continent 101.<sup>32</sup>

Among other things, the Table shows that the preponderantly Protestant countries are much more productive in terms of Nobel scientists than the preponderantly Catholic ones. The validity of this contrast is mitigated by the fact that the preponderantly Protestant countries, such as Germany and the Netherlands, contain large Catholic minorities. Similarly, Catholic countries, such as France, have intellectually significant Protestant minorities. The Catholic countries in turn are more productive than the Greek Orthodox and non-Christian. In these comparisons, the Jewish Nobel Prize winning scientists are inevitably credited to the Christian countries of their birth.

Of the Nobel scientists 161 came from preponderantly Protestant countries with an aggregate 1938 population of about 300 million; 38 came from Catholic countries with a total population of about 140 million and 20 came from Iron Curtain countries which, officially at least, are atheist. The Protestant countries produced about 53 scientists per 100 million inhabitants, the Catholic countries about 27 and the atheist countries about eight.

Of the 225 Nobel Prize winning scientists, 36½, or 16%, were Jewish. Estimating world Jewish population in 1938 at 18 million, the Jews produced 203 Nobel award recipients per 100 million of population.<sup>33</sup>

The decay of the European Continent as a fountainhead of innovation in science at the highest levels, as evinced by the dwindling importance of the region as a source of Nobel Prize winners, is exactly the consequence which would be expected given the dysgenic policies perpetrated on the area by its Nazi and, to a lesser extent, Soviet oppressors. The average Nobel Prize winner in science is about 50 years old. Hence, his early professional career, if he is a European, was overshadowed and perhaps distorted by totalitarian pressures, dysgenic extermination, war and postwar chaos and revolution. If, twenty years hence, Europe has not regained her former position as a leading creative center of pure science, we may be

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<sup>32</sup> The adjective "free" is simply shorthand for "non-Communist." Obviously, the Continent was not free under the Nazis and there will be disagreement as to the degree of freedom prevailing at present in some European countries.

<sup>33</sup> Of these Jewish Nobel Prize winners, 14½ earned their awards in the earlier period and 22 in the latter period. The respective percentages of Jewish to all scientists were 14% and 18%.

forced to conclude that the Nazi catastrophe caused irreparable damage to her civilization. In 1844, Sir William Osler wrote: "Should another Moses arise and preach a Semitic exodus from Germany, and should he prevail, they would leave the land impoverished. . . . There is not a profession which would not suffer the serious loss of many of its most brilliant ornaments, and none more than in our own [medicine]."

This prediction has been confirmed in a way Osler could not have imagined. Of the 36 Nobel Prize winners in science from 1901-33, who were born in Germany or Austria, 11 were Jewish. Thus, the Jews, who constituted about 2% of the population of Germany and Austria during this period, furnished 31% of the region's outstanding scientists. Of the 22 Nobel Prize winners in science from 1934-60 who were born in Germany and Austria, eight were Jewish—35% of the total. These figures show that, while the Jews have made a disproportionately large contribution to German science, their annihilation was not the sole cause of Germany's scientific decline. Thus, in 1901-33, 25 non-Jewish scientists, born in Germany and Austria, won Nobel Prizes; in 1934-62, only 14 won these awards. This decline of over 35% can be attributed to such factors as the distortion of German science by Nazi ideology, the malformation of scientific effort in the war and immediate postwar periods; the emigration of German scientists for political reasons, and the removal of intellectual stimulus when uniformity was enforced in the laboratories and universities.

The United States was the main haven both for the Jewish refugees and for those other scientists who fled political persecution, whether by Czar, Fuehrer or Commissar. In addition, it has attracted foreign-born scientists and intellectuals who were not obliged to flee their countries, but who wished an atmosphere of free scientific inquiry, democracy, due process, adequate working facilities and financial rewards.

### **Dysgenic Catastrophes**

As can be inferred from the statistical tracing of the shift of intellect, we can state a general historic rule: complexly articulated societies with an open promotion system which successfully maintain order at home and peace abroad are eugenic. That is to say, they upgrade the genetic pool of the population in terms of brain power. On the other hand, all retreats from civilization and social order tend

to be dysgenic, that is to say, they have an adverse effect upon the gene pool. We have dealt here with a series of biohistorical processes the nature and importance of which are almost universally ignored. We call these dysgenic deterioration when they are gradual, and dysgenic catastrophe when they are overwhelming. They consist of the nullification or extermination of intellectual elites. Under the Nazis, the process was one of annihilation of the intellectuals in part and the Jews in toto. Under Communism, the war against intelligence assumes the form of persecution and physical destruction of the upper classes and the intelligentsia. In both backward and advanced countries, these leveling processes are probably survival necessities for totalitarian dictatorships, since the creative minorities inevitably threaten their power.

Historically speaking, dysgenic catastrophes are internal or external upheavals in the course of which a mentally inferior element violently seizes power and exterminates the *ci-devant* intellectual elite, thus radically impairing the mental resources of the nation or civilization afflicted by the upheaval. Successful barbarian invasions generally assume this character. The long retreat and hibernation of Western civilization after the destruction of the Roman Empire in the West and its replacement by the kingdoms of the barbarian hordes is historically the most important of these dysgenic catastrophes.

Another external dysgenic catastrophe was the overwhelming of the Middle East and Eastern Europe by the Mongols under Genghis Khan and his successors, together with the subsequent overwhelming of much of India and the Middle East by Tamerlane. In each case, these barbarians perpetrated genocide on an appalling scale. They transformed the great cities of Islamic Asia into immense mausoleums.<sup>34</sup> Since the intellectual elite—the bureaucrats, the scholars,

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<sup>34</sup> Toynbee, *op. cit.*, IV, 500, writing of Tamerlane, alludes to "the crack-brained megalomania of the homicidal madman whose one idea is to impress the imagination of Mankind with a sense of his military power by a hideous abuse of it. . . ." He adds: "We think of the monster who razed Isfara'in to the ground in 1381; built two thousand prisoners into a living mound, and then bricked them over, at Sabzara in 1383; piled 5,000 human heads into minarets at Zirih in the same year; cast his Luri prisoners alive over precipices in 1386; massacred 70,000 people, and piled the heads of the slain into minarets, at Isfahan in 1387; massacred the garrison of Takrit, and piled their heads into minarets, in 1393; massacred 100,000 prisoners at Delhi in 1398; buried alive the 4,000 Christian soldiers of the garrison of Sivas after their capitulation in 1400; built twenty towers of skulls in Syria in 1400 and 1401; and dealt with Baghdad in 1401 as he had dealt fourteen years earlier with Isfahan."

the scientists, the writers, the artists and the religious leaders—lived almost without exception in the cities, this wholesale extermination meant a swift and catastrophic destruction of the brain resources of an entire civilization. What was left was primarily a sodden peasant mass. Islamic civilization in the Asian Middle East never survived the genetic catastrophes inflicted by the Mongols. What followed was a slow degeneration of the Arab world toward its 19th century condition of a fellaheen society.

Several historians of Islam have stated that Arabic civilization never recovered from the blow dealt it by the Mongol invasions. Yet, strangely enough, they have confined themselves to this bare assertion; they have in no way attempted to analyze the genetic processes at work, nor have they indicated the simple chain of causation suggested in the previous paragraph. The civilization-potential of Eastern Europe was likewise stunted by the Mongol hordes. Here they found few cities to destroy and built no pyramids of skulls, but they enslaved the sedentary populations. In Peisker's opinion, the civilization of Western Europe might have been completely aborted if the Mongol advance into Europe had not been stopped on the plains of Hungary.<sup>35</sup>

We have distinguished between external and internal dysgenic catastrophes. The blow is external whenever actual invasion is involved. In its internal form, we have an internecine struggle in the course of which a mentally inferior race, ethnic subgroup, class, caste or other division of the social structure subjugates and proceeds to exterminate its betters.

In recent times, the paramount instance of internal dysgenic catastrophe was the extermination of from 4½ to 6 million European Jews by the Nazis. Here, there is naturally no question of equating the Germans to the Mongols, since the intellectual eminence and creativity of the former has been abundantly proved.<sup>36</sup> Nevertheless, there is sufficient evidence to posit Jewish intellectual percentage pre-eminence over all other ethnic groups, for which data exist, from at least the early Middle Ages to the present. Hence, the extermination of Jewry was not only a hideous instance of genocide, but one of the worst dysgenic catastrophes in the history of mankind. (It is probable that, in their anxiety to prove that they are neither

<sup>35</sup> *Cambridge Medieval History, op. cit.*

<sup>36</sup> The actual extermination of Jews was frequently carried out by Letts and other East European nationals since the rate of mental breakdown among the Germans assigned to this murderous work was very high.

racists nor imperialists, the European powers will abandon their African colonies under conditions which will lead to the virtual extermination of the white settlers by the Negro masses.)

While social revolution is the most common form of internal dysgenic catastrophe, the slaughter of French aristocrats and scientists during the French Revolution seems quantitatively unimportant, and had little permanent effect on the intellect of the nation. In fact, all the social upheavals in Western Christendom of the 18th and 19th centuries were comparatively civilized and bloodless affairs. It is when we reach the Bolshevik Revolution of October, 1917, that a new chapter in the history of internal dysgenic catastrophe opens. Communist doctrine demands the liquidation of the ruling class in toto<sup>37</sup> and this doctrine was applied with systematic thoroughness. When we consider the extent to which the intellect of Czarist Russia came from the nobility and, to a lesser proportion, from the middle classes, the degree to which the Russian people must have been genetically downgraded can readily be imagined. As a matter of fact, the Czarist nobility was continuously enriched intellectually by conferring patents of nobility on men of unusual distinction and creative ability. The second phase was to decimate, through the Bolshevik purges of all rival revolutionary parties, that substantial portion of the Russian intelligentsia which had supported the overthrow of czarism. The third phase was the Stalinist slaughter of most of the intellectuals who were Bolsheviks. Thus far, the Chinese Communists have perhaps been less thorough than their Russian teachers in killing off the most intelligent elements in their population. Nevertheless, the casualties of Soviet Chinese purges have been estimated at anywhere from 15 to 20 million human beings, including amongst them the leaven, the flower and the most promising creative potential of a great civilization.

In Communist Cuba, the same or similar processes are occurring in microcosm. The intellectuals have, for the most part, been driven into exile, imprisoned or shot; the Melanoid elements in the lower classes are being thrust into prominence; the uneducated, the unskilled and the genetically inferior are deemed the most promising subjects of the emerging slave state. To a great extent, the Negroes

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<sup>37</sup> This command does not, of course, apply to members of the upper class who desert it and become professional revolutionaries as Lenin did. Theoretically, liquidation merely means reducing the political influence of an individual or class to zero. However, regardless of the theory, the Bolsheviks, like Fouché, found vertical deportation the most effective method of liquidation.



in Cuba are the armed element and the police force. The importation of Russian combat and garrison units in 1962 was evidence of the antagonism of the people to the dictatorship.

Some may object that the economic expansion of the U.S.S.R. and the development of science and education in the Soviet-bloc areas contradicts this analysis of the relationship between Communism and both dysgenic deterioration and dysgenic catastrophe. The answer is that we are witnessing, not a flowering of intellectual effort, but rather the drastic and total mobilization of whatever brainpower is available into the very narrow channels of the military needs of the state.

Even in this, political exigencies clash with the effective use of mental resources. A cursory examination of the rosters of the most eminent scientists in the Soviet Union about five years ago, and in particular those receiving the highest honors from the state, suggested that at least a third were Jewish and that such other minority groups of outstanding talents as the Germans and Armenians were disproportionately represented. Now this condition applies to the Soviet scientists who are today middle-aged, but it does not apply to the young cadres who are replacing them. For about a decade, the Jewish population of the Soviet Union has been subjected to much harsher and more discriminatory measures in higher education and employment than prevailed under czardom. Thus, in the four leading cities of White Russia in 1958, Jews constituted from 10% to 12% of the population, but only 2% of the history and chemistry graduates of the University of Minsk. At the philology faculty of Moscow University, the percentage of Jewish students declined from 40% before the war to 1% in 1951 and 2% in 1955. "The instructions are obviously such that Jews are, as a rule, not to be admitted into universities and the more important institutions," wrote David Burg (a Soviet university graduate who defected to the West in 1957) recently in *The New Leader*. By contrast, the czarist practice was to admit Jews to universities up to 5% of the student body.


The Jewish population of the U.S.S.R. numbers only two million as compared with 5.2 million in the United States. The denial of educational opportunity to this highly talented minority will have cumulative adverse effects on Soviet science in the years to come. The older generation of scientists, consisting to a very great extent of Jews and of Russians of upper-class origin, will increasingly be

replaced by Russians of lower-class origin who, as a group, are mentally much less capable.

When we scrutinize fields which the layman is able to appraise without specialized training, the insubstantiality of Soviet intellectual achievements becomes obvious. Are there any great writers in Soviet Russia? The contemporary Soviet fiction, which is translated and which is, therefore, presumably the best, is shallow, psychologically crude and by Western standards almost juvenile. The eminent Soviet writer, Boris Pasternak, certainly could not be compared with Dostoyevsky and Tolstoy or even, for that matter, with Turgenev and Chekhov. And Pasternak, the outstanding exception to the rule of mediocrity in Russian contemporary literature, was a Jew, a survivor of that class of intelligentsia which the Bolshevik Revolution worked so hard to exterminate and a victim, in the end, of Communist persecution.

The Nazis may well have created greater eugenic havoc than the Communists because of their extermination of the Jews and because they operated in the European heartland of human creativity. Completely misunderstanding human genetics, they believed they were killing *Untermenschen*. The Communists, operating with total disregard of genetics, have exterminated upper classes for political reasons and used such devices as collectivization and man-made famines to obliterate individuals with more than average initiative and brains. They have wiped out intractable national minorities and brutally repressed the Ukrainian and Polish elites. They have been in the business of destroying man's biological resources much longer than the Nazis. Fortunately, many of the intended victims of these two totalitarian enormities managed to flee to the Free World and succeeded in substantially improving its genetic resources.

If we consider the matter with cold objectivity, it becomes plain that, to the extent that Soviet power and Communist revolution spread, dysgenic deterioration and catastrophe will radiate outward from the present Eurasian core of Communist rule. This means dementalization, both in the form of brainwashing and in the much more irreparable, genetic sense. The conscious purpose and final upshot of these processes of physical extermination of the elite will be to stabilize and equalize human intelligence at a level so low that *Homo sapiens* will no longer be capable of functioning in a social order based on individual initiative and personal freedom.



*“Individuals of genius show the way, and set the patterns which common people then adopt and follow. The rivalry of the patterns is the history of the world. . . . In our democracy, where everything else is so shifting, we alumni and alumnae of the colleges are the only permanent presence that corresponds to the aristocracy of other countries.”*

—WILLIAM JAMES, *Address to the Association of American Alumnae*, meeting at Radcliffe, November 7, 1907.

## VII

# Intelligence Tests and Intellectual Elites

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**I**NTELLIGENCE TESTING, one of the many new disciplines originated by Sir Francis Galton, gave social scientists a new and powerful instrument which could be brought to bear on the problems of ethnopsychological difference. The intelligence tests are objective, as contrasted to subjective, measuring devices. They yield quantitative results. Their administration entails the use of standard operating procedures which any competent technician can repeat. Accordingly, the personal peculiarities, predilections and prejudices of the tester cannot influence the test results.<sup>1</sup> Like all scientific experiments, the intelligence test provides answers that can be verified or refuted by retesting.

The psychologists who pioneered in developing these tests were interested in measuring the differences in the reasoning capacity and other higher mental functions of different individuals, and of different human populations. Intelligence test studies disclosed remarkable variations in the I.Q. distributions of different races, national groups, castes and classes.

The basic measure chosen was the intelligence quotient or I.Q.

<sup>1</sup> In an effort to account for the fact that the average I.Q.'s of Negroes and Puerto Ricans are lower than those of other races, some psychologists have alleged that, where the tester is of a different race than the group tested, there is lack of rapport and that this lowers I.Q. scores. A recent authoritative survey showed that this theory is not supported by the evidence. See Audrey M. Shuey, *The Testing of Negro Intelligence* (Lynchburg, Va.: Bell, 1958), pp. 129-30, 223.

This is the ratio of a subject's test score to the average test score at his age-level expressed as a percentage. The I.Q., accordingly, makes allowance for the normal development of brain-power with growth and maturation. The normal situation is for an individual's I.Q. to remain fairly constant until he reaches the age at which his mental faculties begin to deteriorate. Marked variations in the I.Q. of an individual may indicate brain damage, neurosis or psychosis, disease, the impact of environmental change or simply a growth pattern which deviates from the norm.

An I.Q. of 100 obviously means average psychometric intelligence.<sup>2</sup> According to the classification proposed by Terman in 1916, an I.Q. in the range of 80-90 denotes mental dullness, one of 70-80 borderline mental deficiency, one of 50-70 means that the subject is a moron, one of 20-50 that he is an imbecile and one of less than 20 that he is an idiot.

At the upper range of the scale, people with I.Q.'s of 140 or better are generally classified as gifted. Genius cannot be defined in terms of I.Q. alone, but in a famous monograph, Catherine M. Cox found that the median genius had a childhood I.Q. in the range of 130 to 140<sup>3</sup>

Intelligence tests can be used effectively to measure the comparative mentality of different races, classes and occupations. There are a few simple precautions which must be observed. These precautions will be more or less self-evident to people with some training in mathematics, but not all sociologists fall into this category.

The basic consideration is that the I.Q.'s of a population are described by a frequency distribution. Hence, when we compare the psychometric intelligence of two or more populations, we are comparing two or more frequency distributions. These frequency distributions are not adequately described by arithmetic means or medians. They have such additional attributes as range, standard deviation, skewness and overlap.

This can be put more concretely. In 1945, an analysis was made of the Army General Classification Test scores of 18,782 white Air Force enlisted men in terms of their civilian occupations. Of the 74

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<sup>2</sup> Psychometric intelligence is simply that which the intelligence tests measure. Use of this term enables us to avoid the barren semantic arguments, which many sociologists and psychologists love, about what intelligence really is and whether or not there are significant aspects of intelligence which the tests do not measure.

<sup>3</sup> *Genetic Studies of Genius*, Vol. II: *The Early Mental Traits of Three Hundred Geniuses* (Stanford: Stanford University Press, 1926).

occupations listed, accountants scored highest with a mean score of 128.1; teamsters lowest with a mean score of 87.7.

The first and most obvious conclusion from these figures is that most accountants do considerably better than most teamsters in this particular mental aptitude test. The second pertinent measurement in this case is range. The scores of accountants ranged between 94 and 157, those of teamsters between 46 and 145. This shows that no accountants were mentally retarded, but that at least one teamster was a moron.<sup>4</sup> It also shows that at least one teamster was mentally gifted and scored well above the average of accountants.

If one wants to know how many of the teamsters scored higher than the accountants' average score, we have to look at the standard deviations, which were 19.6 and 11.7 for the two groups respectively. The standard deviations in this case show that it is wildly improbable that the observed difference between the mental scores of the two groups should be due to random errors of sampling and that only a small proportion of the teamsters scored as well as the average accountant.<sup>5</sup>

Where available, two key measurements should be used in comparing the I.Q. scores of different populations. The first is the arithmetic mean or median; the second is the overlap. The overlap tells one what percentage of population A equals the average score of population B. Where the psychometric intelligence of the two populations is equal, the overlap should be 50%; where A is absolutely inferior to B, its overlap should be zero.

The differences between the average I.Q. scores of races are never as great as the differences in I.Q. within each race. This is quite obvious as every major race has some individuals who rate psychometrically as geniuses and others as idiots. For the I.Q. differences between races to be as great as those among individuals of the same race, it would be necessary to have a race of geniuses and a race of idiots. The most perfunctory observation of the world we live in suggests that no race of geniuses exists. The most casual consideration of evolutionary processes suggests that a race of idiots could never have survived.

The fact that interracial I.Q. difference is less than intraracial I.Q. difference does not mean that the former lacks significance, despite

<sup>4</sup> Because an AGCT score of 46 corresponds to an adult I.Q. of about 60.

<sup>5</sup> The data are taken from T. W. and M. S. Harrell, "Army General Classification Test Scores for Civilian Occupations," *Educ. Psychol. Measmt.*, V (1945), 229-39.

the fact that this naïve or ingenuous conclusion has been suggested by Myrdal and associates in their monumental and sophisticated brief in favor of the thesis that the races are equal in innate mental ability.<sup>6</sup> This is tantamount to denying that men are taller than women on the grounds that the difference in stature between the largest and smallest man on earth is considerably greater than that between the average man and the average woman.<sup>7</sup>

One final point should be made about the significance of differences between the average I.Q.'s of populations, regardless of whether they are defined in ethnic, national, class, educational or other terms. This is that comparatively small differences in average intelligence become very great differences in the very high I.Q. ranges. A decline in average psychometric intelligence of only a few points will mean a much smaller population of gifted individuals and it is, of course, this natural elite of gifted people and of geniuses which does most of the really creative work of the world, which gives civilizations their shape, and the presence or absence of which determines which nations are to lead the world and which are to follow. After commenting on the fact that "any one who thinks about the future must live in fear and terror," Albert Einstein wrote: "This is due to the fact that the intelligence and the character of the masses are incomparably lower than the intelligence and character of the few who produce something valuable for the community."<sup>8</sup>

We can indicate the relevance of this to I.Q. frequency distributions as follows: First, let us assume that the distribution of I.Q.'s corresponds to the Gaussian normal probability curve of error.<sup>9</sup> This is approximately correct, but fortunately not entirely so. *Homo sapiens* produces more highly intelligent individuals than the Gaussian formula would allot to him.

Second, assume that the average I.Q. of a population declines by 15 points, possibly because of intermarriage with mentally less gifted groups, perhaps for other reasons. Under these assumptions, the production of highly intelligent people, those with I.Q.'s of 130 and over,

<sup>6</sup> *An American Dilemma* (New York: Harper, 1944), pp. 144-149.

<sup>7</sup> The larger the population studied, the greater its probable range of variation.

<sup>8</sup> Albert Einstein, "Message for Posterity," placed in the time capsule of the New York World's Fair in 1938 and reprinted in *Out of My Later Years* (New York: Philosophical Library, 1950), p. 11.

<sup>9</sup> This curve describes such matters as random dispersion of shots in terms of their distance from the bull's eye. It can be defined as a curve, the ordinates of which are the parameters of the binomial expansion of  $(a + b)^n$  to the power  $n$ , where  $a$  equals  $b$  and as  $n$  approaches infinity.

would decrease from about 2.27% to about 0.13% of the population.<sup>10</sup> In other words, a 15-point decline in average I.Q. would suffice to wipe out 92% of the minority with markedly superior minds.<sup>11</sup>

### Nature and Limitations of the Tests

Intelligence tests of the Stanford-Binet sort emphasize reasoning capacity. They are obviously not "culture free" since they require mental procedures and thought processes derived from the general framework of Western civilization and, particularly, from the scientific, academic and intellectual segments of the Western system. Thus, the individual raised and educated within the Western culture-civilization has a decided advantage in respect to these tests as does the individual whose profession or character structure makes him devote a great deal of his energies to abstract thought.

The Stanford-Binet-type test is, however, much freer from certain types of irrelevancies than such comparatively empirical measures of mentality as school grades, rates of promotion, academic degrees, etc. The tests emphasize thought more than information; they present new problems and hence the answers cannot be memorized. A pleasing personality may give a child straight A's, but it will not help him in a Stanford-Binet.

The tests do not measure the rapidity with which mental operations can be performed. In Professor Tyler's opinion, what the tests measure is level of mental development. If the slow developer took two years to master what brighter children mastered in one, she writes, "this is not because he learned more slowly, but because it took him longer to reach the level of mental development at which these things could be learned at all. This change in interpretation fits in with the fact, quite familiar to teachers, that at the high-school and college ages which correspond to the leveling-off period in mental growth no amount of time spent by the dull on the same materials which the bright grasp with ease seems to produce mastery of them. There probably is a fair proportion of the adult population who are incapable of understanding integral calculus, Platonism, or international finance."<sup>12</sup>

What the tests measure then is ability to function intellectually at

<sup>10</sup> The percentages, but not the argument, are taken from Leona E. Tyler, *op. cit.*, p. 138.

<sup>11</sup> This same conclusion was drawn by Sir Julian Huxley in an important article in *Perspectives in Medicine and Biology* in spring of 1963.

<sup>12</sup> Tyler, *op. cit.*, p. 93.



various levels of complexity within the framework of Western civilization. Since, for better or for worse, the scientific method (systems of logic and linguistic structure of Western civilization) is rapidly conquering the world and relegating once rival civilizations to anachronisms, this limitation is of less practical importance than it would have been several centuries ago. Or, to put the matter more precisely, the fact that the tests are oriented toward Western civilization does not make their aim parochial, since this particular civilization is fast becoming the universal matrix of literate mankind.<sup>13</sup> It is, of course, a severe limitation in a different sense. That is to say, the Western orientation of the tests means that certain groups are very badly handicapped because their cultural and linguistic heritage is not purely Western. This does not necessarily mean that the tests are measuring the *wrong* thing. It means merely that, to this extent, the test results reflect environmental differences as well as innate variations in mentality.

Psychologists, such as Goodenough and Porteus, have developed ingenious tests which are to a remarkable extent culture free. The Draw-a-Man and Porteus Maze tests are frequently used in attempted appraisals and comparisons of the mentalities of primitive peoples. There is conflict of opinion as to what these tests measure in terms of the structure and functions of the mind. Concerning his Maze Test, Porteus claims:

"All the evidence, however, now points to the conclusion that the abilities tested by the Maze, particularly mental alertness and capacity for planning ahead, are much more fundamental to survival than scholastic educability. Apparently, awareness is mediated by entirely different brain structures such as the reticular formations in the brain stem, whereas intellect as contrasted with practical intelligence is subserved by more recently evolved cerebral areas."<sup>14</sup>

From our standpoint, the problem of the validity of the Porteus and Goodenough tests is not of vast practical importance, since peoples living in fossil cultures are a dwindling and quantitatively unimportant portion of mankind.

New and refined techniques have increased the efficacy of intelligence tests and reduced their limitations. Instead of seeking a total

<sup>13</sup> In this context, the Soviet world is, or is becoming, part of the Western civilization framework. Soviet scientists think in accordance with the same scientific methods which are in use throughout the Free World.

<sup>14</sup> S. D. Porteus, "Ethnic Group Differences," *The Mankind Quarterly*, I, No. 3 (1961), 192.

measure of mental ability, there is increasing interest in searching for qualitative differences in the mentalities of various ethnic and national groups. For example, refined intelligence testing techniques have been used to explore the hypothesis advanced by Carothers that the mind of the trans-Sahara Negro is primarily auditory, rather than visual and space-perceiving.<sup>15</sup> A challenging study of French Sudan natives showed that, while their ability to concentrate was far inferior to that of European whites, four-fifths of them were superior in respect to verbal memory.<sup>16</sup> Tests of American Negroes have shown that they fall behind American whites less in linguistic tests, requiring memory, than in non-linguistic tests, calling for reasoning. Investigations made by Stanley Porteus in Hawaii suggest that the Chinese excel in solving linguistic, and the Japanese in solving non-linguistic, problems—a difference that might have been anticipated on the basis of the comparative cultures of these two peoples.

New techniques have also been devised to narrow the influence of environmental conditions on I.Q. scores and to make the latter more nearly a reflection of innate mental ability. The most important of these is pairing. An investigator wants to compare white with Negro intelligence, but to eliminate the influence of the Negro's substandard environment. He rates each of the Negroes he intends to test on the Sims scorecard, which contains about a dozen measures of socioeconomic and cultural status. Then, he uses the scorecard to get a white control sample. Each white to be tested in the control sample is paired with a Negro and is so chosen that, in terms of the Sims scorecard, he is equal or inferior to the latter. Thus, the white control group has been so chosen that its environmental conditions are less favorable than those of the Negroes. Psychologists have discovered that, even after this has been done, the Negroes score markedly lower than the whites.<sup>17</sup>

As the intelligence testing techniques have become more precise and refined, American psychologists and sociologists have tended increasingly to discount their validity. The reasons for this seeming

<sup>15</sup> J. C. Carothers, *The African Mind in Health and Disease* (Geneva: World Health Organization, 1953), pp. 92, 157.

<sup>16</sup> L. Bourdel, *Rev. mens. Comm. nat. Org. franc.*, XXIII (1949), 9.

<sup>17</sup> M. Bruce, "Factors Affecting Intelligence Test Performance of Whites and Negroes in the Rural South," *Arch. Psychol.* No. 252, and Frank C. J. McGurk, *Comparison of the Performance of Negro and White High School Seniors on Cultural and non-Cultural Psychological Test Questions* (Washington, D.C.: Catholic University of America Press, 1951 [microcard]).

paradox are in reality quite simple. Since at least 1933, the dominant purpose in making comparisons of the I.Q. distribution of different races, peoples, classes or castes has been to demonstrate that they are equal in innate intelligence and that the observed I.Q. differences can be entirely explained in terms of environmental factors. However, the light shed on this issue by psychometric tests has been overwhelmingly in support of the hypothesis that significant innate differences do exist in the frequency distributions of the mental ability of these various groups.

Psychometric testing is a device which the social anthropologist is prone to use and, at the same time, to denigrate. One reason for this attitude of depreciation is that the social anthropologists seek *Gestalt*-like definitions of "basic personality" in the primitive societies they study.<sup>18</sup> They are interested in the unique and qualitative aspects of these societies and they generally assume that man is shaped by his social institutions. Thus, they are very defensive when they think they sense an implication that their tribalized subjects may be inherently less gifted in mentality than those peoples which produced a Mozart, a Descartes or a Newton. It is, however, quite true that it is difficult to get meaningful results when intelligence tests are given to groups wholly outside the realm of modern civilization.

The influence of psychoanalysis has also been negative toward the intelligence test. The reasons for this are manifold and also fairly obvious. Freudian psychoanalytic theory assumes supposititious cerebral entities or functions (superego, ego, censor, id, etc.) without making any effort to discover where they are located in the human brain, how they occur in electrochemical or cybernetic terms or what evidence there is, if any, that they exist. The psychoanalytic theory is a deductive discipline based on assumptions which have never been scientifically tested. Virtually all of its assertions are so couched as to make experimental verification or disproof impossible. The evidence it advances for its theories is not quantitative. Rather it points to its record of "cures" and the frequency with which its patients "recognize" the truth of the psychoanalytic interpretation of their disorders. Since the analyst dominates the patient via the trans-

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<sup>18</sup> For a telling criticism of this whole approach and of the slipshod thinking of its protagonists, see Ralph Linton, *Culture and Mental Disorders* (Springfield: Thomas, 1956), pp. 14-63. The critical writings of George Devereux in this area are also important.

fer mechanism, "recognition" by the latter may be the result of suggestion and the overwhelming desire to please and be accepted. In the Middle Ages, people "recognized" that they were witches even without being tortured. They experienced "cures" when they believed that the devils possessing them had been exorcised. If medical science accepted "recognition" and "cures" as valid evidence for the use of new drugs and new techniques, it would be swamped by quacks of every sort. The rigorous, controlled scientific testing procedures upon which the medical profession insists, unfortunately seem abhorrent to psychoanalysis.

The mutual antagonism between psychometrics and the psychoanalytic influence (a mode of thinking much broader than Freudian doctrine) is deeply embedded and part of a larger alignment of clashing forces. Freudian and Jungian psychoanalytic theory, like much of social anthropology and like the philosophies of history which derived from Hegel, Spengler and Toynbee, represents a reaction against the experimental methods of modern science. These systems of thought have also been described as reactions against rationalism.

To a certain extent, this new scholasticism is in the ascendancy, at least as far as American "intellectuals" are concerned. (We put the word between quotation marks because it is tending to denote, not the ablest and most creative minds of our society, but rather those which are pre-eminently verbal and anti-rational.) Psychometrics suffers loss of influence precisely because its impressive advances in techniques, procedures and accuracy threaten to dislodge anti-scientific and aprioristic systems.

There are large differences in score between the various linguistic and national component groups of the Caucasoid race. Most comparisons in this area were made in the United States. However, we also have a fair amount of European, and some scant Asian, material.

The bulk of the comparative surveys date from the 1920's and the 1930's. The reason is that these surveys revealed significant and consistent differences among the various national groups in mental capability as measured by I.Q.'s. Increasingly, however, American psychologists and sociologists have accepted the dogma of equality and proclaimed, not merely that members of different races should all have the same "rights" (an entirely separate question), but that they are innately equal in all forms of mental capacity as well. Having placed themselves in the vanguard of an ideological movement pro-

claiming absolute equality, a very large group of American psychologists and sociologists chose to sacrifice scientific objectivity to their political and propaganda purposes. Broadly speaking, the first phase was one in which comparative studies were conducted, but the results were interpreted in exclusively environmentalist terms and the actual quantitative findings were sometimes suppressed. The second phase was one in which no such studies were made. The third and current phase is one in which professional associations in the social sciences actually request the suppression of statistical data which might "give ammunition" to those who doubt the dogma that all ethnic groups are equal in mental ability.

Nevertheless, a good deal of comparative mental testing was done before the egalitarian iron curtain descended. These tests revealed significant and quite consistent differences in the I.Q. distributions of different ethnic subgroups, nationalities and immigrant stocks.

In the first place, there is strong evidence of overall Jewish intellectual superiority in the areas measured. (This difference would not necessarily apply to non-Western disciplines such as Zen. Furthermore, the generalization is statistical and as such refers to the means of populations and not to individuals.) This is shown by comparative intelligence tests and, in a much more startling form, by surname frequency analysis. The special role of Western Jewry<sup>19</sup> will be dealt with below, and the details of Jewish performance are related throughout the book.

Excluding Jewry from consideration, the highest psychometric intelligence is shown by the inhabitants of northwestern and north-central Europe and the overseas areas to which these elements emigrated: the United States, Canada, Australia, New Zealand and white South Africa. Within the northern, western and central European area, the I.Q. distributions of Protestant nations tend to be markedly higher than those of Catholic nations. This is particularly evident when we compare ethnically and linguistically similar groups, such as the Welsh and Scots with the Irish.

As we move either eastward or southward from this core area of European intellectual ferment, average I.Q., as measured by the tests, declines. Psychometric tests of Portuguese, Spaniards and Italians *in the United States* have generally revealed I.Q. distributions markedly inferior to those of white Americans as a whole. In

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<sup>19</sup> All Jews of European provenance, but excluding those of North Africa, Yemen and central Asia. Israeli studies indicate that these extra-European groups reveal inferior intellectual performance, but there is much reticence concerning the extent of this inferiority.

the Balkans and Levantine countries, very little reliable psychological testing has been done. The tests with which we are familiar indicate fairly low psychometric intelligence.

It is more difficult to generalize concerning eastern Europe. From the standpoint of intelligence testing, the Soviet Union is *terra incognita*. In the early 1930's, P. I. Leventuev gave group Binets to 226 male and 273 female children in Moscow schools. Finding that workers' children scored markedly lower than the children of intellectuals and that this class gap widened with age, Leventuev proposed that the psychological tests be doctored to eliminate this difference, one which was naturally repugnant in the extreme to the pundits of Marxism-Leninism and to the rulers of the Soviet state.<sup>20</sup>

The proposed solution of tampering with the tests was not considered drastic enough. In 1936, mental tests were abolished by proclamation of the Central Committee of the Communist Party of the Soviet Union. The tests were denounced as "a device for perpetuating the existing class structure by mass tests which demonstrated the superiority of the dominant classes and 'superior races.'" The authorities added that these tests were "a very poor way of evaluating the child since they made only a partial assessment of his personality."<sup>21</sup> This decree was lauded ten years later as a milestone in Soviet educational development and the ban on mental tests is apparently still in effect. This negative attitude toward objective testing of psychometric intelligence would be expected under a social system which denies full educational opportunity to the children of "enemy class elements." The fact that the children of intellectuals and members of the upper class generally had higher I.Q.'s than the progeny of workers, even in a society which discriminated against the former, contradicted Marxist-Leninist dogmas concerning the equal endowment of brain-power of the various social classes. It was no doubt personally repugnant to Communist leaders such as Stalin and Khrushchev, who alleged that they came from the lower strata of society.<sup>22</sup>

The ban on intelligence tests currently covers the entire Soviet world. Hence, in considering the mental resources of the Slavic and

<sup>20</sup> See *Psychological Abstracts* 1934.

<sup>21</sup> A. B. Fomichev, "The 10th Anniversary of the Proclamation of the All-Union Communist Party (Bolshevik) concerning the Pedagogical Perversions of the System of the Peoples Commissariat of Education," *Sovietsk. Pedog.*, VII (1946), 11-20.

<sup>22</sup> The earlier Bolshevik leaders were often of very different social origin and mental stature. Although the matter is glossed over by Soviet writers, V. I. Lenin was a member of the hereditary nobility. See Bertram D. Wolfe, *Three Who Made a Revolution* (Boston: Beacon Press, 1948), p. 46.

Magyar peoples, we must either rely on old and fragmentary material or else on comparative I.Q. studies of various groups of immigrants in the United States. The latter approach presupposes that Jewish immigrants can be eliminated from the totals for various countries. When this is done, the I.Q. distributions are, as a rule, markedly lower than those of European immigrants whose homelands were north of the Po and west of the Carpathians. However, these mental tests of Slavs and Magyars apply primarily to the mass immigration which reached its peak just before World War I and which consisted largely of peasants and unskilled workers. The I.Q. distributions of the post World War II Slavic refugees from Communism are probably considerably higher and this is no doubt the case as far as the emigrés of the Hungarian uprising of 1956 are concerned.

### Jews and Gentiles

Toward the turn of the last century, educators and psychologists in Western Europe were much impressed by the speed and ease with which the Jews had moved from the ghetto to the peaks of Western intellectual life. The inference often drawn was one of Jewish inherent mental superiority. "The foreign children in the East End are universally allowed to be sharper and more intelligent than the English and they carry off a large proportion of prizes and scholarships," one observer wrote in 1900.<sup>23</sup> Four years later, a witness testified before a British commission on physical deterioration that he was "astonished at their intelligence."

These opinions were expressed at a time when Binet-Simon tests were just being evolved and quantitative appraisal of human intelligence was in its infancy. Over the next half century, 17 studies with which we are familiar compared Jews and other groups. Eleven found the Jews superior in mental test scores, four found them equal and two found them inferior. Of the third category, Brigham's study<sup>24</sup> was based on a fatal methodological error. Thus, the results of these tests, noted in this chapter, are consistent with the biological hypothesis which we have already advanced that the rabbinate and the structure of Jewish society over the past two thousand years have created an extraordinarily successful laboratory for eugenic reproduction in favor of intelligence.

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<sup>23</sup> C. Russell, *The Jew in London*, 1900.

<sup>24</sup> Carl C. Brigham, *A Study of American Intelligence* (Princeton: Princeton University Press, 1923).

One of these studies is so outstanding for its extreme care, its broad scope and the author's familiarity with the problem that it deserves mention in these pages. We refer to A. G. Hughes' analysis of the results of a very broad series of tests covering almost 2,000 Jewish and non-Jewish children in three London schools. School A was upper class, School B poor and School C very poor. The two last schools were in London's East End. An equal number of Jewish and Gentile children were given the Northumberland Standardized Tests in English and Arithmetic. Hughes concluded:

"The results of these tests were very striking. The Jewish children, both boys and girls, in all three schools, at almost every age from eight to thirteen, proved to be superior to the non-Jewish children, alike in intelligence and in attainments in English and arithmetic. In only two out of the one hundred and twenty-six age groups tested did the non-Jewish children appear to be superior. . . .

"On an average, the mental ratios<sup>25</sup> for intelligence of the Jewish boys in each school were about ten points greater than the corresponding mental ratios for the non-Jewish boys. . . .

"It is often alleged that, although Jewish children are precocious, they do not fulfill their early promise. But our results (which so far refer only to children of 8 to 13 years of age) show no such premature arrest of development. If there are any variations of ability with age, it would appear that Jewish children develop most rapidly about the age of 10, during the next two years progress seems to be slower, but at the age of 13, they have apparently regained their original degree of superiority."<sup>26</sup>

Hughes divided his students into 11 categories in accordance with the status rank of the occupations of their parents. In the 7 groups large enough to be statistically significant, the arithmetic mean score of the Jews was from 6.6 to 13.3 points higher than that of the Gentiles. The I.Q.'s of non-Jews rose with the social status of their fathers, but, among the Jews, the sons of "shopkeepers, dealers and small masters" scored higher than all other groups.

Hughes' explanation of his findings anticipates the general theory proposed in this book. "Others suggest," he wrote, "that the Jewish superiority is not temporary, but that it is a result of generations of 'breeding for intelligence.' They point out how it was for years a

<sup>25</sup> That is to say, intelligence quotients.

<sup>26</sup> A. G. Hughes, "Jews and Gentiles, Their Intellectual and Temperamental Differences," *The Eugenics Review*, London, July 1928.



tradition for rich Jewish fathers to seek out men rich in learning rather than goods, as husbands for their daughters. Then there is, of course, the unnatural selective influence of years of persecution."

### Music and Jewry

The Jewish contribution to the fine arts, and particularly to music, has been sufficiently large to evoke several studies. The *Oxford Companion to Music* lists 138 composers born after 1750 under "Symphony" or "Concerto" who also have individual biographical listings. By comparing these names with rosters in various standard Jewish reference books, we find 22, or 16% of the total, to be Jewish or partially so.

In 1933, Keith Sward did a much more comprehensive study of Jewish musicality in America.<sup>27</sup> He found that of 145 composers, listed in Claire Reis's *American Composers* and in a supplementary roster by Dr. Charles N. Boyd, 14.5% were Jewish. Of the 42 of those composers whose works were performed by symphony orchestras, 23.8% were Jewish.

Of 37 conductors of America's four greatest orchestras (Boston, Chicago, New York Philharmonic and Philadelphia Symphony) between 1920-1 and 1932-3, 45.9% were Jewish. In twelve symphonic orchestras, Jewish musicians comprised 34.0% of the strings and 51.1% of the first violins, but only 9.4% of the brass and 9.6% of the woodwinds.

Of violin virtuosi who performed only once with an orchestra, 34.6% were Jewish. Of those who performed twice or three times, 38.5% were Jewish, while, among those who had made 4 to 13 appearances, 70.0% were Jewish. The trend among pianists was similar.

Sward found a significant correlation (.41 plus or minus a standard error of .19) between the excellence of a symphony orchestra and the percentage of Jewish musicians. On the other hand, Jews were more heavily represented in 23 so-called pops orchestras, where they constituted 73% of the violins and over a third of the entire membership. Moreover, three European orchestras (London, Paris and Munich) reported in January, 1933, that less than 5% of their musicians were Jewish.

Is this intense musical activity the result of greater innate ability,

<sup>27</sup> Keith Sward, "Jewish Musicality in America," *J. of Applied Psychol.*, Dec. (1933), 675-712.

extraordinary interest due to cultural factors or other causes? Opinions differ. Max Weber was one of the first to emphasize the extent to which the Old Testament relies on acoustic, as distinct from visual, imagery and one might infer from Weber's observations that Jews were unusually sensitive to the auditory world.<sup>28</sup> On the basis of the same evidence, H. Rosenthal argued that Jewish musical ability arose as a compensation for ear defects, a racially inherited tendency. He noted that Jewish prophecy made more frequent use of acoustic appeals and imagery than any other religion and added that there is a tendency for musical ability to be present in families with hearing defects.<sup>29</sup>

Sward tested 300 Jewish and 200 non-Jewish children aged 10 to 11 in St. Paul and Pittsburgh. He used Seashore tests of pitch, tonal memory and tonal intensity, the Kwalwasser-Dykema test of tonal movement and the Drake test of musical memory. The Jewish and non-Jewish children were then standardized in terms of age, training and intelligence. These tests indicated that there was no significant difference in "basic capacities required for musical success," but suggested the possibility that "the Jewish child may be a superior all-around organism by 'nature.'"<sup>30</sup>

### **Superiority of Northwestern Europe**

The comparative intelligence tests show a consistent superiority of Northern and Western Europeans over Southern and Eastern Europeans. These differences can be attributed to such climatological factors as cold, temperature variability, amount of ozone, the stimulus of electrical storms and perhaps the relationship between rate of mutation and cosmic rays. The genetic consequences of clerical celibacy in Catholic countries after the Counter-Reformation affected the general picture. There are regional and national differences in urbanization, education and wealth. Moreover, the immigrants to the United States are not necessarily representative samples of the parent populations. The Puritans, who fled England for reasons of conscience, were of superior mental and moral fiber to the average; on the contrary, the impoverished peasants of Sicily and

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<sup>28</sup> Max Weber, *Ancient Judaism*, tr. and ed. Hans Gerth and D. Martindale (Glencoe, Ill.: Free Press, 1952).

<sup>29</sup> H. Rosenthal, "Die Musikalität der Juden," *Int. Zscht. f. Individ.-Psych.*, IX (1931), 122-31.

<sup>30</sup> Sward, *op. cit.*, pp. 695, 697.

Calabria who immigrated to the United States were probably the mental and moral inferiors of the Italian population at large.

Eight surveys compared the mental test performance of preponderantly Protestant and preponderantly Catholic countries and in each case the Protestant average scores were higher. The bottom positions were held by Negroes, Italians, Portuguese and Mexicans. Of the eight studies which compared Negroes and Italians, Negroes scored lower in five. The Italians suffered, of course, from a very severe language handicap as did the Portuguese, Mexicans and other low-scoring groups. Moreover, the studies were made for the most part in the 1920's, at a time when the South European and East European immigration was recent and not fully adjusted to American conditions. A reappraisal of the I.Q. performance of Americans of Southern and Eastern European origin would be of great interest and importance.

Florence Goodenough summarized the material on the comparative mental test scores of different immigrant European groups in the United States a decade ago. She stated that very large differences exist and that these differences persist for at least a generation: in other words, the I.Q. gap between immigrants of different national origin is about the same as that of their children. In practically all studies made, "the average score earned in standard intelligence tests for the Italians, Mexicans, Portuguese, Poles and Greeks in the United States have been considerably below those of the Jews, Swedes, Norwegians, Englishmen and Germans. The Chinese and Japanese groups have also ranked fairly high in these tests. In all such comparisons, it is, of course, assumed that the tests used make little or no demand upon knowledge of the English language."<sup>31</sup>

### **Intelligence and Class**

Within each race, nation or linguistic group, psychometric intelligence varies sharply in direct relation to social and economic level. This fact has been recorded and confirmed in a vast number of observations, spanning more than half a century, and it is not questioned by any competent student of the matter.

What is in dispute is causation. Environmentalists attribute the consistently superior performance of the upper class groups to their greater material and cultural opportunities. Hereditarians agree that this plays a role, but they add that, by and large, the upper class

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<sup>31</sup> Florence L. Goodenough, *Mental Testing* (New York: Rinehart, 1949).

groups are genetically superior in respect to intelligence. In most cases, those who are outstandingly successful, it is argued, have a superior intellectual endowment, their position in society enables them to choose mates who are also superior, and in this manner the familial line retains its characteristics of inherited intellectual gifts.

Evidence from a variety of places shows that intelligence test scores are directly related to class and status. Thus, intelligence tests of 2,782 children in Madison, 4,727 in Ohio City and 6,688 in New York villages, assorted according to the occupation of the fathers, showing that the children of professionals scored 115, 115 and 116 respectively, children of business and clerical men 105, 110 and 107, children of skilled and semi-skilled wage earners 95, 102 and 97, while the children of unskilled laborers averaged 89, 94 and 91. The New York villages reported an average score of 94 for farmers' children.<sup>32</sup>

The Alpha scores in World War I tests of soldiers showed the same relationship. Engineers and accountants were in the 200-290 range, machinists between 90 and 180, laborers between 50 and 140. The highest scoring laborer was about 60 points below the lowest scoring engineer or accountant.<sup>33</sup> An analysis of AGCT scores of 18,762 white enlisted men by civilian occupation showed similar relationships.

The positive association between intelligence and social status is not confined to the United States. A similar picture has been revealed by various British studies, in a 1944 study by Livesay of Hawaiian high school seniors, in a 1929 study of the U.S.S.R. by Sirkin and in a 1947 study of American Negroes.<sup>34</sup>

### Eugenics and the Future

Extensive tests of Scottish intelligence were made in 1947. These were designed to prove or disprove the warning of British eugenicists that the class-reproduction pattern of the United Kingdom would necessarily cause significant and progressive declines in innate intellectual ability. In 1950, Vernon had estimated that the general intelligence of the British people would decline by two points of I.Q. in each generation of 30 years unless the class-reproductive pattern changed.<sup>35</sup>

<sup>32</sup> Frank Lorimer and Frederick Osborn, *Dynamics of Population* (New York: Macmillan, 1934), pp. 159-60.

<sup>33</sup> R. M. Yerkes (ed.), *Psychological Examining in the U.S. Army*, Memoirs of National Academy of Science, Vol. XV (1921).

<sup>34</sup> The references are in Tyler, *op. cit.*, pp. 321-2.

<sup>35</sup> P. E. Vernon, *Brit. J. Psychol.*, XX (1950), 35-42.

An earlier study by Sir Cyril Burt had pointed out that there was a tremendous range of I.Q. in relation to class and occupation; that the lowest class and educational groups had the lowest I.Q.'s and the highest fertility; that the rural population was more fertile and less intelligent than the urban, and that the I.Q.'s of children tended to cluster much closer to the national average than those of their parents. Sir Cyril's pessimistic conclusions were based on a projection of class-fertility and class-I.Q. trends and also on regional studies. He found the following relationships between I.Q. and occupation and class in England:<sup>36</sup>

Class	Arithmetic Means of I.Q.s	
	Parents	Children
(1) High professional and admin.	153.2	120.3
(2) Lower prof. and tech. exec.	132.4	114.6
(3) Highly skilled clerical	117.1	109.7
(4) Skilled manual	108.6	104.6
(5) Semi-skilled	97.5	98.2
(6) Casual	81.6	89.1
(7) Institutionalized	57.3	67.2

Sir Cyril's conclusion was:

"It will be seen that, if the rate assumed continues, then in a little over 50 years the number of pupils of 'scholarship' ability will be approximately halved and the number of feeble-minded almost doubled. These results, to my mind, are a far more serious consequence than the lowering of the general average by about five I.Q. points."<sup>37</sup>

The detailed analysis of Scottish intelligence by the Scottish Council for Research in Education agreed with Sir Cyril's findings concerning the relationship between parental occupation and I.Q. of children. The Council added that the smaller the family, the greater the I.Q. score of the children. In fact, the average decline in I.Q. score per additional sibling was found to be 2.13 points.<sup>38</sup>

This relationship between number of progeny and mental test score may have had something to do with the unexpected finding that no decline in I.Q. had occurred among Scottish children between 1932 and 1947. A considerably more important factor was the great changes which had occurred in their physical and mental en-

<sup>36</sup> Sir Cyril Burt, *Intelligence and Fertility* (London: Eugenics Society, 1946).

<sup>37</sup> *Ibid.*, p. 32.

<sup>38</sup> The Scottish Council for Research in Education, *The Social Implications of the 1947 Scottish Mental Survey* (London: University of London Press, 1953), p. 45.

vironment over those 15 years. Income, leisure and educational opportunities had improved enormously. The 1947 group of Scottish children were better fed, better housed and in better health than the 1932 group had been.

Moreover, they were much more familiar with intelligence tests. For all these reasons, they should have scored substantially higher in I.Q., assuming that their innate intelligence had not declined. Thus, in the United States, the average educational level rose between two world wars from eight to ten years and the median score on the Army Alpha Test was 104 for World War II recruits as against 62 for the World War I draft. Only 17% of the World War I draftees scored as high as the average score of World War II troops.<sup>39</sup>

Accordingly, if the genetic factors had remained constant, we would have expected to find a significant rise in Scottish I.Q. between the two periods. Since no such rise occurred, the conclusion provisionally indicated is that dysgenic reproduction was counterbalanced by environmental amelioration: in short, that the processes predicted by Burt and others are occurring, but that their effects are masked by social and institutional change.

The progressive intellectual impoverishment of nations because of excessive reproduction by the dull and deficient reproduction by the bright is not merely a British problem, but one that concerns the Western world as a whole. Fortunately, it has been less serious in the post-World War II period than in the years between the two world wars.

The authoritative, nationwide GAF study (in which there were 2,713 white wives, constituting a cross section of the 17 million white wives in their age groups in the American population) revealed that white women born between 1886 and 1890 who married before middle age averaged 3.2 children.<sup>40</sup> Those born during 1906-15 averaged only 2.4 children. But the wives born between 1926 and 1937 plan to have from 2.8 to 3.4 children.<sup>41</sup>

Education and religion are the two main factors determining the expected size of the family. Catholic wives expect to have 3.4 children, Protestant wives 2.9 and Jewish wives 2.4.

<sup>39</sup> John B. Miner, *Intelligence in the United States* (New York: Springer, 1957), p. 69.

<sup>40</sup> Scripps Foundation for Research in Population of Miami University and the Survey Research Center of the University of Michigan "Growth of American Families," (Ann Arbor: 1960). See fn. 41.

<sup>41</sup> "Growth of American Families," *Population Bulletin*, XVI, No. 4 (1960), 66.

Among American Protestant wives, those who stopped their education at grade school plan to have an average of 3.6 children, those who partially completed high school intend to have 2.9 children, whereas the high school and college graduates plan an average of 2.7 children only. If the Protestant reproduction pattern in America is dysgenic for intelligence, the Jewish reproduction pattern is probably more so.

American Catholic wives have a very different attitude. The grade school group expects an average of 3.7 children; those who dropped out of high school 3.1 children; the high school and college graduates an average of 3.9 children. The broad picture which this suggests is that the Catholic group in the United States population will tend to improve progressively in inherited intelligence as long as its current reproduction trends continue, whereas both the Jewish and the Protestant groups will, for the same reasons, progressively deteriorate.

The celibacy of the priesthood imposed a tremendous genetic handicap on the Catholic world over the centuries and this markedly so with the advent of a strict enforcement of sacerdotal abstinence from sexual life during and after the Counter-Reformation. Today, conditions are very different. While the celibacy of the priesthood continues to be a genetic handicap, this calling is no longer the chief refuge of an intellectual elite. With the secularization of the Catholic intelligentsia, the insistence on the part of the Church that the purpose of sexual gratification is procreation has prevented that genetic suicide of the college bred which is such a serious problem among the Protestants and the Jews.







*“How Tragedy and Comedy embrace,  
“How Farce and Epic get a jumbled race.”*

—ALEXANDER POPE, *The Dunciad*.

## VIII

# Racial Patterns in Intelligence and Leadership

### American Indians

The oldest of the immigrant streams, the American Indians, have not been investigated nearly as thoroughly as other American racial groups. Moreover, the Indians of the United States are the remnants of a large number of tribes and nations. These differed from each other markedly, not merely in habitat, climate, language, economic and social institutions and cultural level, but also in race.

"The American Indian appears not to represent a homogeneous racial stock," observes the *Encyclopaedia Britannica*, "though it has been customary so to describe him."<sup>1</sup> The earliest waves of immigration from Asia comprised hyperdolicho- and dolicho-cephalic peoples, whereas the later waves were brachycephalic. "It is even suggested that a line drawn between San Francisco, Calif., and the Gulf of Mexico would divide this earlier, or extra-longheaded man from the later and less longheaded arrival; and moreover such a line would divide seed gatherers and grinders such as characterized the Cochise culture of southeastern Arizona from the predominantly hunting culture, typified presumably by Folsom remains." The first waves of settlement consisted of a group, already racially blended in Asia, and combining a stock similar to the Mediterraneans, one of Australoid and one of Negroid characteristics. These elements were driven into peripheral areas by later, and more characteristically Mongoloid,

<sup>1</sup> Darcy McNickle, "Indian, North American", *Encyclopaedia Britannica* (1961).

immigrants.<sup>2</sup> Since the American Indians are racially diverse, the mental capacities of the many tribes and subgroups cannot be derived from a few scattered tests.

Early mental tests of American Indians indicated a pronounced inferiority in I.Q. distribution as compared with American whites. Pintner in 1931 surveyed the available studies and observed that the mean I.Q.'s of the Indians tested ranged between 69 and 97 and hence were "considerably lower" than those of whites.<sup>3</sup> Otto Klineberg, a staunch environmentalist who denies the existence of significant innate differences between the mental capacities of different ethnic groups, made the interesting suggestion that I.Q. distribution among Indians is positively correlated with degree of white ancestry. He indicated that the median I.Q. score for full-blooded Indians was 67, that for three-quarter Indians 77, that for half-bloods 91 and that for quarter-bloods 109.<sup>4</sup>

Professor T. R. Garth of the University of Denver found that Indian children who had been placed in white foster homes obtained an average I.Q. score of 102, as against an average score of 87.5 for their siblings on reservations and one of 81 for Indians in general. In 1942, Dr. J. H. Rohrer of the University of Oklahoma gave intelligence tests to Osage Indians. This group lives under conditions entirely different from those of other reservation tribes because oil was found on the land which the U.S. Government gave them. These Osage children had average I.Q. scores of 104 on the non-linguistic and 100 on the linguistic tests.<sup>5</sup>

Porteus found that the Navahos, who are among the Indian tribes least acculturated to white living conditions, scored excellently on his Maze Test. For that matter, the Australian Arunta, the Tamils, the Gurkas and the Ainus were also high scorers. The conclusion which Porteus drew was that "ability in maze-threading exists among the most diverse cultures and peoples. Here again is proof that planning and foresight are highly developed among so-called primitive peoples."<sup>6</sup> (It is worth remembering, however, that the Porteus Maze Test calls on older portions of the brain than the conventional intel-

<sup>2</sup> *Ibid.*

<sup>3</sup> See Tyler, *op. cit.*, p. 302.

<sup>4</sup> Otto Klineberg (ed.), *Characteristics of the American Negro*. (New York: Harper & Brothers 1944), p. 86.

<sup>5</sup> Otto Klineberg, *Race and Psychology* (Paris: UNESCO, 1951), pp. 21-23.

<sup>6</sup> S. D. Porteus, *The Porteus Maze Test and Intelligence* (Palo Alto, Calif.: Pacific Books, 1950), p. 128f.

ligence test does; specifically, reticular structures in the brain stem are involved primarily and not the neopallium.)<sup>7</sup>

The indication is that the low scores of American Indians may be due to their language barrier, to their impoverished socioeconomic environment, to the constricting influence of an archaic tribal pattern, magnified by the imposed welfare paternalism of the reservation system and possibly to innate racial differences in capacity as well. Both the diversity of the Indian tribes and the paucity of studies suggest that caution in drawing conclusions is desirable.

### The American Negro

When we turn to the intelligence testing of the Negro, we find, not unexpectedly, that the most frequent comparisons have been between American whites and American Negroes.<sup>8</sup> Over a period of 44 years, at least 240 such experimental studies have been made. In a recent, authoritative study of these psychometric comparisons, Dr. Audrey M. Shuey summarized the results of tests covering 55,000 colored children and 25,000 Negro high school and college students.<sup>9</sup>

These psychometric tests reveal the fact that Negro I.Q. distributions are markedly and consistently lower than white. The Negro shortfall increases rapidly with age and the complexity of the tests. Thus, at two to six, colored children average from 10 to 12 points below whites on Stanford-Binets. Tests of school children show a much more serious lag. In 17 such comparative tests, summarized by Shuey, the Negro groups had average I.Q.'s ranging from 72 to 89. In other words, the best Negro group had an average I.Q. which placed it in the mentally dull category; the worst could be characterized as borderline mental deficiency.

At the college level, the Negro performance is even worse. Tests of 15,000 colored college students revealed that their average score on the American Council Psychological Examination (ACE) was 60% of the national college average. At Howard University, which is probably the best Negro higher educational institution in the nation, only 15% to 20% of the students equaled the nationwide college average. This exceedingly poor performance probably under-

<sup>7</sup> S. D. Porteus, *The Mankind Quarterly*, I, 3 (1961), 192.

<sup>8</sup> We should note, at this point, that it is important to bear in mind the fact that the American Negro is, on the average, from 25-30% white. This statistical generalization cannot be ignored when weighing the results of this chapter. Except when referring to African Negroes, the terms "colored" and "Negro" are used interchangeably.

<sup>9</sup> Shuey, *op. cit.*

states the real differences between I.Q.'s of the two races. In the first place, many studies have shown that the Negro college students as a group are considerably more racially mixed than Negroes as a whole. In the second place, proportionately fewer Negroes than whites go to college and hence the Negro group is more highly selective than the white.

We know several other things about comparative white and Negro psychometric intelligence. In summarizing all available tests of white and colored school children, Shuey found that there were proportionately six times more white than colored gifted pupils and proportionately six times more colored than white retarded pupils.<sup>10</sup>

Many investigations have shown that Negroes do best on questions which call for rote memory or immediate memory. While some psychologists have suggested that the poor performance of Negroes is due to language difficulties, three different recent studies showed that the Negro failure was most marked in the non-verbal portions of the tests.<sup>11</sup>

Professor McGurk of Villanova made an important controlled investigation of this problem in 1951. His Negro group consisted of 213 seniors from New Jersey and Pennsylvania high schools. A white control group of 213 seniors from the same schools was chosen, each member of which was equal to, or lower than, the Negro against whom he was paired in socioeconomic position as measured by the 11 items on the Sims Record Card.

The first question was whether the race difference in I.Q. would persist after the differences in socioeconomic environment had been ironed out. The answer was affirmative. The Negro I.Q. distribution was well below the white and no Negro scored as well as the top 9% of the whites.

McGurk also had the questions divided into three categories to see whether the Negro shortfall was greatest in cultural questions, calling for knowledge and memory primarily, or the non-cultural questions, which called principally on reasoning power. The answer was that the Negroes did worst on the non-cultural questions. In this area, no Negro equaled the score of the best 10% of the whites, whereas in the cultural questions, the best Negro score was exceeded

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<sup>10</sup> Shuey, *op. cit.*, p. 244.

<sup>11</sup> Weyl, *op. cit.*, p. 184.

by only 5% of the whites.<sup>12</sup> Other investigations have revealed that Negro groups lag far behind the whites in I.Q. distribution even when samples of equal socioeconomic position are chosen.<sup>13</sup>

Using substantially the same methods as in his earlier study, McGurk tried to find out whether the lag of Negro behind white I.Q. was greatest among the upper class, educated groups or among the lower class, uneducated ones. Again using the Sims cards, he got a white control sample each member of which was paired against a Negro who was equal or superior to him in his socioeconomic position. He then divided his two groups into four equal parts based on their socioeconomic status. McGurk found that at the bottom level the Negroes and whites were fairly close to each other in I.Q. distribution, but that the Negro elite was far behind the white elite in mental performance. Only 18% of the educated, well-to-do Negroes in the first group managed to make a test score as good as the average test score for the first group in the white control sample.<sup>14</sup>

Another aspect of Negro psychometric intelligence that is of interest is that the I.Q.'s of racially mixed groups tend to be significantly higher than those of full-blooded Negroes. Tanser found that the median I.Q. of the mixed-bloods was 86.4, that of the full-bloods only 79.1. Making a similar separation on the basis of skin color, Bruce found that the median for her darker group was 73, that of her lighter group 76. Similar differences were found by World War I psychologists who tested Negro and mulatto soldiers.<sup>15</sup>

In a fairly exhaustive study of eminent Negroes, Reuter established that the overwhelming majority were racially mixed. Of 2,129 Negroes in the arts, 1,905 were classified as mulatto; of 633 successful in business and industry, only 74 were black, and of 627 prominent in history, 563 were mulattoes, only 64 blacks.<sup>16</sup>

In recapitulation, Reuter found that of the Negroes on his various

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<sup>12</sup> McGurk, *Comparison of the Performance of Negro and White High School Seniors on Cultural and Non-Cultural Psychological Test Questions*, Catholic Univ. Amer. Press (microcard), Washington, D.C., 1951.

<sup>13</sup> Among others, M. Bruce, *Arch. Psychol.*, No. 252 (1940), and H. A. Tanser, *The Settlement of Negroes in Kent County, Ontario, and a Study of the Mental Capacity of Their Descendants* (Chatham, Ont.: Shepherd, 1939).

<sup>14</sup> McGurk, "On White and Negro Test Performance and Socio-economic Factors," *J. Abnorm. & Soc. Psychol.*, XLVIII (1953), 448-50.

<sup>15</sup> G. O. Ferguson, Jr., "The Intelligence of Negroes at Camp Lee, Virginia," *School and Society*, IX (1919), 721-6; also Shuey, *op. cit.*, pp. 272-3.

<sup>16</sup> Edward Byron Reuter, *Race Mixture*, pp. 191-2. Cited by Austin Earle Burges, *What Price Integration?* (Dallas: American Guild Press, 1956), pp. 55-57.

leadership rosters, 3,280 were racially mixed and only 447 racially pure. Although blacks outnumbered mulattoes by four to one, according to Reuter's estimate, they accounted for only 9.3% of the Negro leaders. He concluded that the chances that a mulatto child will rise to prominence are 35 to 100 times as great as that a black child will do the same, the precise ratio depending upon the field under consideration.

Another investigation by Reuter showed that of the 50 Negroes known to have secured patents for inventions (all of which were minor), only seven were blacks.

Burges writes: "I classified the 656 Negroes whose pictures appear in *Who's Who in Colored America*, 1950 edition, as best I could into near-whites, mulattoes and Negroes, basing my classification more on physical characteristics than on apparent color. Here is what I found: Negroes, 159; mulattoes, 394; near-whites, 103. Thus nearly five-sixths of those pictured appeared to have white blood."<sup>17</sup>

Of the 3,000 persons listed in *Who's Who in Colored America*, 1950 edition, Burges found a total of only 31 physical scientists: 23 chemists, 5 physicists, 3 mathematicians, no astronomers and no inventors. By contrast, there were 29 actors and actresses, 21 athletes, 20 artists, 22 composers of music and 28 singers. The Negro contribution to fields calling for kinesthetic ability and voice was substantial; his participation in professions requiring rigorous abstract thought was extremely small.

Another interesting aspect of comparative Negro and white psychometric intelligence is that the lag of the Negroes has apparently increased over the past 40 years despite the impressive improvements in the economic, social and educational opportunities of colored people. This is shown by the mass testing of soldiers in three global struggles. In World War I, Northern Negroes scored approximately as well as Southern whites. (Professor Henry E. Garrett of the University of Virginia has pointed out that the significance of the Negro performance in World War I is reduced by the fact that the Alpha test, which was used at that time, correlates .70 with education. At the time, educational facilities in the North were far superior to those in the South.—Letter from Dr. Garrett to N. Weyl, April 2, 1963.) By World War II, however, Northern Negroes had fallen decisively behind. In the latter conflict 3.1% of the Southern whites,

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<sup>17</sup> Burges, *op. cit.*, p. 55.

as against only 0.6% of New England Negroes, were rated as very superior. Some 20.8% of the Southern whites, but only 8.9% of the New England colored, were in the first two AGCT groups, that is to say, were either superior or very superior.<sup>18</sup>

About 12% of the Negroes in World War II equaled the average score of the white troops. Some 77.7% of World War II Negroes tested and 81% of the Korean War Negroes tested fell into the inferior and very inferior test groups. By contrast, only about a third of the whites were in these two groups.

During World War II, the rejection rate for white selective service registrants because of educational or mental disability varied by region from 9 per 1,000 (Far West) to 54 per 1,000 (Southwest).<sup>19</sup> The corresponding Negro rejection rates by states varied from 36 per 1,000 in New York to 277 per 1,000 in South Carolina.

The higher Negro scores in the North can be explained in part by better educational opportunities and perhaps in part on the theory that the migrants are of higher average intelligence than those who stay at home. It does not follow that the Negro shortfall is wholly, or even primarily, environmental in causation. Although the Negro educational facilities and levels are below those of the whites, the Negroes are less able to do more advanced school work.<sup>20</sup> Improved education for both races would raise Negro I.Q.'s somewhat, but, at the same time, it would widen the intelligence gap between the two races. Since the American school system bases promotion primarily on age, it is better adapted to Negro than to white intelligence. If each race attended schools optimal to its intelligence, the differences in educational performance would become more marked. The salient fact is that 57.3% of the whites are "capable of higher level school performance, while only 21.1% of the Negroes fall into this category."<sup>21</sup>

In World War I, the average Negro I.Q. was estimated at 83. This compares with a median Negro I.Q. of 86 reported by Klineberg on the basis of summarizing 27 studies. A study of over 2,000 Army Air Force recruits during World War II revealed a mean Negro AGCT

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<sup>18</sup> The comparison is between First Command Area Negroes and Fourth Command Area whites; i.e., we have chosen the Command in which the Negroes scored best and the Command in which the whites scored worst.

<sup>19</sup> Eli Ginzberg and Douglas W. Bray, *The Uneducated* (New York: Columbia University Press, 1953), pp. 46-53.

<sup>20</sup> Miner, *op. cit.*, p. 114.

<sup>21</sup> *Ibid.*, p. 110.



score of 68.5 (100 is normal) as compared with 95.1 for whites. In that conflict, the rejection rate for mental deficiency was about 152 per 1,000 for Negroes and 25 per 1,000 for whites. "More recent material, available from the testing of Air Force basic trainees at Lackland Air Force Base in 1952 . . . indicates that the one to six ratio between white and Negro failures is still maintained. The rate of failure on the group psychological tests was 10.0 per thousand for whites and 58.7 for Negroes."<sup>22</sup>

The encouraging aspect of the evidence which mental tests throw on Negro intellectual performance is that *some* Negroes make scores which place them in the genius category. In the mid-1930's, M. D. Jenkins searched for Negro pupils of outstanding psychometric intelligence in the Chicago public schools and found 18 cases with Stanford-Binet I.Q.'s higher than 160 and one girl with an I.Q. above 200. Like the highly gifted of other races, these Negroes displayed intellectual versatility, originality, creativity and impressive capacity to master college and postgraduate studies. All were from Northern and Border states. While Negroes with I.Q.'s which classify them as either gifted or geniuses are found proportionately much less frequently than whites in the same categories, the Jenkins paper demonstrates that "Negro blood is not always the limiting specter so universally proclaimed."<sup>23</sup>

### **Puerto Ricans and Mexicans**

Puerto Ricans and Mexicans in the United States generally have very poor I.Q. distributions. AGCT tests of U.S. Army recruits revealed that there are from five to seven times more Puerto Ricans than mainland white Americans in the mentally backward category and that the mainland white Americans are from two to 20 times better represented than the Puerto Ricans in the very superior and superior test groups. The reason for the range in these ratios is that the tests administered Puerto Rican recruits were "adjusted" to their cultural conditions between 1956 and 1960. To the extent that these adjustments meant minimizing the effect of the language handicap, they were legitimate. However, the main effect of the revision was to compensate for and disguise the inferiority of the Puerto Rican performance.

<sup>22</sup> Miner, *op. cit.*, p. 74.

<sup>23</sup> P. A. Witty and M. D. Jenkins, "The Case of 'B'—A Gifted Negro Girl," *J. Soc. Psychol.*, VI (1935), 117-24.

Comparing the unadjusted 1956 tests with mainland American whites, we find only  $\frac{1}{89}$  as many Puerto Ricans were very superior and only  $\frac{1}{8}$  as many were in the two superior categories. While only 11.5% of the mainland whites were in Group IV, 81.0% of the Puerto Ricans were in that category.<sup>24</sup> The 1960 adjustments placed 1.9% of the Puerto Ricans in the very superior class (as against 8.9% of the mainland whites) and 14.4% of the Puerto Ricans in the two top groups (as against 37.4% of the mainland whites). Almost three-fifths of the Puerto Ricans were in the inferior (Group IV) category as against only 11.5% of the mainland whites.

A very carefully controlled study of the psychometric intelligence of Mexican-American children was made by Hilding and Henderson in 1950. They took a variety of precautions to eliminate or minimize the language handicap and the impact of inferior environment. Despite this, the Mexican-American children averaged 13.9 points below the American norm on the linguistic portions of the California Test of Mental Maturity and 14.5 points below the norm on the non-linguistic portions. The authors reluctantly concluded that there seem to be "intellectual differences between 'races' or national groups, at least in so far as intelligence is measured by the tests involved in this study."<sup>25</sup>

### Chinese and Japanese

The Chinese and Japanese who came to the American mainland and to Hawaii were largely farm workers, peasants and city laborers. They were recruited to do unskilled work on the sugar plantations, in the mines and in building the railroads. Despite the fact that their language, alphabet and culture were structurally different from that of the West and despite the mistreatment that was their lot in this country, they took full advantage of the opportunities of American life and advanced steadily in economic, social and intellectual status.

The Chinese immigrants, however, consisted mainly of a very special group, the Hakkas, a people who were exposed to the full force of natural selection in three great historic migrations, which ruthlessly eliminated the weak and incompetent, and who, in the intervening centuries, kept themselves biologically separate from

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<sup>24</sup> There are no Group V's (very inferior), since these are automatically disqualified today from military service.

<sup>25</sup> R. Carlson Hilding and Norman Henderson, "The Intelligence of Children of Mexican Parentage," *J. Abnor. & Soc. Psychol.*, XLV, No. 3 1950, 544-51.

their neighbors. "The history of the Hakkas," Huntington wrote, "deserves careful study. Recall the fact that in the opinion of many good judges they are today 'the cream of the Chinese.' Their energy and cleanliness, their respect for women, and their high degree of education are almost unique. They differ markedly from the Chinese of earlier migrations who surround them, and the difference is the same kind as that which differentiates those same surrounding Chinese of the south from the less progressive and active Chinese of the north. The qualities of the Hakkas are in many respects like those of the energetic barbarian invaders of Tartar, Mongol and Manchu stock from the dry northern regions to whom north China owes so much of its historic dominance. In the case of the Hakkas, we have written evidence that they were impelled to leave their northern homes under the stress of famine and invasion. We get glimpses of the way in which hardship and war inexorably cut down their numbers and left only a chosen remnant of unusual capacity. We also find that this process of selection took place three successive times. Finally, when the Hakkas, especially those in the central and most typical area, were free from the difficulties and hardships which induced migration and natural selection, they kept themselves aloof from their neighbors and thus preserved their inheritance. The competent, wide-awake, progressive Hakkas, on the one hand, and the incompetent, dull, conservative people of the villages near Peking where the houses are left sealed while the villagers beg for bread, on the other hand, seem to represent the two extremes due to natural selection and migration in China. In the one case we have migrants in whom a high degree of ability has been concentrated; in the other we have the stay-at-homes from among whom most of the more able elements have gradually been eliminated."<sup>26</sup>

The achievements of the Japanese and Chinese in the United States could have been predicted as early as a generation ago on the basis of their mental test scores. In 1931, Pintner summarized the available studies of the I.Q.'s of Orientals in the United States and reported averages on Binets ranging from 85 to 98. The significant point was that, when the language questions were eliminated, the Japanese and Chinese did as well as the American whites. Another summary by Garth in the same year showed that rural Japanese in California and presumably rural Japanese and Chinese in Hawaii scored significantly below the white average, possibly because of language

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<sup>26</sup> Ellsworth Huntington, *The Character of Races* (New York: Charles Scribner's Sons, 1927), pp. 199-200.

difficulties. However, when rural Orientals were given non-linguistic tests and when urban Orientals were given either performance tests or Binets, they scored up to and above the white American average. Tests of Chinese in Vancouver and Hawaii and of Japanese in urban California, Tokyo, Hawaii and Vancouver resulted in average scores ranging from 99 to 107.2.<sup>27</sup>

Maze Tests administered by Porteus in Hawaii showed Japanese scoring higher than part-Hawaiians. Filipinos, Chinese and Portuguese followed in that order. In terms of test scores, Chinese-Hawaiians are less successful than either Japanese-Americans or Chinese-Americans.

The low scores of the Portuguese in Hawaii are confirmed by a variety of tests. There is, of course, a major difference between the "black" Portuguese, emigrating from the Cape Verde Islands where a great deal of race mixture with Negroid groups has taken place, and the "white" Portuguese from the peninsula itself.<sup>28</sup> The typology of the Portuguese in Hawaii is by no means clear and Porteus found that this group contained examples of both the brightest and dullest intelligences.

The astounding intellectual contributions of the Chinese in America in recent years in such fields as university teaching and research science, not to mention the Chinese Nobel Prize winners in physics, cannot be attributed to the sturdy Hakkas. This intellectual florescence is almost exclusively the creation of middle- to upper-class intellectual Chinese who left China for political and educational reasons subsequent to 1930. A Chinese research chemist recently told one of the authors that, at a 1960 scientific conference of the American corporation he works for, about 50 Chinese attended. With one exception, all came from the upper class and knew each other's families. During the ten years he had spent in the United States, this scientist never met a Chinese, either socially or professionally, who had been born in this country.

### **The Peoples of the Pacific and Near East**

The material we have on the Near East is fragmentary. In 1929, Wood gave the Otis Self-Administering Test of Mental Ability

<sup>27</sup> Thomas R. Garth, *Race Psychology* (New York: McGraw-Hill, 1931), pp. 77-78.

<sup>28</sup> There is also a considerable Negro admixture in the population of southern Portugal due to the fact that Portugal was the only European country which used African slave plantation labor extensively in the home country. In the 16th century, Algarves became predominantly Negro and by 1550 blacks outnumbered whites in Lisbon itself. W. E. B. Du Bois, *Black Folk: Then and Now* (New York: Henry Holt, 1939), pp. 132-3.

(Higher Examination, Form B) to 120 sophomores, juniors and seniors in the Constantinople Women's College. The rank order of the national groups tested was Bulgarians, Turks, Armenians and Greeks. The average I.Q. of all the college students was only 95.<sup>29</sup> This compares with an average I.Q. of 118 for American college entrants and of 123 for American college graduates.<sup>30</sup> A study of Bengali college students in the University of Calcutta also yielded an average I.Q. of 95 on Stanford-Binets.<sup>31</sup> While it would be rash to generalize from these two investigations, they contain the disturbing implication that university students in underdeveloped areas may be much more poorly endowed mentally than students in American and European institutions of higher education.

In his elaborate study, "Psychometric Testing in Iran," published in the *Journal of Mental Science* for January, 1959, Max Valentine showed that Persian intelligence test scores are "sub-normal" if measured against British norms. After repeating the usual cautions against intercultural comparisons, Valentine observed that the non-verbal Progressive Matrices test which he used is designed to evaluate ability in abstract, objective, logical and relational thinking. Mentation in Iran is of a "qualitatively different kind—a lower order of concrete, subjective, alogical, global thinking."

A fair number of studies of Indian psychometric intelligence have been made, but most must be regarded with a certain amount of mistrust. One Indian psychologist recommended that the scores be recalibrated to make the average Indian I.Q. equal 100, a procedure which would have made the tests useless for international comparisons.

The pioneer work in intelligence testing in India was done by Rice. He devised a Binet scale adapted to Indian conditions, administered the tests to children aged five to sixteen, and found that the variation among individual scores in India was considerably more than in the West.<sup>32</sup>

A few investigations have been made of the relationship of I.Q. to

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<sup>29</sup> M. M. Wood, "Mental Test Findings with Armenian, Turkish, Greek and Bulgarian Subjects," *J. App. Psychol.*, XIII (1929), 266-73.

<sup>30</sup> Tyler, *op. cit.*, p. 88.

<sup>31</sup> H. Maity, "A Report on the Application of the Stanford Adult Test to a Group of College Students," *Indian J. of Psychol.*, I (1926), 214-22.

<sup>32</sup> C. H. Rice, *A Hindustani-Binet Performance Scale* (Princeton: Princeton University Press, 1929); also W. Leslie Barnette, "Survey of Research on Psychological Tests in India," *Psychol. Bull.*, LII, No. 2 (1955), 105-21.

caste. Blood type analysis reveals that some Indian castes "are at least as different (from one another) in these traits as American whites and American Negroes."<sup>33</sup> Sohan Lall investigated the I.Q.'s of school children in the United Province by religion and caste and found that the difference between the average mental scores of the twice-born Brahmins and the lowly Sudras amount to 5½ I.Q. points.<sup>34</sup> In his much earlier study, Rice had reached a similar conclusion.<sup>35</sup>

Japanese material is available to the writers only insofar as it has been translated or abstracted in Western languages. A 1942 study of 17,000 school children in Kobe contains the information that about 1% normally score above 140 on the Binet tests.<sup>36</sup> This is very close to the figure of 0.95% prevailing among white American schoolchildren.<sup>37</sup> Another Japanese study, which combines a variety of tests, including the Rorschach, concludes that intellectually children from Northeastern Japan are at least a year behind those from Southwestern Japan.<sup>38</sup>

The I.Q.'s of primitive peoples are generally very low regardless of the tests used. A 1933 study of Eskimos, Amerinds and Aleuts in Alaska revealed an average I.Q. of 77.6 in Stanford-Binet tests and one of 91.5 in Goodenough tests. Mental score averages were found to increase with the percentage of white genes.

There is evidence that populations of Anglo-Saxon origin make consistently good I.Q. score distributions regardless of habitat, though not regardless of class and occupational status. Tests of school children in three New Zealand districts at the ages of four, seven, ten, thirteen, fourteen, fifteen and sixteen revealed consistently high I.Q.'s on the Stanford-Binet scale. The samples were about a quarter to a half rural. In these tests, the lowest average score was 104.4 and

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<sup>33</sup> L. C. Dunn, *Race and Biology* (Paris: UNESCO, 1951), p. 31.

<sup>34</sup> Sohan Lall, "The Distribution of Intelligence in the U.P., India," *Brit. J. Educ. Psychol.* (1944), 1495-8. And writing in *National Review* for March 26, 1963, the distinguished political scientist, E. V. Kuehnelt-Leddihn, observes that India "stubbornly sticks to certain egalitarian idiocies," limits the number of Brahmins able to enter the universities by quota and makes desperate efforts to get *harijans* (or members of the "unscheduled castes") to matriculate. This discriminatory policy is justified on the grounds that the Brahmins are "too clever." A research center for a Swiss pharmaceutical firm, which hires on the basis of ability without regard to caste, has a labor force which is 70% Brahman.

<sup>35</sup> Rice, *op. cit.*

<sup>36</sup> Katumi Sumita, *Toh. Psychol. Fol.*, X (1942), 21-31. We have relied on the summary in *Psychological Abstracts*.

<sup>37</sup> Shuey, *op. cit.*, p. 232.

<sup>38</sup> Y. Owaki *et al.*, "Experimental Investigation on the Local Character of People in Northeastern Japan, *Toh. Psychol. Fol.*, II, Nos. 3-4 (1949), 37-56.

the highest 115.3, suggesting marked mental superiority.<sup>39</sup> Mass tests of Scottish eleven-year-olds in 1932 and 1947 revealed average I.Q.'s in the latter year of 104.4 for boys and 100.7 for girls. There was no indicated decline in I.Q. over the 15-year period.<sup>40</sup>

### The Intellectual Leadership of America

Surname frequency analysis is a new tool in the social sciences which was developed recently by one of us and which makes it possible to analyze rapidly, comprehensively and objectively the composition of the leadership element of any nation which has adequate statistics. We are indebted to *The Mankind Quarterly* of Edinburgh and to its editor, Professor Robert Gayre, for permission to use material which appeared originally in its columns.<sup>41</sup>

The technique is simply to take groups of common surnames which are representative of national-linguistic groups (such as Irish Americans) or class groups (such as English names of clerical origin) and to compare their representation on leadership rosters with their representation on U.S. social security rolls. These ratios, when multiplied by 100, give us indexes of leadership. We call them performance coefficients. If a group has a performance coefficient of 200 in, say, the *Directory of American Scholars*, it is producing twice as many scholars as the average; if its coefficient is 100, it is right on the average; if it is 20, it is doing one-fifth as well as the average.

On the basis of the first of the three articles, these generalizations could be made about leadership in the United States:

(1) Variation is greatest "in the exacting and creative areas, strongly evident in fields which require outstanding qualities of will, administration and judgment, least marked in such security-oriented

<sup>39</sup> A. B. Fitt, *The Stanford-Binet Scale: Its Suitability for New Zealand* (Auckland: The New Zealand Council for Education Research, 1952).

<sup>40</sup> Scottish Council for Research in Education, *The Trend of Scottish Intelligence: a Comparison of the 1947 and 1932 Surveys of the Intelligence of Eleven-Year Olds* (London: University of London, 1949). Apparently, the I.Q. distribution of Northern Irish children is markedly lower than that of Scottish children. J. K. Forbes, "The Distribution of Intelligence among Elementary School Children in Northern Ireland," *Brit. J. Educ. Psychol.*, XV (1945), 39-45, reported an average I.Q. of only 91.4 for 640 ten-to-twelve-year-olds according to the Moray House intelligence test. Forbes blames the poor scores on lack of language aptitude and paucity of interests. Since the majority in northern Ireland is Protestant, this does not seem to be an after-effect of clerical celibacy.

<sup>41</sup> Nathaniel Weyl, "Ethnic and National Characteristics of the U.S. Elite," *The Mankind Quarterly*, I, No. 4 (1961), 242-47; "Dynamics of the American Elite," *ibid.*, II, No. 1 (1961), 48-55 and "Class Origin of Surnames and Achievement," *ibid.*, II, No. 3 (1961), 159-66.

occupations as the higher and middle echelons of the American Foreign Service.

(2) "Jews generally excel Protestants and Protestants Catholics. These differentials are large and statistically significant. Similarly leadership concentrations are greatest among Northwestern Europeans and there is a gradient of deterioration as one moves toward the Mediterranean." While the Slavic sample is too small for certitude, it suggests that there is another gradient of deterioration as one moves from Germany eastward and southeastward. On the basis of a very small sample, Chinese in America emerge as an elite of great potential, particularly in the sciences and professions.

(3) "The American Negroes, the Spanish-speaking element (which is overwhelmingly Puerto Rican and Mexican) and the Italian group (chiefly of peasant stock from Sicily and Calabria) make minimal contributions to American leadership and creativity. They have been relatively unresponsive to the American environment."<sup>42</sup>

(4) English names of clerical origin "constitute a group which is consistently and markedly superior to the English average in all leadership areas studied. This superiority suggests that a process of eugenic mating on the part of the scholarly and clerical element has occurred over the seven or eight centuries during which surnames were the rule in the English-speaking world."<sup>43</sup>

Let us look at the size of these differences. Considering the performance coefficient of the name *Smith* to be 100, the Jewish role in American leadership is 237 in the physical sciences, 272 in the biological, 338 in the social and behavioral sciences, 164 in scholarship, 131 in *Who's Who in America*, 180 in business leadership, 129 in the

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<sup>42</sup> The reader may challenge this conclusion on the grounds that there are no specifically Negro names in the United States. This is, of course, true; however, we can derive Negro performance by analyzing surnames the Negro proportion of which is known. For instance, four-fifths of all *Washingtons* in the United States are Negro and, in honor of the general who headed the Freedmen's Bureau in 1865-74 and hence fed and clothed the emancipated blacks, over a third of the *Howards* are. *Davis* is a very common Negro name in honor of the President of the Confederacy and many are named *Jefferson*, *Jackson* and *Johnson* for three Presidents, none of whom were particularly known for helping the Negro race. By contrast, there are few *Lincolns*, *Sumners* or *Grants* and hardly any Negro place names, animal names or occupational names except *Smith*. See Howard F. Barker, "The Family Names of American Negroes," *American Speech*, XIV (1939), 163-74. Barker compared the frequency of common names in the ranks of the Confederate States Army with the corresponding frequencies in the records of the North Carolina Insurance Company, the largest colored insurance organization in the United States.

<sup>43</sup> Weyl, *Mankind Quarterly*, II, No. 1, 48-49.



Foreign Service, 114 in engineering, 233 among artists, 177 among authors, only 80 among Army officers and a mere 26 in the social elite.<sup>44</sup> The Jews are obviously an outstanding element in the American elite, but they are also a group which is subject to maximum tension, insecurity and perhaps frustration because their dominant position in intellectual leadership and business is negated by their more or less pariah status in the social elite.

The Dutch form an equally outstanding leadership group. Here we find performance coefficients of 293 in the physical, 217 in the biological and 90 in the social sciences; 216 in scholarship; 183 in *Who's Who in America*; 165 in business leadership; 137 in the Foreign Service; 198 in engineering; 215 among artists; 104 among authors and 137 among Army officers. The Dutch in the United States have no problems about status. They rank above all other national groups in the social elite with a performance coefficient of 157.

A comparison of Scots, English and Irish reveals interesting differences. Combining all volumes of *American Men of Science*, the Scottish performance coefficient is 134, the English 116 and the Irish only 87. In *Who's Who in America*, the range is narrowed and the respective coefficients are 134, 114 and 111. The Scots lead in scholarship, business, Army officers, engineers, authors and the social elite. The English rank first in art; the Irish are first in the Foreign Service. The Irish provide more authors than the English, but in art the Irish coefficient of 99 compares with one of 150 for the Scots and 199 for the English.

To see how the various national-linguistic groups shape up in the total leadership spectrum, we have taken simple averages of their

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<sup>44</sup> The rosters consulted were these: *American Men of Science* 1955-56 edition, Vol. I of which covers 43,518 physical scientists, Vol. II, 25,000 biological scientists and Vol. III, 11,000 social and behavioral scientists; *Directory of American Scholars*, 3rd edition (1957) with about 22,000 entries; *Who's Who in America* 1955-57 edition with some 49,500 entries; *Poor's Register of Directors and Executives, U.S. and Canada*, 1959, with some 75,000 names; the *Biographical Register* for 1959, listing around 12,000 high- and middle-echelon Foreign Service and State Department officials; *Who's Who in Engineering*, 1959; *Supplement of Mallett's Index of Artists*, 1948, containing about 17,000 names (international) who did not appear in the original 1935 compendium and hence are mostly contemporary; *Twentieth Century Authors: First Supplement*, 1955, 2,550 names familiar to readers of English, all of this century and 700 of them post-1941; *U.S. Army Register*, January 1960, listing the 39,300 officers then on the active list and the *National Social Directory*, 1961, with about 15,000 entries.

performance in the 12 elite rosters.<sup>45</sup> The Dutch are in the leadership with an average performance coefficient of 176, followed by Jews with 173, Scots with 138, English with 120, Germans and Scandinavians with 115 each, Welsh with 109, Irish with 104, French with 94, Italians with 28 and Spanish-speaking with 17. This is the same pattern of intellectual leadership encountered elsewhere. Jews and Northwestern Europeans excel; the Mediterranean lands lag badly; Protestant countries are significantly ahead of Catholic ones.

Confining ourselves to performance in *American Men of Science*, we find a picture which is similar, but not identical. Jews and Dutch are in the lead. They are followed by Scandinavians and Germans, then by Scots, English, Welsh, French and Irish. The Italians lag far behind and the contribution of the Spanish-speaking group is negligible.

In considering these findings in relation to immigration policy, it is necessary to remember that the performance coefficients describe the immigrants and their descendants, but not necessarily the parent populations from which the immigrants derived. In the case of the United States, the customary view is that, in general, the English, Scots, Welsh, Scandinavians, Germans, Dutch and Jews in the U.S. population are either representative or above average in intelligence and capacity.<sup>46</sup> By contrast, the Irish immigration to the United States was primarily the result of potato famine, which bore down most cruelly on the peasants, unskilled laborers and other less privileged groups in Irish society. The performance of the French element is weighted down by the presence of large numbers of French Canadians, who are generally below the overseas French average in culture and social and economic status. The Spanish-speaking group does not represent Spain at all, for it consists overwhelmingly of racially mixed Puerto Ricans and Mexicans of peasant and unskilled proletarian origin. The low Italian performance coefficients are primarily due to the fact that the Italian immigration consisted chiefly of Sicilian peasants, a group socially, economically, culturally and intellectually inferior to the Italian average. If

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<sup>45</sup> Physical scientists, biological scientists, social scientists, scholars, engineers, business leaders, State Department officials, Army officers, artists, authors, socialites and persons in *Who's Who in America*.

<sup>46</sup> However, one of us resorted to statistical analysis and found evidence that the Scots in Scotland are more "able" than the Scots in the United States. See Weyl, *Mankind Quarterly*, II, No. 4 (1962), p. 246.

the Italian migration to America had been representative of Italy, performance coefficients might have ranked with those of the Scandinavians.<sup>47</sup>

### Class Aspects of the American Elite

A special analysis was made of two special groups in the Anglo-Saxon portion of the American population. The first of these were the bearers of three common English clerical surnames, *Clark*, *Clarke* and *Palmer*, representing 386,000 of the 117,300,000 persons registered with Social Security. *Clark* means *cleric* and has come with the passage of centuries to mean *clerk*. As the *Oxford English Dictionary* puts it: "The original sense was 'man in a religious order, cleric, clergyman.' As the scholarship of the Middle Ages was practically limited to the clergy, and these performed all the writing, notarial and secretarial work of the time, the name 'clerk' came to be equivalent to 'scholar,' and specially applicable to a notary, secretary, recorder, accountant or penman." As late as 1584, Powel in *Lloyd's Cambria* could write: "The Clarkes of the Church of Winchester did choose him for their Bishop," thus indicating that the Clarkes were not only of the clergy, but wielded ecclesiastical power as well. As for the *Palmers*, they were pilgrims who had been to Jerusalem. To quote the *Oxford English Dictionary* again: "A pilgrim who had returned from the Holy Land, in sign of which he carried a palm-branch or palm-leaf; also, an itinerant monk who travelled from shrine to shrine under a perpetual vow of poverty; often simply an equivalent of *pilgrim*."<sup>48</sup> As a class, the palmers were not merely of the religious, but men of dedication and courage, who chose hardship and poverty as their lot.

<sup>47</sup> R. N. Franzblau tested Danish school girls in Denmark and Italian school girls in Italy in 1935, using the non-language International Intelligence Test. The scores were similar. Applying the same test to immigrants to the United States, Franzblau found that "the Danish-Americans received significantly higher scores than the Italian-Americans." Article in *Arch. Psychol.*, No. 177, quoted by Tyler, *op cit.*, p. 307. In 1931, Otto Klineberg tested 10-to-12-year-old rural school boys in various parts of Europe. The average score in 10 Alpine Italian villages was 188.8, that in 9 Sicilian villages was 173.0. Even though Klineberg used the inappropriate Pintner-Paterson scale, this difference strongly suggests that the Sicilian group is mentally inferior. See O. Klineberg, "A Study of Psychological Differences Between 'Racial' and National Groups in Europe," *Arch. Psychol.*, No. 132 (1931).

<sup>48</sup> In Scene 5, Act I of *Romeo and Juliet*, Juliet says:

"Good pilgrim, you do wrong your hand too much,  
Which mannerly devotion shows in this;  
For saints have hands that pilgrims' hands do touch,  
And palm to palm is holy palmers' kiss."

These *Palmers* and *Clarks* were presumably genetically superior in intelligence and in other psychic qualities at about the time of the Crusades when surnames were assumed in the British Isles. The hypothesis to be explored was whether or not that superiority would be preserved by their descendants after a period of about 750 years and the passage of some 25 generations. An affirmative answer would presuppose that this intellectual and clerical element mated selectively, choosing wives of superior mental qualities, and continued to do so despite the fact that, during the latter part of this time-span at least, the bearers of the clerical names lacked any self-consciousness of different and superior origin from that of other Anglo-Saxons. The hypothesis seemed most improbable.

Yet, it was verified. The finding was that the English Clerical Surname group is definitely superior. Its performance coefficient was 163 in *Who's Who in America*, 186 among physical scientists, 194 among biological scientists and 186 among social scientists; 147 among scholars, 234 among business executives, 148 among engineers, 169 among artists, 177 among authors and 178 in the social elite. The only area in which the superiority of the clerical group was not clearly manifest was the American governmental bureaucracy, an organization which tends to appeal to those who prefer security to rigorous competitive struggle and to reward conformity more than creativity. The performance coefficient of the English clerical group was 128 both among Army officers and among Foreign Service officials.

A more mysterious elite subgroup is one we call Special English Occupations. It comprises the four non-clerical English occupational surnames with the highest performance coefficients within this category in *Who's Who in America* 1955-57. The names are *Cooke*, *Draper*, *Miner* and *Potter*.

The superiority of this group is manifest and marked. It furnishes more than twice its "quota" of scientists, scholars, business leaders, engineers and entries in *Who's Who in America*. It provides about three times its share of artists and authors and has a coefficient of 533 in the *National Social Directory*. It is well represented even in the American Foreign Service.

Averaging all 12 rosters of leadership, we find that the Special English Occupations have a mean performance coefficient of 277, followed by English Clerical Names with 180, Dutch with 176, Jews with 173 and Scots with 138. This indicates the immense and com-

prehensive superiority of these two special groups in the formation of the American elite.

The reason for the leadership of the Special English Occupations is still obscure. Professor Gayre attributed it to the role of medieval tradesmen, "who provided the whole impetus of civic life, development and merchant venturing, and out of its profits built cathedrals and fine parish churches. . . ." He observed that the *Drapers* were "leading merchants and merchant venturers" and that the *Miners* were "engineers and sappers and master men," so privileged, in Cornwall at least, that "they were allowed their own Stannery Courts, and could not be tried before the Royal Courts." Weyl suggested tentatively that the four occupational names might be borne primarily by the descendants of the Puritan settlers of New England, concerning whom de Tocqueville wrote: "These men possessed, in proportion to their number, a greater mass of intelligence than is to be found in any European nation of our own time."<sup>49</sup>

There are other indications that the bearers of surnames of scholarly, aristocratic or, in some other sense, elite origin are significantly superior to the average and contribute much more than their quota to the American creative minority. Among Irish-Americans, the average performance coefficient in *Who's Who in America* for 909,000 bearers of names of royal origin is 134; that for the 1,035,000 bearers of names of non-royal origin is only 113. Among Scots, the bearers of royal names seem to be equally superior. Taking seven pairs of common names, we find that the average coefficient for the 251,000 persons who use the uncommon spelling is 239; that for the 2,640,000 people who use the common spelling is only 94. This difference of 145 points is much too large to be attributed to chance.<sup>50</sup> The probable explanation is that those who distinguish themselves by superior achievement often separate themselves from the mass by altering the spelling of their names. Their descendants inherit their superior genes.

This analysis of surname-frequencies suggests that America is not a melting pot and it is our national good fortune that it is nothing of the sort. The pre-eminent region of indiscriminate race mixing is tropical Brazil—a population area which has furnished only a minute

<sup>49</sup> Weyl, *Mankind Quarterly*, I, No. 4, 246-7. The de Tocqueville quotation is from *Democracy in America* (1889) I, 28.

<sup>50</sup> Weyl, *Mankind Quarterly*, II, No. 3, 161. The name pairs are: *Cook-Cooke*, *Clark-Clarke*, *Green-Greene*, *Brown-Browne*, *Thompson-Thomson*, *Johnson-Johnston*, *McDonald-MacDonald*.

proportion of the world's creative minds. Its vast raw materials potential lies dormant while torpid and inept millions of Brazilians find it virtually impossible to earn even a subsistence livelihood.

In the United States, creative achievement and social leadership are provided to an immensely disproportionate extent by groups of special class, professional and national-linguistic origin which have been biologically selected for superior mentality and character. Naturally, intermarriage across class, national or race lines need not impair the excellence of this creative minority *provided* the miscegenation is generally between superior individuals. Marriages between Jews and non-Jews have produced proportionately far more Nobel scientists than either of the two original groups. The progeny of outstanding Negroes and gifted whites may include geniuses such as Dumas and Machado de Assis. Intermarriages which cross class lines, the mating of exceptional men, who rise from the lower classes, with women of the aristocracy, the plutocracy or the community of scholarship, have often reinvigorated the blood-lines of declining elites.<sup>51</sup>

It is not this sort of miscegenation which destroys a social order by breeding its creative minority out of existence. Miscegenation of the suicidal sort is rather random mating, based on whim or sexual desire, which breeds the best with the worst and thus produces the mediocre. These processes may become rife because of the character of a colonization process, as a consequence of chattel slavery, as a symptom of a general social decay in which men and women mate without any forethought for their progeny or, in our own age, because egalitarian levelers preach that all men are equal in talent and relentlessly propagandize for indiscriminate miscegenation. In the Free World, the Communists transform the egalitarian dogma into a fighting faith and urge a biological crusade, the effect of which would be to extirpate all excellence. In the Soviet Union itself, however, racial segregation is the rule and miscegenation with backward racial elements is discouraged.

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<sup>51</sup> However, Nobel Prize winner Medawar recently observed concerning miscegenation: "Hybridization between peoples of different races need not be expected to lead to an improvement, because both races will probably have adopted the well-balanced genetic constitution that matches their own environment." P. B. Medawar, *The future of man: the Reith lectures* (London: Methuen, 1960), quoted in Ernst Mayr, *Animal Species and Evolution*, *op. cit.*, p. 655.



*“His form is ungainly—his intellect small—”*

*(So the Bellman would often remark)*

*“But his courage is perfect! And that, after all,*

*Is the thing that one needs with a Snark.”*

*—LEWIS CARROLL, *The Hunting of the Snark**

## IX

# Somatic Differences Among Races



**W**HERE ENVIRONMENT produces physical differences among races of animals, it generally also produces psychic differences, also of an inherited sort. Man is not exempt from the evolutionary forces which shape variation among animals.

Hence, a brief survey of the scope of inherited somatic differences between racial groups is relevant. The existence of physical differences is a matter of common observation and general knowledge. As to their scope, there have always been differences of emphasis. In the opinion of Comte Georges de Buffon (1707-88), "the white man in Europe, the black man in Africa, the yellow man in Asia and the red man in America are merely the same man tinted with the color of the climate." This view is, of course, erroneous, for the innate physical differences between races are much more deep-seated than mere pigmentation. Their scope and ramifications were summarized as follows by a modern authority:

"Race differences exist throughout the body and into the area of metabolic activity and biochemical functioning. Not only are there race differences in the pigmentation of the skin, eyes and hair, and in the morphology of the lips, nose, eyelids and mouth, but there are also differences in the inner organs, in the muscles and in the patterning of subcutaneous fat. The teeth, hemoglobins and hemoglobin-fixing proteins, taste acuity, drug sensitivity, urinary excre-



tion patterns and probably sex-hormone activity exhibit measurable differences in averages or proportions from race-population to race-population. To say that 'race is only skin deep,' a statement notably, but inaccurately, repeated in many textbooks, is patently naïve in the extreme."<sup>1</sup>

The variations in physical structure that serve to identify the various races may be entirely hereditary in origin, environmentally caused, or the mixed products of environment and heredity. Stature is a case of multiple causation. Cranial index, once believed to be a purely hereditary matter, has now been shown to be variable over the centuries. Blood groups, of course, are hereditary.

### Blood Types

In blood groups, as in other respects, races are defined in terms of frequency distributions. If blood antigen B, for instance, is typically Asiatic, this merely means that there is a tendency for the proportion of B antigens to be higher in Asia. It does not mean that Asian populations exist which are composed exclusively of bearers of antigen B.

The discovery that blood is not homogeneous is comparatively recent. As early as the 15th century, physicians experimented with blood transfusions; however, as they injected the blood of lambs and calves into the veins of human patients, the consequences were lethal. In the 17th century, the practice of transfusing animal blood into human beings was outlawed by the Paris Parlement, but it was not until 1874 that Landois proved that transfusion of the blood of one species into that of another will cause agglutination. At the dawn of the 20th century, Karl Landsteiner discovered that agglutination could also occur within healthy individuals of the same species and described the four main blood types A, B, AB and O.

At the time, it was believed that two genes were at work, A and B; the fourth blood group, O, was supposed to lack either and was named for the German word *ohne* since it was "without" either gene A or B. This interpretation was refuted by Bernstein and Snyder, who showed that three allelomorphous genes were at work, that A was dominant over B and that both A and B were dominant with respect to the recessive, O.<sup>2</sup>

<sup>1</sup> Stanley M. Garn, *Human Races* (Springfield: Charles C. Thomas, 1961), pp. 35-36.

<sup>2</sup> An excellent brief discussion is contained in Jacques Millot, *Biologie des Races Humaines* (Paris: Collection Armand Colin, 1952), pp. 76-89.

Blood groups provide an excellent series of clues to the interrelationships and historic migrations of races. They provide a far less subjective and more exact basis for classification than pigmentation. Thus, observers can disagree as to whether or not an individual has "olive skin," but there can be no disagreement on whether he is Rh positive or Rh negative.

Europeans run to about 40-50% O, 30-40% A, 8-12% B and 1-6% AB. By contrast, Amerindians are overwhelmingly O with some A and hardly any B or AB. Moreover, the A antigen has been broken down into two subtypes, A<sub>1</sub> and A<sub>2</sub>. The A type prevalent among Amerindians, Asiatics, Pacific islanders and Australian aborigines is always A<sub>1</sub>.

The table which follows shows the distribution of blood groups among races in terms of the comparative frequency of the three genes, A, B and O.

RACIAL DISTRIBUTION OF BLOOD GROUPS<sup>3</sup>

Ethnic Group	Number Tested	Gene Frequencies:		
		p(A)	q(B)	r(O)
Peruvian Indians (pure)	200	.00	.00	1.00
Blackfoot Indians	394	.54	.01	.45
Sioux Indians	260	.16	.02	.82
Bantu	5,000	.14	.12	.74
American Negroes	189	.16	.14	.70
Bushmen	615	.20	.07	.73
Ainu	509	.30	.30	.40
Chinese (Peking)	1,000	.20	.26	.54
Filipinos	501	.16	.34	.50
Greenland Eskimos	1,063	.35	.04	.60
Arabs (Baghdad)	500	.22	.21	.57
Armenians (Beirut)	1,536	.36	.13	.51
Greeks (Athens)	1,200	.25	.10	.65
Finns	11,330	.31	.14	.55
Swedes	1,200	.30	.09	.61
Danes	1,759	.26	.08	.66
English (London)	500	.29	.07	.64
Irish	399	.19	.07	.74

The highest frequencies of antigen B, Rife points out, occur among east Asians (Filipinos, Ainu and Peking Chinese in that

<sup>3</sup> Taken from David C. Rife, *Heredity and Human Nature* (New York: Vantage Press, 1959), p. 122.

order). Yet the B antigen is non-existent among Peruvian Indians and rare among other Amerinds. This seems to conflict with the generally accepted theory that the Indians of America are descendants from early migrants from northern Asia.

One possible explanation of this is that any Bering Straits migration may have been class-selective or race-selective. In other words, specific ethnic groups, which were subordinated and lived apart from the majority—perhaps like the Ainu in Japan—may have been extruded and forced to emigrate. Alternately, the emigrants might have consisted of warrior castes or helot elements with heredity and blood-group frequency distributions different from that of the parent communities.

Rife advances a very different and intriguing hypothesis. "It would be more plausible to assume that possession of antigen B is of more positive survival importance in Asia, and perhaps of negative importance in North America," he writes. "The observation that typically non-Mongoloid peoples living in Asia, such as the peoples of India and the Ainu, resemble their Mongoloid neighbors in having relatively high frequencies of antigen B is in line with the foregoing assumption."<sup>4</sup>

When the polymorphism of human blood was discovered, the prediction was made "that members of these different serological types would not be equally susceptible to specific diseases—a conclusion which has since been verified with results of medical importance."<sup>5</sup> Rife estimates that the O group has a 37% higher duodenal ulcer morbidity rate than the other groups combined and that the corresponding stomach cancer rate for group A is 20% above that of groups O and B.<sup>6</sup> On the other hand, the O genotype may have "a slight adaptive advantage."<sup>7</sup>

Some experts hold with Rife that the blood antigens are associated with genetic traits basic to survival. From this it would follow that the blood-type frequency distributions of populations can be changed radically by migration and exposure to different ecological challenges. However, in arguing that blood-type distributions are seldom radically changed by environment, Millot points out that the

<sup>4</sup> Rife, *op. cit.*, pp. 134-5.

<sup>5</sup> E. B. Ford, "Evolution in Progress," in *Evolution After Darwin*, Sol Tax ed. (Chicago: University of Chicago, 1960), Vol. I: *The Evolution of Life*, p. 149f.

<sup>6</sup> Rife, *op. cit.*, p. 134.

<sup>7</sup> P. B. Medawar, *The Uniqueness of the Individual* (New York: Basic Books, 1957), p. 126f.

Germanic peoples of Hungary are comparable to Germans elsewhere in blood antigens, that the Gypsies of Hungary show close blood kinship to the Indians of Asia (from whence the Gypsies probably came) and that the Magyars are related in blood antigen patterns to the Turks whom they resemble racially.<sup>8</sup>

The MNS-U system is another basic blood division. M is high among American Indians, where there is little or no N. N appears to be deficient in the Near East. By contrast, Australia is "the virtual homeland of N" and, throughout the Pacific, N is predominant over M. This means that "the high N frequencies of Pacific people set them off completely and preclude recent major contact with America, as their absence of B does with Asia." In fact, "no combination of Asiatics could yield the low values common in America, and no Caucasoid-Negroid combination could yield the nearly M-free peoples of Australia."<sup>9</sup>

Many other blood agglutinators have been discovered over the past 30 years. These comprise the Rh positive and negative types, the Diego, Lutheran, Kell, Duffy and Kidd subtypes.<sup>10</sup> When exhaustive analyses of the blood-type distribution of the peoples of the world have been made with reference to all these serological categories, we will have a racial map of mankind from which we will be able to derive a fairly complete pattern of the various lines of descent, migration, spatial isolation and miscegenation of the human species.<sup>11</sup>

### Malaria and Race

The eclipse of Rome and the downfall of Ceylonese civilization are among the catastrophes which have been attributed, in whole or in part, to the scourge of malaria. Rife in well-watered, tropical to semi-tropical regions, which were also densely populated, malaria is believed to have accounted for half the deaths occurring in the world 80 years ago. Throughout the span of human history, this disease has probably killed and incapacitated more people than any other. Man developed various genetic defenses against malaria and these tended to be two-edged swords. The most important of these is the sickle-cell trait, common throughout those areas of Africa in

<sup>8</sup> Millot, *op. cit.*, pp. 90-1.

<sup>9</sup> Garn, *op. cit.*, pp. 41-2.

<sup>10</sup> E. Adamson Hoebel, *Man in the Primitive World*, (New York: McGraw-Hill, 1958), pp. 123-5.

<sup>11</sup> It should be remembered that *miscegenation* is a morally neutral word. In other words, the *mis* with which it begins is akin to *mix* and not to *amiss*.

which malaria is or was prevalent and among migrants from those areas and their descendants. Recent findings indicate three genetic possibilities. First, there are the homozygous normals (that is to say, individuals without any of the sickle-trait recessive genes). These people develop malaria early in life, are exposed to its full force and, in many cases, are killed or debilitated by it. Second, there are the homozygous sicklers. Since both of their genes are sickle-trait, they are afflicted with this generally fatal disease of the blood and most of them die before reaching reproductive ages. Finally, there are the heterozygous individuals with a dominant normal and a recessive sickling gene. These people are not exposed to sickle-cell anemia; moreover, their sickling gene evidently gives them protection against malaria, for the illness attacks them with much less severity than it does normal people.

The genetic mechanics of sickling were discovered by a number of scientists, including notably Linus Pauling and A. C. Allison.<sup>12</sup> It was obvious that a gene which caused death when homozygotic would, in the normal course of events, die out because a substantial proportion of its carriers would be killed by sickle cell anemia before they reached breeding age. Since the gene was not dying out, it followed that, in its heterozygous condition, it must confer some advantage. A map of sickling gene frequencies showed that they reached 40% in regions of heavy and severe malaria. Consequently, the protection conferred by the sickling gene, when not homozygous, must be against malaria. This statistical reasoning was confirmed and proved by experiment.

In the Mediterranean malarial areas, there is a somewhat similar relationship in the genetics of thalassemia or Cooley's anemia. The carriers get protection against malaria; the sufferers from thalassemia major are unable to produce their requirements of normal hemoglobin A and die in infancy.

The elimination of malaria on a worldwide scale, primarily through the use of DDT by public health authorities, will revolutionize the ecological conditions which determined the genetic equilibria with respect to sickle cell anemia and thalassemia. With malaria eradicated, the heterozygotes in respect to the sickling and thalassemia genes will cease to enjoy any advantage over normals.

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<sup>12</sup> An excellent bibliography is contained in Garn, *op. cit.*, p. 79. Garn's discussion of this and the related thalassemia gene pattern is thorough, pp. 70-9.

Consequently, these abnormal genes will slowly die out provided cures are not found for the anemias they produce. This process of genetic change is visible when one compares American with West African Negroes and notes the much lower percentages of sickling genes in the former.

There are a variety of rare hereditary diseases, which largely affect only specific racial groups or even specific tribes in localized areas. These may be related to blood type or caused by mutation or genetic drift. Leprechaunism is most prevalent among people of Irish ancestry; favism is a sex-linked disorder confined to the peoples of the Mediterranean; Mediterranean disease (Cooley's anemia) is also concentrated among peoples living on the littoral of that sea; Silferskiold's disease is concentrated in Scandanavia, while the Tay-Sachs type of idiocy and familial dysautonomia is most common among Jews.

In the small habitat of the Fore people of New Guinea, a hereditary disorder called kuru accounts for as many as 50% of all deaths. The course of the ailment is one of progressive loss of coordination and control, which eventually applies to walking, standing, sitting, speech, eating and evacuation. Death normally ensues after less than a year. Investigation of this remarkable ailment, which was discovered only in 1953, has established that it is not influenced by diet or physical environment and is entirely hereditary. The primary reason that the lethal gene for kuru has not died out is, in the opinion of the American authority, Carleton Gajdusek, that "leprosy and yaws are less frequent here (in the Fore) than in many surrounding populations who do not suffer from kuru."<sup>13</sup> Gajdusek has subsequently lost confidence in this explanation. However, the strong possibility remains that, here, as in the case of sickle cell and Cooley's anemia, possession of the lethal gene, when paired with a normal one, protects against some cause of death.

### **Blood Type and Migration Patterns**

The so-called Rhesus factor, which actually should be broken down into a "long series of Rhesus genes," has attracted a good deal of public attention. Rhesus negatives occur with considerable frequency in Western Europe and the United States and are particu-

<sup>13</sup> Quoted in Garn, *op. cit.*, pp. 81-93, from "Kuru," *Am. J. Med.*, XXVI (1959), 442-69.

larly high among Basques. They are half as common among American Negroes as among Northern Europeans and are very rare in Asia.<sup>14</sup>

The Duffy positive factor, which is also significant in blood transfusions, is extremely high among Australians, Koreans, Chinese, Japanese, East Indians and some American Indians. It occurs with medium frequency among whites and with low frequency among American Negroes.

The recently discovered Diego factor is of Asiatic origin and is common among South American Indians, less so among North American Indians and Southeast Asians—practically absent among Europeans, Negroes and Australians. The Diego factor may have been carried by migrants from Asia to the Americas. However, the virtual absence of this element in Alaska and its comparatively high frequency in Central America might suggest that the particular migrations carrying this factor took place across the equatorial oceans rather than over northern continental land masses.

The Kidd positive factor is common in West Africa and among American Negroes, very common among Amerindians, common among Europeans and considerably rarer among Chinese.

### Tasters and Non-Tasters

Another basic genetic difference with racial dimensions is the ability to experience a bitter taste from phenylthiocarbamide. This was discovered by A. L. Fox, who found that tasting ability was inherited in the form of a single dominant gene, T. In the United States, about 70% of the population are tasters and about 30% have the two recessive genes, tt, and therefore are taste-blind. Non-tasters form over 40% of the population in India, over 30% in northern Europe, between 15% and 30% in the rest of Europe and among Malays, Negritos and Eskimos of Alaska. The non-tasters virtually disappear, however, in Formosa, among Labrador Eskimos, African Negroes, Amerindians of North America and, above all, Indians of Brazil.

### Human Stature

In Africa, Pygmies average a little over 4'6", while neighboring tribes, such as the Watusis and Nilotic Dinkas, average 5'10" and

<sup>14</sup> Medawar, *op. cit.*, p. 126f., states that "Levine and Wong found only one Rh-negative individual among 150 Chinese, having been led to their enquiry by the significant observation that haemolytic disease in China is very rare."

5'11" respectively. A comparison of the frequency distributions of Pygmies, on the one hand, and Watusis and Dinkas, on the other, shows that there is no overlap whatsoever as regards height. No Pygmies attain 160 cm. and no adult males of the two other tribes are that short.

Only the more advanced countries have sufficiently accurate statistics to permit comparison of human stature from generation to generation. In Sweden between 1840 and 1914, stature increased almost 2.8 inches, among Danish conscripts between 1853 and 1905 by slightly more than an inch, in Japan in recent decades by almost 2 inches.<sup>15</sup>

Bowles made a study of four generations of Harvard students, which revealed that an increase of about an inch per generation had taken place. Among men of the fourth generation, over half the total increase had occurred in the upper legs; the upper arms were shorter; heads were narrower, bodies more slender, but with greater chest girth. At four women's colleges, Bowles found that the younger generation was taller and heavier than the older.<sup>16</sup> In 1941, 23% of the students entering Yale were over six feet as against only 5% half a century before.<sup>17</sup>

The increase in human stature is a well-established matter of statistical record since 1792 (Swiss army recruits). Moreover, it is obvious from any examination of medieval suits of armor, which, on the average, are about the right size for a 13-year-old American boy. This is particularly significant as only the upper classes, which were considerably taller than average, could afford armor.<sup>18</sup> Late Stone Age human bones in Norway indicate that primitive man, at that time and place, was even shorter than medieval man.<sup>19</sup>

A stature map of Europe<sup>20</sup> shows that the shortest groups live in the Arctic zone, the tallest in Sweden, Iceland, Ireland and parts of England and Yugoslavia. In Germany, France, Great Britain and Italy, the taller people live in the North; in Spain, they are found in the mountainous Southeast. In the U.S.S.R., Ukrainians are taller

<sup>15</sup> Millot, *op. cit.*, p. 21.

<sup>16</sup> Gordon T. Bowles, *New Types of Old Americans at Harvard and at Eastern Women's Colleges* (Cambridge: Harvard University Press, 1932). The women's colleges were Mount Holyoke, Smith, Vassar and Wellesley.

<sup>17</sup> William Deegan, *Research Quarterly*, XII, No. 4 (1941).

<sup>18</sup> Ellsworth Huntington, *op. cit.*, pp. 55-6.

<sup>19</sup> Upper classes are almost invariably above average in height. This may be due to superior diet or to their tendency to mate selectively for stature or both.

<sup>20</sup> Marc R. Sauter, *Les races de l'Europe* (Paris: Payot, 1952), pp. 164f.



than Great Russians; the south Caucasians of the high mountains are taller than the north Caucasians of the piedmont.

There is no uniform relationship between either stature and altitude or stature and latitude.<sup>21</sup> However, within each racial subgroup, there is a strong inverse correlation between height and isotherm. In other words, the tallest members of each ethnic group are generally to be found in the colder portions of its range. As Hilgard points out in his stimulating contribution to the Darwin Centennial Papers, the increase in the height of second generation Americans over that of their immigrant parents has not reduced the correlation between the stature of parents and that of their children, for this "has not changed from Galton's day to our own."<sup>22</sup> Enthusiastic environmentalists often stress the variation from generation to generation, while failing to mention the invariance of the child-parent correlation. Advocates of a hereditary approach to physiology sometimes fall into the opposite error.

### Cranial Index

Throughout Europe, over the course of thousands of years, there has been a progressive tendency for the skull to broaden. This has been demonstrated by observations made in Scandinavia, Germany, Italy, England and Russia. "Studies of the crania of ancient Swedes show that formerly 12% were hyperdolichocephalic, 44% dolichocephalic and 44% mesocephalic," writes Millot, "whereas the proportions among present-day Swedes are 17% dolichocephalic, to 66% mesocephalic and 17% brachycephalic."<sup>23</sup>

Many explanations have been proffered for this change in the cephalic index. On the theory that the sphere is the ideal geometric solution to an increase in brain mass and size of the cerebral cortex without magnifying the outer dimensions of the skull to such an extent as to increase cranial birth traumas, some anthropologists have argued that civilization, with its increasingly exigent demands upon human intelligence, causes brachycephalization. The weak-

<sup>21</sup> Garn., *op. cit.*, p. 50.

<sup>22</sup> Ernest L. Hilgard, "Psychology after Darwin" in *Evolution After Darwin*, *op. cit.*, II, 278f.

<sup>23</sup> *Op. cit.*, p. 24. Franz Boas, in research into the comparative physical anthropology of immigrants and their children in the United States, found that dolichocephalic groups, such as the Scots and Sicilians, produced children with lower cephalic indexes, whereas such brachycephalic groups as Russian Jews produced more long-headed progeny. The implied conclusion was that the American environment tended to eliminate extremes and impose cephalic mediocrity.

ness in this explanation is that the trend from long to broad skull has not been associated with increases in brain size or weight.

Others follow Darwin and Virchow in arguing that dolichocephalic heads are better adapted for the powerful masticating muscles needed by such groups as the long-headed Eskimos. By contrast, the Mongols of Central Asia, the Gobi and the Siberian steppe subsist on dairy products, do not need strong chewing muscles and are brachycephalic. One of the salient exceptions to this relationship between cephalic index and dietary habits is the West Greenland Eskimos who have and use powerful jaw muscles and yet are short-headed.<sup>24</sup>

Griffith Taylor has argued that narrow heads are a stigma of racial primitiveness. A map of world population in accordance with cephalic index gives weight to this theory, for the dolichocephalic groups are at the extremities of continents and in remote, inaccessible and submarginal areas. This theory may seem plausible when one thinks of the African Negroes and Australian primitives. Yet, if the supplanting of narrow-headed by broad-headed peoples is a measure of the forward march of civilization, it becomes difficult to explain the high proportion of the creative intellectual achievements of mankind made by the dolichocephalic Mediterranean and Nordic subraces.<sup>25</sup>

Gobineau argued that the dolichocephalic Nordics, as "active lovers of battles," managed to get themselves killed off and replaced by the putatively inferior and brachycephalic peoples.<sup>26</sup> This theory does not stand the test of facts. It is not primarily the warrior peoples who fall victims to war, but those incapable of defending themselves. Between the fall of the Roman Empire in the West and Sarajevo, the greatest military destruction of human life was the work of the brachycephalic Mongol hordes. Their victims consisted primarily of brachycephalic Mongoloid, and Turkic people, on the one hand, and dolichocephalic Mediterraneans, Iranians, Hindus and Dravidians on the other. However, the Napoleonic wars resulted in a decline in the stature of the French people because such a large proportion of the tall Nordic and Dinaric racial elements was elimi-

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<sup>24</sup> Millot, *op. cit.*, pp. 28-30.

<sup>25</sup> Griffith Taylor, "Climatic Cycles and Evolution," *Geog. Review*, VIII (1919), 228-338, and "The Evolution and Distribution of Race, Culture and Language," *ibid.*, XI (1921), 55-119.

<sup>26</sup> Joseph Arthur, Comte de Gobineau, *Essai sur l'inégalité des races humaines* (Paris: 1853-55).

nated. England paid a similar price in World War I because of the selective elimination of the aristocracy and the near-aristocracy. This has been true of the Spanish *hidalgos* and occurred in Sweden because of the wars of Gustavus Adolphus and Charles X.<sup>27</sup> In general, where wars are fought by volunteers, they are dysgenic as far as stature and other more important qualities are concerned. Modern warfare, waged by conscript armies against military forces and civilians alike, is much more costly in human life, but does not selectively eliminate the most capable elements in society.

Differences in human stature have often been attributed to differences in nutrition. These may be either quantitative or qualitative. Moreover, it is argued that famines kill off the largest individuals, whose survival-needs for food are greater than average.<sup>28</sup> Millot suggests that the dietary explanation is refuted by the fact that such groups as the African Pygmies live side by side with the giant Sara Negroes who average 6'1" and that both groups suffer from the same sort of nutritional inadequacy.<sup>29</sup> The example given would not invalidate the nutritional explanation, but simply rebut any assertion that it was the sole cause of the variations in stature among races.

The assertion that genetically small individuals are better able to survive under famine conditions applies to man-made famines in which food is rationed per capita (concentration camps, death marches and Soviet slave labor camps: in fact, Marguerite Buber, who survived the concentration camps of both Hitler and Stalin, observed that it was primarily the small people who escaped death).

Famine, however, is not always negatively selective for stature and size. Where the larger individual is stronger, he can seize the food of his smaller neighbor by force, he can enslave him and strip him of his meagre food supply. In Africa, the larger Watusi and Masai were able, through warlike prowess, to appropriate the best pastures for themselves and to subjugate their smaller or stunted neighbors. In lands chronically plagued by famine and drought, puny tribes, such as the Otomi, were driven to the dustbowl lands and the high, arid plateaus by stronger, larger and militarily more

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<sup>27</sup> Recently, there has been a rise in the proportion of dolichocephalic people in the United States, perhaps causally associated with greater stature and improved nutrition.

<sup>28</sup> Garn, for example, terms famine "a powerful selective force" which eliminates "the massive and large" and creates an environment in which "genetically small individuals have a better chance to reach maturity and to reproduce themselves." *Op. cit.*, p. 58.

<sup>29</sup> *Op. cit.*, p. 32.

effective ethnic groups. Finally, if famine always favored the small, then in the animal kingdom, where, both in the oceans and on land, food shortage is always the rule, the larger species would have been at a disadvantage and would have disappeared.

Others have urged that herbivorous races, which need large digestive systems, tend to be brachysomes, whereas the carnivorous groups are more likely to be leptisomes. This theory is persuasive, but there are exceptions in both directions: the Eskimos are brachysomes, yet exclusively meat eaters; moreover, there are vegetarian Negro and Indian groups with slender body structure. In fact, most of the denizens of the Arabian and Sahara deserts live chiefly on grain, dates and milk, yet are attenuated and frail in somatype. Still another theory which has been advanced is that the increase in stature is a product of civilization. The modern order breaks down the micro-communities of tribe, clan or feudal manor. As men's horizons become broader, as their radius of physical movement extends and as the barriers of race, kith, caste and class tend to dissolve, marriages cease to occur solely within the micro-community. As a result of this change, hybrid vigor ensues and this vigor expresses itself *inter alia* in increases in stature. This theory seems supported by the fact that the increases in height first become evident in the aristocratic and upper classes, which are quickest to respond to the change in *mores*, subsequently among the working class, which is comparatively mobile, and last among the peasantry, which is mentally and physically immobile. In favor of this theory is the fact that remarkable increases in height have occurred in that nation which is perhaps the least caste- and class-conscious of all—the United States.<sup>30</sup>

However, as Millot observes, stature increases of a significant sort have occurred in racially homogeneous countries, such as those of Scandinavia, whereas they have failed to occur in "veritable cross-roads of peoples" such as Sicily.<sup>31</sup> Moreover, we really know very little about the significance and mechanism of hybrid vigor between human races. One thing that can be said with confidence about human stature is that, within each race, it is negatively correlated with isotherm: the colder the habitat, the larger the individual.

Another obvious morphological characteristic which varies among races is the shape of the nose. J. Thomson pointed out as early as

<sup>30</sup> *Ibid.*, p. 36.

<sup>31</sup> *Ibid.*

1903 that large nasal orifices are associated with warm, damp climates and narrow ones with climates that are cold and dry.<sup>32</sup>

### Musculature

Races are also differentiated in muscular structure. For example, the risorius muscle, which has much to do with the capacity for facial expression, is found among 80% of whites, 60% of Negroes, but only 30% of Hottentots. Concerning the fact that primitive man has less capacity for physiognomic change, Millot writes:

“Numerous dissections, comparing Negroes and Papuans, on the one hand, and whites, on the other (Vallois, Hubert, Harlsem-Riemschneider) have revealed the presence in the first group of less carefully differentiated muscles, with less clearly delimited fasciculi, permitting only a restricted range of facial expression, which the thicker and less mobile skin further restricts. To this must be added a less precise nervous control: Stannus has emphasized that the natives of the shores of Lake Nyasa cannot close one eye independently of the other and that, when they open their mouths wide, they close their eyes simultaneously.”<sup>33</sup>

This does not prevent the more primitive races from possessing muscles and muscular controls, generally in areas unrelated to mentation or emotional expression, which the more advanced races sometimes lack. Due to extreme muscular flexibility, most primitives and also Negroes can sit in ways that are impossible for Europeans; many Asiatic and Amerindian groups have developed an extraordinary prehensibility of the toes, etc.

Muscular strength and general physique are combined results of heredity and environment. Muscles atrophy when not used sufficiently. Mechanization often accelerates this atrophy—a case in point being the startling deterioration in the muscular strength and physical condition of American youth between 1950 and 1960.

Gobineau not unexpectedly asserted that the white race was pre-eminent in physical strength. Writing half a century ago, Hrdlicka showed that in strength, as measured by hand pressure in kilos on the dynamometer, American whites averaged 41, American Negroes 40½, American Indians 37 and Egyptian fellahs from the Kharga oasis 32½.<sup>34</sup> Investigations made at about the same time showed that the

<sup>32</sup> J. Thomson, *Journal of the Royal Anthropological Association*, XXXIII (1903).

<sup>33</sup> *Op. cit.*, p. 177.

<sup>34</sup> Average of right and left hands.

average Japanese adult was a third weaker than the average American.<sup>35</sup> Contemporary travelers in Saudi Arabia have noted that the Arab stevedores and porters are able to carry only about one-third the load that a European or American unskilled worker would consider average. While this physical debility is no doubt accentuated by malnutrition, parasitic infection, malaria and other afflictions, it seems to be primarily constitutional, since the Negroes in Saudi Arabia, who are subjected to the same unfavorable conditions, can do two or three times as much heavy work.

Within the United States, the late Earnest A. Hooton of Harvard classified 31,000 whites and 3,000 Negroes and Negroids in the U.S. Army according to up-to-date anthropological methods. The study served the practical purposes of providing guidance to the Quartermaster for uniform requisitions and providing forecasts of physical fitness by race and region for the Adjutant General.<sup>36</sup> The sample is not representative of the general U.S. population to the extent that it consists of persons on active duty in the Army, who were therefore of military age, volunteers or conscripts and men who met Army physical requirements. Subject to these qualifications, the Hooton survey discloses highly significant somatic differences among Americans of different racial, regional or national origin.

Subjects born in New England have more than the national average of well-muscled types, due in part to the strong component of Central and East European stock. Probably for the same reason, there is an excess of all muscular types in the Middle Atlantic states, but also an excess of fat types. The East North Central states are overrepresented in thin, sub-medium fat and "very fat, very muscular" men. As a whole, the Midwestern contingent is "definitely less muscular than the New England and Middle Atlantic groups." The West North Central area<sup>37</sup> is deficient in thin, sub-medium and very fat types. Here the trends "are toward means of body types rather than extremes."

The South, as a whole, is characterized by below-average musculature. The eastern seaboard South is an area where all weak types are overrepresented and all muscular types underrepresented. In the East South Central states, there is overrepresentation of poorly

<sup>35</sup> Ten Kate, *American Anthropologist*, XVIII (1916).

<sup>36</sup> Headquarters Quartermaster Research and Engineering Command, U.S. Army, Technical Report EP-102, *Body Build in a Sample of the United States Army* (Natick, Mass.: February 1959).

<sup>37</sup> Minnesota, Iowa, Missouri, North and South Dakota, Nebraska and Kansas.

muscled, thin and also excessively fat types. In the West South Central region, musculature is better than in the rest of the South, but here, too, there is an excess of weak, tall men. (In other words, if Hooton's findings are correct, the tall Texan is, from a muscular standpoint, just a pushover.)

These differences are correlated chiefly with national origin. The foreign born are more muscular than the native born. The "Old Americans," while they do not generally run to fat, are deficient in "nearly every muscularly dominant type." The Quartermaster report adds:

"Muscular strength and fat deposits increase and skinny, attenuated weak types decrease in the following order: (1) Old Americans, (2) Irish, (3) British, (4) Scandinavian, (5) Germanic, (6) Balto-Ugric, (7) Mediterranean-Near Eastern-Slavic. It is therefore apparent that differences in body build in the various census districts of the United States depend largely on the national extractions of the military population inhabiting such districts."<sup>38</sup>

Hooton described the Old Americans as "an overgrown type which shows correlations with sociological categories involving very poor muscular development." The group with "maximum strength in body build" and which stood out in terms of "great muscularity" was that deriving from Eastern and Southern Europe.

The Negroes were found to be: ". . . characteristically thinner and more lightly muscled than Whites, except that shoulder musculature in Negroes tends to be heavier and trunk musculature somewhat sharper in definition. But Negroes are of more slender skeletal framework and their extremities are attenuated, and, in the case of the inferior extremity, the lower leg is extremely meagre. Their total body types are then different from Whites with the same body build formulas."<sup>39</sup>

In general, Negroes are taller than whites of the same body type, but they have consistently shorter torsos. Their shoulders tend to be wider, their deltoid muscles stronger, but their chests are narrower. They have a narrower pelvis than whites of the same body type and their arms and legs are considerably longer. Hooton found that the Negroid sample was "characteristically much thinner and in general more lightly muscled than the Whites." The primary reason for this was that the Negro body builds "are really quite different from those

<sup>38</sup> *Op. cit.*, p. 4.

<sup>39</sup> *Ibid.*, pp. 28-30.

of the Whites . . . due to the fact that the lower leg of the Negro or Negroid is characteristically so thin and attenuated that it sharply reduces the sum total of his body type rating. . . ."<sup>40</sup>

Garn observes that the "fat-free body weight of American males (presumably whites) approximates 135 pounds (some go as high as 190 pounds), while the comparable fat-free weight in other groups may average as little as 105 pounds."<sup>41</sup> American data also show that in the colder states young men are heavier.

In interpreting these findings, it is well to recall that muscular development can both be acquired and lost and that this applies even more obviously to fat. In the case of Negroes, Hooton finds muscular inferiority *despite* the fact that the Negro at that time was primarily an unskilled manual worker who would naturally be expected to develop more powerful musculature than the more skilled and sedentary whites. This also suggests that racial differences are at the root of the matter.

Another factor, whether genetic or environmental, that influences the somatic differences between Negroes and whites is feminization. As Dr. J. C. Carothers put it: "From whatever cause, physical feminization, though far from universal, is an undeniable fact in the life of many African men."<sup>42</sup> Atrophy of the testicles and gynaecomastia (feminization of the male breasts) are frequent among African Negro men and the latter condition, rare among whites, was diagnosed among 5% of 500 railroad workers by Trowell.<sup>43</sup> While both conditions can result from acute hunger and have been reported as frequent among concentration camp survivors, the same cannot be said for cancer of the male breast, rare in Europe, but frequent in Africa.<sup>44</sup> As Carothers put it:

"It has often been remarked that many African males show feminine physical attributes—slender build, soft skin, knock-knees, flexible joints, etc. Corroboration of this was found by Dean, who, in X-ray studies of the skeletal development of African adolescents, observed that the pattern of bone development in the boys followed patterns unlike those of European boys, but closely similar to those which obtain in girls."<sup>45</sup> Moreover, Vint's valuable research on the African

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<sup>40</sup> *Ibid.*, pp. 111f.

<sup>41</sup> Garn, *op. cit.*, pp. 56f.

<sup>42</sup> J. C. Carothers, *op. cit.*, p. 64.

<sup>43</sup> H. C. Trowel, *East African Medical Journal*, XXV (1948) 236.

<sup>44</sup> Carothers, *op. cit.*, p. 63.

<sup>45</sup> R. F. A. Dean, *East African Medical Journal*, XXIX (1952), 1.



pituitary gland showed that the latter in the males has a ratio of acidophil to basophil cells closely similar to that which obtains in European females.<sup>46</sup> Davies<sup>47</sup> says: "The hormonal effects seen in liver disease—gynaecomastia, testicular atrophy, alterations in hair distribution, and other changes—imply feminization and correspond broadly with the changes produced by the administration of estrogens. The explanation appears to lie in the inability of the liver to inactivate endogenous estrogens."<sup>48</sup>

It seems evident that the American Negro reveals some tendencies toward physical feminization, but the extent of such tendencies and whether or not they are comparable to the conditions among African Negroes are questions which cannot be answered without much more research.

Within the white groups, it will be noted that the order of muscularity was roughly inverse to that of social and economic status. The Old American stock, which comprises most of the dominant elite of the United States, is least muscularly developed, followed by stock from the British Isles, Germany and Scandinavia, Finland and the Baltic area and, finally, Eastern and Southern Europe.

This is roughly the order of economic and social status within the white population. Moreover, the non-Jewish immigration to the United States from southern and eastern Europe is primarily peasant in origin and therefore possibly subjected to the forces of natural selection for strength and physical vigor to a greater extent than ethnically similar elements of middle and upper class origin.<sup>49</sup> In the United States, the eastern and southern European stock is heavily concentrated in occupations involving hard manual labor. Thus, we have a group which was probably selected genetically for strength and vigor, which developed its natural musculature in manual labor and which was less influenced by the enervating forces associated with mechanization than other white groups.

The record of winning nations<sup>50</sup> in Olympic Games provides further clues. Between 1896 and 1953, 13 Olympic Games were held,

<sup>46</sup> F. W. Vint, *East African Medical Journal*, XXIX (1949), 58.

<sup>47</sup> J. N. P. Davies, *British Medical Journal*, II (1949), 676.

<sup>48</sup> Carothers, *op. cit.*, p. 63.

<sup>49</sup> It is also possible that the peasant population of Europe is ethnically different from the urban populations; it appears to be largely Dinaric and considerably more brachycephalic than the other classes.

<sup>50</sup> Officially, only individuals score in Olympic Games. The press computes national scores by awarding 3 points for first place, 2 for second and 1 for third.

of which the United States won 12 and Germany one (in 1936). In 1956, the U.S.S.R. won the Olympic Games at Melbourne and in 1960 she won overwhelmingly in Rome, outscoring her nearest rival, the United States, by almost three to two.

NATIONAL SCORES AT THE 1960 OLYMPIC GAMES  
AT ROME

<i>Group of Nations:</i>	<i>Total Score</i>
Eastern Europe <sup>51</sup>	1,368
Anglo-Saxon <sup>52</sup>	959
Western and Central Europe <sup>53</sup>	709
Latin <sup>54</sup>	345
Japan	156
All other	219
TOTAL	<hr/> 3,756

Olympic scores may be indicative of physique when we compare the Soviet bloc in Europe with the United States. It is true that the Soviet state has imposed tremendous pressure on its athletes to win and that it considers the Olympics as another battleground between capitalism and Communism. On the other hand, the sports tradition is far more strongly rooted in the United States; climate is more favorable for year-round practice and abundance of leisure makes mass participation in competitive sports the norm. These factors may balance each other out. If so, the scores at Rome suggest that the superior musculature which Hooton found in American Army recruits of East European origin may be due primarily to hereditary differences in physique and somatype. This possible conclusion is emphasized by the fact that a high proportion of the American victories were scored by Negroes.

<sup>51</sup> U.S.S.R. 807.5; Hungary 168.5; Poland 158.75; Rumania 85.5; Czechoslovakia 81.5; Bulgaria 42; and Yugoslavia 24.5. It should be noted that the "U.S.S.R." is not identical with "Russia." Among the winners accredited to the U.S.S.R. were a number of non-Russians: e.g., Ukrainians, inhabitants of the Caucasus and Central Asia, Balts, etc.

<sup>52</sup> United States 564.5; Australia 168.5; United Kingdom 146.25; New Zealand 38; South Africa 21.5; Canada 16; and Ireland 4.

<sup>53</sup> Germany 319.25; Sweden 64.5; France 52.75; Denmark 51; Netherlands 39.75; Switzerland 38.75; Belgium 26; Norway 20; Austria 15; and Iceland 2.

<sup>54</sup> Italy 270; Latin America (including the West Indies) 55.5; Greece 10; Portugal 5; and Spain 4.

OLYMPIC SCORES 1960 PER 1,000,000 OF  
NATIONAL POPULATION

Hungary	16.8
New Zealand	16.5
Australia	16.3
Denmark	11.3
Finland	11.2
Iceland	10.0
Sweden	8.6
Switzerland	7.3
Union of South Africa (White)	6.7
Czechoslovakia	6.0
Norway	5.6
Italy	5.5
Poland	5.5
Bulgaria	5.4
Rumania	4.6
Germany	4.5
U.S.S.R.	4.1
Netherlands	3.5
United States	3.1
Belgium	2.9
United Kingdom	2.8
Austria	2.1
Japan	1.6
Ireland	1.4
Yugoslavia	1.3
France	1.2
Greece	1.2
Canada	1.1
Portugal	.6
Latin America	.3
Spain	.1

The calculation of the 1960 Olympic scores on a population basis shows that the non-Slavic Hungarians scored best but that the New Zealanders and Australians are about just as physically fit as this East European nation. The Scandinavian states, Switzerland, white South Africa and the satellites of Eastern Europe score next. The high score of Italy is surprising, as are the low scores of Yugoslavia and Canada. Interestingly enough, high per capita scores (6 per 1,000,000 and more) were all attained by small states, whereas the three "superpowers" put in a poor performance; however, the difference between them is not really significant. The remarkable feature

of this table is not only the apparent geographic and ethnic concentration of prowess in sports, but the enormous spread between the high and low scorers.

### Facial Shape

There seems to be a tendency for the ruling elements within each race to be lighter, more beak-featured and narrow-faced than the ruled. Oriental art shows that the aristocracy of both Japan and north China deviated markedly from the moon-like physiognomy and darker complexions of the Mongoloid masses. In his *The Story of Man*, Coon speculated that the reason for this deviation in a Caucasoid direction was prehistoric miscegenation with "some Ainu-like Caucasoids."<sup>55</sup> Similarly, in discussing the differences between the ruling and the ruled in the great Amerindian civilizations, Thor Heyerdahl advanced the hypothesis of a Caucasoid leadership element.<sup>56</sup>

Recently, Coon and others have urged that it is not necessary to posit the *deus ex machina* of Caucasoid genes. They suggest that the lighter complexions of the ruling class (observed in such places as Japan, China, Indians of the Pacific Northwest, Amerindian mummies, the Jews of Yemen and the Arabs of Morocco) are an evolutionary adaptation to living in the shaded indoors. There appears to be a tendency for the narrow-faced, sharp-featured elements to appear more often in urban life and in positions of leadership and command than the flat-faced groups do. H. Suzuki found a gradual shift over the centuries in the Japanese cities from the flat-faced to the narrow-faced strains. The narrow-faced group can be termed gerontomorphic (or old-man-shaped), the moon-faced group pedomorphic (or child-shaped). Coon wrote recently:

"If one looks at Japan in terms of the mountains-coast dichotomy, it is clear that the most Mongoloid people live in the mountains, that the fishermen of the coast are predominantly Alpine, and that the city people have developed a type of their own which is brachycephalic and long-faced, with relatively little Mongoloid appearance in the anatomical structure of the malars and nose. Various explanations were given me by my learned amanuenses; that the isolation of upland villages on the west coast have so fostered the growth of local populations that many new types have arisen; that

<sup>55</sup> Coon, *op. cit.*, p. 192.

<sup>56</sup> Thor Heyerdahl, *American Indians in the Pacific*, (Chicago: Rand McNally, 1953).

there has also been a continuous selection of the Sedentes-migrants character by which the narrow faced people have been drawn to the cities (Shapiro and Hulse, '39; for the I.Q. aspect of a similar situation, see Scott, '57: 311-329), and that upper class Japanese have deliberately bred a Samurai-looking type from second marriages with geishas . . .

"The narrow faced condition, along with light skin color, is definitely the more desired and sought after. By 'seeking after' we include the use of artifice; cosmetic surgery to build up the nose and remove epicanthic folds is a thriving business in Japan; so is the manufacture of skin-bleaching substances, and of false breasts and buttocks. While at present there may be an element of imitation of the Caucasoid ideal in the motivation of these steps, the great motivation antedates our own (American) brief period of being chic, and goes back to the ancient Samurai ideal, in fact to the inspiration of the horse-faced and horse-riding invaders from whom the nobler Japanese are believed to be more largely descended than from their commoner fellow-citizens. It is my own feeling that, all else equal, a gerontomorphic Japanese, to use the younger Maret's word ('36), is somehow better suited by temperament to endure the crowded life of a Japanese city than his moon-faced cousin, and that we have a principle here which can stand exploration in other countries. If I am right, then Professor Suzuki's dilemma, of how the embodiments of his mesocephalic and platyrrhine Mediaeval Japanese skulls sired the modern brachycephalic and leptorrhine urban Japanese may be on its way to a solution."<sup>57</sup>

### **Bone and Hair Differences**

The presence of characteristics of bone structure which are distinctively racial in origin has been well established. The ratio of leg and arm to torso bones ranges from the Negro, at one extreme, to the Japanese and Eskimo, at the other. The Caucasians occupy an intermediate position. Racial identification of skeletons is sometimes possible on the basis of pelvic bone structure alone. Asian and Amerindian skeletons have been correctly identified as such solely

<sup>57</sup> Carleton S. Coon, "An Anthropogeographic Excursion Around the World," *Human Biology* (1958), XXX 30, No. 1, pp. 31-32. The references in the quotation from Coon are: Shapiro, H. L. and F. S. Hulse, *Migration and Environment* (New York: Peter Scott); "An Isonoetic Map of Tasmania", *Geographical Review*, CXXIII, pp. 311-329 (1957); and Maret, J. R. de la H., *Race, Sex and Environment* (London: 1936).

on the basis of their possessing wormian bones along the suture lines of their skulls. Negro skeletons are heavier in proportion to volume than those of whites because of the greater degree of mineralization of Negro bones.

According to Garn, "Hair form alone would effectively discriminate two-thirds of the world's population."<sup>58</sup> The range is from spiral tuft through helical and woolly to straight-to-wavy to straight-coarse. Again, as in the case of torso-limb ratios, Bushmen, Hottentots and Negroes are at one extreme, Asiatics and Amerinds at the other, with the Caucasoids and, for that matter, the primitive Australians and Papuans, in the middle.

Thick, abundant body hair is present in the white race from Europe to Pakistan. The Papuans, Ainus of northern Japan and primitive Australians constitute another enclave of hirsutism. Most of the rest of mankind is sparsely endowed with body hair.

Balding is believed to occur because of the presence of a gene which is triggered by abundance of the male sex hormone. The bald or balding man is not necessarily more virile than the possessor of a full head of hair; the latter may simply be fortunate enough not to possess the balding gene. Baldness is frequent among Caucasoids: its range is from Ireland through northern India and encompassing the overseas areas of white settlement.

Size of teeth varies among racial groups, "the largest teeth being reported for the Australian aborigines and the smallest for the European Lapps."<sup>59</sup> Tooth form differs among races, notably in relation to the number of cusps on the posterior teeth and the fusing or absence of third molars. The time of appearance of permanent dentition also varies, the Europeans being latest in this respect.

This discussion merely scratches the surface of the subject of the physical differences among races which are believed to be genetically determined or influenced. The intricate pattern of race variation represents the response of the human organism to the challenge of its physical habitat. In short, somatic characteristics, defining the various ethnic groups, have arisen and become stabilized through evolutionary adaptation to environment. Since psychic characteristics may be more important than physical ones to group survival, it is reasonable to assume that the same forces which impose genetic variations in the somatic sphere will do so in the mental sphere. If so,

<sup>58</sup> Garn, *op. cit.*, p. 26.

<sup>59</sup> Garn, *op. cit.*, p. 28.

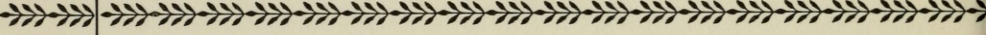
through selective breeding and selective survival, those psychic characteristics must become predominant in each ethnic gene pool which are most conducive to its survival in the specific environmental conditions that define its habitat. Thus, some psychic differences among ethnic groups, like some physical ones, must be genetically determined.<sup>60</sup>

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<sup>60</sup> Weyl, *op. cit.*, p. 161.







*“If the moral world is will, the falsest of moral hypotheses is the negation of the will to live.”*

—ANTONIO CASO Y ANDRADE,  
*Ensayos críticos y polémicos*

# Character Structure and Social Dynamism

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**T**HE DRIVE necessary for a dynamic and expanding system need not be that of classical capitalism or of the Protestant ethos which presided at its early growth. The Soviet system may provide drive mechanisms of its own adequate for rapid, though inefficient, expansion. Compulsive and obsessional character structures, such as those typical of Japan, can readily be channeled into the creation of nation-states dedicated to expansion in the economic, military and political spheres. The recent history of Japan reveals the persistence of this dynamism in the economic and cultural areas after shattering military defeat.

Other systems, however, seem to fail to create the sort of character structure which can be adapted to the dynamic, developing society. This does not necessarily mean that they are condemned to an indefinite future of stagnation and failure, for the character structures of a people may vary sharply from generation to generation.

In Latin America as a whole, the predominant character structure seems to be deficient in drive and this helps explain the lack of any consistent progress in most of the area. Islam and Negro Africa are much clearer examples of cultural systems which create mentalities poorly adapted to successful functioning within the matrix of Western civilization.

One tends to think of the social orders in which drive is defective

as being essentially feminine and passive. This is certainly a component element in the picture, but there are outstanding exceptions. What dynamism there is in Red China, for instance, exists despite the strongly feminine and passive traits in the character structure of the Chinese male. The Islamic society, which is basically masculine despite the prevalence of homosexuality, is virtually devoid of drive.

A strong drive mechanism, we believe, will be most clearly in evidence where the dominant religion or secular ideology teaches that man is master of his own fate and responsible for it, where the ego is well integrated and where the typical adult member of the society experiences guilt. By *guilt*, we mean simply that the individual accepts for himself certain standards of conduct and achievement and that he is sufficiently dedicated to these standards to feel acute psychic discomfort when he falls seriously short of them. One might say that guilt, fear and pain, within rational limits, are control mechanisms essential to both survival and mental health. Pain is a warning signal against physical injury; fear is a signal against impending danger; guilt is a signal against internal disintegration of moral standards and life-purpose. The individual who feels no guilt is a primitive, a saint or a psychopath. The society in which guilt is rare or unknown may be one dominated by a philosophy of fatalism, predestination and human impotence or, alternately, it may consist of human beings whose ego structure is so poorly developed and whose reactions are so chaotic and paroxysmal that they lack any real awareness of themselves or any rational continuity in their conduct. Broadly speaking, the first variant is incarnated in the Islamic civilization area; the second in Africa south of the Sahara.

### Tragic and Epic Civilizations

The Latin American character structure is that of a tragic civilization, the Anglo-Saxon character structure that of an epic one. The tragic sense of life implies preoccupation with death. The bullfight is a ritual of death and as such has both a sportive and religious character. Romanell has pointed out that, when the American tourist in a Latin country applauds the bull, he commits much more than a merely social error.<sup>1</sup>

“Whereas North American thought has been largely motivated by an interest in the problems of knowledge,” writes Romanell, “Latin American thought has been inspired essentially by problems of con-

<sup>1</sup> Patrick Romanell, *Making of the Mexican Mind* (Lincoln: University of Nebraska Press, 1952), p. 24. This is an outstanding and unjustly neglected study.

duct. The latter's concern over normative issues reflects a tragic sense of life. Since the preconception concerning the tragic character of life is born out of man's moral struggle with himself and the society in which he lives, its conceptual expression should correspond in content. . . .

"The typical *pensador* below the Rio Grande, like the French *philosophe* of the eighteenth century, writes popular essays on morals and politics rather than technical treatises on logic and metaphysics, and speaks in the public square or cafe more than he writes. In a word, this thought is 'non-systematic.'"<sup>2</sup>

The Latin American is concerned with style, with dignity, with the sense of honor, with refusal to accept affronts, with masculinity, with fearlessness in the face of death, with the ability to live and die in the grand manner.<sup>3</sup> If pragmatism is characteristic of the Anglo-Saxon epic philosophy of success, existentialism corresponds to the Latin American tragic philosophy of failure.<sup>4</sup> To quote Romanell again: ". . . while the epic soul struggles endlessly to conquer obstacles external to himself, the tragic soul has the more difficult job of conquering himself." The conflict of the tragic soul is not between good and evil, but between alternate goods.

The lack of dynamism in the Latin American character is a logical consequence of these attitudes. The focus of interest is not the conquest and reshaping of inanimate matter, but the relationships between human beings. There is more concern with style than with content, with talk as a means of expression than with thought as a means of solving problems.

To all this, one must add the Latin American's sense of inferiority which moves him toward an almost automatic rejection of American values as meretricious. This inferiority complex is, according to the contemporary Mexican philosopher, Leopoldo Zea, a result of the mestizo culture of the Ibero-American area. The typical Latin American is thus the "illegitimate child" of Europe.<sup>5</sup> The prejudice against American materialism, American business, Western science and

<sup>2</sup> *Ibid.*, p. 27.

<sup>3</sup> These characterizations of the Latin ego image seem to have made little impression on the American Foreign Service in respect to assignment of personnel to Latin missions, and when Vice President Nixon allowed Communist mobs to spit on him and his wife in Caracas without demanding public apology and punishment of the guilty, he unwittingly lowered American prestige in Latin eyes.

<sup>4</sup> According to Romanell, *op. cit.*, p. 25.

<sup>5</sup> Leopoldo Zea's chief work is a history of positivism; *El positivismo en México* (Mexico City: 1943) and *Apogeo y decadencia del positivismo en México* (Mexico City: 1944).

Western technology is common to the *pensadores* of the left and of the right, of José Clemente Orozco, the painter, and of José Vasconcelos, the Catholic philosopher. The power of Communism in Latin America today, like that of Nazism there yesterday, stems in large part from hatred and envy of the United States.<sup>6</sup>

If a free enterprise economy is allowed to be introduced into Latin America, dynamism toward the physical environment will tend to supplant the exercise of power toward individuals and, in that process, the traditional character structure of the Latin Americans will inevitably be modified.

### The African Negro

In the African scene, the psychology of the Negro has been much more intelligently studied than in the United States.

Carothers points out that all writers are agreed that mania in its standard form is extremely common in black Africa, but there is almost equal agreement that depression is virtually absent. He quotes Tooth:

"The absence of depressed patients is most strikingly demonstrated by a casual visit to an African mental hospital where, under infinitely more depressing conditions, the atmosphere of tense unhappiness usually found in European mental hospitals is replaced by one of unrestrained and misdirected exuberance of spirits."<sup>7</sup>

Why is depression so rare? "Sixteen years have passed since Gordon asked the question, and with characteristic genius, showed where the answer might be found. We are now less 'ignorant of normal native mind' and it seems the solution is inherent in African culture and the psychology that derives from it.

<sup>6</sup> F. S. C. Northrop, *op. cit.*, made the Virgin of Guadalupe the symbol of Mexico, referred to her as "this Indian Madonna" (p. 26), and depicted the Mexican character structure in Indian terms. Romanell points out rightly that this viewpoint is unrealistic. The ancient Indian civilizations are as irrelevant to modern Latin America as Druid rites are to contemporary England; the racially Indian population lives outside civilization in Latin America. Moreover, the original Virgin of Guadalupe was in Extremadura in Spain. "Cortés and Pizarro, also from Extremadura, were much indebted to her," writes Américo Castro (*op. cit.*, p. 197). "Mexico has a replica of the shrine of Guadalupe," Dr. Castro adds, "although many Mexicans, in their zeal for attributing only the evils of Mexican life to its Hispanic past, prefer to ignore this." None of this prevents Professor Northrop from citing the rhapsodic prose of Frances Toor's *Guide to Mexico* to the effect that the Mexican Virgin of Guadalupe was largely "Aztec," because she is "dark-skinned," as if there were no dark-skinned Virgins in Spain. The moral, we suppose, is that philosophers of history (and Professor Northrop is considered to be one) should not rely on guidebooks for their historical research.

<sup>7</sup> G. Tooth, *Studies in Mental Illness in the Gold Coast* (London, 1950), quoted by Carothers, *op. cit.*, pp. 144-8.

"The development of depression in standard forms is linked in high degree with personal integration, with a sense of personal continuity, and with a sense of responsibility for one's past and of a retribution that must follow for one's sins. Tooth says: 'One of the most characteristic elements in the depressions of European psychotics is self-reproach . . . but it is certainly true that self-reproach is very rarely met with in the content of African psychotics.'"<sup>8</sup>

In Islam, an attitude of fatalism virtually destroys the concept of individual responsibility and hence the possibility of guilt and self-reproach. In Negro Africa, the situation is not quite so clear-cut. Here there are powers which can be propitiated. Once these steps have been taken, "the outcome is in the hands of the Gods," to quote Tooth again, "the responsibility has been shifted and the main cause of anxiety, the personal factor, is removed. There can be little doubt that the greater the assumption of free-will, the greater the strain on the personality and the likelihood of breakdown. The corollary of this proposition is that where there is no choice there can be no conflict."<sup>9</sup>

These views are reinforced by the testimony of virtually all competent observers of the native African mind. The references to emotional, explosive and paroxysmal states, to lack of personality integration, capacity for sustained thought or introspection at any level, to inability to reason coherently, to maintain attention or even a consistent emotional reaction, to imitativeness, lack of originality, passivity and childish self-aggrandizement form a monotonous litany. "With the Negro," writes Westermann, "emotional, momentary and explosive thinking predominates. . . . Primitive man's energy is unstable and spasmodic. . . . A primitive man does not plan, set himself an aim and exercise his strength in attaining it. . . . Personal responsibility is avoided wherever possible."<sup>10</sup>

The social anthropologist can relate these defects in emotional response and mental functioning to the institutions of tribal life. On a deeper level, we are dealing with "frontal idleness," with the fact, to quote Carothers again, that "the African lives largely in the world of sound, in contrast to the European, who lives largely in the world of sight."<sup>11</sup> Thus, in many respects, the average African Negro

<sup>8</sup> Carothers, *op. cit.*, p. 148.

<sup>9</sup> Tooth, quoted by Carothers, *ibid.*

<sup>10</sup> D. Westermann, *The African Today and Tomorrow* (London, 1939). Quoted by Carothers, *ibid.*, p. 85.

<sup>11</sup> Carothers, *ibid.*, p. 103.

functions as does the European after a leucotomy operation. After explaining that the frontal lobes are the only part of the brain with the specific function of integrative thought, he adds: "The African, with his lack of total synthesis, must therefore use his frontal lobes but little, and all the peculiarities of African psychology can be envisaged in terms of frontal idleness."<sup>12</sup> French psychiatrists have the same thing in mind when they write of "fragility of higher psychic functions" being characteristic of the trans-Saharan African Negroes."<sup>13</sup>

That the frontal idleness of African Negroes is caused by frontal atrophy was suggested by two important articles published in the authoritative British medical journal, *The Lancet*, and in *Courrier* in 1956 and 1957 by two doctors, Marcelle Geber and R. F. A. Dean.<sup>14</sup> These articles summarized the results of extensive observations and tests of African children in Kampala, Uganda, between birth and their sixth year. Drs. Geber and Dean found an amazing precocity in kinesthetic learning in these African children. Some of them showed rates of development in the first days of life which were not attained by normal European or Asian Indian children until after the first month of life. They maintained this lead until about the third year after which they fell rapidly behind. A superficial conclusion from this might be the mental superiority at birth of Negro children. Actually, the reverse is indicated. Carothers, who was ignorant of the Geber and Dean findings at the time, wrote:

"The difficulty of early learning is mainly one of cerebral complexity, and it is the rule in all mammalian life for full mental stature to develop early in direct relation with cerebral simplicity. The rat, for instance, is fully competent to deal with his relevant environment within three months of birth, whereas the chimpanzee takes several years. Whenever the nervous system is enlarged out of proportion to its sensory supply and has many alternative pathways and opportunities for choice, much time is taken in growing up. In Hebb's phraseology, where the association-sensory ratio is high, the

<sup>12</sup> *Ibid.*, p. 50.

<sup>13</sup> P. Gallais and L. Planques, *Méd. trop.*, XI (1951), 5.

<sup>14</sup> Marcelle Geber, M.D., and R.F.A. Dean, M.D. (Director and visiting worker of the Medical Research Council for research in infantile malnutrition at the Mulago Hospital, Kampala, Uganda.) "Development rates of African children in Uganda," *The Lancet*, CCLXXII, No. 6981 (1957), 1216-19. Also Marcelle Geber, "Développement psycho-moteur de l'enfant africain," *Courrier*, VI, No. 1 (1956), 17-29. Also, see the detailed discussion and summary in Weyl, *op. cit.*, pp. 142-8.

learning must be slow, though the final ability to handle complex relations will be great."<sup>15</sup>

This raises the question of whether the rapid kinesthetic maturation observed among Uganda Negroes is characteristic of the African Negro in general, and of the American Negro as well. Racially, the differences between the Negroes of Uganda and those of West Africa are minor; the West African tends to be shorter, frequently much closer to a true black in skin color and more prognathous.<sup>16</sup> However, racial uniformity does not preclude local differences in mental ability. Unfortunately, the study of comparative rates of neonatal kinesthetic maturation is in its infancy. The only comparable study we have for other African areas is that of Faladé, who found that test results in the Senegal were similar to those found by Geber in Uganda.<sup>17</sup>

As for the American Negro, it must always be remembered that he is a product of racial mixture. Writing in 1954, Curt Stern concluded that: "about two-thirds of the genetic building material of the United States Negro comes from Africa and about one-third from Europe." And in a 1958 article, Stern reduced the proportion of Caucasoid genes possessed by the average American Negro to about 25%.<sup>18</sup>

Thus, those aspects of character structure which seem to preclude civilization creation or the autonomous development of a dynamic social order by the Negro peoples of Africa are not merely reflections of peculiar institutions, but seem to proceed from fundamental structural and functional differences in the mind itself. Whether this finding applies to all Negro groups and whether there are significant differences in the extent to which this handicap inhibits development cannot be determined on the basis of the presently fragmentary evidence. It is conceivable that some parts of sub-Saharan Africa may possess better intellectual resources than others.

### Chinese Character Structure . . .

An investigation of Chinese character structure is of particular interest because of the immense transformation engineered by the

<sup>15</sup> Carothers, *op. cit.*, p. 100.

<sup>16</sup> George P. Murdock, *Africa: Its Peoples and their Culture History* (New York: McGraw-Hill, 1959), pp. 8-9.

<sup>17</sup> S. Faladé, *Le développement psycho-moteur du jeune Africain originaire du Sénégal* (Paris: R. Foulon, 1955).

<sup>18</sup> Curt Stern, "The Biology of the Negro," *Scientific American*, CXCVIII, No. 8 (1954). Also, Curt Stern, *U.S. News & World Report*, September 19, 1958, pp. 81-82.



Communist regime. To what extent did the Chinese ethos, as sociologists, philosophers and psychologists defined it prior to 1948, seem to preclude the emergence of the politically and economically dynamic totalitarian nation-state that exists in China today? This question is of considerable importance for the future of social anthropology. It is important that we know the value of the many studies of national temperament and psyche that have appeared in the past 20 years. Are they arbitrary constructs without basis in solid evidence? Do they make the fundamental error of considering as durable and relatively constant attitudes of mind that can be revolutionized by a strong, disciplined element, armed with enthusiasm, dedication and ruthlessness and carrying with it an ideology that claims to hold the keys to utopia?

Toward the close of World War II, Martin Yang made a study of Chinese psychology in terms of family orientation and lack of any drive toward military aggression.<sup>19</sup> Another ethnopsychologist, Weston La Barre, observed: "The Chinese never had the evangelical impulse to carry their values to other peoples and to impose these upon others by conquest. They are too naively, unquestioningly and inexpugnably convinced of the value of their own culture to need such overprotest. . . . The picture of the internal growth of China . . . is one of a gradual accretion of inwardly focused family groups, the state being based on the same familial principles. . . . Wisdom . . . early in Chinese history became a primary value. . . . There has nowhere in the world been such a deeply rooted social approval of the intellectual as social cynosure . . . as opposed to the military man, the entrepreneur, or the priest." La Barre characterized Chinese culture as the most "bookish" in the world and asserted that before the middle of the 18th century more books were published in Chinese than in all other languages combined. "If the Chinese are essentially a non-military people, it is again partly because the primary obligation is to the family and its continuity, and not to the abstract state."<sup>20</sup>

La Barre also pointed out that the Chinese "lack any strong visceral disciplines, such as are so insistent and strong in the 'Protestant ethic.' In the Chinese, 'sphincter morality' is poorly developed with regard to all body products. The internalization of the superego is

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<sup>19</sup> Martin C. Yang, *A Chinese Village: Taitou, Shantung Province* (New York: Columbia University Press, 1945).

<sup>20</sup> Weston La Barre, "Some Observations on Character Structure in the Orient, Part II: The Chinese," *Psychiatry*, IX (1946), 375-99.

weak, the demands almost uniformly seek undeterred physiological gratification, and libidinal tensions are low. . . . The Chinese will very likely never produce an agonized ascetic saint, or a Kant, a Newton, a Napoleon or even a great football team." This is due to an "uncompetitive attitude" toward the world. "The inhibitions, the tensions, and the aggression of the West are not part of their genius."

The character structure depicted by La Barre is obviously negative for a dynamic, aggressive society, regardless of whether it is individualistic and free or collectivist and slave. Whatever the truth of this sort of conventional portrayal, its significance in the Chinese case has seemingly been negated by the swiftness with which a very different sort of Chinese man was created by the new Communist masters of that country.

In 1951, Professor Hsu, an anthropologist at Northwestern, wrote an interesting article on sex crimes in China.<sup>21</sup> He pointed out that these offenses are as rare in China as they are common in the United States, being frequent only during periods of military disorder. Yet Chinese farm and city workers often live in the compounds of their employers and do not see their women for months or years at a time. This condition also applies to the overseas Chinese. Wives frequently murdered their husbands in the past because this was the only way they could become free. Hatred was seldom a motive and murder is defined in a Chinese saying as "taking life because of the desire for wealth."

Hsu notes that the vehemence of American emotional expression is in contrast with its virtual absence in China. In Chinese painting, man appears as a small, calm, fully-clothed figure in an enormous landscape. His body is concealed and his expression is impassive. Chinese novels are concerned with what people do, not with what they feel. No traditional Chinese novel ever tells the story through the eyes of one character only. Sex is not the climax of the story. Couples have sexual intercourse early in the tale with few preliminaries. The climax of the love story is the regularization of the relationship through marriage and community acceptance.

Various studies have been made of the sexual aspects of Chinese character structure. Throughout Chinese literature and folklore, one finds the vampire or fox woman who drains men sexually and destroys them. The male fear of the all-devouring female and of castra-

<sup>21</sup> Francis L. K. Hsu, "Sex Crimes and Personality," *The American Scholar*, XX, No. 1 (Winter 1951-52), 57-66.

tion is apparently widespread. The Taoists taught that sexual intercourse strengthened the body and enabled people to attain old age. The female essence, Yin, and the male essence, Yang, nourished each other and were indispensable to each other. However, the male was weakened by loss of his semen whereas the female was not weakened by loss of her lubricating fluid. The conclusion drawn was that during copulation the male "was nourished by the orgasm of the female and strengthened by the retention of his own sperm."<sup>22</sup> Fear of female sexuality and withholding of the male orgasm is combined with other aspects of male sexual passivity. In his study of Chinese erotica, Gichner writes: "In other cultures, there is portrayed an aggressive forcefulness on the part of the male, during courtship and intercourse, which is missing to marked degree in the creations of the Chinese."<sup>23</sup>

The large collection of Chinese erotic paintings, scrolls and modeled figures, spanning many centuries, which are reproduced in Gichner's book reveal radical differences in sexual attitude between the Chinese, on the one hand, and the Japanese and Hindus, on the other.<sup>24</sup> In intercourse, the Chinese male is often portrayed in a relaxed position, lying beneath the woman. He is frequently supported or pushed in and out of the female by retainers, swings or mechanical contrivances. The absence of physical tension or sexual aggression by the male is further emphasized in the pictures dealing with oral intercourse and onanism.<sup>25</sup>

Is this picture in alignment with the typical character structure of the Chinese under Communism? We would assume that the male withdrawal and detachment from full sexuality is emphatically consistent with the Communist dynamic. In fact, Communism, like other Puritan revolutionary formations, seeks to inhibit full sexuality because it competes with state and party for the drives, fixations and loyalties of the people. The part of the picture which is seemingly inconsistent with Communist dynamism is the exaggerated passivity of the Chinese male, his oral fixations and his absorption with day dreams and reveries.

<sup>22</sup> Lawrence E. Gichner, *Erotic Aspects of Chinese Culture* (privately printed, 1957), p. 20.

<sup>23</sup> *Ibid.*, p. 14.

<sup>24</sup> See Lawrence E. Gichner, *Erotic Aspects of Hindu Sculpture* (1949) and *Erotic Aspects of Japanese Culture* (1953).

<sup>25</sup> Opium smoking is, of course, an orally passive trait.

## . . . and Pavlovian Man

The possibility that the traditional character structure of China has been virtually destroyed during 15 years of Communist dictatorship can be attributed largely to unprecedented processes by which the human mind is disintegrated and refashioned in the Soviet mold.

"The methods devised by the Free World to combat illness are used by the Communists to create it," Dr. Leon Freedom pointed out. "That is why brainwashing can only be properly understood and dealt with as man-made illness. . . . All that they have done is to take what free science has developed and use it in a manner that would ordinarily be considered mad. There isn't anything original about what they are doing, only in the way they are doing it. Their single innovation has been to use what they copy in a diabolical order. Their objective is solely to make minds sick, not healthy, to create frustrations and to fan them into hates, so they can be projected against their own subjects and the Free World."<sup>26</sup>

Brainwashing is not primarily a technique to make prisoners of war confess to imaginary crimes and betray their country's secrets. It is primarily a means of transforming the character structure of an entire population and of keeping that population in a permanent condition of mental subordination to the Communist state, of unhesitating belief in all that it asserts, in chronic anxiety, neurotic tension and disintegrated personality state.

The process was suggested by the distinguished Russian physiologist, Dr. Ivan P. Pavlov, who was diverted from his studies of conditioned reflexes among animals, at Lenin's personal request, to the application of conditioned reflex techniques to human beings.

Where entire populations under Communist rule are involved, and particularly in those areas under Chinese-Soviet domination,<sup>27</sup> the techniques used are diverse. The mind is broken down by such

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<sup>26</sup> Quoted in Edward Hunter, *Brainwashing from Pavlov to Powers* (New York: The Bookmailer, 1960), p. 249.

<sup>27</sup> Brainwashing was not applied in a coordinated manner in the U.S.S.R. between Stalin's death and the present (June, 1963). There is an inevitable contradiction in the Soviet order, between the *political* need for a population which has been conditioned into automatic acquiescence in the orders of the state and the *economic* and *military* need of a non-neurotic population able to produce and fight effectively. The intensity of Communist mind conditioning varies directly with the newness of the regime, the poverty and backwardness of the nation and the extent to which the dominant brand of Communism is Stalinist.

devices as deprivation of sleep and sufficient food, alternating periods of enforced solitude with those of continuous questioning, mental and physical tortures, the practice of requiring self-criticism and the denunciation of others, indoctrination and reindoctrination. The processes used involve arousal of guilt feelings and maintenance of a continuous atmosphere of tension and fear. Guilt is collective in the sense that the individual is made to feel responsible for his class, his community, his nation, for the class origin of his family, for the "crimes" of his nation, defining crimes as anything which departs from the Communist line.

Guilt is relieved by confession. The confession must be voluntary, that is to say that however imaginary the offenses of the individual are, they must be internalized to such an extent that he believes fervently that he committed them. These dynamics of fear and guilt are maintained after the catharsis and rebirth of confession by the institutions of self-criticism and denunciation of others. Hunter writes: "A saturation treatment is being given to Communist society. The routine of each day and night is so arranged that the people simply cannot escape from the sight and sound of Communist propaganda pressures. The spoken and the written word are injected into every conceivable phase of working and leisure time. Writings are prescriptions, not stories. Entertainment is sugar-coating for mind pills."<sup>28</sup> Shallow observers in America noted that Fidel Castro was in the habit of giving six- to eight-hour harangues until the early morning hours and inferred that he was insane. It is more probable that this was simply application of the brain-washing technique: the imposition of propagandistic and agitational points by massive repetition at a time when resistance is at its lowest ebb; simultaneously, the use of sleep denial (since attendance was virtually compulsory) as a means of weakening the power of the listeners to offer mental resistance.

The processes obviously involve capitalizing on existing resentments and channeling them against targets chosen by the Communist dictatorship. "The only possible conclusion," Hunter maintained, "is that a long-range program is being pursued which, if left unhindered over a long period, will make whole populations just as neurotic as a single individual." Dr. Freedom characterized the operation as the use of virtually all known techniques for the psychi-

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<sup>28</sup> *Ibid.* p. 259.

atric rehabilitation of the mentally ill in order "to produce hysterical and obsessive delusional states in the populations under their domination."<sup>29</sup>

According to Dr. Freedom, these methods of indoctrination, if unhampered, "will create a nation of hysterically inflamed people obsessed with the idea that they have to destroy us before we destroy them." A new youth is being developed with blind spots to non-Communist ideas that may, in many instances, be ineradicable. "This calculated creation of national neurosis," writes Edward Hunter, "is incontrovertibly the greatest threat ever posed against human society. A people with such a streak in them cannot listen to reason, for they are conditioned into simply not hearing it."<sup>30</sup>

To all this must be added the attempt to disintegrate the family in China through the commune system. The indoctrination purpose of withdrawing children at infancy from their mothers and placing them in collective institutions is obvious. What is not so obvious is that this practice almost certainly involves deprivation of maternal love since the nurses at the crèches are not numerous enough to serve as mother substitutes. Modern child psychiatrists are in virtual unanimity that the institutionalization of infants, under conditions where adequate mother substitutes are not available, results in a process of psychic and physical withering away, called *marasmus*, which is frequently fatal.<sup>31</sup> Mother deprivation remains a most serious psychic blow until at least the age of six, as Anna Freud has pointed out in her analysis of the effects of the evacuation of London school children to rural areas during the Nazi bombing raids of World War II.

Children who grow up without experiencing mother love tend to become adults who are incapable of the love relationship. A few years ago, Dr. Harry F. Harlow of the University of Wisconsin believed that he had proved experimentally that mother-surrogates in the form of terry cloth and wooden objects served the needs for affection of baby monkeys as well as real mothers. In September, 1961, however, Harlow reported to the American Psychological Association that most of the infant monkeys given surrogate mothers had developed into individuals incapable of reproducing. Those

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<sup>29</sup> Quoted by Hunter, *ibid.*, p. 258.

<sup>30</sup> *Ibid.*, p. 261.

<sup>31</sup> See Margaret Riddle, *The Rights of Infants* (New York: Columbia University Press, 1960).

that did reproduce were "helpless, hopeless, heartless mothers devoid, or almost totally devoid, of any maternal feelings." The first 47 baby monkeys separated from their mothers in the experiment and reared in wire cages thereafter became increasingly abnormal as they matured to full sexual development. "We have seen them sitting in their cages, strangely mute, staring fixedly into space, indifferent to people and other monkeys," Dr. Harlow reported. "Eventually, we realized that we had a laboratory full of neurotic monkeys."<sup>32</sup>

Infants and toddlers deprived of their mothers often become psychopathic personalities, that is to say, totally amoral people. Whether this additional element of induced mental disease will be inflicted upon the tens of millions of Chinese children subjected to the commune experiment depends on the precise organization of the crèches and the mothers' relationship to them and on whether the entire enterprise is shattered on the rock of mass passive resistance. We see, therefore, that the Chinese Communists are engaged in attempting drastically to alter the character structure of the entire Chinese nation. This operation requires that the new state be led by individuals who are atypically Chinese. The resulting conflict between the Chinese character and the ethos being superimposed upon it should lead to violent neuroses and perhaps to the eventual overthrow of the dictatorship itself.

### **Puritanism and Dynamism**

Upward mobility and societary drive are generally closely associated with Puritanism, defining the word for present purposes as the postponement or repression of sexuality in favor of action-drives. This relationship has been persuasively summarized by Lipset and Bendix as follows:

"An indication of the way in which a knowledge of psychological variables may contribute to the analysis of a typically sociological topic can be seen in the study of mobile groups. There is evidence that certain ethnic groups—the Jews, the Scots, the Jains, the Parsees, the Armenians, the Japanese and the Czechs—are more successful than other groups in enabling individuals to fill new roles in society. So far, the differences between these groups and others have been explained primarily in terms of attributes endemic in the situation of minorities. However, Jews in America tend to have higher intelli-

<sup>32</sup> Emma Harrison, "Mothers Upheld in Monkey Tests," *New York Times*, September 4, 1961.

gence-test scores than Gentiles, regardless of what social factors are controlled, and Scots have the same records in the British Isles. In addition, the Japanese-Americans have done much better in school than most other groups in the United States.

“These groups also show a considerable capacity to defer gratifications or not to indulge in them at all. The pattern of inhibitions on extramarital sexual behavior of lower-class Japanese-Americans, Jews and Scots resembles the middle-class pattern among other groups. Jewish family structure is of the type which is regarded as favoring personalities with a capacity for mobility—the strong-mother and weak-father family. All three, Jews, Scots and Japanese-Americans, stress early independence for young children, a pattern which coincides with McClelland’s assumptions concerning the background of men who are high in motivation for achievement.\* There are, of course, many more purely sociological hypotheses which may account for the ‘success’ of these two groups. For example, both Jews and Scots are ‘peoples of the book’: the first completely literate peoples in Europe, since both their religions enjoined them to be able to read regularly from the Bible. The strong drive to learning which characterizes both is probably strongly related to the positive value which they give to religious education. The Japanese-Americans have also placed strong emphasis on education as a means of advancement.”<sup>33</sup>

We agree with this interpretation subject to one major qualification. Lipset and Bendix operate within a framework provided by the tacit assumption that the different ethnic groups are equal in innate intelligence. Our view is that they are unequal and that this inequality both shapes and is shaped by character structures, traits and institutions either favorable to intellectual development or the reverse. Furthermore, this inequality is reflected on a broader scale when we assess the nature of the dynamic societies in history. These societies are those which apply scientific procedures to enhance man’s power over his environment and in which “compulsive” attitudes toward work prevail. A mere 80 years ago, it would have been easy to draw a map of the world, showing precisely where these conditions existed. The zone of dynamism would have com-

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\* David C. McClelland, *Studies in Motivation* (New York: Appleton-Century-Crofts), 1955.

<sup>33</sup> Seymour Lipset and Reinhard Bendix, *Social Mobility in Industrial Society* (Berkeley and Los Angeles: University of California Press, 1959), pp. 255-6.



prised the United States, the British Dominions, Western Europe and Germanic Central Europe. About thirty years later, these new attitudes toward science, technology and work transformed Japan and made their appearance in Western Russia, Catalonia and Northern Italy. Today, the zone of modern civilization has expanded further by seizing strong points in the temperate regions of Ibero-America, by advancing further into the Mediterranean and into Eastern Europe and by embracing to a degree the Soviet Union and, potentially at least, China.

Dynamism remains conspicuously absent in Indian America, in most of Southern Asia, in the world of Islam, in the Negroid and Melanoid regions (of Africa, the Americas, Asia and Australasia) and in virtually all tropical regions. We are not concerned here with either the sheer volume of labor performed or with "laziness" as such. The Chinese coolie and the Slavic peasant probably work harder and longer than any group of Westerners. However, what they do is routinized and unchanging. They work because they must and rest when they can. They neither think scientifically nor apply intellect to ways of easing the work burden. In one zone, man is master of his physical habitat; in the other, he is its slave. It is simply specious to assert that Western Civilization is not superior to, but merely different from, the archaic cultures and civilizations which are irrelevant to the world of science and reason. For Western man always has the potential of freedom, whereas man caught in the fossil cultures or civilizations does not.

Most reformers assert that the ill-favored areas merely suffer from a cultural lag which time and good will can rectify, thus enabling them to follow our path to material progress and freedom from poverty. However, in most of the regions that have failed to grasp the nettle of Western civilization, deep-seated obstacles in the form of inappropriate character structures, value systems or institutions—not to mention genetically caused mental incapacity—seemingly impede the road to progress.

The zone of modern civilization is characterized by preoccupation, *in the sphere of action*, with the here-and-now as contrasted with the hereafter. This does not mean that the motivations for the action must be worldly. The medieval Christian faith which acted through cathedral building was, to that extent, part of this system of dynamism. The Calvinists, who believed that business was a calling and that making money at it honestly was a sign of divine favor, were

builders of civilization. By contrast, religions which teach the futility of action, or the doctrine that the world is so insignificant in the total scheme of things that it is a waste of time to change it, are destructive of any dynamism or any advance into the modern order.

Neither technology nor a positive attitude toward work can make much headway in countries where the people accept *Kismet*, desire *Nirvana* or rely on the better chance offered by a subsequent incarnation. In the case of Islam, the belief in fate is a strongly negative factor. The fact that *Islam* means submission and that *Abd*, one of the commonest of Arab names, means slave suggests the extent to which the religious world of Islam is incongruent with the rationalism and technology of the Northern peoples and with the work ethos of Protestantism. Among the hundreds of millions of people who worship Allah, not one has won a Nobel Prize. Over the past four centuries, no Mohammedan has made a major scientific discovery, written a great work of literature<sup>34</sup> or created anything that might rank him with the great minds of history.

Caste systems are generally negative factors in relation to the new modes of transformation of and command over the physical environment, for the highest caste is generally the lineal descendant of those sacerdotess and magicians whose powers supposedly derived, not from the deed, but from the word, the incantation and the ritual. Hence, the highest castes are dedicated to contemplation of an exceedingly abstract sort and are, as a rule, ritually forbidden to do manual work and hence to enter the areas of applied science and technology. Conversely, a large sector of economic activity falls under a religious tabu and can be performed only by outcasts, untouchables and slaves. Accordingly, this work is done badly and by rote; innovation in these areas is stifled because it has become the monopoly of the least privileged and often the least intelligent elements in the social order.

It is debatable whether, at the dawn of European capitalism, the positive attitude toward work and technology preceded the appearance of the new enterprises, or vice versa. In most non-European countries, industrial enterprises were brought in from abroad and appropriate psychic attitudes developed in response to these imported or grafted institutional conditions. However, in several cases,

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<sup>34</sup> Neither literature nor even the novel is a traditionally Western preserve. One of the greatest of all novels, *The Tale of Genji*, was written by the Japanese noblewoman, Lady Murasaki, around 1000 A.D.

attitudes favorable to capitalist development already were present, for example, among Japanese craftsmen, Parsi entrepreneurs and Syrian merchants.

Furthermore, the geographical expansion of the zone of Western civilization has occurred almost exclusively in the temperate to cold zones of the human habitat. There is, in fact, a continuous belt of dynamic modern societies, technologically progressive and sharing an acceptance of scientific method and rationalism<sup>35</sup> which girdles the northern portion of the globe. It covers (with the trivial exception of the Eskimos) Northern Europe, the U.S.S.R., Japan, Canada and the United States. Other areas in which similar attitudes toward science, technology and work prevail include the coldward zone of the Southern Hemisphere, embracing Australia, New Zealand, white South Africa, Argentina, Uruguay and Chile.

Racially, the expansion of modern civilization has occurred primarily among the light-skinned races, those forged by evolutionary adaptation to temperate and cold climates. The zone of dynamism is one peopled primarily by Caucasoids and Mongoloids, but not by Melanoids. The swift and successful adoption of Western Civilization by the Mongoloids of China and Japan also has an institutional side. Neither of these peoples was steeped in fatalism or at all otherworldly in the arena of action. In the Chinese case, the dominant religion of Confucianism is essentially a philosophy of living and of manners with only minimal reference to the supernatural.


Even outside the favored areas, attitudes are swiftly changing. The fossil civilizations, cultures and religions are disintegrating before the eyes of their adherents. The transition from peasant to city dweller creates new attitudes toward accepted truths, methods of doing things and the rhythm of work. Western doctrines—ranging from communism, socialism, fascism and nationalism to individualism, democracy and freedom—are borne to the backward corners of the earth by the winds of change. Most of the key ideological treatises of Western culture have been translated into the main non-Western languages. Particularly when they speak the language of revolution, these volumes are avidly devoured by the growing literate and politically minded minority. The disagreeable possibility exists that the underdeveloped peoples are more likely to learn the

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<sup>35</sup> The official philosophy of dialectical materialism is neither scientific nor entirely rational, but Soviet scientists no more follow Marxist-Leninist method with respect to problems of technology than American scientists follow religious revelation.

worship of naked power from the West than respect for work, and that the spread of higher education through these regions serves in the main to give effectiveness and direction to a previously blind resentment and aggression.

While these new forces of unknown potential are let loose in the world, the dynamism of the West is being eroded by the feather-bedding mentality, the worship of security, egalitarianism and socialist doctrines. The superior individual is often criticized or viewed with distrust for not being "part of the team," the large rewards paid for his accomplishments are regarded as unconscionable gains and his very success may be held against him as if it were based on oppression of the untalented.



*“I cannot understand the existence of any of the great religions, I cannot explain any fine and grave constructive process in history, unless there is such a serious minority amidst our confusions. They are the Salt of the Earth, these people capable of devotion and of living lives for remote and mighty ends.”*

—H. G. WELLS,  
*Democracy under Revision*

# The Creative Minority and World Power



**O**N THE basis of the historic record, one might infer that the Western civilization area has a major advantage in terms of human mental potential over the Soviet bloc. Those peoples who have accounted for the large preponderance of creative intellectual achievement since the close of the Middle Ages are within the Western political orbit. They are, in essence, the Europeans from lands west of the Vistula, the white inhabitants of their lands of overseas settlement and the Jews.

## **The Power Balance**

Poles, Hungarians, Czechs, Russians and other East Europeans have shown outstanding genius in science, the arts and other fields of human achievement. With the possible exception of the Hungarians, these gifted people have been a much smaller minority in proportion to population than their counterparts in Western Europe. This difference may, however, be due to such institutional factors as a more backward economic status, lesser degree of urbanization and industrialization and a more preponderantly peasant composition of the population than in the case of Western Europe.

A clue to the comparative mental abilities of the two zones might have been provided by comparative intelligence testing. However, these tests have been prohibited in the Soviet zone since the 1930's. We can compare immigrants to the United States from these areas

with West European immigrants and, when we do so, we find that the average mental test scores of non-Jewish East European groups are markedly lower than those of West European groups.

The validity of these comparisons is, however, questionable. There is reason to believe that immigration from Eastern Europe into the United States, which was responsive to the need for unskilled manual labor, may have been negatively selective.<sup>1</sup> Under the circumstances, we must conclude that the evidence concerning the comparative intellectual potential of West and East Europeans is too fragmentary to permit definite conclusions and that the question is, therefore, an open one.

We have already suggested that a large part of the intellectual elite of Eastern Europe was exterminated in successive waves of Nazi and Communist genocide. In this manner, the Jewish population of the area was decimated. Of a world Jewish population of 12,650,000 in 1960, as estimated by the Jewish Statistical Bureau, 2,300,000 were in the Soviet Union and 396,000 in other Communist countries. By contrast, there were 5,400,000 Jews in the United States, 1,880,000 in Israel, about a million in Europe, some 700,000 in Latin America and less than half a million in the British Dominions. Other gifted minorities in the Soviet zone, such as the Germans and the Armenians, have also suffered expulsion and genocide, though not to such a drastic extent.

The Great Russian intellectual elite has also suffered from Soviet genocide. The expulsion or extermination of the aristocracy and the upper classes was followed by purges of non-Bolshevik revolutionary intellectuals and finally by the series of internal purges which decimated the intellectuals who sided with the Communist Party.

The extent of this genetic havoc is masked by other processes, operating in the opposite direction. The development of mass education under the Soviets and the creation of enormous employment opportunities for scientists, technologists, executives and professionals of all sorts have developed abilities which lay dormant under the more primitive conditions of czarism.<sup>2</sup> The transformation of any nation from an agricultural to an industrial, and hence from a rural to an urban one, multiplies educational and job opportunities for top-

<sup>1</sup> This does not apply to East European Jews.

<sup>2</sup> It does not follow that these abilities would have continued to lie dormant had czarism not been overthrown, for the rate of industrial advance during the last pre-World War I years of Imperial Russia was at least as great as the rate during the Bolshevik era.

and middle-echelon intellectual elites. This transformation is not specifically Russian or Communist. It occurred equally dramatically in Japan.

Obviously, however, the chief human element under Communism is not European, but Chinese. While our knowledge of the Chinese human potential is limited and based on fragmentary evidence, there is reason to believe that it is high. If overpopulation is brought under control, it is logical to expect that the abilities of the Chinese people will raise China to the rank of a great power. This development might be quicker and more certain if the Chinese should return to Western forms of modernization, but even under continued Communist rule it appears probable, provided aristocracide and transformation of the Chinese character structure do not cause catastrophic deterioration in Chinese intellectual ability.

The Soviets have not been uniformly successful in the effective utilization of their intellectual elite. The vast inefficiency of Soviet industry in those areas which are not militarily important, the poor quality of products, the dead hand of the swollen managerial bureaucracy and the general wastage of manpower resources are major negative factors.

The Soviets have concentrated on training their elite and in giving large rewards and much prestige to their top scientists, executives, engineers and creative artists. The highly competitive nature of the educational system and the policy of concentrating on the intellectual elite have already been discussed. Since all mass media are in the hands of the Communist party and the totalitarian state, the Soviets have been able to impose that popular image of the scientist, inventor, explorer, artist and managerial leader which they consider desirable. Success in these areas is rewarded by overwhelming approval by the state and hence by public opinion. This, together with the fact that the elite is chosen through rigorous competition and is not allowed to rest on its oars, should result in high morale.

In peacetime and particularly at present, the American elite seems woefully lacking in morale. It does not have, as a group, a deep commitment of loyalty and its most intellectual component is at times so open-minded that it does not know what side it is on. The business elite is subjected to a literature, a television stereotype and a political environment which deprecates monetary success in business as the mark of a thwarted personality. In a free society, the elite is naturally at liberty to engage in any lawful activity. In an increasingly



rootless and uncertain society, a strong body of public opinion and a firmly held system of values do not necessarily operate to prevent part of the elite from squandering its talents in ways useless to themselves and to society.

Yet the defection of key elements of the Soviet elite to the West, a process which has occurred ever since the Bolshevik Revolution of 1917, suggests that the morale of the Communist creative minority must be weak. The acuteness of this problem is indicated by the extreme measures the Khrushchev government has taken to seal off the Soviet frontiers. The savage punishment, including death sentences, meted out to "economic criminals" (those who engage in illegal trade, speculation, etc.) suggests that economic leadership is weak and low in morale. By contrast, the refugees from Red China in recent years have included scarcely any defectors from the leadership element. The Soviet leaders are aware of the inefficiencies of their system. They face the basic problem of a centralization so complete that it requires an incredible amount of paperwork to control procedures and to detect those who break the economic rules. The result is managerial inefficiency to an extent completely unknown in the West.

The Soviets believe that cybernetics and automation will solve this problem. It is not accidental that the Soviets should have scored brilliant successes in rocketry. They concentrated their best resources in this area, primarily because of its vast military and strategic importance, but secondarily because rocketry involves a great deal of machine programming and automation.

"The year 1956," write Kintner and Kornfeder, ". . . was also the year in which Soviet mathematicians, physiologists, psychologists, economists and engineers officially and ardently embraced the science of cybernetics ('the science of control of man, machine and society'). Cybernetics had previously been denounced as a capitalist device for the further exploitation of workers through automation." By 1959, Arab-Ogley was asserting that "cybernetics will replace historical materialism as the guide to social processes" and in 1960 Nesmeyanov claimed that "cybernetics is completely in harmony with dialectical materialism."<sup>3</sup>

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<sup>3</sup> William R. Kintner and Joseph Z. Kornfeder, *The New Frontier of War* (Chicago: Henry Regnery, 1962), pp. 162, 164. Arab-Ogley's views are heretical and he was demoted, but intensified Soviet research on a broad front is being devoted to the utilization of cybernetics for total control of human activity.

The Soviets hope that control by machine programming will eliminate a vast bureaucracy, an overblown, inefficient and corruptible horde of economic detectives and mountains of paper work. It is supposed to enable a comparatively small number of excellent minds to program complete instructions to machines equipped with feedback mechanisms, enabling the latter to control, swiftly and accurately, production processes, factories, accounting systems and production and transportation flows.

Similar machines can be devised to weigh complex political and military situations and arrive at optimum decisions, to choose targets for aggressive action (not merely on the basis of Soviet priorities, but also on the basis of probable Western reaction); they can be devised to teach and test students, to predict legal decisions, to translate documents from one language to another and to determine authorship.<sup>4</sup>

Developments in cybernetics and control of economic processes by machine programming might make the socialist system workable and even somewhat efficient. The consequences, as far as intellectual elites are concerned, could be momentous. In a machine-controlled society, there will always be room on the top. The demand for first class, originating minds would probably be much greater than it is today. Some of these minds would function entirely outside the machine-programmed sector of the society; others would devise the cybernetic and automation control systems; still others would code the machines and feed the necessary data and programs into them.

In such a society, large numbers of the middle-echelon elite would become economically superfluous as far as their present skills and functions are concerned. Machines can displace men who audit books, check inventories, blend gasolines, decide which products to reject as inferior, test students, pilot airplanes, mix prescriptions, engineer new products to specification, serve as bank tellers, check income tax frauds and route trains in marshaling yards. The casualties among office workers would probably be considerable; those among factory workers would be enormous.

If a large variety of skills of the middle-echelon elite were elimi-

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<sup>4</sup> A recent example is the analysis by machine of those essays in *The Federalist*, the authorship of which was previously disputed. Two American statisticians fed the machine data on sentence-length, frequency of use of various words, etc., etc., by Alexander Hamilton and James Madison. On this basis, the machine determined authorship. In each case, the probable error, as computed by the machine, was so low that the results could be accepted as certainties.

nated, it would not necessarily follow at all that this elite would be displaced or even reduced in number. While the issue is controversial, it seems probable that continuing automation and advancing machine programming will simply accelerate present trends: that is to say, they will displace factory workers by service workers and manual workers by office workers.

Certain elements are exempt from the destructive effects of this revolution on their employment. The very brilliant and genuinely creative have already been mentioned. Another group which is immune consists of those whose jobs are not worth automating. This includes large numbers of repair and maintenance men, waiters, receptionists, salesmen and retail clerks. If the customer who goes to a filling station for gas wants to know how the fishing is at the lake, the servomatic machine will not satisfy his curiosity.

Thus far, the cybernetic revolution has been primarily an American phenomenon. It has had its most massive negative impact on factory labor in the major industries, such as Detroit, eliminating primarily semi-skilled and unskilled labor and causing a major problem of largely Negro unemployment. Its positive effect has been to magnify the demand for technologically and scientifically competent personnel at all grades and to upgrade the labor force in terms of training and intelligence.

If cybernetics and automation mean a revolutionary and drastic rise in the minimum threshold of mental ability in the economic system, they will magnify the social problem of the economically submarginal man. It would also follow that the fate of the world and the result of the struggle between the Soviets and the free nations for world mastery will increasingly depend on the quality of the intellectual elites and the success of the two systems in training, mobilizing, directing and utilizing them.

### **Human Inequality and the Backward Areas**

In the postwar world, the West has become acutely aware of the fact that the majority of mankind lives under conditions of economic backwardness, mental stultification and hard toil, with no visible hope for economic betterment and under the shadow of famine. This condition has been recognized as a moral problem for mankind as a whole. There is patently no justice in a world order in which the majority, by reason of nationality and habitat and irrespective of

intellectual potential and human worth, is condemned to a life which is little better than that of wild animals.

The United States government has sought to end these evils; unfortunately, it has taken action which will perpetuate and aggravate them. The failure is not in small areas of detail, but in major premises and policies. The root of the erroneous policies and self-defeating procedures is the assumption that men, classes and races are equal in capacity and that human resources can be stepped up to any level by education.

In Africa and the Middle East, with the pious purpose of destroying colonialism, we have unleashed the forces of savage race and class warfare. We have forced the emigration and expulsion of the European elite, which is in fact virtually the *only* elite, and by doing this we have condemned the area to a swift regression to chaos and barbarism.

In Latin America, we are pursuing a policy of aiding in collectivist and government-controlled undertakings and are stimulating punitive legislation and taxation which causes capital flight and hampers modernization.

Instead of concentrating our aid on countries which are strong in human resources, endowed with free institutions, individualistic and self-reliant, we often shower aid on nations ruled by despotic governments of the left, collectivist, hostile to our ideals and institutions and poorly endowed with human resources. The commitment to aid the underdeveloped nations in modernization is too often made without reference to population growth and population policy. We merely give lip service to the recognition that unchecked demographic expansion involving genetic deterioration can lead to catastrophe, regardless of the amount of dollar aid poured in.

Common sense would dictate that, in considering economic aid to nations in the throes of population explosions, we regard the steps being taken to control population growth as basic to the economic picture. The expansion of population now occurring on a worldwide scale is not only producing too many people, it is also producing a superfluity of human beings who are mentally ill-equipped for the work of modern civilization. In plain English, present population trends involve a serious genetic deterioration in human intelligence.

On reflection, this fact, which is scarcely ever mentioned in the

voluminous literature of demography, becomes obvious. World leadership for at least the past five hundred years has come from Western and Central Europe, from areas of white overseas settlement and from Jewry. These groups, which constitute the core of Western civilization, either have moderate rates of population growth or stabilized populations. Consequently, each year they form a smaller proportion of the human race. In the other actual and potential leadership areas, Soviet population increase has fallen to about the United States level. Japan has been successful in reducing her rate of population increase. After a catastrophic population explosion in Red China, the regime began to propagandize actively for birth control and may accept this as permanent policy.

By contrast, the areas of most rapid world population increase are Negro Africa, the Middle East, Latin America and Southeast Asia. As a whole, these regions are genetically unpromising. Concerning Negro intellectual potential, nothing more need be said at this juncture. The Middle East, or at least the Muslim population which forms the immense majority of its inhabitants, has produced virtually nothing that is intellectually impressive over the past two hundred years. The reasons for this may be obscure, but the assertion itself can scarcely be challenged. In Latin America, the population explosion is most marked among the Negro masses, the Indian peasants and the mestizo elements—groups which have also produced little that is creative or enriching of human life in proportion to their numbers. As for Southeast Asia, the area is a question mark. Our information about the intellectual potential of its inhabitants is fragmentary. We know that India has produced great scientists and thinkers *in our own time*. If there are not many of them, the chief reason may be the economic environment of misery, squalor and hunger.

Class reproduction patterns are also unfavorable to human intelligence. The rural areas are more fertile than the cities. In almost every country, the undereducated, the unskilled, the poor and the unsuccessful show much greater fecundity than the educated, capable and successful minority.

The political and social effects of population trends which reduce the inherited intellectual potential of the human species must be viewed with profound misgivings. A democracy of the unfit is more likely to choose monsters for its rulers than a democracy of the fit. As the level of brain-power declines, we can expect that even the

affluent nations may become, to an increasing extent, the dupes of demagogues and scoundrels.

Genetic deterioration of the human race is frequently paralleled by growing lip service to democracy. The slogan of the democracy of the unfit has been echoed by Tom Mboya, the Kenya political leader: "One man, one vote." In this conception of democracy, participation in government is totally divorced from knowledge, from moral integrity or from ability to understand the issues. This crude concept is by no means peculiarly African. We Americans consider it a civic duty to "get out the vote" without reflecting on the possibility that the reluctant voter may well be deficient in responsibility, intelligence or understanding of the issues and that it might be better for the nation if his voice were not heard and his ballot not cast. When the Supreme Court strikes down state laws requiring that citizens be able to read and explain a paragraph of the Constitution before being allowed to vote, it reflects the same rather primitive conception of democracy, one quite alien to the thinking of the founding fathers of the nation.<sup>5</sup>

### Quantity and Quality

The two major problems for the long-term future are the *quantity* and the *quality* of population. Based on a good deal of widely scattered and as yet imperfectly analyzed scientific work, Coon suggests that there may be an inbuilt biological mechanism for population control. Among animals, stress and crowding stimulate the hypothalamus, which in turn signals the anterior lobe of the pituitary gland and, as a result, the secretion of sperm, the production of sex steroids and the ovulation mechanism are inhibited. Sperm cells may simultaneously be deformed. Stunting, reduced fertility and increased cholesterol levels result. Coon suggests that studies of the very high blood pressure of urbanized Negroes in both America and Africa point to a similar process among humans and that there are inherited biological differences in the capacity to resist crowding and stress. A possible conclusion is that we will eventually get quantitative population control through neuroendocrinological selection. In other words, human strains able to resist stress and congestion will become dominant and reproduce, whereas those unable to do so will be hospitalized for mental disease or perhaps prematurely

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<sup>5</sup> Obviously, this criticism would not apply to a Court decision that merely demanded that literacy clauses be interpreted in a racially non-discriminatory manner.

killed by heart attack. In either case, their fertility will be severely reduced or eliminated. Coon does not suggest, however, that this natural selection process would necessarily favor more over less intelligent human beings.<sup>6</sup>

The *qualitative* improvement of human populations presupposes either a change in class and race attitudes toward reproduction over those prevalent today (and this on a virtually global scale) or else societary intervention to seek to bring about genetic improvement. Eugenics, through sterilization of the supposedly unfit, merely eliminates those who definitely should not reproduce; it does not produce a numerous intellectual elite. Moreover, it is a power subject to terrible abuses as the history of Nazi Germany reveals.

A more promising approach is to devise measures to increase the fertility of the intellectual elite. Artificial insemination of women with the sperm of exceptionally gifted men has been urged by Professor Hermann J. Muller, the distinguished 1946 Nobel Prize winner in Medicine and Physiology, for over half a century. Sperm can be obtained from outstanding men in quantities sufficient to impregnate thousands of women and can be kept indefinitely in a frozen state. Women who are unable to have children by their husbands, and married couples who wish to have at least one exceptional child, could resort to germinal selection of this sort. In this way, a small minority of the female population might multiply the production of genius several fold.<sup>7</sup> Since artificial insemination is already widely used, what is needed, among other things, is to educate women to the fact that highly gifted children tend to be better balanced emotionally, less subject to neurosis and psychosis, more stimulating and more likely to have satisfying marriages than aver-

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<sup>6</sup> Coon, *The Origin of Races*, *op. cit.*, pp. 106-11.

<sup>7</sup> About 1% of American white and 0.14% of American colored children have I.Q.s over 140, according to Shuey, *op. cit.*, p. 232. This suggests that about 1.6 million of the U.S. population of 180 million qualify as gifted. In other words, about 25,000 births of gifted children have been occurring annually. Assume that artificial inseminations with geniuses involve donors with I.Q.s of 160 and recipients females with I.Q.s of 120 (the thought being that the more intelligent women are those most likely to want superior children). Then the most probable value for the I.Q. of the progeny would be 140, and we could assume that half would rank higher and half lower. Accordingly, to double the production of gifted children in the United States by germinal selection, about 50,000 successful inseminations of this sort would be needed. Yet it is estimated that there were from 50,000 to 100,000 Americans who owed their lives to artificial insemination in 1960, and a large proportion of them were the germinal product of husband and wife. See Elmer Pendell, *The Next Civilization* (Dallas: Royal Publishing Company, 1960), p. 102.

age children.<sup>8</sup> In addition, the child of superior intelligence is likely to be much more of an economic asset to his parents than the ordinary child.

This proposal, which has the potentiality of determining which civilizations and which countries will have the mental power necessary for world leadership in science, the arts and political and economic development, has received scant attention in the Western world. Man devotes immense concentrations of energy to seemingly dire emergencies, which are in reality ephemeral and transitory, while overlooking the slow, glacial processes that determine the shape of the future.<sup>9</sup>

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<sup>8</sup> See the summary of these aspects of the Terman studies of gifted children in Tyler, *op. cit.*, pp. 398-409.

<sup>9</sup> The "invention" of artificial insemination as a technique to improve the genetic equipment of mankind was made by Hermann J. Muller in 1910, in a paper which he delivered at Columbia University while he was a student there. The first published paper on artificial insemination was by Mrs. Marion Piddington, an Australian social worker. Her 1916 paper was entitled "Scientific Motherhood" and it was followed in 1918 by a pamphlet entitled *Facultative Motherhood* by Dr. Henry Waterman Swan, also an Australian. See Elmer Pendell, *Population on the Loose* (New York: Wilfred Funk, 1951), p. 340.

In 1925, Muller proposed germinal selection in a lecture delivered at the University of Texas entitled "The Promise of Biology." In 1935, this lecture was reprinted in *Out of the Night, A Biologist's View of the Future* (New York: Vanguard). Here Muller made the additional suggestion that the germ cells be kept for a considerable period of time before being used to avoid jealousy and to gain a better time perspective on the talents of the donor.

It is often assumed that the first major presentation of the theme of genetic improvement through artificial insemination was contained in a paper by Dr. A. S. Serebrovsky, entitled (in German) "Anthropogenetik und Eugenik in der sozialistischen Gesellschaft." This was published (in Russian) as the leading article of the first issue of the *Journal of the Medico-Biological Institute*, Moscow, in 1929. Less than a decade later, Serebrovsky fell victim to the Lysenko purge of Soviet geneticists and he is presumed to have died in a concentration camp or to have been executed.

A scrutiny of Serebrovsky's article, which has been read for us by a Russian expert in the Hoover Institution, shows that his proposals were primitive and somewhat unscientific. He advocated having young proletarian women rounded up and placed in concentration camps where they would be studied by young proletarian men of "deep socialist convictions." This suggests that Serebrovsky may have held the naive belief that ideologies can be genetically transmitted. According to the Russian expert who scanned the article for us, Serebrovsky did not propose artificial insemination, but rather imagined that one man could service a thousand women.

In an article on "Should We Weaken or Strengthen our Genetic Heritage" in "Evolution and Man's Progress," *Daedalus* (Summer 1961), Dr. Muller suggests the possibility of flushing eggs out of the female reproductive tract and fertilizing them *in vitro* with chosen sperm. These eggs could then be implanted in selected female hosts. The eggs, like the sperm, could be stored indefinitely. In this article, Muller states:

"In fact, it seems not unlikely that in respect to the human faculties of the highest group importance—such as the neuronal equipment conducive to integrated understanding, foresight, scrupulousness, humility, regard for others, and self-sacrifice—



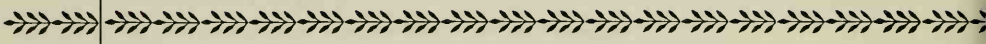
Whether Muller's particular proposals or some other approach contain the solution to the problem is a matter on which we need not express opinion. The science of genetics is young; that of human genetics has huge uncharted areas on the chromosome map; the application of eugenic controls to qualitative upgrading of the human population must inevitably suffer from these gaps.

However, the basic problem remains and the failure to act cannot be entirely excused by the lack of comprehensive knowledge. The progress of human civilization, perhaps even its continued existence, requires that the inherited nature of man, his gene pool, improve so that it may keep pace with the advance in man's control over the material world. We, as a species, have produced wonders; what we lack is a human population sufficiently wise and sufficiently intelligent to use them for the welfare of mankind.

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modern cultural conditions may actually lead to a lower rate of reproduction on the part of their possessors than the rate of those with the opposite attributes. Is it not often true today, when birth control is available, that those persons are likely to have the largest retinue of children, whether legitimate or otherwise, who are most lacking in perspective, or are dominated by superstitious taboos, or are unduly egotistical, or heedless to others' needs, or shiftless, or bungling in techniques? These considerations raise the possibility that a much faster acting and more serious cause of genetic deterioration than the accumulation of detrimental mutations occurring in the wake of relaxed selections, is an actual reversal of selection in regard to those psychological traits that are of the highest social importance. Objective data are badly needed on this question." *Daedalus, op. cit.*, p. 446.





*“Free though they are, they are not free altogether. They too serve a master in the shape of Law, whom they dread far more intensely than your servants dread you. They show this by doing whatever their master orders, and his orders are always the same: ‘In action, it is forbidden to retire in the face of enemy forces of whatever strength. Troops are to keep their formation and to conquer or die.’”*

—DAMARATUS, the Greek renegade, to Xerxes, Emperor of Persia, on why the Spartans are indomitable, shortly before Thermopylae (480 B.C.).

## XII

# The Loyal, the Unloyal and the Disloyal

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**P**SYCHOLOGICAL COHESION and patriotism are basic elements in a nation's strength. Possession of a first-class intellectual elite is of little use to a nation-state if that elite is alienated from its society and functions outside it. Should the elite be actively hostile to the nation and operate as a "treasonable" element within it, then it is self-evidently a negative factor in national strength.

In the Western civilization area as a whole, there is considerable evidence that processes of alienation have developed to a very dangerous extent. In England, this disease tends to be general. In the United States prior to 1961, it was primarily an ailment of the intellectuals, which was gradually infecting the rest of the population. The unloyalty of the intellectual politicians was masked by subterfuge and the masses remained largely oblivious of the true situation. In very recent years, the problem of unloyalty has inevitably become much more acute, because the powerful American Left has tended to prefer various forms of accommodation to the Soviet Union to other goals.

In November, 1961, the Gallup Poll asked Britons and Americans whether they favored risking nuclear war as an alternative to living under Communism. The replies were as follows:<sup>1</sup>

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<sup>1</sup> American Institute of Public Opinion (Princeton: 1961), November.

<i>Alternatives</i>	<i>American Views</i>	<i>British Views</i>
Fight nuclear war	81%	21%
Live under Communism	6%	31%
Undecided	13%	48%

Thus, the process of disintegration of traditional national and ideological allegiance had spread so far in England that four-fifths of the public was not prepared to say it would risk nuclear war rather than live under Soviet rule. Although eight of ten Americans previously polled rated their survival chances under nuclear attack as slight, 81% were ready to take that risk.

This poll cast a searching light on the value of the alliance with Britain in the event of a nuclear showdown. While this poll suggested that the British might not fight in the event of a nuclear showdown, it is well to remember that in the 1930's the students of Oxford voted overwhelmingly against fighting for King and Country. Nevertheless, these same people distinguished themselves as part of the officer corps that fought the Battle of Britain.

A UNESCO study polled public opinion in nine countries concerning levels of personal satisfaction and security. The questions dealt with the individual's attitude toward living in his country, his evaluation of his opportunities there and his attitude toward the prevailing class structure.

The degree of satisfaction and acceptance varied widely from country to country. This variation was not necessarily caused by real differences in conditions. For example, recent studies have shown that upward mobility from the lower classes to the business and political elite is about the same in Western Europe as in the United States.<sup>2</sup> Yet public opinion about this matter is very different in the two areas. The American attitude is dominated by belief in equal opportunity and unlimited frontiers, whereas the European outlook has been largely poisoned by the Marxist doctrines of class, both in their communist and in their social-democratic forms. In terms of cohesion and loyalty, opinion is more important than reality, for loyalty and allegiance are creatures of the mind.

The UNESCO study developed data which may be indicative of the extent of active patriotism in a variety of countries. We may take the percentage of people picking their own country as the place where they want to live and the UNESCO "security index," reflect-

<sup>2</sup> Lipset and Bendix, *op. cit.*, pp. 17-33.

ing expectations, job security, ability to plan and general satisfaction, as indicators of national cohesion or national fragmentation.<sup>3</sup>

## ATTITUDE TOWARD ONE'S COUNTRY

<i>Country</i>	<i>Percent Preferring to Live in Own Country</i>	<i>Security Index (percent)</i>
United States	96	39
Australia	83	42
United Kingdom	51	35
Norway	50	39
Mexico	45	39
France	43	20
Italy	36	32
Netherlands	31	33
Western Germany	30	26

The figures on "percentage preferring to live in own country" reveal the far stronger commitment of Americans and Australians to their native lands than that of the peoples of Europe. It is extraordinary that, of the nine countries in which the polls were taken, there were only three in which a majority preferred to live at home. These figures are obviously influenced by comparative living levels, but this is evidently not the only factor involved. The fact that West Germans are far more interested in emigrating than Frenchmen or Norwegians may be a psychological consequence of disaster in World War II or a result of close contacts with the American army of occupation.

Willingness to live outside one's own country does not always imply indifference toward it. The Chinese in Southeast Asia consider themselves Chinese. During the Nazi era, a large part of the overseas Germans identified with the Third Reich. In our own history, the American colonists who went to Texas and Hawaii not only remained American at heart, but strove successfully to bring their adopted areas into the United States. Similarly, lack of desire to emigrate, particularly in a backward country such as Mexico, may reflect not so much attachment to one's native land, as lack of opportunity or imagination.

Yet in the contemporary context, the place to which the immi-

<sup>3</sup> William Buchanan and Hadley Cantril, *How Nations See Each Other: A Study in Public Opinion* (Urbana: University of Illinois Press, 1953), pp. 30, 68-83. It should be observed that on the continent, part of the disaffection may have been caused by the preceding war and by the unsettled conditions of the post-war era.

grants wish to go is usually the United States. It is, therefore, immigration which generally implies the amalgamation of the migrant into his nation of adoption. A European who wishes to emigrate permanently to America usually has little attachment to his fatherland and does not feel strongly either that he belongs to that nation-state or has duties toward it either as a civilian or as a soldier.

The "security index" is not clearly related to real income level. Despite the greatest prosperity ever known in time or space, Americans appear to be as discontented with their lot as Mexicans. France and West Germany show up worst in these figures. In each instance, the survey reveals lack of attachment to the fatherland combined with such a high degree of personal discontent that it suggests widespread class schism and alienation from the social order. The questionnaire, nevertheless, has its limitation. A high security index may simply reflect the aforementioned lack of imagination; it may be the response of an apathetic, tradition-bound people, to which the idea of progress is alien and which has not yet reached the level of either identification with or opposition to the nation.

Nations can be defined as large sovereign communities with a common political will. As Renan put it: "A nation is a spiritual principle made by two things—the one in the present, the other in the past; the one is possession in common of a rich bequest of memories; the other a present sense of agreement, a desire to live together, a will to continue to make effective the heritage received as an undivided unity." To the extent that there is a weak sense of agreement, a declining desire to live together, and a doubtful attitude with respect to the heritage (possibilities which are strongly suggested by the above statistics), nations tend to lose their nationhood.

The strength of the common political will and the feeling of belonging together in one state is great in the United States, Britain, and Western Europe and Japan because nations have emerged in these areas, persisted and served as unifying political and psychic forces. This is probably true of Russia as such, but hardly of all the nationalities within the U.S.S.R. The non-Russian nations of the U.S.S.R. often resent Great Russian hegemony and display centrifugal tendencies.

Sovereignty and hence the sense of national identification are today in flux. The military, political and economic need to transfer certain aspects of sovereignty to multi-national organizations arises at a time when developments in the mass communications area are

reducing the importance of specifically national cultures. As the Soviet-bloc and the Free World Alliance assumed shape, patriotism ceased to be simple; unitary allegiance and loyalty were partially transferred to the new supra-national alliances. This process does not necessarily reduce either the effectiveness and utility of elites or the cohesion of peoples. It may increase them.

From the standpoint of the nation-state, the paramount necessities are that there be a positive commitment of loyalty to country and to a coherent set of beliefs, and that the society be reasonably free both from apathy and active disloyalty. Therefore, the progress of Western Europe toward unity and the development of NATO were not threats to nationalism, but reinforcements and enlargements of it. This alliance system joins peoples who share a common Graeco-Hebraic-Christian tradition, who are rational in outlook, bound together by history, institutions and race, alike in cherishing general ideals of due process and of individual freedom.

By contrast, the transfer, both overt and surreptitious, of the sovereignty of Western powers to the United Nations is a process which can be destructive of national consciousness. The Afro-Asian majority of the United Nations is largely outside the framework of modern civilization. Its peoples are primitive, steeped in incredible ignorance and superstition; their masses live outside the modern world and remote from it, ignorant of due process, not familiar with the Western concept of the dignity and worth of the individual, alien from us in history, institutions and laws. Their rulers have, for the most part, a veneer of Western culture of varying durability, but the appeal of Marxism-Leninism, which offers these politicalized pseudo-intellectuals unlimited power as "professional revolutionaries," is inevitably stronger. The United Nations may be a convenient area for diplomatic negotiations, but it cannot, in its present form, be more than a caricature of an oecumenical state. For the civilized portion of the world, it is not a new cynosure for allegiance, dedication and faith, but can be an acid corroding them.

### **The Treason of the Scholars**

A much more fundamental aspect of the loyalty problem is the tendency of intelligentsias to become the grave-diggers of those regimes and social orders which support them. De Tocqueville expressed amazement at the way the French aristocracy of the *ancien regime* pampered a rising class of literati, who were largely ignorant



of French conditions, had no experience in the real problems of government and yet believed that they could bring about a millennium on earth by applying the light of natural rights and pure reason to all existing institutions—and, in this manner, abolishing them virtually in their entirety. After pointing out that powerful aristocracies do not merely shape the course of public affairs but guide public opinion, set the tone for writers and become arbiters of ideas (and after adding that the French nobility of the late 18th century was supine, discredited and losing its power), de Tocqueville wrote:

“Still more remarkable was the fact that this very aristocracy, whose place the writers had taken, made much of them. So completely had our nobility forgotten that new political theories, once they are generally accepted, inevitably rouse popular passions and bear fruit in deeds, that they regarded even the doctrines most hostile to their prerogatives, and in fact to their very existence, as mere flights of fancy, entertaining *jeux d’esprit*. So they too took a hand in the new, delightful game and, while clinging to their immunities and privileges, talked lightheartedly of the ‘absurdity’ of all the old French customs.”

The alienation of the Russian intellectuals from the regime of czarism and in fact from Western liberal civilization *in toto* was even more painfully evident, and produced ultimately even more catastrophic results.

“The greatest of Russian geniuses, even at the height of their spiritual life and creative powers,” wrote Nikolai Berdyayev, “were unable to bear the lofty peaks and haughty freedom of the spirit; they were afraid of solitude and hurled themselves down into the flat places of the life of the people, hoping by so doing to reach a higher truth. . . . But they surrendered to the peasants, not having the strength to defend their truth as a national truth common to everybody; and they also looked upon the people, ‘the folk,’ as in opposition to the cultured class—a mistake which had dire consequences for the national consciousness. The irreligious ‘left’ garnered the harvest of this identification of a people with a class. . . . All the time there were in the heart of Slavophilism seeds of a larger and more living understanding of the people, as a nation, as a mystical body; but the slavophiles fell victims to the malady of the intellectuals and so did Dostoyevsky himself.”<sup>4</sup>

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<sup>4</sup> Reprinted from “Dostoyevsky” in de Huszar, *op cit.*, pp. 111-12.

In the contemporary Western world, the United States included, the prevailing *Weltanschauung* of the intellectuals is characterized by hostility toward the social order of liberal capitalism and the political order of division of powers. Despite the fact that the intellectual in the United States enjoys perhaps unprecedented prestige, power and affluence,<sup>5</sup> he habitually pictures himself as neglected and undervalued.

The prevailing political stance of the intellectual is radical and socialist. Despite gross unfamiliarity with the command problems of political life and, as a rule, incapacity to govern, he is quick to assume that those who do rule—the President, Congress, the men in command posts of economic power—are not only his inferiors, but uneducated, boorish, foolish, mediocre, greedy, corrupt and immoral. He is attracted to the most lofty and abstract problems of social and political organization, probably because seeking to cope with them gives him a feeling of power and mission.

The power-seeking intellectual in the non-Soviet world becomes a self-appointed champion of the rights of the proletariat or “the common people.” This enables him to disguise his ambition in the garments of specious altruism and humanity. Often he begins by deceiving himself and only later deludes others. The historic record is filled with instances in which the idealistic intellectual, having gained power, does not hesitate to commit any and all crimes in the name of the proletariat or the people, or even against them, as a means of consolidating and aggrandizing that power.

In America, the intellectual is not dazzled by Marxism, but by the aura of Marxist concepts, filtered through the fuzzy and untrained minds of non-Communist interpreters. What results is an inchoate congeries of socialistic doctrines, which are neither coordinated and systematized, nor even called by their right name. The socialism of the mentally unkempt in the United States is generally known as “liberalism” or “progressivism.” What these doctrines have in common is their depiction of American life as psychically barren, unrewarding, unhappy, tension-ridden, other-directed. One buries a social order by convincing its members that it is not worth defending.

The extent to which this process of spiritual corrosion has already rotted the fabric of American society is a matter of conjecture. The

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<sup>5</sup> Lipset and Bendix, *op. cit.*, passim; also Lipset in de Huszar, *op. cit.*, pp. 510-13.

danger is great and the time short for the healthy forces in the American community to reassert themselves. A prerequisite for such a national resurrection is that the pseudo-intelligentsia be supplanted by a genuine creative minority.

### The Anxious American

According to Talcott Parsons of Harvard, "the typical Western individual . . . has been through an experience, in the process of growing to adulthood, which involved emotional strains of such severity as to produce an adult personality with a large reservoir of aggressive disposition." This aggressive attitude, still according to Parsons, must be repressed because the individual is expected to shoulder his burden of responsibility, conform to a rigid discipline and succeed in a highly competitive occupational system. Parsons thinks that Western man is bound by compulsive attitudes toward sex and the ideal of "compulsive masculinity." He believes that the West possesses a system of "mutually reinforcing . . . forces acting on the individual to generate large quantities of aggressive impulse." Moreover, the processes of science and technological change introduce a dynamic factor into this system which continuously upsets precarious balances. Parsons believes that in the Western world, "levels of insecurity and hence of anxiety and aggression" tend to increase.<sup>6</sup>

We have quoted and paraphrased Parsons at such length, not because we believe that his ideas have merit, but because he is one of the more eminent figures in the ocean of mediocrity known as American sociology, and because his appraisal of the American character is typical of that milieu.

Now for a few critical comments. When one rereads Parsons' chain of dogmatic assertions, it becomes quite clear that the society about which he is writing bears little resemblance to that which most normal members of the Western civilization area experience. The child, as a rule, is not subjected to fearful "emotional strains" which create reservoirs of aggression, but is allowed to live a largely undisciplined existence by overindulgent parents. The welfare state with its cradle-to-the-grave social security system does not impose rigid discipline, subject its members to destroying competition, foster insecurity or build up aggression. The notion that Western man is forced into

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<sup>6</sup> Talcott Parson, "Aggression in the Social Structure of the Western World," *Psychiatry* (1947), 167-82.

“compulsive masculinity” and compulsive sex will appear ridiculous to most healthy male members of that civilization area.

If Americans as a people are insecure, it seems strange that they listen politely to diatribes against their free society by foreigners of all sorts, including would-be political mentors who come from nations whose history is little more than a succession of crimes. American tolerance toward dissent and difference is hardly characteristic of an anxiety-ridden and insecure people. In fact, the insecure generally fear criticism and hence refuse to listen to it. Nor do Americans habitually boast about their national achievements or vaunt their collective superiority. If explosive latent aggression characterizes the American personality, it is strange that the United States has managed to develop one of the stablest systems of representative government on earth and has solved all internal conflicts, save one, without recourse to civil war.

The peoples of Latin America, of the Soviet alliance and of many of the newly hatched nations whose representatives today strut in the U.N. building on the East River do reveal their insecurity and their badly leashed aggression by their conduct. They make preposterous claims for their countries, as exemplified by the Soviet habit of claiming to have invented all those devices which Russia, in fact, borrowed from the West. They display anxiety by their intense interest in the reaction of foreigners to them and by their resentment of all foreign criticism. The attribution of their own national vices to others and the habit of blaming foreign nations for their own failure to develop good societies are part of this pattern.

One suspects that the Talcott Parsons' portrait of America may be more revealing of the reactions of the American pseudo-intelligentsia as a group than of anything else. Within this group, the sense of insecurity, of anxiety and of fear would seem to be prevalent and compelling. It is easy to believe that a large part of its male membership regards sexuality as onerous. There is also reason to believe that a characteristic attitude is to fear competition and shrink from aggression, while simultaneously building up high latent charges of explosive aggression—an aggression, by the way, often directed against their country and its established institutions.

This caricature of the American psyche also reflects the extent to which sociology and social psychology have in recent years tended to become academic sects dedicated to the repudiation of the fundamental values and institutions of the nation. The sharpest sociologi-

cal attacks are not unexpectedly directed against the idea of freedom.

The right-wing reactionary side of this coin is the so-called plant sociology of Mayo, which claims among its ancestors the medieval Christian Church, German Romanticism, Nazism and Communism. "Man is a uniquely social animal who can achieve complete 'freedom' only by submerging himself in the group," wrote two disciples of Mayo. And again: "If a slave enjoys his slavery, he is free, while a free man who wants more freedom is a slave."<sup>7</sup>

The left-wing version of this attack on freedom does not so much deny that liberty is a true value as allege that the freedom offered by a capitalist society is shoddy and meretricious. The most persuasive advocate of this view is Erich Fromm, whose most widely known book has the characteristic title, *Escape from Freedom*:<sup>8</sup> capitalism dehumanizes the relationship between man and man, destroys pride of workmanship, and substitutes a socially approved stereotype for true individuality. Most of this is a paraphrase of Karl Marx's early writings and his chapter on "commodity fetishism," but without acknowledgment of source. (After all, hardly anybody in America has actually read *Das Kapital*!) Freudian concepts, a few obscure opinions of the late Harry Stack Sullivan and some of Fromm's own expressions of high and noble purpose have been added to the cocktail.

Now Marx at least investigated the stubborn facts of the society in which he lived. His economics was based in considerable part on the concrete data concerning the British industrial revolution contained in the Factory Reports of the time. He did not go to Aristotle to find out what capitalist society was like and how it works. Moreover, he was sufficiently disgusted with doctrinaire imitators and plagiarizers and with those who preferred copying the ideas of others to taking a fresh look at the facts to once exclaim: "*Moi, je ne suis pas marxiste.*"

Another sociologist whose work seems motivated by hatred of American institutions and American freedom is the late C. Wright Mills of Columbia University. His book, *White Collar*, sang the same dirge about the way capitalism prevents the flowering of the truly human personality and substitutes relationships between things for relationships between people. It was a national *succès d'estime* and

<sup>7</sup> Clark Kerr and Lloyd H. Fisher, *Common Frontiers of the Social Sciences*, (Glencoe, Ill.: Free Press, 1957), pp. 289, 300-1.

<sup>8</sup> Fromm, *Escape from Freedom* (New York: Rinehart, 1941).

a popular success as well. (In addition, it is widely used in American college classrooms.) It too borrowed copiously from the chapter of Marx's *Das Kapital* which we have just cited. (In 1960, Professor Mills presented his views at their most extreme by publishing a hate-saturated volume called *Listen, Yankee*, which Senator Thomas Dodd of Connecticut aptly characterized as "a scurrilously anti-American and pro-Castro diatribe.")<sup>9</sup>

In psychoanalysis, one of the pundits of the new ideology of un-freedom is already noted, Harry Stack Sullivan who sought to merge elements of Freudianism with the philosophy of John Dewey. The popularity of Sullivan with "liberal" sociologists and psychiatrists is presumably due to his stubborn conviction that human individuality does not exist *per se*, but is simply a bundle of relationships with other people.<sup>10</sup> Sullivan, the prophet of interpersonal relations, was too warped and disturbed a human being to have good interpersonal relations with anyone. Those who have weak ego structures fear freedom. They prefer regimented societies in which the natural slave can flourish.<sup>11</sup> Here again, we have the war of mediocrity, of psychic illness and of envy against the creative individual, the whole man—the man who lives a life of inner harmony.

### Caste and Loyalty

The fact that a nation-state is based on caste or slavery does not necessarily impair its cohesion or the patriotism of its people. Japan has an estimated two million *Etas*, a caste which is not only un-touchable, but unmentionable—the only element in Japan which is "dirty, degraded and utterly without pride."<sup>12</sup> Yet patriotism and national unity have been as intense in Japan as anywhere else on earth. The valor and unity of the Confederacy was not impaired by slavery or by the immense gulf which separated the races. The internal stability of the South was made possible by Negro acceptance of slavery, an acceptance evidenced by the absence of slave revolts at a time when white Southern manhood was engaged in combat. This acceptance of their lot by the large majority of South-

<sup>9</sup> Address to the Conference on Soviet Cold War Strategy (Paris: 1960).

<sup>10</sup> Harry Stack Sullivan, "The Illusion of Personal Individuality," *Psychiatry*, XIII, No. 3 (1950), 329.

<sup>11</sup> "He who is by nature not his own but another's man, is by nature a slave; and he may be said to be another's man who, being a human being, is also a possession." (Aristotle, *Politics*, 1254<sup>a</sup>, 10-18).

<sup>12</sup> Fosco Mariani, *Meeting with Japan* (New York: Viking, 1960), p. 222.

ern Negroes was a social phenomenon of which Negro leaders boasted in the post-bellum era. In his justly famous Cotton States Exposition speech in Atlanta in 1895, Booker T. Washington praised the loyalty and docility of the "8,000,000 Negroes whose habits you know, whose fidelity and love you have tested in days when to have proved treacherous meant the ruin of your firesides."

On the other hand, national cohesion is jeopardized if either an ethnic group which is deemed below the national standard asserts its claim to equality or if this putatively inferior group gains the upper hand. In the first instance, the conflict may split the nation into two hostile camps, as in the current case of the Union of South Africa. Considerations of justice and morality clash with that unyielding psychic substance which Sumner called folkways. The conflict must prove irreconcilable unless either the putatively inferior group abandons its claims or the dominant ethnic group revises its evaluation of the subordinated element.

Rule by the underdog, whether he be such by reason of class or race, occurs as a result of revolution. Revolutionaries favor this element because what it may lack in intelligence, knowledge and ability, it makes up for in resentment, envy, the desire to destroy, the urge toward revenge, the wish to soil what is clean and to dwarf whatever towers above the monotonous horizon of mediocrity. An affinity for dirt frequently characterizes truly revolutionary movements. To consider one of the most recent and least pleasant specimens of this genus, it seems not accidental that Fidel Castro's nickname in college was *bola de churre* ("ball of grease") or that his followers made a fetish of neither shaving nor trimming their beards.

When these underdog elements supplant the *ci-devant* ruling classes or ruling races, the latter are usually exterminated. The reason for this is the well-founded belief that they will never acquiesce in a status of subordination to those whom they consider their inferiors. The extermination of the upper classes by a revolutionary element is characteristic, not only of Communism, but of the jacqueries and the Anarchists. The annihilation of putatively superior ethnic groups occurred in Haiti under Toussaint l'Ouverture and Henry Christophe, in the Middle East under Genghis Khan and Tamerlane, in Germany and Eastern Europe under the Nazis. An ethnically superior element can be forced into a subordinate status and exploited when it is numerically too weak to change the situa-

tion. Examples include the Christian and Jewish enclaves in the Islamic world; the Chinese in Southeast Asia; the Jews in the U.S.S.R.

### The Levelers and the Protestant Ethos

The classic sociological theory of Western personality was developed by Max Weber, who argued that the Protestant ethos, by exalting work, frugality and material achievement, made modern capitalism possible. Weber foresaw the dissolution of this motivational complex because of the decline of religious asceticism and the impotence of "the ghost of dead religious beliefs." He wrote: "In the field of its highest development, in the United States, the pursuit of wealth, stripped of its religious and ethical meaning, tends to become associated with purely mundane passions, which often actually give it the character of sport."<sup>13</sup>

As Weber predicted, this Protestant ethos is dead or dying. In the non-Soviet West, new forces are shaping character structure. The quest for security has largely superseded the proud individualism of earlier eras. The stress on security means the aggrandizement of protective and stabilizing institutions: socialized sectors in the economy, price supports, agricultural subsidies, labor and welfare codes, monopolistic trade unions. About a century ago, Sir Henry Sumner Maine made the characteristically Victorian observation that human progress could be defined as a transition from status to contract. Our stress on security has brought about a reversal of this trend.<sup>14</sup> Moreover, in the democratic nation-states of the West, status inevitably tends to mean equality. It is a leveling, not a differentiating, force.

Doctrines of equality, both within and among nations, also level. At the minimum, they blur and minimize innate differences in talent among individuals, classes, nations and races. Closely associated with this is a preoccupation with environmental handicaps and the plight

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<sup>13</sup> Max Weber, *The Protestant Ethic and the Spirit of Capitalism*, trans. Talcott Parsons (New York: Scribner's, 1958), pp. 181-2.

<sup>14</sup> Maine meant by *status* a position determined by membership in a group as distinct from a position earned by one's own efforts and abilities. A medieval city worker might have the *status* of journeyman apprentice and an American worker who advances merely by trade union rules and seniority owes whatever position he has to *status*. On the other hand, an inventor who becomes rich by mental effort owes what he has to *contract*. This explanation seems necessary because Vance Packard, in his stimulating and popular *The Status Seekers* (New York: McKay, 1959), uses the word *status* in a different sense.



of the underdog, which involves guilt feelings toward those groups which are poor, ignorant and shiftless. If all the really significant differences between various peoples are due only to their conditions of life, if all are fundamentally equal in ability under the skin, then success must be undeserved and failure a cruel blow of fate. At the best, the successful are undeservedly lucky; at the worst, they are exploiters of their miserable brethren.

Add to this the sometimes murky influence of psychiatry and psychoanalysis. The sociologists of underdogery have sought to prove that the poor are not responsible for their poverty. Psychoanalysis, operating at a much deeper level, adds that the criminal is not responsible for his crimes, since the capacity to commit unspeakable acts is part of the human heritage and whether or not this capacity is likely to be actualized depends fundamentally on the environment of love.

Psychoanalysis teaches recognition and reconciliation rather than struggle. It may view the Calvinist carrier of the Protestant ethos and, to a certain extent, of Western civilization as a sexually repressed neurotic engaged in obsessional activities. The builder of industrial empires is no longer seen as a folk hero of Horatio Alger tales, but as a sick man in need of a doctor. And when his "disease" is cured, he will realize that his frantic activity was merely a defense mechanism against awareness of his incapacity to lead a full and mature emotional life.<sup>15</sup>

These doctrines and disciplines of the 20th century may have made us wiser, more tolerant, less driven, emotionally freer and more concerned with pleasure than our ancestors. But what they have done to the mechanisms of incentive and drive at the crucial command levels of our civilization is a very different matter. The limited question we are concerned with here is the extent to which Western character structure has been fundamentally transformed by these new ideas and winds of doctrine. Is the once traditional psychosociological portrait of Western man as aggressive and driven by an ethic of self-betterment hopelessly out of date?

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<sup>15</sup> Freud, like Marx, was a man of much broader vision than his followers. He believed that man had a "natural aversion to work" and that work was the result of suppressing the sexual instinct (the pleasure ego). However, he also recognized that the progress of civilization depends on the work drive. Repression, to this extent, was necessary to the survival and advance of modern society. See Sigmund Freud, *Civilization and its Discontents* (London: Hogarth, 1949); also Herbert Marcuse, *Eros and Civilization* (Boston: Beacon, 1955).

### Territory, Dominance, Hierarchy and Aggression

In a remarkable recent volume, Robert Ardrey has attempted a new synthesis of "the animal origins and nature of man," based on the salient discoveries in zoology and physical anthropology of the past fifty years.<sup>16</sup> Relying on the pioneer work of Eugene Marais on baboons, on C. R. Carpenter's studies of dominance in howler and rhesus monkeys, on Eliot Howard's pathbreaking *Territory in Bird-life*, on W. C. Allee's *Social Life of Animals* and on a variety of special studies, Ardrey presents impressive evidence that the instinct for the achievement of one's own territory is primary, due to the fact that territory determines survival. Throughout large areas of the animal kingdom, the majority of young adults fail to acquire and successfully defend territory of their own. These territoryless animals fall victim *en masse* to predators; the majority of the landless that escape this hazard almost invariably fail to find mates and thus also are biologically extinguished. The role of sexual selection is that the females seek males who are dominant and in possession of territory. With birds and quadrupeds, as with man, territory and dominance define male eligibility. The dominant males fertilize the most desirable females in all species; they fertilize the vast majority of females in some species.

In human society, private property is the counterpart of territory. Status perhaps best corresponds to dominance, but the dissociation between the formal aspects of the zoological and the human civilized hierarchy is here already apparent. Among humans, mere virility, strength and aggressiveness have become dissociated from the forms of ordered hierarchy achieved by animals. The breeding pattern is also markedly different. In the animal kingdom, females are for the most part the booty of victory in the battles for dominance and territory. Natural selection operates through the superior breeding opportunities of the dominant and territorially powerful minority. In human societies, and particularly in the affluent ones, this mechanism has almost completely broken down. The dominant human minority is seldom polygamous, nor does it express its power by exuberant mating. On the contrary, it may be relatively infertile.

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<sup>16</sup> Robert Ardrey, *African Genesis* (New York: Atheneum, 1961). A natural science major, a lecturer in anthropology and then for twenty years a playwright, Ardrey combines training in scientific method with the writer's art of organization, synthesis and elimination of the unimportant.

Its leading position may be partially due to descent from infertile lines which could therefore offer better-than-average educational opportunities and inheritances. It may consist of individuals with weak sexual and reproductive drives who could therefore easily defer marriage until they got ahead. The dominant male element may tend to choose spouses, as Galton suggested, who are rich because they are heiresses and heiresses because they are biologically infertile. All these and other processes, operating within human societies, tend to dissociate the instinctual quest for dominance and territory from its zoological role in natural selection. Power over men and things no longer yields breeding power. Yet man's instinctual drives toward property and power persevere; and the resulting implications of this observation for the study of contemporary man are immense—most seriously influencing psychology, political philosophy and sociology.

Pecking-order studies, chiefly of birds, show that the comparatively unsuccessful males and females need the status and security which the hierarchy of dominance gives them. They prefer even lowly status to lack of status. Rank not only satisfies the ambition of the strong, but the insecurity of the weak. One danger of the egalitarian society is that, by destroying all status, it creates anxiety among the masses. The logical transition is from the egalitarian hell of insecurity to the Communist hell of unfreedom.

Turning to man's origins, Ardrey infers from the work of Oakley, Dart, Brain, Leakey and others that the man who emerged in Africa was the descendant of a special breed of carnivorous killer-apes. He was not so much man the tool-maker as man the weapon-maker, a distinction glossed over by generations of overly sentimental anthropologists. The predatory instinct, combined with man's big brain, explains the presence of as many as 50,000 animal victims in the fossil deposits of only one of Dart's caves.

Domestication of animals—implying that they no longer must search and find their food, be on guard against predators or make decisions vital to their survival—has resulted, over the generations and through natural selection, in reductions of from 10% to 30% in brain size. "This has been established," Coon writes, "in the case of dogs, ferrets, pigs, ducks and cats. When house cats become feral, larger brains reappear."<sup>17</sup> The implications of this discovery should

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<sup>17</sup> Coon, *The Origin of Races*, *op. cit.*, p. 117.

give advocates of cradle-to-the-grave security for the capable, as well as for the incapable, pause to re-examine directions.

When we consider man as conditioned, together with other animals, by the principles of *territory*, *dominance* and *hierarchy*, when we view him as the lineal descendant of a highly successful line of killer-apes, when we consider that the growth of his brain may well have been due in large part to natural selection for adaptation to his predatory role, much of his instinctual psychology seems to become clear. The street gangs of juvenile delinquents can be regarded as man in a state of nature. It is no enigma that they contain so few frustrated and neurotic members.

This synthesis seems based on better biological evidence and seems more in accord with ordinary observation of human conduct than the Freudian menagerie of supposititious psychic entities. The contemporary mania to legislate equality among nations, classes and races and to impose democracy upon all of mankind may stumble against formidable instinctual urges for private property, for dominance over one's brothers, for the hierarchic security of status and for the opportunity to release violent emotions.

Man is not measured by his instincts. He is not their prisoner. Human wisdom does not consist in blindly following them. However, civilized man must make concessions to this instinctual nature if he wishes to avoid the explosions of intellectual irrationality which have led to the monstrosities of Nazism and Communism. A limited amount of status and hierarchy, a partial retreat from the myths of egalitarianism and more opportunity for the expression of aggression in spheres less damaging than thermonuclear war may be the building blocks of social stability and order. The disquieting alternative to this natural approach to the social crises of Western man—who is emasculating himself psychically, blunting his drives and stifling his competitive aggression—is the movement of the Soviet world in the opposite direction, toward a high-incentive ethos, in which duty to the state and to the revolution appear analogous to the Calvinist sense of mission or duty in one's calling.



*“Labor is no more the cause of value than  
Shakespeare’s pen was the cause of his writing  
Hamlet.”*

—W. H. MALLOCK

*Labor and the Popular Welfare.*

## XIII

# Inequality and the Free Society

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WE HAVE EMPHASIZED the large differences which separate individuals, classes, peoples and races in inherited intellectual ability and the role that these differences play in the shifting geography of genius and the rise and fall of civilizations. The very fact of hereditary intellectual inequality, however, is vehemently denied by the egalitarian ideologists. In many instances, they refuse even to discuss whether or not significant racial differences exist and, when driven into a corner, assert that the notion of human inequality is destructive of the foundations of Christianity and democracy.

The implication here is that, even if races and peoples are profoundly unequal, we should pretend the contrary in order to save the beliefs we live by. Obviously, the shortest answer is that we are dealing with a question of scientific fact, the truth or falsity of which should be determined objectively and dispassionately. If our beliefs rest on a foundation of falsehoods and fallacies, it would seem high time to revise them.

The alternative course, that which the Soviets do in fact pursue, is to impose a false ideology on the public by means of social pressure and eventually sheer force. This means "revising" sciences when they conflict with those doctrines which the ruling Establishment believes the public should be compelled to accept. In the Soviet Union, Marxism-Leninism asserts that acquired characteristics can be inherited. Those honest geneticists who refused to accept this

thoroughly discredited and well-refuted proposition were hounded out of their positions and in some cases died in forced labor camps. The practical result was that Soviet genetics fell into the hands of charlatans and fools and the U.S.S.R. fell woefully behind in the biological sciences.

In the United States, happily, there are no concentration camps for those who challenge the prevalent dogmas. However, powerful and pervasive pressures are applied to deny professional employment to anyone who challenges the egalitarian creed. In one case that we know of, a professor of psychology at a well-known university was rash enough to publish a statistical study of the comparative mental-test scores of Negroes and whites of similar socio-economic status. Since his findings were that the Negro averages are consistently and significantly lower, delegations from two racial pressure organizations—one Negro and one Jewish—requested his university to fire him; the doors of other universities were closed in his face, and a professional society in his field of specialization refused to admit him to membership on the grounds that his opinions might be offensive to its Negro members.<sup>1</sup>

Censorship of science by political and religious bigots is an old story. When scientists themselves engage in a revolting scramble to impose orthodox ideologies (which are popular with the government and hence the key to sinecures and good salaries), when they attack those who have the courage to dissent and when they refuse to subject the evidence offered by the dissenters to calm and objective examination, then they simply prove themselves unworthy of a free society and unfit to be members of it.

As Carleton S. Coon put it:

“More serious are the activities of the academic debunkers and soft-pedalers who operate inside anthropology itself. Basing their ideas on the concept of the brotherhood of man, certain writers who are mostly social anthropologists, consider it immoral to study race, and produce book after book exposing it as a ‘myth.’ Their argument is that because the study of race once gave ammunition to racial fascists, who misused it, we should pretend that races do not exist. Their prudery about race is equaled only by their horror of Victorian prudery about sex. These writers are not physical anthropologists, but the public does not know the difference.”<sup>2</sup> Thus, the truth should

<sup>1</sup> The name of this courageous professor and of his principled university are withheld to save both of them from further molestation.

<sup>2</sup> Coon, *The Story of Man*, *op. cit.*, pp. 187-8.

be stated about race regardless of whether or not it is in accordance with Christian and democratic dogma. The business of science is to discover the truth, not to falsify it to accord with moral and political preconceptions.

However, there is in reality no conflict whatsoever. Christianity teaches us that each human being has an immortal soul and that all men are brothers under the fatherhood of God. Now various "liberal" Christian theologians have suggested that brotherhood implies equality. Does it? If my brother is a cripple, do I treat him as if he were physically sound? If he is mentally retarded, does a brotherly attitude consist in pretending that he is normal? The questions are rhetorical and the answers self-evident.

Jesus commanded: "Therefore all things whatsoever ye would that men should do to you, do ye even so to them: for this is the law and the prophets."<sup>3</sup> He did not order his followers to treat all men equally. He ordered that each be treated as the doer would wish done to himself were he in that situation. Thus, the Golden Rule can not be said to have been formulated to negate the underlying reality of human inequality. In the *First Epistle to the Corinthians*, St. Paul compares the Christian Church to a body, which has different parts with different functions and powers, yet the body and the Church are harmonious wholes because each utilizes the abilities of its members and because all of these abilities have their place and use. St. Paul continues:

"Now you are the body of Christ and individually members of it. And God has appointed in the Church first apostles, second prophets, third teachers, then workers of miracles, then healers, helpers, administrators, speakers in various kinds of tongues. Are all apostles? Are all prophets? Are all teachers? Do all work miracles? Do all possess gifts of healing? Do all speak with tongues? Do all interpret? But earnestly desire the higher gifts."<sup>4</sup>

One could cite many Biblical passages to show that Christianity recognizes the basic fact of human inequality of capacity. The Pauline Church was based upon that recognition. This does not contradict the concept of the fatherhood of God. Nor does inequality conflict, in the secular sphere, with the fundamental principles of freedom, due process and equality of opportunity.

The Calvinist principle of predestination is a fundamentally anti-egalitarian doctrine, for it holds that differences in men's stations

<sup>3</sup> *Matthew*, 7: 12 (KJ).

<sup>4</sup> *I Corinthians* 12:27-31 (RSV).



are preordained and, even if seemingly unjust to the lowly and unfortunate, reflect God's will. The authors do not necessarily subscribe to this doctrine and they recognize that Calvinism was used in the past to justify slavery and a callous attitude toward the poor. The Calvinist theology illustrates, however, that a very substantial portion of Christendom explicitly and categorically rejected the notion of human equality of capacity.

We are sometimes told that the United States was founded on the principle that "all men are created equal" and that this is its cornerstone. This is a caricature of the historic facts. The phrase in question was placed in the Declaration of Independence by Thomas Jefferson. The document that Jefferson may have had in mind was the Virginia Declaration of Rights, written by George Mason, which stated: "All men are by nature equally free and independent."<sup>5</sup> The fact that Jefferson chose the simpler and less precise formulation can be attributed to two factors. First, in its historic context, the Declaration was a protest against laws and taxes discriminatory against the colonists. It referred to *equality of rights* as between two groups of Anglo-Saxons and it could scarcely have occurred to Jefferson and his contemporaries that future generations would strain these words to refer to *equality of innate capacity* among different races. In the second place, the Declaration was an exhortation to war which, like other examples of psychological warfare, had to be judged in terms of its effectiveness in moving men's minds and hearts. Simplicity and force were here of greater value than precision and nicety of formulation. The Declaration did not commit the United States to any course of action. The Constitution of the United States, which did so commit the states and the people, contains no pronouncements about human equality.

Jefferson himself believed in conscious mating and breeding to produce a class of mentally and morally superior individuals. He held that "there is a natural aristocracy among men" and that this aristocracy is "the most precious gift of nature, for the instruction, the trusts, and government of society."<sup>6</sup> John Adams shared the

<sup>5</sup> Mason's declaration was widely circulated among American revolutionary leaders at the time. Julian P. Boyd in *The Declaration of Independence*, Washington, 1943, states that Jefferson borrowed from it. Other authorities are less certain. "By the time of the Declaration of Independence," writes Dumas Malone in his authoritative biography of Jefferson, "he was convinced that aristocracies of birth and wealth were artificial and unjust, but what he sought to promote was a 'natural' aristocracy of talent and virtue."

<sup>6</sup> Letter to John Adams, October 28, 1813. Foner, *op. cit.*, pp. 714-18.

same "aristocratic" view as did Alexander Hamilton and most of the founding fathers of the American nation.

When we come to consider racial equality, the record is even clearer. Throughout his long life, Jefferson adhered to the view that the Negro was grossly inferior to the whites emotionally, morally and mentally. In his extended discussion of the Negro in the *Notes on Virginia*, he concluded: "... it appears to me that in memory they are equal to the whites; in reason much inferior, as I think one could scarcely be found capable of tracing and comprehending the investigations of Euclid: and that in imagination they are dull, tasteless and anomalous."<sup>7</sup> While Jefferson opposed Negro slavery on moral grounds, he also believed that the Negro, once emancipated, should be denied American citizenship and deported from the U.S. This allopatric approach to the race problem in America would later be echoed by Marcus Garvey, the Black Muslims and other Negro groups. These views were echoed by James Madison, Henry Clay and most of the statesmen of the first three generations of American independence. In fact, racial inequality was taken for granted to such an extent that the Bill of Rights could be incorporated into the Constitution by the Congress and the states simply because nobody imagined that any future generation would believe that its provisions were supposed to cover Negroes and Indians.

Jefferson's views concerning the Negro were echoed, in their most essential points, by Abraham Lincoln. In the debates with Stephen A. Douglas, Lincoln denied that he wished to introduce political or social equality between black and white and, in his Cooper Union speech on February 27, 1860, he declared: "In the language of Mr. Jefferson, uttered many years ago, 'It is still in our power to direct the process of emancipation and deportation, peaceably, and in such slow degrees, as that the evil will wear off insensibly and their places be, *pari passu*, filled up by free white laborers.'"<sup>8</sup>

Once elected, Lincoln made repeated efforts to colonize free Negroes outside the United States and to induce the leaders of this group to serve as an example for the rest. When they showed reluc-

<sup>7</sup> He added that he was most reluctant to reach a conclusion concerning the Negro which "would degrade a whole race of men from the rank in the scale of beings which their Creator may perhaps have given them." (*Notes on Virginia*, 1785.) Reprinted *inter alia* in Foner, *ibid* pp. 51-182.

<sup>8</sup> Quoted by Richard N. Current, *The Lincoln Nobody Knows*, (New York: McGraw-Hill, 1958), p. 220. As the context reveals, the "evil" referred to was not the deportation of reluctant Negroes, but the temporary labor shortage caused by their absence.

tance, he accused them of "an extremely selfish attitude." Addressing a colored delegation to the White House on August 14, 1862, Lincoln asserted that the Negroes must leave the United States because "there is an unwillingness on the part of our people, harsh as it may be, for you colored people to remain with us." He added: "Your race suffers very greatly, many of them, by living among us, while ours suffers from your presence. In a word, we suffer on each side."<sup>9</sup>

One could continue at considerable length with this discussion of what the founders and preservers of this country thought about equality in general, and racial equality in particular. It would be tempting to do so because their clear statements on these matters have been so consistently misrepresented and falsified. Fundamentally, however, the basic issue is not what Jefferson or Lincoln said, but the nature of a free society. The reason to emphasize freedom is that each man is unique and all men are unequal. If human beings were essentially interchangeable in terms of heredity, as the Communists and socialists often assert, then those freedoms which protect the minority and the individual would become of completely secondary importance.<sup>10</sup>

### The Cult of Mediocrity

If men are essentially equal in mentality, one can assume *prima facie* that the majority is right and therefore that minorities ought to conform. The elaborate freedoms in the area of privacy of the individual are no doubt considered superfluous by those who assert that man is essentially a social animal, that he realizes himself only by acting through a social group, etc. All these views proceed from the premise that the individual human being is neither unique nor even significantly different from his fellows and that it is only as a member of the social organism that he is fulfilled and made whole.

The extreme instance of this attitude is the beehive society of Red China which, through super-Orwellian techniques, has achieved an almost total destruction of human privacy and of human individuality as Western Civilization understands them. At a more muted

<sup>9</sup> All this was accurately and fully chronicled by Carl Sandburg in his classic four-volume work, *Abraham Lincoln: The War Years*, *op. cit.*, I, 574-5.

<sup>10</sup> The distinction is between freedom from certain restraints (such as from arbitrary arrest and deportation), which all men want, and the essentially *intellectual* freedoms, which only a minority care about. The average man may be concerned about the right to read a free press, but he is not concerned about the right to publish what he pleases.

level, we have the late Dr. Harry Stack Sullivan making the momentous discovery that individual personality is a "myth" or the "progressive" educators who insist that learning must be collective, adding that work should not be graded as good or bad to avoid offending the incompetent and making the talented "over-competitive."

The society which concentrates almost entirely on "helping" the mediocre and the mentally subnormal does them a disservice. The great advances and, for that matter, the steady progress of most modern societies are almost exclusively the work of that group which Toynbee called "the creative minority" and Jefferson "the natural aristocracy." It is this element which is the creative force in literature and the arts, which makes scientific discoveries, which invents technological improvements, which provides executive leadership and makes decisions at the highest levels. This element is backed by a middle-echelon elite that is also necessary to progress, but less indispensable. If the medical specialist who discovers new drugs or the injurious effects of old ones is a member of the innovating elite, the physician who keeps abreast of new discoveries and applies them in treatment is a member of the middle-echelon elite.

If the creative minority is almost the exclusive source of the material and intellectual advances of a civilization, then the future of that civilization will largely depend on how it treats these elite elements. This elite requires, as fundamental conditions, social order and freedom to do its work. More than this, it is desirable that unusually gifted persons be recognized in childhood and given the best educational resources the nation has to offer. Obviously, concentration of these educational resources on the creative minority can pay off a hundredfold; concentration on the average will provide more modest gains and concentration on the mentally subnormal is a sheer waste of teaching ability.

In a free society, it is important that the pattern of rewards should be so structured that the intellectual elite is drawn to the most mentally exacting and creative areas of work. This means a revolutionary change in the pay system and the re-education of the public to a point where the creative scientist is regarded, not as some sort of freak, but as a norm toward which the youth should strive. One of the great strengths of the Soviet Union is that, by authoritarian means, it has given scientists top financial remuneration, enormous prestige and high social standing.

True elites emerge through processes of rigorous competition. In

the traditional American system, the selection mechanism was a free market economy set in a society which believed in thrift, self-reliance, rugged individualism and the drive for honestly earned material wealth. In the Soviet Union, the educational system is the basic selecting mechanism. The students who advance to the higher schools are those with higher intelligence, more driving ambition and greater capacity for hard work. The small minority that graduates from the universities to take its place automatically, barring accident or misconduct, in the ranks of the Soviet elite is the cream of the crop—those who survived grueling tests of will, stamina and intelligence.

### The Past and the Future

Inequality of intellectual ability, among races, nations, classes and individuals may be expressed in variations in brain size, in the development of the “new brain” (neopallium), in EEG patterns, in varying rates of kinesthetic learning among infants and in many other ways. Fossil races often have brains so small that they are barely at the threshold of specifically human thought. From Carleton S. Coon’s analysis of the early appearance of raciation and the differences in the *Homo erectus* ancestry of the main ethnic groups, differences in structure, physique and mentality among the racial divisions of mankind can be derived.<sup>11</sup>

Going beyond the possibly diverse heredity of *homo sapiens* from his ape-like ancestors, we come to the cardinal factor of climate as a shaper of the human mind through the processes of evolutionary adaptation. The challenge of glacial cold and glacial change contrasts with the enervating heat and invariance of the tropics. The Caucasoid and Mongoloid races, which evolved out of adaptation to temperate and cold climates, have thus far served as the chief originators and carriers of civilization. Where the case appears to be otherwise, we generally find either that the climate was colder, more variable and more bracing during the era of civilization building (as in Egypt of the Pharaohs and Alexandria of the Ptolemies) or else that the creative achievement was the work of invading and conquering races, who had evolved in conditions of cold as in the case of the Aryan conquerors of India. The influence of climate persists into modern times and the areas of most intense creativity

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<sup>11</sup> Coon, *The Story of Man*, *op. cit.* (2nd edition), p. 37.

continue to be those of cold, ozone showers, electrical storms and, possibly, more than average radiation.<sup>12</sup>

As we proceed in time to more complexly articulated societies, institutional forces exert greater influence in determining intellectual potential. With the rise of civilization, man produces enough beyond bare subsistence to afford a ruling class, one which consists primarily of intellectuals and governs chiefly with the weapon of the mind. This ruling class generally comprises bureaucrats, priests, scribes, war leaders and kings: the first are the controllers of tax assessment and collection and of irrigation works, the builders of cities, temples, pyramids and palaces; the second are the magicians, the healers and the astronomers; the third are the accountants; the fourth lead by judgment more than by individual valor and physical strength; the last coordinate all and make the crucial decisions. The more complex the society, the more intellectualized the function of command.

The way this ruling class is selected is a matter of fundamental importance to its intellectual vigor and durability. If it is drawn exclusively from a ritually protected caste, it faces the danger of deterioration from inbreeding, that is to say, the emergence in time of deleterious and lethal genes. Where the elite loses its fertility, either because of unwillingness to reproduce or because of physical incapacitation (due to some such factor as lead poisoning), it must rely on fresh infusions of leadership material from alien areas. These new groups, however, usually become infertile after exposure to the same conditions which destroyed the indigenous elite. In the end, the imported elite elements fail or betray the civilization and the day of the barbarian conqueror comes.

When the centrifugal forces of social life are ascendant over the centripetal ones, the intellectual element suffers. In the barbarian successor states or the primitive feudal demesnes, an intellectual class, such as that of Imperial Rome, had no function and could not have been supported. All social regression, all dissolving of large, ramified, interdependent societary organizations into small, simplified and self-sufficient ones must threaten the existence of the creative minority. The transition from slavery, which under Rome implied a complex division of labor, to medieval serfdom, which im-

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<sup>12</sup> Radiation causes mutation; thus heavy radiation can mean accelerated biological change.

plied crude subsistence agriculture, was a catastrophic step in terms of the survival of the intellectual elites.

The triumph of the barbarians over civilization also generally entails the physical destruction of a large portion of the mentally gifted minority. This occurred during the last centuries of the Roman Empire in the West through the depopulation of the cities and a general decay of social order, accentuated by plagues (such as that of Justinian) far more terrible than any which had previously afflicted the Western world.

Almost a thousand years later, when the Golden Horde rode from the Gobi desert into the tilled lands of Islam, the Mongol policy was to turn the great cities into pyramids of skulls (and this policy was pursued with even more zealous fervor in the considerably later conquests of Tamerlane). The result was to annihilate the intellectuals physically, for they were almost exclusively city dwellers. The impact on the flourishing culture and civilization of the Eastern Mediterranean and the Middle East was catastrophic. Despite many military and political vicissitudes, this area had served as a perpetual fountain of genius and creativity from the Sumerians, Assyrians, Hebrews, Chaldeans and Persians, through the long millennium of Hellenistic and Roman sovereignty and into the brilliant first centuries of Islam. Thereafter, the region became a desert of the mind. From the withdrawal of the Mongol scourge to the present, the Middle East has hardly produced a single intellect of the first rank (if we exclude the Israelis, who are after all recent returners to the region). Peisker has argued with much learning and apparent cogency in the *Cambridge Medieval History* that the centuries-long backwardness of Slavic Europe is the direct fruit of Mongol conquest, Mongol enslavement and Mongol genocide. If the Mongol advance had not been stopped on the plains of Hungary, he believes, Western and Central Europe would also have passed through a similar night of centuries. To be sure, the Mongols were unable to stifle the light of civilization in China and India, but that was because these people were numerous, fortunate and skillful enough to absorb their conquerors into the superior civilizations of the conquered.

The modern counterpart to the dysgenic catastrophes inflicted by Genghis Khan and Tamerlane is the Nazi extermination of European Jewry, a tragedy the effects and implications of which we have discussed in detail. In the contemporary era, Western civilization is faced with policies of enforced dysgenic deterioration which are

being imposed in a consistent and relentless fashion. The Soviets liquidate the ruling classes and the bulk of the intellectuals when they subjugate new countries. The non-conformist thinkers in the Soviet world and such intellectually superior minorities as the Jews of Russia are subjected to harsh persecution on the theory that they cannot readily be manipulated in accordance with the purposes of the totalitarian state and, to that extent, must be treated as security risks.

### **Genocide in Negro Africa: The Destruction of the Creative Minority**

The masochistic racial policies of the West also involve genetic catastrophe, though of a different sort. In British East Africa, power is being transferred from about half a million Europeans to a handful of Negro political leaders, backed by violent, resentful and incredibly ignorant black millions. In the Portuguese possessions, sadistic race war against about half a million white and assimilated Africans smolders and is being encouraged, not merely by the neutralist bureaucracy of the United Nations, but by such civilized nations as the United States and Israel. The final goal of this racial revolution now in progress is apparently to be the subjugation or annihilation of the three million whites who now govern in the Union of South Africa. This continental race war will involve genocide on a prodigious scale.

The alleged purposes of this crusade in Africa are to eliminate the evil vestiges of colonialism; to enable the African masses to enjoy freedom; by eliminating white "exploitation" to bring prosperity to the native millions; to win a continent for democracy; and, finally, by this demonstration of Western altruism, to win new allies for the West.

All of these perspectives are chimerical. In one of the few realistic and unsentimental studies of Negro Africa published in recent years, Gann and Duignan observe that "democracy of the Western type is an almost impossible ideal for backward agrarian societies."<sup>13</sup> They add that "liberty and stability will not easily be secured if Africans seize power" and that the native politicians of *uhuru* are motivated largely by resentment, tensions and frustrations, which can be eased by making the white man the scapegoat for their own failures. Their foreign policy is not likely to be motivated by gratitude to the West,

<sup>13</sup> L. H. Gann and P. Duignan, *White Settlers in Tropical Africa* ("Penguin Africa Series" [London and New York: Pelican, 1962]), p. 128.



but, on the contrary, by the recognition that the more hostile an attitude they display to Washington and London, the greater their prospects of being flattered and showered with multi-million-dollar aid programs. The record up to the present reveals that the fervor of the United States in working for the self-government of these African nations has not brought this country new allies, but rather recruits to "neutralism."<sup>14</sup>

The theory that colonialism is a cause of African poverty is one of those myths of Marxism-Leninism which has been tacitly accepted by many Western intellectuals. The African Negro enjoys higher living standards in the Union of South Africa, where the white presence is most numerous and massive, than elsewhere. Gann and Duignan point out that the material wellbeing and economic opportunities of the blacks of tropical Africa are greatest in the areas of largest white settlement. The fact that 35% of the Kenya White Highlands were up for sale in early 1962 was simply a harbinger of the impending destruction of modern agriculture and consequently of the impending years of famine for the Negro masses of that colony.

The anti-colonialist policies of the West in trans-Saharan Africa are often viewed in terms of the respective rights and interests of white settlers and black natives. This is a mistake for, in general, these sets of interests coincide, and are opposed merely by the minority of power-oriented nationalist and native Communist politicians. The African policies of the West are ostensibly designed to bestow independence, but actually will undermine, if not destroy, the livelihood of the Negro masses.

A vast elite of European blood is being uprooted in tropical Africa. It is utterly fanciful to suppose that this elite can be supplanted by transient acrobats and reformers from the Peace Corps. The goal of the anti-colonialist crusade is to extrude from Negro Africa (since they obviously will not remain there as a downtrodden minority under Negro rule) four million people who are virtually the only presence with skills in technology, administration and the other disciplines of Western civilization. There is nothing in the slothful and insecure progress of the Negro that suggests that he will be able to replace this elite in Africa from his own ranks at any time in the

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<sup>14</sup> Gann and Duignan summarize the psychodynamics of the anti-colonial politics of resentment as follows: "Each demand becomes obsolete as soon as it has been conceded; the more moderate leaders who do not adjust themselves to this mounting rhythm are always in danger of being ousted by leaders of a more radical stamp." *Ibid.*, p. 142.

foreseeable future. In any event, the need of tropical Africa for an expanded elite is so great that the present policy of uprooting the existing one is a crime against the Negro people.<sup>15</sup>

These considerations apply, in the short run at least, to the encouragement of national independence and anti-Western forms of communism, socialism and neofascism in Africa north of the Sahara. From Egypt to Morocco, the European (and also Jewish and Coptic) elites have been precipitated by persecution and anarchy into headlong flight. New capital investment has dried up; the modern cities and industries built by European brains cannot even be maintained due to the virtual non-existence of technologically competent natives. Economic crisis and food shortage already afflict most of the area. As population increases at nightmarish rates, the prospect is again for economic disintegration—more desperate misery, more hopelessness, the steady advancing specter of famine.

It is conceivable that the situation may be mitigated by crash training programs and by massive assistance (implying that African independence will cost the American taxpayer billions of dollars for an indefinite period) and that in areas like North Africa, where the population has greater innate ability and a more adequate educational base, eventual stability and economic progress may be attained.

### **Celibacy and Fertility**

To return to the subject of how the creative minority is formed, we have noted that one of the major causal forces is the celibacy or fertility of the priesthood. In most complex societies in the pre-industrial eras, the priesthood was *the* learned profession and the monasteries were *the* centers of learning to which scholars and intellectuals gravitated. Where this was so, the degree of celibacy of the priesthood was of the greatest possible consequence to the civilization in question. A highly fertile clerical class would continuously upgrade the genetic pool in terms of intelligence; a genuinely ascetic priesthood meant that the best minds of the society had no issue.

The extraordinary position of the Jews in the intellectual history of Western civilization is the result, we believe, of generations and centuries of eugenic breeding for intelligence. Jewry was a society without sovereignty, territory or feudal order, in which the com-

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<sup>15</sup> Nathaniel Weyl, "The Ordeal of Negro Africa," *National Review*, XII, No. 24 (1962), pp. 445-6.

munity bestowed its supreme rewards upon the scholars. A highly competitive system, open to all male Jews, determined who were the outstanding scholars and the most skillful logicians. There was fervent competition among the merchant families to marry their children into families with a reputation for learning and brilliance. These marriages generally occurred as soon as the scholar reached puberty, or even before, and the young couple was enjoined, as were all Jews, to reproduce and multiply to the limit of their biological power. This system served, in short, to select the outstanding minds of each generation, to give them preferred status in their communities, to encourage them to reproduce throughout their years of fertility and to rear their children under conditions much more favorable to survival than those of Jewry as a whole. In China, the equally ancient institution of competitive literary examinations for official positions had a similar biological effect in that it also improved the genetic potentiality of the nation in terms of intelligence.

In the Christian world, the contrast between zones of sacerdotal celibacy and of sacerdotal fecundity becomes marked only after the Reformation. In the centuries that follow, the intellectual leadership of the West passes decisively to the Protestant areas. Their eugenic advantage is increased by religious persecution in the Catholic countries. Switzerland, the Netherlands, the British Isles and other areas are periodically enriched by the flight to their countries of the victims of religious persecution, the Jewish exodus from Spain and the Huguenot flight from France being the most important of these movements. Simultaneously, the widespread imprisonment and execution of heretics under the Spanish Inquisition added to the genetic impoverishment of Spain. It was thus that the people who had produced Cervantes and Velasquez sank into a long slumber of ignorance and superstition from which they are fortunately at last awakening.

The modern counterpart of these shifts in the geography of intellect because of religious oppression is the spatial displacement of the Western intellectual elite by Nazi and Communist persecution. Europe has been impoverished by these totalitarian enormities to an extent dramatically illustrated by the changed provenance of Nobel scientists. The United States, as the chief refugee-recipient area, has been sufficiently enriched to have become the scientific and intellectual capital of the world. And yet, in his classic *Animal Species and Evolution*, Ernst Mayr has quoted Huxley with approval to the

effect that: "man's genetic nature has degenerated and is still doing so. . . . There is also the fact that modern industrial civilization favors the differential decrease of the genes concerned with intelligence. It seems now to be established that, both in communist Russia and in most capitalist countries, people with higher intelligence have, on the average, a lower reproductive rate than the less intelligent; and that some of this difference [in intelligence] is genetically determined. . . . If this process were to continue, the results would be extremely grave."<sup>16</sup>

Mayr continued to observe that "counterselection" may be operating in modern man "and that the most desirable genes and gene combinations" may not be being "maintained at current frequencies in the total gene pool of the human species. . . ." The remedy, he suggested, need not await discovery of the totality of relationships between gene combinations and characteristics and in fact "animal breeding has long abandoned all attempts to discover superior genes individually. . . . One could readily translate this in terms of desirable goals for human biological progress. Perhaps it is not unreasonable to assume that a person with a good record of achievement in certain areas of human endeavor has on the average a more desirable gene combination than a person whose achievements are less spectacular. In our present society, the superior person is punished by the government in numerous ways, by taxes and otherwise, which make it more difficult for him to raise a large family."<sup>17</sup>

### Barren Soil

When genius tries to sprout on sterile soil, its development will be stunted. On the other hand, no degree of physical mobilization of intellectual resources can compensate for the national or ethnic affliction of mental dullness. (There is, as yet, no reason to believe that the almost miraculous progress of medical science will enable future generations to inject functioning brains into empty skulls.) Mentality and intellectual mobilization are reciprocally interacting variables. A highly intelligent people always displays a thirst for knowledge and generally makes sacrifices to acquire it. Conversely, peoples with below-average mental capacity seldom strive for excellence in an area in which they inevitably meet with successive

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<sup>16</sup> Julian S. Huxley, "Evolution in Action" (*Harper's*, 1953), quoted in Mayr, *op. cit.*, pp. 658-9.

<sup>17</sup> Mayr, *op. cit.*, p. 661.

failures. However, the fact that our two variables are causally inter-related does not mean that they are congruent. Situations exist in which intellectual mobilization is disproportionate to mental ability, the American Negro being perhaps the outstanding contemporary example. On the other hand, there are glaring cases of inequity in which innate mental ability is far in excess of the resources available for its mobilization. The most obvious instance of this case occurs in Eastern Asia, where desperate poverty and apparently high mental potential coexist. The task of the Free World in respect to intellectual mobilization should be to raise the mental opportunities of all areas, but to concentrate on those peoples whose intellectual potential most greatly exceeds their educational opportunities.

The non-material factors determining the level of intellectual mobilization include national or ethnic character structure, the institutions, drives, emotional attitudes, value systems and sexual patterns which help define the manner in which the mind develops. After a brief survey of this large field of factors we were left with several major unanswered questions: To what extent are national character structures durable? To what extent can they be adjusted and moulded to the needs of a highly mobilized nation-state? To what extent do the differences between the psychic patterns of various peoples tend to dissolve as modern technology and science sweep the world, as competing nation-states shape their human resources in accordance with their own survival- and aggrandizement-needs, and as totalitarian Communism ruthlessly creates societies of hysterics and obsessionals?

We have found, by and large, that mental capacity tends to be adequate among peoples and races adjusted to cold and temperate climates, but inadequate among those adjusted to hot climates. This raises one of the questions with which the book began: Are there significant ethnic, national or geographical groups which *en masse* lack the innate brain-power required for mastery and operation of the tools of modern civilization—groups, in short, which are sub-marginal to the economy of a scientifically developed system? And, if so, what is to be done with them or for them? Is there reason to believe that reproduction and mortality patterns are becoming increasingly dysgenic: in other words, is the human race downgrading itself in terms of mental ability?

As man's power to create or destroy increases, any such deteriora-

tion in his intelligence becomes a matter of grave concern. Education and brainpower do not always guarantee political sanity or armor a nation against suicide, but, if the intelligent sometimes fail in running complex political systems, the unintelligent must invariably fail. The accretion of lethal power in the hands of nation-states dominated by populations incapable of rational thought could be a harbinger of total disaster.

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