SEX VERSUS CIVILIZATION

Since most babies are born because of the sex drive, sex is the thermonuclear element in the population explosion. **Sex Versus Civilization** reveals how civilization is affected by the QUALITY, as well as the quantity, of its people, and how its rise and fall are coincident with quality CHANGES. This analysis of one of the most widely-discussed of all modern-day problems shows how:

1. Civilizations reverse evolution;
2. Wars against poverty have actually fostered it;
3. Among educated people, there has never been a "population explosion";
4. The statement, "There is too little food," is usually simply a means of disguising the more meaningful fact that there are too many people, a condition which exists not just within nations, but within individual families as well;
5. Families on the government dole have more children than the average of the taxpayers who support them;
6. The quality of a nation changes as a consequence of changes in personnel.

A thorough and fresh treatment of a subject formerly reserved for specialists, **Sex Versus Civilization** cuts through an ages-long fog of misunderstanding about population, and carries a storehouse of vast and urgent implications for ourselves and our nation's future.

NOONTIDE PRESS; P.O. Box 76062 Los Angeles, California 90005

THE AUTHOR—As listed in **Who's Who In America,** Elmer Pendell, Ph.D., has a broad educational background, having obtained degrees from George Washington U., U. of Oregon, U. of Chicago, and Cornell. Studies in Population have been his central interest since he learned from Walter B. Pitkin's **Must We Fight Japan,** published in 1922, that Japan's burgeoning population would probably lead to that country's aggression in the 1940's. Four of Pendell's six books are on Population. The first two–**Population Roads to Peace or War,** and **Human Breeding and Survival**–were co-authored with Guy Irving Burch, who founded the Population Reference Bureau. Later Pendell wrote **Population on the Loose** and **The Next Civilization.** The author classifies the book in your hands, **Sex Versus Civilization,** as a **population** book, and considers that it is his greatest contribution.

Awarded the Distinguished Service Cross and the Pur[illegible] Heart for war duty in Europe, Doc Pendell has been an Army flyer, a flying patrolman over Oregon forests, and a college professor, as well as a writer.

CH 101

SEX VERSUS CIVILIZATION ELMER PENDELL, PH.D.

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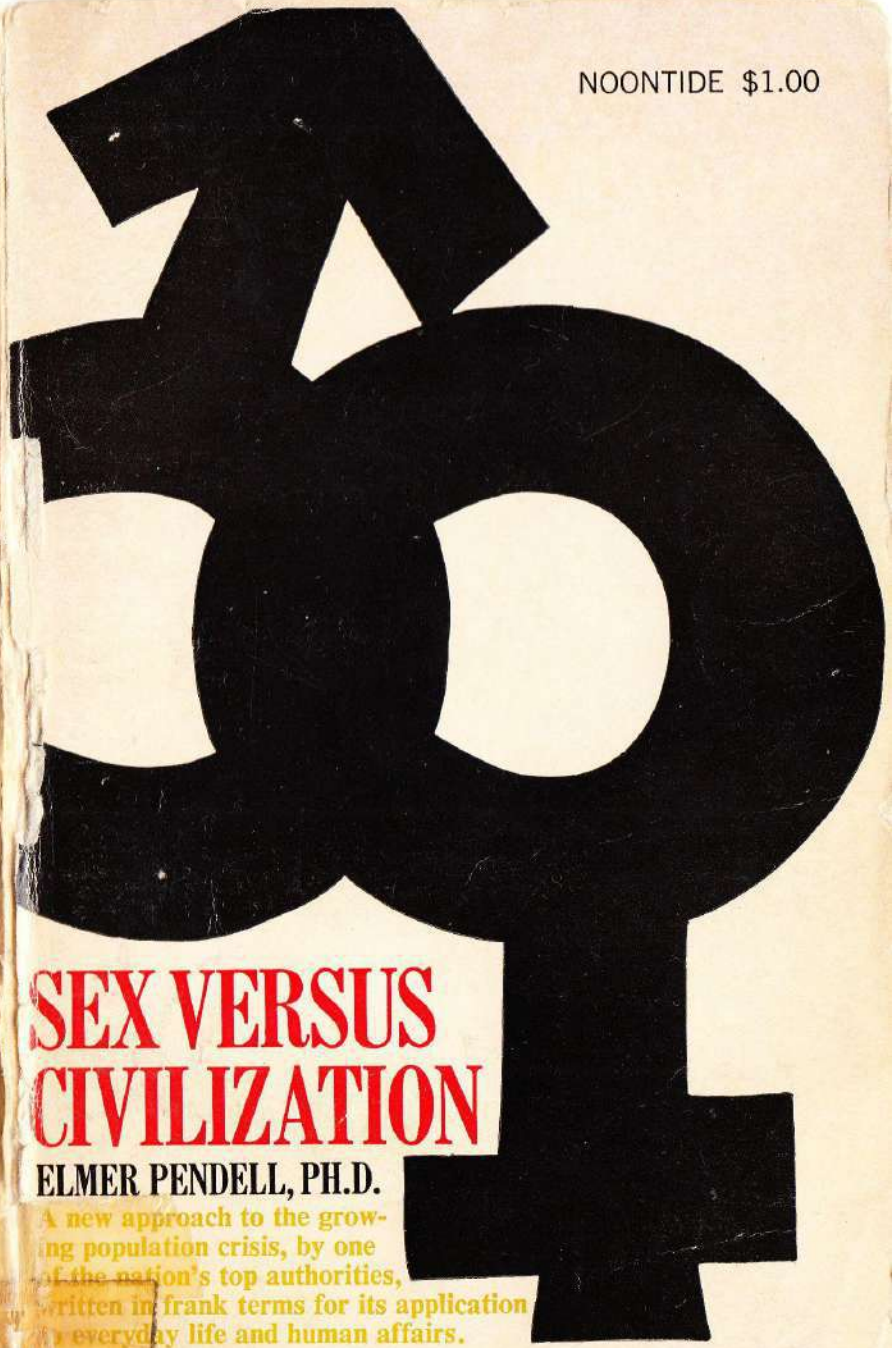

SEX VERSUS CIVILIZATION

ELMER PENDELL, PH.D.

A new approach to the growing population crisis, by one of the nation's top authorities, written in frank terms for its application to everyday life and human affairs.

Early Comments about ***SEX VERSUS CIVILIZATION***

Dr. S. S. Visher, of Indiana University, past-president of the Indiana Academy of Sciences; past vice-president, Association of American Geographers, summarizes Pendell's analysis of the fall of a civilization: "Each new generation consists of an increasing percentage of the less able half of the population. Hence more and more people become 'problem makers' and fewer are 'problem solvers'." " . . . All who read this book," says Dr. Visher, "will be stimulated to much thought . . . "

Dr. S. Colum Gilfillan, analyst of civilizations ("Coldward Course of Progress"; "Roman Culture and Dysgenic Lead Poisoning"); author: ***SOCIOLOGY OF INVENTION:*** *". . . The fact remains that the races and classes are not equal. Pendell proves this once again by sound data in lively style, shows how it comes about, and proposes some drastic remedies for the dysgenic ruin today in process . . ."*

Dr. Henry E. Garrett, past-president, American Psychological Association; leading textbook writer in Psychology says of ***SEX VERSUS CIVILIZATION:*** *"The book . . . is convincing."*

SEX VERSUS CIVILIZATION

BY

ELMER PENDELL, Ph.D.

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Dedicated to those creative thinkers in Population problems who have been, or are, "before their time." (To be creative, doesn't one have to be "before his time?) I name, among them, besides Malthus and Darwin,

Guy Irving Burch
C. M. Goethe
S. J. Holmes
Harry H. Laughlin
Henry L. Mencken
Walter B. Pitkin
E. Parmalee Prentice
E. A. Ross
Margaret Sanger
Lothrop Stoddard
Horace Dutton Taft
H. Curtis Wood

PREFACE

Sex versus Civilization is a *population* book. The sex drive, functioning with too little use of brains, makes the population *explosion.* That, in itself, is a dire challenge to civilization. But an even more important way in which sex works against civilization is by *reducing the quality of the citizenry.* This book deals with both of these problem.

These are the population books I have written:

Population Roads to Peace or War, 1945
With Guy Irving Burch

Human Breeding and Survival, 1947
With Guy Irving Burch

Population on the Loose, 1951

The Next Civilization, 1960

Sex vs. Civilization, 1967

All are out of print except the last in the list, the one in your hands. None of them is limited to population *quantity,* and I plan never to write such a one; a book which would omit quality of people would tend to lead its readers astray. *Quality deterioration* is part of the problem: each generation is composed disproportionately of the offspring of parents of below average intelligence. The population explosion threatens everybody, but not everybody is guilty of fueling it; *there is no population explosion among educated people.* For any indiscriminate warning that the world has become overcrowded, persons with the keenest intellects, being most sensitive, almost surely would, disproportionately, be the ones to pay heed, and reduce still further their quota of prospective children. That would make worse the quality aspect of the prob-

lem, already most serious though not presently fashionable to talk about.

•

Sex versus Civilization is intended primarily for the general public: book clubs, discussion groups, public-affairs policy makers, and individual readers who wish to get beneath the surface of the news.

Of course I shall be glad if it is also used as supplementary reading in a few population classes. The book is a startling departure from the standardized content of formal population courses, mainly in that it organizes biological facts which in population classes have usually been ignored. It deals with one area that ought to be common ground for population students whether they get into the subject from biology, sociology, economics, geography, psychology, statistics, or by way of general reading. It is this: People who, for whatever reasons, are social burdens *usually have more than an average number of babies,* and those burdensome people furnish the environment as well as the heredity for an enlarging proportion of subsequent society.

•

The human animal is not very human; not very reasoning. Somebody discovers a problem. He studies it; finds it serious and gives a warning. Does the public give it attention as a problem? Not likely; not that generation, or the next.

In 1798 Thomas Robert Malthus first published his *Principle of Population.* Now it is receiving wide attention. NOW? Yes, now—after 168 years! If somebody warned *you* that there was a worm on *your* salad, and it required that long for the warning to register. . .!

Meanwhile, what has happened to the problem? World population has increased from perhaps 850,000,000 in Malthus' time to approximately 3,300,000,000 now.

Shall we examine the problem with a view to action now—or shall we dally another 168 years?

ELMER PENDELL

206 West Mountain Ave.
Jacksonville, Alabama

Acknowledgments

There have been predecessors for parts of my theme. Eventually I may write another book to point out their contributions and to re-emphasize the portions of their studies of special importance. Surely Lothrop Stoddard and S. J. Holmes will be included in that analysis. (But before that, perhaps, I should put some of the material which is herein, and some besides, in textbook form.)

In helping me build the present book the Library staff at Jacksonville State University have joined in the searches concerning sources as if they were a game, and have been equal to every puzzle. Particularly I wish to thank Miss Doris Bennett, Miss Kathleen Brown, Mrs. G. L. VanPelt, Mr. Thomas J. Freeman, Mrs. George V. Haywood, and Mrs. William D. Staples.

My secretary, Miss Wanda Faye Burns, claims that her work on the book has been very helpful to her. That tends to balance the benefits, though I suspect that the book—and so you, the readers, and I—got the better of the deal.

As a name for the book, I had been using *The Third Principle of Population*, but that lacked direct description. Good suggestions came in from several people—such titles as Civilization Destroys Itself, Pills or People, Who Will Inherit The Earth? Who Wins The Baby Race? Those four and twenty-eight others were eliminated in a series of six preferential ballotings in which nearly five hundred of the faculty, staff, and students in Jacksonville State College cooperated. For helping in conducting the balloting I wish to thank Prof. Robert E. Williams, Dr. Walter L. Ogilvie, Dr. Edwin Van Keuren, Col. Edward B. James, Prof. Howard O. Prichard, Mr. Tom E. Shepherd, Mr. Charles W. DeWulf, and Mrs. J. O. Pyron. Prof. George V. Haywood had helpful suggestions as to processing the ballots.

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CHAPTER ONE

ALL THREE MAJOR PRINCIPLES OF POPULATION IN A QUICK SURVEY

Population was given its first book-size analysis by Thomas Robert Malthus in 1798. Essentially the Malthusian principle of population is that because of the sex urge man tends to increase; that he does increase to the extent that the earth permits; that as numbers meet increasing earth resistance via diminishing returns the going gets rough.

The truth that was discovered by Malthus gave the first light to Charles R. Darwin. Darwin saw results of earth limitation on other species besides man. Darwin, in his introduction to *The Origin of Species,* referred to "the struggle for existence amongst all organic beings throughout the world, which inevitably follows from the high geometrical ratio of their increase," and went on:

> This is the doctrine of Malthus, applied to the whole animal and vegetable kingdoms. As many more individuals of each species are born than can possibly survive; and as, consequently, there is a frequently recurring struggle for existence, it follows that any being, if it vary however slightly in any manner profitable to itself, under the complex and sometimes varying conditions of life, will have a better chance of surviving, and thus be naturally selected.

Man was included in Darwin's generalizations, of course, and the study is richly important in explaining the origin of people from their animal ancestors.

Also, in making the point that evolution invoked the death sentence as a penalty for incompetence, and that later generations were therefore the descendants of the relatively capable people, Darwin revealed how human beings acquired enough intelligence to establish civilizations.

He did more than any other man who ever lived in making human life comprehensible. We do well to recognize that. But we must not think that the story of man was finished when Darwin closed his book. We find that the normal, predictable, and regular withering and shrinking of men's minds, by which they cause the *terminations* of civilizations, is by way of normal, predictable, and regular differences of birth rates, taking place in the sheltering structure of a civilization.

Characterizing the birth rate differences, *the dumber the couples are, the more babies they have.* That rule has many exceptions of course but it is statistically true and demonstrable, as I shall show herein. In a civilization the weeding-out process of evolution is reduced to insignificance; we save almost everybody.

So the natural birth rate differences, rather than the weeding-out process, determine the capability level of our citizenry, and normally bring about a declining quality. Thus, normally, a civilization, for its duration, in effect reverses evolution and destroys itself. *That is The Third Major Principle of Population,* and the subject of this book.

Before we plow through the mass of details, let's resummarize our summary in one, two, three, order, so that you will know where we're going:

1. From Malthus: Men tend to increase. Under diminishing returns they thereby bring poverty to themselves and make their lives very hard.
2. From Darwin: As pre-requisite to a civilization, death weeds out the incompetent, so later generations are, disproportionately, the offspring of the better problem-solvers.
3. From Pendell: In a civilization the weaklings have most babies; we, protecting the weaklings and doing most of our breeding from them, reverse evolution and destroy civilizations.

Oh yes; the book includes one more feature. By popular demand (of students in my Population classes) I have forsaken the scholar's aloofness and included some for-instances of what you can do about our trends if you don't like the prospect of dark ages.

CHAPTER TWO

MALTHUSIAN LIGHT ON THE WORLD'S PLIGHT

The Malthusian aspect of the Population Problem is the terrifying increase of people. One way to sense the acceleration of growth in numbers is to think of the fewer years that flash by in the piling up of successive human billions.

An incomprehensibly long time passed before there were the first billion people on the earth. General enough to be considered a way of nature is a balance between births and deaths, and roughly there is a balance between and among species, too. For hundreds of thousands of years human beings, like other species, fitted the general rules. Man was probably a tasty morsel in a food chain which might include a boa constrictor or a panther or a colony of red ants. At any rate his job was to stay alive; a fulltime job with not much unemployment. Like the other species he developed instincts to help him stay alive. There was no excess of human life, and no instinct to keep him from over-reproducing. The hunger instincts of tigers and malaria germs were part of the normal mechanism which kept human numbers in check.

A civilization developed in the Tigris and Euphrates valley about 7,000 years ago. That seems to have been the first one, and probably it was very localized. A civilization is characterized in part by its relatively efficient ways of getting things done, and one of its effects is a reduction of death rates. That first civilization must have reduced the death rates in only a small area, but gradually other lands became civilized too, and it has been estimated that 5,000 years later, at the time of Christ, the world population was a fourth of a billion.

In the next 1,640 years it doubled, making the total a half billion. By 1840, only 200 years after that first half billion mark was reached, the excess of births over deaths had brought the total to the first full billion, and the rate of increase was rising faster. These figures are estimates of the demographers, who are population specialists with a statistical emphasis.

•

Malthus had been impressed by population growth, and nearly a half century before the rounding out of that first billion he had worked out his principle of population, published in 1798.

Englishman Thomas Robert Malthus, born in 1766, was 32 when his *Principle of Population* was published, the first of his seven economics books, and of his *Principle of Population* there were five later editions. The full title of that first book was about a foot longer: *An Essay on the Principle of Population as it Affects the Future of Society, with Remarks on the Speculations of Mr. Godwin, M. Condorcet and Other Writers.* In 1824 he wrote the article on Population for the Encyclopaedia Britannica. He died in 1834.

In 1793 William Godwin had published an *Inquiry Concerning Political Justice,* proposing changes in property laws with the intention of abolishing poverty. (That has a 1966 sound. As Dan Bennett says, History repeats because people weren't listening the first time.) Mr. Godwin re-stated his argument in the *Inquirer,* which seems to have been a periodical. In that later presentation country-gentleman Daniel Malthus found Godwin's fantasy interesting and discussed it with his son. From that stimulation, son Thomas Robert Malthus took off.

I quote from the first edition of his *Principle of Population.* The later editions are more scholarly, but this one is more compact.

I think I may fairly make two postulata.

First, That food is necessary to the existence of man.

Secondly, That the passion between the sexes is necessary and will remain nearly in its present state.

* * *

. . . The power of population is indefinitely greater than the power in the earth to produce subsistence for man.

Population, when unchecked, increases in a geometrical ratio. Subsistence only increases in an arthimetical ratio.

* * *

Through the animal and vegetable kingdoms, nature has scattered the seeds of life abroad with the most profuse and liberal hand. She has been comparatively sparing in the room and the nourishment necessary to rear them. The germs of existence contained in this spot of earth, with ample food, and ample room to expand it, would fill millions of worlds in the course of a few thousand years. Necessity, that imperious, all-pervading law of nature, restrains them within the prescribed bounds. The race of plants, and the race of animals shrink under this great restrictive law. And the race of man cannot, by any efforts of reason, escape from it.

* * *

In the United States of America, where the means of subsistence have been more ample . . . the checks to early marriages fewer, than in any of the modern states of Europe, the population has been found to double itself in twenty-five years.

This ratio of increase, though short of the utmost power of population, yet as the result of actual experience, we will take as our rule; and say, that population, when unchecked, goes on doubling itself every twenty-five years, or increases in a geometrical ratio.

. . . the produce of this Island may be doubled in the first twenty-five years. . . . In the next twenty-five years, it is impossible to suppose that the produce could be quadrupled.

* * *

The poor-laws of England tend to depress the general condition of the poor in these two ways. Their first obvious tendency is to increase population without increasing the food for its support. A poor man may marry

with little or no prospect of being able to support a family in independence. They [the poor-laws] may be said therefore in some measure to create the poor which they maintain; and as the provisions of the country must, in consequence of the increased population, be distributed to every man in smaller proportions, it is evident that the labour of those who are not supported by parish assistance, will purchase a smaller quantity of provisions than before, and consequently, more of them must be driven to ask for support.

* * *

A labourer who marries without being able to support a family, may in some respects be considered as an enemy to all his fellow-labourers.

●

Economists are glad to claim Malthus as an Economist. After all, a Geographer, or a Biologist, or even, since the sex drive is involved, a Psychologist, might have been the pioneer in pinpointing the main relationship of man to earth. But though honoring Malthus for working out, and sensing the importance of, the first major principle of population, present day economists sometimes formulate subsidiary generalizations to express relationships in current applications. I did that in an article entitled "Some Principles of Population Economics," published in *Population Review,* (Madras, India) in July 1957. Let me quote the high points of that article here.

Central, in impact on population conditions, is the fact of *diminishing returns.* The law reporting that central set of relationships is that in every major region of the world *the direction of influence of any substantial increase in number of persons working the soil is to bring about a smaller proportion of increase in amount of food.*

The law reports the relationship between workers

and land, land being the constant factor. Land is constant in any economy—practically so. As a tool in social economics there is no appropriateness in the introductory clause with which some economists have stated the law: "If land is held constant. . . ." That formulation has an applicability in personal business economics, but as a social or national matter we don't have to hold land constant; it is constant in spite of us (or diminishing, as by erosion). And there is no need for that other diluting modifier: "Beyond a certain point in the addition of workers. . . ." Every large region which is reasonably habitable is occupied far beyond that point where additions of workers will tend to do anything else but reduce the per capita agricultural productivity. In some places the effect of worker additions can be offset or more than offset by increase in machinery; but that must not be confused with the direction of influence of the addition of the workers; where machinery increases the product it would increase the product still more per capita if the workers did not increase.

Related to the law of diminishing returns is a principle that *when food is scarce those who produce it have an advantage.* Consequently the variations in production result in still greater variations in exports. If a country ordinarily exports 20 per cent of its wheat, a crop which happens to be 20 per cent short of normal would reduce exports not a mere 20 per cent but close to 100 per cent.

Another but also related principle is that over the years *food exports in international trade tend to zero,* and it follows that food *imports* tend to zero.

In explanation of that principle, all the nations from which food is exported are growing in population.

If the citizenry in a food exporting country maintains the same proportion of food growers, it produces with diminishing returns. During some measure of the increase its exports are likely to be increased a little, but will eventually decline. That is the prospect for rice shipments from the Irrawaddy River delta in Burma, the Chao Prava River delta in Thailand, and the delta of the Mekong River in South Vietnam. In those lands manufacturing is not likely to take many workers away from food production.

Canada, Argentina and Australia, are countries of greater food surpluses but manufacturing opportunities exist there. As the populations grow, the prospect of greater resistance of the soil turns the young people, as they reach working ages, away from the land. They get into manufacturing and thus avoid, for themselves, the effects of diminishing returns in agriculture. Since the food production remains about the same and its consumers increase, the exportable surpluses decrease.

Even in the United States, where huge investments in agriculture have increased total agricultural production, our agricultural exports are a declining percentage of our total exports, and our *net* food exports have for years see-sawed across zero.

From the way the law of diminishing returns affects behavior in areas which are now exporting food, it follows that *any country which increases its dependence on food imports is inviting disaster.* Those countries which already have a dependence on food imports, such as Great Britain, will experience increasing population pressure even if their own populations increase not at all.

There is a very widespread lack of comprehension on this point, even in textbooks, many of which state or imply that the great need in the Orient is an increase in manufacturing, by which purchasing power

can be attained with which to purchase food. Actually, any such program is ill-advised. Even temporary relief is unlikely, and in the long run the condition would be worse than if the reliance on outside food had not developed.

Manufacturing, in a crowded land, has very limited prospects. There is popularity in the idea that manufacturing can bring relief from overpopulation. That idea is mostly illusion. What we have observed concerning diminishing returns from *agriculture* applies as an obstacle to *manufacturing*. Food is the prime necessity; industrial workers have to eat. Can they get food from the rural areas they leave when they come to the cities?

We found that if workers are added to previous numbers of workers on a piece of land they produce less than the previous average; in other words, they work with diminishing returns. Nevertheless, they do, as a rule, produce something additional to what would be produced without them. Take off half the workers and send them to factories, and the total food production would be diminished. It would not be reduced by half, but in a conceivable situation it would be reduced by a third. The production of food *per remaining worker would go up* but the *total production would go down*. So, averaging the food total over the workers who produce it and the workers who go to the factories, the amount available for each is less than before the industrialization.

Now consider that in connection with the hereinabove presented principle that when food is scarce those who produce it have an advantage. Those remaining on the farms may send a little more to the city than they would from the smaller plots they were working before their neighbors went to the city, but

they will not send to the city enough to feed those neighbors who left the land. The total is down a little, and of what is produced the landman keeps a somewhat larger proportion. And, more of his children surviving, he will soon send no more to the city than he did before his neighbor left for the city.

In a crowded land a man who has any hold at all on the land has better prospects if he stays on the land than if he goes to the city for a job in a factory.

•

Let us line up some principles as a summary.

Food is a prime necessity.

The direction of influence of any substantial increase in number of persons working the soil is toward a smaller proportion of increase in amount of food.

Where food is scarce those who produce it have an advantage.

If part of a crop is normally exported, a reduced crop is followed by a larger proportionate reduction of its exportable portion.

There is not a single large area in all the world whose trends point to a continuing ability to supply food to crowded lands.

Net food exports tend to zero; net food imports tend to zero.

Any country that increases its dependence of food imports is inviting disaster.

The growth of a village to city size is hampered if food surpluses from nearby areas are small.

A crowded land has to be mostly a land of villages; the food surpluses are too scanty to support the proportion of urbanization that can occur in a less crowded land.

A country in which the population increases beyond the carrying capacity of its own soil can have only temporary relief, if any, from manufacturing.

In a country where food is scarce industrialization can improve the food prospects only to the extent that food can be used domestically which in the absence of industrialization would be used to pay for imported manufactured goods.

To say there is too little food should be interpreted as saying there are too many people.

Population problems, though social in their economic results, stem from the behavior of pairs of individuals.

•

The infinite reproductive power of human beings is restrained by the finiteness of the earth itself, and the recital of principles growing out of the law of diminishing returns shows how that finiteness of earth takes effect. We cannot say the earth can support some definite number of people and no more; we can say that if an area (or the world) has X number of inhabitants per arable square mile, the people can have choices comparable with choices in America, whereas with 10X inhabitants per arable square mile they can't choose to eat beef or ride in automobiles; 90 percent of them can never have any kind of meat, and not more than 1,800 calories per day of anything. So an increasing population involves a narrowing range of choices; in other words a declining level of living.

•

Now let's get back to our population explosion.

Modern civilization had markedly reduced the death rates by 1840, about the time when the world's first billion inhabitants accumulated, and in a mere 90 years more—at about 1930—people numbered TWO billions. The less than a century that it took to accumulate the 2nd billion people should be viewed in comparison with the hundreds of thousands of years that the first billion required. The balance with other species was gone; the balance between births and deaths was gone.

To stack the third billion on the other two, the time was cut to about a third of those 90 years. Civilization's various groups were making an objective of saving lives—just anybody's lives, anywhere. The objective—

saving lives—was idealized. The utter impossibility of being successful in such an objective on a long-time basis without comparably trimming the birth rates was completely ignored.

It was in 1961 that we came to the third landmark: 3,000,000,000 human beings on earth at one time.

Perhaps there will be a further reduction of death rates, but even with birth rates and death rates as they are now, leaving a 2 percent increase per year in the population totals, the problem of population quantity takes on nightmarish proportions because of the increasing base. That increasing base in what makes the mathematics of compound interest applicable to human increase. The increase of each period becomes part of the base on which the rate of increase applies for the next period.

I asked Mrs. J. B. Chiepalich, the head of the Math Department at Jacksonville State College, to figure the time for the added billions after 1961, on the basis of a two percent increase a year. The billions have arrived and are scheduled to arrive in accordance with the following timetable:

1840 ..... THE FIRST BILLION

To that we added a billion in NINETY years.

1930 ..... TWO BILLION

Then we added a billion in THIRTY-ONE years.

1961 ..... THREE BILLION

Now we are adding a billion in FIFTEEN years.

1976 ..... FOUR BILLION

Then we'll add a billion in ELEVEN years.

1987 ..... FIVE BILLION

A billion is only 20 percent of that large base, and unless the death rate rises we'll add that billion in NINE years.

1996 ..... SIX BILLION

The billion that was added between 1840 and 1930 was a doubling, a one-hundred percent increase. But

now the base is three times as large, so that for the 4th billion, the billion being amassed now, the addition constitutes only a third more than the 1961 base. Our problem becomes more formidable with the shrinking of time in which the billions are added: 90 years; 31 years; 15 years; 11 years; 9 years. . . . The final billion to be added in the 20th Century requires only 10 percent of the time required for the addition of the first full billion completed in the century.

By 1975, says the Food and Agriculture Organization of the U.N., food must increase by a third, in order to maintain present standards. Of course nobody seriously expects any such food increase by 1975!

•

The Population Reference Bureau constructed a valuable *World Population Data Sheet* at mid-1964, showing population at that time and as projected for 1980; showing annual percent of increase since 1958; showing births and deaths per thousand of the population per year for practically all countries and for each major area of the world.

The world in 1964 had 3,283,000,000 people; will have by 1980 4,274,000,000, an increase of 30 percent, practically a billion people, in a little over 15 years. The Latin American countries are the most flagrant offenders, and are expected to increase from 236,000,000 to 374,000,000 which is 56½ percent in just over the decade and a half. From the *Data Sheet* one can figure out the worst enemies of mankind, and can crystalize the size of their problem and ours, particularly if we re-group the countries according to the evidence of their uninhibited indulgence in sex (or in a few cases an unrealistic policy of immigration).

This first list includes 32 countries with rates of increase of 3 percent a year or more.

	Percent of annual increase in population		Percent of annual increase in population
Hong Kong	4.5	Equador	3.2
Costa Rica	4.3	Guatemala	3.2
South Viet Nam	3.7	Philippines	3.2
Dominican Republic	3.6	Syria	3.2
El Salvador	3.6	Trinidad and Tobago	3.2
Nicaragua	3.6	Mauritius	3.1
Tiawan	3.6	Mexico	3.1
Israel	3.5	Mongolia	3.1
North Viet Nam	3.4	Brazil	3.0
Venezuela	3.4	British Guiana	3.0
Malaysia	3.3	Honduras	3.0
Panama	3.3	Morocco	3.0
Rhodesia	3.3	Niger	3.0
South Korea	3.3	Peru	3.0
Upper Volta	3.3	Thailand	3.0
Albania	3.2		

The next list is of countries increasing by 1 percent a year or more, up to but not including 3 percent. (There are a few for which figures are inadequate.) The countries in this list are our enemies too, in that they are making a world which is surely less tolerable to us and our descendants than if they used more brains in their reproduction. But the harm they are likely to do us by way of population increase is less threatening, as a rule, than the harm from those in that first list.

	Percent of annual increase in population
Kenya	2.9
Madagascar	2.8
Sudan	2.8
Zambia	2.8
Ceylon	2.7
Ghana	2.7
Senegal	2.7
Rwanda	2.6
South Africa	2.6
Togo	2.6
Turkey	2.6
United Arab Republic	2.6
Laos	2.5
Uganda	2.5
Chile	2.4
Congo (former French)	2.4
Paraguay	2.4
Dahomey	2.3
Jordan	2.3
India	2.3
Columbia	2.2
Haiti	2.2
Indonesia	2.2
Ivory Coast	2.2
New Zealand	2.2
Algeria	2.1
Angolia	2.1
Australia	2.1
Burma	2.1
Canada	2.1
China	2.1
Malawi	2.1
Gabon	2.1
Mali	2.1
Pakistan	2.1
Switzerland	2.1
Cuba	2.0
Mozambique	2.0
Cameroon	1.9
Central African Republic	1.9
Iceland	1.9
Iran	1.9
Libya	1.9
Tanzania	1.9
Iraq	1.8
Puerto Rico	1.7
USSR	1.7
Argentina	1.6
Nepal	1.6
USA	1.6
Bolivia	1.5
Jamaica	1.5
Tunesia	1.4
Congo (former Belgian)	1.3
Netherlands	1.3
Poland	1.3
West Germany	1.3
France	1.2
Chad	1.1
Yugoslavia	1.1
Cyprus	1.0

These others are less a cause for worry for us by way of volume of reproduction:

Bulgaria	0.9
Japan	0.9
Luxembourg	0.9
Romania	0.9
Denmark	0.8
Finland	0.8
Greece	0.8
Norway	0.8
Spain	0.8
United Kingdom	0.8
Czechoslovakia	0.7
Portugal	0.7
Austria	0.6
Italy	0.6
Belgium	0.5
Malta	0.5
Sweden	0.5
Hungary	0.4
Ireland	(minus 0.3)
East Germany	(minus 0.5)

Interesting, isn't it, that excepting Japan, the only countries adapting to the population pressure are in Europe?

You think the Congo is doing rather well? It is not. That low percentage increase depends on a high death rate. There is no volition involved in a high death rate; there is no adaptation.

The Population Reference Bureau tells us that a population increasing at two percent a year doubles in 35 years; at three percent it doubles in 23 years. With that formula and those lists you can get an idea of the prospects for various parts of the world.

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The euphonious phrase "the developing nations" seems to have been adopted as a result of wishful thinking rather than any evidence. Nations to whom that terminology has been applied are *not* developing in any significant sense, and there is not a ghost of a chance for them to develop, so long as their population problems get only residual attention by their governments, their citizenry, and those who are or pretend to be their friends.

The Food and Agriculture Organization of the United Nations completed in 1963 a survey of the world's food supply; found that food production is increasing but not faster than the population, and as to the future the food increase will not keep up with the prospective population increase. Ten to fifteen percent of people are undernourished now.

In absolute numbers there are more hungry people now than when the UN organized it's social programs just after World War II, and the prospect is that in another 20 *years there will be more hungry people than the total world population now.*

As Robert C. Cook, head of the Population Reference Bureau, emphasizes, a projection of rates is not a

prediction; somewhere along the way the increase will be at a lesser rate than what has prevailed, though the base will continue to enlarge. But don't interpret it as good news that the rate of increase will decrease. It *can* be good news—if it means that wisely planned population control has developed. But that assumes more sense in human animals than they have ever so far shown en mass with their biological behavior. More likely the lower rate of increase will be by way of a higher death rate, and that will go along with sharply increased suffering. The higher death rate will be the result of the tougher struggle to stay alive that denser population will necessitate.

Another reason why it will be harder to stay alive as the population increases is that diseases will be harder to control. The World Health Organization warns that health problems are already "of staggering dimensions."

We will have to meet the population problem as a *population* problem or it will be forever bungled, as it has been to date. In plain language birth rates will have to go down or there will have to be a gruesome amount of dying. The alternatives are just that clear cut. Increasing the world's food will occur—but in insignificant measure as compared with the prospective increase of people. To emphasize the possible increase of food is to toy with delusion—and is likely to do harm by causing the surface-thinking masses to depend on a hope that is sure to fail.

We will do well to treasure the soil, quit mining it, and restore its humus by composting the autumn leaves and much of other organic refuse now destroyed — not with an idea of then overworking it to keep senseless increases of people alive, but to maintain a permanence in man's habitation.

Already the suffering is acute in some of the overcrowded parts of the world, and the population pres-

sure is practically everywhere. There are no "empty lands," no underpopulated lands.

This, for some of us, is important: a larger population is inconsistent with independence, freedom, individualism.

Famine is one of the positive checks to population growth which Malthus identified. Dr. Raymond Elwell, who is vice president for research in the State University of New York at Buffalo, according to an Associated Press account of September 2, 1964, told the American Chemical Society that a world famine will strike hundreds of millions of human beings in the 1970's as expanding population outstrips food production. He thought of it as "the greatest disaster in the history of the world." The famine has already struck in India, Pakistan and China, and will strike imminently in Indonesia, Iran, Turkey and Egypt. Africa and Latin America face spreading starvation by 1980.

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It is often remarked that with all these other countries increasing their population so fast, we'd better do likewise or else they will overrun us.

That reminds me that one time at a discussion meeting of a college faculty a professor reported some disturbing figures of population growth. The President of the college (financed in greater percentage than most colleges by tuition fees) remarked that there was a favorable side to it: the greater the population the greater the college enrollment. I protested that the generalization was too sweeping—otherwise the Chinese, with about four times our population would have a greater college attendance than the United States. The President narrowed his generalization.

As to China or any other country "overrunning us"; that depends on how stupid we are with our immigration

policy. As to overrunning us by force, they will not be able to do that. Numbers alone, in war, cannot do much; there has to be "hardware."

Asiatics are, to be sure, giving us a rough time in Vietnam. That is far from our home base, and we are fighting "under wraps." We are not using our most effective weapons. In fact we are so chivalrous that because some ladies thought it impolite to make people cry, we refrained until recently even from the use of tear gas. Also we are careful not to offend anybody by blowing up organizing points like Hanoi and Haiphong.

Again, soldiers, to be effective, not only have to be fed but they must have equipment. A large population can be an obstacle to providing adequate food and equipment.

Still, some people resist the idea that reproduction restraint is appropriate for the United States. The absurd assertion has been made in a publication that reached several hundred thousand readers that Texas alone could feed the entire United States! At what level of living? Even at present levels of cultivation Texas is using ground water reserves faster than they accumulate.

Population in the U. S. is now more than six times the 31½ million citizens of Civil War time. If our rate of increase were to continue the same for another 105 years, then by a time as long in the future as the Civil War is in our past our numbers would be far more than a billion—and our economic condition would be as desperate as that of China now.

The U.S. birth rate has declined rapidly even since the compilation of that Data Sheet of 1964. The almost spontaneous acceptance of "the pill" is one reason; the realization, new to most Americans, that the world has too many people, is another reason. Even more

than before, America's population problem is, in essence, a *quality* problem.

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A sentimental use of language sometimes tends to fog facts. One term which is often distorted is "human resources." The expression probably originated because of its emotional tone: it compliments the human beings so classified, because resources are helpful. But most human beings are, in net effect, the opposite of helpful. A resource is a basis of benefits. When people are in excess numbers, any random portion of them is, for the rest of them, exactly the opposite of a basis of benefits. They constitute not a resource but a handicap. If three-fourths of the people of India were suddenly swept away in a flood the other fourth would be much better off. They would have more land and capital per capita to work with and would be much more productive per capita. In such a situation a general reference to the people of India as "human resources" is false and possibly fraudulent, and at best is irresponsible and ridiculous.

A user of the term "human resources" might argue in a sweeping generalization that a man would be in a bad way with no other people in his country; that *a* man is better off with *all* the people now in the world than he would be with *none;* that therefore the other people as a whole are resources.

But actual problems are not like that. When the alleged scholars talk about "humanity's obligation to make the best use of human resources" they are usually talking about people in Asia; or overcrowded people somewhere else.

It is dangrous to permit our sympathy for the personal suffering of these people to excuse the pretense that is carried in the term "human resources" that they are, *or ever can be,* of any net benefit to the rest of humanity.

That does not mean that there are no "human resources" in the overcrowded nations. An engineer, or other organizer, who guides other workers to an output greater than enough to offset his own salary is a basis of benefits. It is the indiscriminate use of the term that is false.

That brings us to a key fact: some men are useful and some are not—some are problem solvers and some are problem makers; and a persistent fact that confronts us everywhere is that the problem makers are the ones who are crowding the world.

That is true in America as elsewhere. The Population Reference Bureau made a study published January 25, 1965 which links *large families* with *poverty*. A father who receives an annual income of $3,000 or less is more than two and a half times as likely to have 6 or more children as is a father of higher income.

Of 2-child families only one in TEN had income of less than $3,000.

Of 4-child families one in SEVEN had income of less than $3,000.

Of 6-child families one of THREE had income of less than $3,000.

The Report of the Population Reference Bureau quoted the Secretary of Labor: "There is strong indication that a disproportionate number of the unemployed come from large families. . . . We know that almost half of the boys rejected for military service because of inadequate mental capacity and education come from families with six or more children."

In that quotation we get a hint that there is some connection between quantity of population and its quality. That connection is examined in later chapters. In preparation for a consideration of quality of people we must give attention to the source of people. That requirement is met in the next chapter.

CHAPTER THREE

WHO AM I AND WHENCE DID I COME?

Alfred Lord Tennyson had one good answer to "Who am I?" "I am the heir of all the ages, in the foremost files of time."

My legacy—and yours—is partly biological and partly cultural. Some of the culture seems out of harmony with the biology.

One fragment from the early passages of the American Declaration of Independence is often quoted: "We hold these truths to be self-evident: That all men are created equal. . . ."

Thomas Jefferson had no need to make so broad a statement. It would have served his purpose to observe that the American colonists were the descendants of Englishmen, that the inhospitable prospects and experiences of the colonizing era had yielded a quality of surviving American settlers at least as capable as average Englishmen, that the rights derived from the Magna Carta and parliamentary government belonged to American colonists as surely as to other Englishmen.

When was the Declaration of Independence adopted? That question is more important in Population analysis than is at first apparent. It was adopted on July 4, 1776, by the Continental Congress.

When was Charles R. Darwin's *Origin of Species* published? In 1859. And what is the significance of that date? The *Origin of Species* was published 83 years later than the date of the Declaration of Independence.

The truths and conclusions in the *Origin of Species* constitute a *scientific refutation of the idea that men were "created equal."* If Darwin's publication had preceded the Declaration of Independence, the dictum

that men are created equal could not have been included in it!

What irony it is that a great man and a great document are most widely remembered for an idealized fallacy!

Darwin in 1871 went further and gave us *The Descent of Man.*

In the present century and particularly in the recent years since Dr. Raymond Dart, Dr. Robert Broom, and Dr. L. S. B. Leakey and Mary Leakey, on the one hand, have been unearthing new evidence of early men and their ancestors; and on the other hand the students of animal societies have found rich mines of new knowledge, the unfolding story compels a re-examination of the whole structure of the social sciences. Mankind has been human longer than we knew; and time, long eons of it, is of the essence, because it permitted changes that would not have been developed otherwise.

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The evidence concerning the evolution of man is voluminous, fascinating, and important. Kenya, in East Central Africa, appears to have been our earliest home and pivot place.

L. S. B. Leakey, who was born in Kenya, is curator of Coryndon Museum in Kenya's capital city, Nairobi. He has been fossil hunting in and near Kenya since 1932, and has unearthed about 600 fossil apes, some of them on our ancestral tree, others not. They reach back to proconsul, a small primate that lived 20 million years ago.

But for our present purposes we need not carry our search so far back as that. We shall start with Australopithecines, ancestors of ours who, a million years ago, lived from Lake Victoria south at least to the Johannesburg area.

Fossilized remains of at least 74 of them have been studied. They had their heyday in the first half of the

pleistocene period, as shown by the Argon-40 method of dating, and so between a million and 500,000 years ago. But they entered their Australopithecine stage *more* than a million years ago, and in some directions their evolution out of the Australopithecine classification was probably later than midway in the Pleistocene.

These, your ancestors, the ancestors of all present-day human beings, were thriving 750,000 years ago. At least 30,000 generations of our ancestors have lived, had babies, and died, since then; there has been time for great changes, by way of variations, mutations, and early deaths of unadapted brothers and sisters and tribe members.

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Early death? Death? What is the importance of death?

Who are the ones which early death deprived of direct descendants?

Let us apply this question to human beings in early times, before there was any civilization.

Each individual had to provide for himself or herself then in much greater measure than now. Hardships were frequent and severe, and such social organization as existed was not very protective of individuals. The individuals who were comparatively strong and quick and alert and intelligent could meet the dangers or dodge them more successfully than their weaker or slower or less alert or less intelligent relatives and tribesmen. The more intelligent ones could devise the better preparations for winter. The ones who had less of the favorable traits, or more traits which directly hindered, were much more likely to die—and die early, before their own reproduction.

Some of the foundations for strength are inherited. Quickness, too, and speed, alertness, vision, hearing, perception and intelligence are in large measure trans-

THE PROCESS OF EVOLUTION

By the action of harsh factors in the environment, the segments of the human species which got the roughest treatment were brought to an intelligence level sufficient to support civilization. Roughest? Yes—within limits; limits which allowed the survival of SOME individuals. The harsh factors prevented the reproduction of the less adapted persons. Here we see a very harsh factor in the environment forestalling the reproduction of a primitive man who seems to be not very alert.

mitted via the genes. Individuals vary in their endowment in these and other characteristics, even brothers receiving them in unequal measure.

In the long past more of the slow ones died in childhood, killed by hyenas and black panthers, so subsequent generations of a tribe averaged greater speed, because those who became fathers and mothers of subsequent generations were those who escaped the hyenas and black panthers. Also those who lived long enough to become fathers and mothers had been wise enough in the summer to prepare for winter: to build a shelter or find a cave; and to get some skins of mountain sheep for bedding and clothing. They had stored a few seeds and nuts in preparation for those days when they couldn't find any rabbits to eat. The tribe members of less wisdom—many of them—died of malnutrition and cold.

Evolution depends not alone on the inheritance of favorable variations but also on mutations. Mutations are large size variations. Some are favorable but more of them are unfavorable. They depend on pecularities in the genes.

Occasionally a group with a favorable variation, changing its location because the meat supply was getting scarce, would come in conflict with a group without the favorable variation. More of those without the favorable variation would be killed than of those who had it. There would be a disproportionate "survival of the fittest"—the fittest to survive.

Except for "natural selection"—that is—except for the fact that death culled out the weaklings in a job of negative selection, the weak ones would have reproduced, and subsequent generations of a tribe would have been no more "fit" than earlier ones.

Thus death caused not only the blotting out of a deficient individual but the withholding of his heredity

from the gene stream of his tribe. So the tribe and the species were improved by nature's "negative eugenics": the death sentence for the unadapted.

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The time-tooled process by which humanity came "Up From The Ape" is awesome, and horrible, but magnificient in its product: Man. Clement Wood caught some of the marvel of it in a poem called "Time" in *Survey Graphic*, October, 1922.

I give you extracts from that Oration to Time:

The rock is dead, and does not mark your going;
The grass that feeds upon its aging head
Takes of the ancient soil to speed its growing,
But to your passing is forever dead.
The pine that shivers on the windy height,
The seaweed dozing in the stagnant sea,
Are blind to blazing sun and blinded night,
As to the gray stretch of infinity.

The deer that crop the grass are more than these,
Stirring upon the stirless face of land;
The bird that has its choice of kingly trees
Kings it, all unaware that near at hand
There is a hidden and a precious way
To make long yesterdays nourish today.

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Why, there are larks that wake the English woods
Whose fathers saw fierce Caesar beach his keel,
And shake the Druids' solemn solitudes
With the harsh clangor of the naked steel.
There are sleek dolphins in the tossing spray
Whose ancients saw Apollo come to port,
And yet their knowledge cannot leap today,
Nor spin the heavy ages for their sport.

Forever locked to grass and toughened tree,
Forever barred from animal and bird,

The travelled vistas of eternity,
The dust the marching centuries have stirred.
They are Time's abject creatures; they are slaves,
Who crumble dumbly into crumbling graves.

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But out of jungle loins a being came
Fitted to smooth the jungle to his will,
Whose groping vision sharpens to a flame
That leapt lightly above your highest hill;
One who could add one day unto another
Until the hoarded store was rich and vast;
Kin of the ape and the strong eagle's brother —
And yet himself, and none of these, at last.
Now tremble, Time, for your unbroken sway —
Here is a lord will share your ancient throne.
He travels far beyond the thin today,
And makes forgotten yesterdays his own.
The half-chained spirit, Time, shrinks at man's nod—
And a whole conquest makes of man a god.

One might argue that Clement Wood carried his glorification too far; that man is an awful bungler after all. But in contrast with "the stirless face of land," or "the pine that shivers on the windy height," or the deer, the larks and the dolphins, those sons of apes have done all right.

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How many ancestors have you had in the 30,000 generations since the competitive success of the Australopithecines? A computer could help us on such a problem, but the computer could not tell us very closely, because many of our ancestral lines have merged, as cousins, eight or thirty-two times removed, mated. In fact, the ancestral line of every human being now living has merged with every other, within 30,000 generations. That far back you are related to every Chinaman on earth.

Yet, in spite of merging, the number of your direct ancestors would run high in the millions. In the third generation before you—your great-grandfather's generation—you have had eight ancestors. Your ancestors of that generation together with the more recent generations—in other words including your parents and grandparents—number 14.

In the tenth generation before you, the number of your direct ancestors is 1024. Each of your parents had two parents—just try doubling the numbers for each generation back. Between you and that tenth generation of ancestors were another 1022. So, if we figure 30 years per generation, in the last ten generations, which total 300 years, you have had 2046 ancestors. That many ancestors just since New Amsterdam became New York!

In the 20th generation before you, you had more than a million ancestors, and between you and them were more than an additional million of your ancestors. In 30,000 generations the figures would be—except for the merging of lines—fantastic. So it is not surprising that favorable variations and mutations, *together with death to the tribal members who did not share them,* have given you some talents that your far-back forebears lacked.

In the long run, variations and mutations take place in every direction. If they aid in survival they become part of the equipment of the group.

There was much suffering in the process by which the favorable variations and mutations were stamped into your heredity, because that process, the process of evolution, involved the death of so many individuals who lacked those favorable variations and mutations. Hunger and cold and accidents and germs and enemy animals took a frightful toll of lives, but be proud of this: Among the many millions of your direct ancestors,

not one of them was a victim of infant mortality; there were no early deaths. Every one of your direct ancestors had what it took to survive! And every one of them did survive, at least long enough to reproduce, and thus keep the line unbroken. If it had not been so, you would not be here.

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The first Australopithecine discovery was made in 1924. Dr. Raymond Dart, born in Australia, educated in England and the United States, had, in 1922, gone to the Witwatersrand University in South Africa's Johannesburg, as head of the Anatomy Department. Josephine Salmons, a student in one of his classes, brought to him a fossil baboon skull which had been found in a lime works at Buxton, a village near Taungs, about a hundred miles south of Johannesburg. A baboon belongs to that broad subdivision of mammals called primates, which also includes monkeys and lemurs and other species with some likenesses to apes and human beings, which are likewise included. Dart was much excited about the baboon fossil, and he aroused the interest of a geology professor, Dr. R. B. Young. Young soon made a trip to Buxton and arranged that Dart should receive some fossil-bearing rocks which one M. de Bruyn had collected from blastings of the week before. In those rocks Dart found the mineralized skull and face bones of a youngster who had died at age about five: a youngster who was not a baboon!

Dart named the people of whom the infant was representative, "Australopithecus Africanus": South African Ape. "Austral" refers to anything southern; Dart thought of Australopithecus as an ape type, and the name signifies that the evidences of it were first found in southern Africa. The fact that the heredity of present day Australian aborigines has recently been traced directly by Dr. Carleton S. Coon to Australopithecus

is interesting, but your ancestry and mine go back to and through Australopithecus also. The first-discovered Australopithecine skull is called the Taungs skull, and the infant has sometimes been called Dart's baby. It had died at least 750,000 years ago.

Robert Broom, a distinguished Zoologist, saw the Taungs skull in 1936, and considering it the most important fossil ever found, he undertook a search for other specimens of Australopithecus Africanus. He found several. Dart got into the act again and found many more.

Anthropoid apes (manlike apes) now living are of five kinds: chimpanzees, gorillas, orangutans, gibbons, and siamangs. Australopithecus Africanus was more like us that like any of those. He walked and ran erectly, as could be judged by his short pelvis and the balance of the skull on his spine. His teeth were like ours, even his canine teeth being level with the others as ours are, though roots were vestigially large, as ours are, recording still earlier thousands of years when the canine teeth were fangs used for fighting as well as for tearing food.

We can conclude from the big roots of our eye teeth (our canine teeth) that in the distant past our ancestors had fangs, but inasmuch as Australopithecus had no fangs the ancestors who had fangs were farther in the past than his time; they lived perhaps six million years ago. Those teeth roots, like a veriform appendix, point to a way of life different from present ways.

Our ancestors, like several species, must have used fangs as weapons, perhaps for attack but surely defensively. A mutation which reduced the length and sharpness of the fighting teeth would have made the mutant an easier victim of hyenas, wolves, snakes, baboons, and many other fierce foes *unless* that mutant had some other weapon or weapons. There would have been no chance for him to have spread his mutation by mat-

ing—no chance for the whole species to have acquired it—*except* as weapons as effective as fangs had already come into general use.

Some scholars doubted that Australopithecus used weapons. Robert Ardrey, to whom I shall refer again, makes a strong case that even if we had no direct evidence that Australopithecus used weapons (and we have evidence) we could be very sure from the fact that his whole species had lost their fangs that he did use weapons. The only possible condition under which a mutation could have spread which deprived his ancestors of their fangs was the regular use of hand weapons. So not only the earliest Australopithecines which have been studied used weapons, but their ancestors for additional thousands of years used weapons too.

Except for clubs or spears or knives or comparable weapons those fangless forebears of Australopithecus could not have stayed alive, and there wouldn't have been any Australopithecines to leave the fossils that have been found.

A question could arise: How happens it that we lost the fangs but kept their roots?

If the fighting function were otherwise taken care of, just ordinary teeth where the fangs were would be more serviceable than the fangs. Biting and chewing could be more effectively done, and digestion would probably be a little better. There would be a positive value in mutations which substitute biting and chewing implements in place of protrusions that had lost all usefulness. But there seems to be no disadvantage in the large roots. They service the biting and chewing functions as well as smaller roots would. So there has been no reward for a mutation toward smaller roots.

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A little reflection is due on how a mental or physical mutation becomes a characteristic of a whole tribe or other segment of humanity; for examples white skin, black skin, speed in running, absolute pitch in hearing, comprehensive perception, logical reasoning. Let's play with this AP News item of December 2, 1965, written up by Bob Wood.

Mary Anne Murray, 17 years old, is a student at Eden Hall Convent of the Sacred Heart in Philadelphia. Maybe she has ESP—Extra Sensory Perception—sometimes popularly referred to as a sixth sense. John Freeman thinks she has. He is a Research Associate at the Institute of Parapsychology, which is located on the campus of Duke University at Durham, N.C.

For most of us, "I have the most luck with my corn crop where I hoe the corn rows the most." But hoeing cannot account for Mary Anne's crop of winnings. She just chooses her ticket and it seems that she might as well pay the income tax on the prize at the same time. Within the past year she has won "two Cadillacs, a Mustang, a two-hundred-dollar hand organ, a one-hundred-dollar gift certificate and several smaller prizes."

I understand that ESP is an inborn receiving set for electrical emanations; that most people have a rudimentary beginning which compares with Miss Murray's ESP as tropism to light compares with sight, or as the reaction of mucus membrane to chemical substances compares with the reaction of taste buds.

Maybe the young lady has a mutation, or maybe the mutation came into her heredity a few generations back. Let's take it at face value and imagine it as a mutation possessed by a Cro Magnon lass (pronounced Cro Manyon) about 30,000 years ago.

"Daddy, if you go in that cave take some neighbors with you; I think there is a bear in there." So she

would save her father's life and he would continue to be a good provider, and in time she would save her sons' lives. Some of her grandchildren would inherit some ESP of their own. If it is as useful as I am assuming, everybody that had it, and those associated with them, would be more likely to survive than those without it.

In half a dozen generations the trait could have been transmitted at least as a recessive to probably two hundred people: probably everybody in the tribe. The smaller the number who constituted the entire group the shorter would be the time required for the inheritance of the mutation as a tribal characteristic. If ESP had a very effective survival value the whole Cro Magnon population would probably have had the characteristic in a thousand years or so. If there was only one mutation, everyone who had it would have inherited it from the single source. As family lines merged, every Cro Magnon, after two thousand years, would have been descended from that one girl. If the aid of ESP to survival were only slight it would save fewer lives, and would therefore spread much more slowly.

What about its prospects in the future from 1966 of becoming a characteristic of the whole species? There is no chance at all in the present drift of events. Since Miss Murray is more successful than average people the chances are she will stay single or at any rate will have fewer children than average. But we'll talk about that principle in a later chapter.

But mutations in brain cells that were of great survival value did take place in Cro Magnon times, and occasionally all the way up to their times.

Imagine an early Australopithecine who could convey about forty meanings to persons of somewhat less comprehension, by mouth sounds accompanied by gestures. The sounds might have such meanings as food, water, mother, come, go, where? there; light, dark, sun, moon,

left, right, look, man, child, me, you, all, animal, wind, tree, club, a little danger—be alert; big danger—help; big danger—run. He would imitate animal sounds for identification and description.

He was able to twist a splinter from the leg bone of a deer to poke holes in the deer's hide to sew it to another.

He could make a club from a branch or from a leg bone of a zebra, and he had enough sense to keep it handy.

Suppose, at first only one man had so much brains as that. Some of his children would equal him in intellegence. They would survive in greater percentage than the other people of the tribe, and so would their children. In five or six generations there would have been enough cross mating so that everybody in the tribe, a small tribe, would have some heredity from that one source. Meanwhile the less gifted tribe members, whether descended from our record breaker or not, would have been much more likely to die young and leave no offspring.

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Australopithecine brain sizes ranged from 435 cc. to 700 cc., which range is about that of gorillas' brains, but a gorilla has more than four times Australopithecine's body size. According to Carleton S. Coon, "the mean weight of adult male gorillas is about 400 pounds." Dart gives the probable weight of Australopithecus as less than 100 pounds. For comparison, our brains probably average between 1400 and 1500 cc., a little more than twice the brain size of the best of Australopithecus, and our bodies average something less than twice as large. William H. Sheldon, in *Atlas of Men* considers 165 pounds as our average adult male weight. Considering the difference in body size the difference in brain size is proportionally not much.

Human beings have sometimes been described as tool-making animals, but that criterion seems unworkable. *Science News Letter* for March 21, 1964, reported a study made by Jane Goodall, a graduate student at Cambridge University, England, under grants from the National Geographic Society. She was in the wilds of Tanganyika studying the behavior of chimpanzees. They use leaves as napkins to wipe their sticky fingers; they dip leaves to get water to drink; they strip leaves from twigs and use the twigs to fish out termites. Miss Goodall has seen them throw stones to influence an enemy.

Dart in his *Adventures with the Missing Link,* p. 167, quotes Fred G. Merfield, who tells of watching through binoculars eight excited chimpanzees in a small clearing in the Yaounde forests, in Cameroon in Africa, about 250 miles north of the Equator and the same distance east of the Gulf of Guinea. The chimpanzees were sitting around the opening of a ground bees' nest, each with a stick. One after another would dip his stick in the hole and withdraw it with the end covered with honey. He would lick off the honey and dip again.

Breaking a stick or a twig is not a very intricate process, but we can reasonably project to find what the inventive capacity would be of an ape only a little more intelligent than the best of the chimps. Assuming that he didn't need his hands as an aid in walking he'd find a stick heavy enough for a club, and work on it to make it the right length.

Perhaps relative ratios of brain sizes to body sizes, and facility in using brains, are our most important bases for distinguishing between human beings and other animals. Does the human status become a matter of degree?

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One point that Dart made was that the Australopithecine people used the knee-joint end of the upper

front leg of a middle-sized antelope as a weapon, and the twin point to that one was that our ancestors were meat-eaters.

Dr. Dart gathered 58 baboon skulls from three sites. Sixteen of them were too shattered for study; the other 42 showed violence. Of those 42, 27 had been struck from the front, six from the rear, seven from the attacker's right side, two from the attacker's left side. Seven of the 42 showed that the blows were from a double-headed instrument.

Who could have practiced that carnage? Those early ancestors of ours, nobody else.

At Limeworks Cave in Makapan Valley, north from Johannesburg by 200 miles, bone-bearing waste between the lime layers had been dumped down the slope in front of the cave. Dart had loads of that anthropological treasure taken to the Witwatersrand University, and there he and his students cleaned and classified the limey bone fossils for six years. They took out every bone from a 20-ton sample: 7,159 bones, and they identified and classified 4,560 of them.

Of the 4,560 identified bones, 518 were humerus bones of antelopes: 11 percent. There were 238 knee-joint ends of the humerus bones of middle-size antelopes, only 7 of the shoulder ends. *Planned selection must have taken place.* And those knee joint ends were of a size to have made the double depressions in the seven baboon skulls, and knee-joint bones could have been the instrument of death for all 58.

There were fifty-three halves of jawbones of very small antelopes—the size of gazelles. They could have been used as knives. A variety of other fossil bones, statistically unbalanced and impossible as a matter of chance, seem to have been brought to the cave because they could function as weapons and tools.

Robert Ardrey, in *African Genesis*, sets up the case. And he stresses the fossilized head of a hyena in Dart's collection. From the mouth of the hyena protrudes a fossilized lower legbone of an antelope, jammed to that death-dealing position with a force that broke the animal's palate 750,000 years ago. That must have been an Australopithecine job! There was no one else.

Raymond Dart seems to have established that our early ancestors were predominantly meat eaters, and he and Robert Ardrey make it seem likely that our early ancestors became human *because* they were meat-eaters—subjected to an endless testing of wits in finding, stalking and overcoming their prey, and thinned down to their most adaptable and thus victorious members.

Dart had an opportunity to compare tools and weapons of Australopithecines made 750,000 years ago with those of the Middle Stone Age, a mere 15,000 years ago. Remarkable is the fact that the ways of Australopithecus were for the most part the ways of the men of 15,000 years ago. The later men did have the addition of hafted stone axes, but they still used bone tools of the same patterns as their ancestors used three-quarters of a million years earlier.

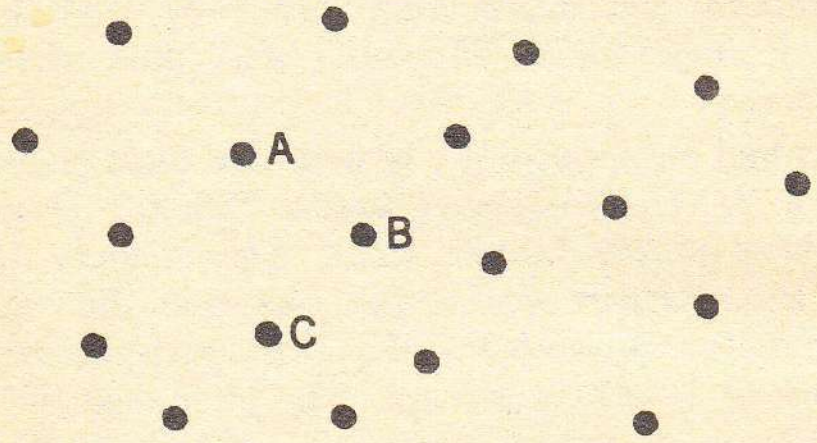
Dart's comparison was of the tremendous showing of bone specimens which he and his students had collected at Makapansgat Valley and those of the Middle Stone Age collected by J. Stander and by Dr. Revil J. Mason at Kalkbank 70 miles from Makapansgat.

Of bones other than skull bones those of antelopes numbered in the Kalkbank deposit 742 in 847, and as in the Makapansgat collection the small antelopes outnumbered the large.

Australopithecus wandered, of course, in many directions. It would be interesting but probably not very important to know what spot on earth could be called

central. I have referred to Kenya as probably our earliest home. But what might be central at one stage would not be such at another stage. "Central" seems to be the spot from which an important mutation was radiating.

After groups were formed in several places, schematized by these dots, there would be some interchange of genes between border members of groups A and B, so that a mutation originating at B would be transmitted back to A and in another direction to C.



Except as some of the groups journeyed to rather inaccessible areas they would in time, by way of the merging of family lines, share the favorable variations and mutations arising in any of the other groups.

Sometimes an isolated group, failing to improve with the others, might after a few generations find itself in competition with an aggressive group of its distant relatives and might be wiped out or partly destroyed and partly absorbed. Probably sometimes even if a group had everything, or even if it included persons having a favorable mutation, if the mutation had had too little time to spread to the group as a whole the group might be wiped out.

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Sir Arthur Kieth has stressed the point (most recently in *Western Destiny* for January 1966) that *isolation* of a group is essential to the origin of a new variety of animals, or a new species, and that the generalization applies within the human species.

The idea is that in the isolation of a group a mutation has a chance to be re-enforced through the inbreeding of the individuals that have it until it becomes characteristic of the whole group.

This interpretation seems valid in explanation of divergencies of types. How would it have applied in the evolution of the human species as a whole?

Isolation throughout the long past has always been interrupted. Traits which have been the special property of individuals in a group have been spread to another group and eventually to multiple groups at those times when isolation has been interrupted.

There seems to be plenty of evidence of parallel evolution for some phases of development, yet most of the ways in which human beings differ from other primates have almost surely resulted from the fixation of mutations within groups in isolation and then the spread of those mutations at times of interruption of isolation.

The interruption of isolation must sometimes have been by the intermating of lonely individuals at the borders of tribal areas, as illustrated by our A, B, C dots; sometimes by conflict, in which women were taken as prizes, or both men and women were taken as slaves.

The measure in which a mutation aided in individual survival seems to have affected the speed of its spread. If the mutation's contribution to survival were great, the descendants of the mutant would increase faster that the descendants of other individuals because a larger proportion would live to their own reproduction

age; and the tribe in which the mutation originated would sooner have a quantity problem of population, and invade the domain of another tribe.

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The Pleistocene, an alternately wet and dry period in which we diverged further and further from other animals, lasted from a million years ago to 8,000 years ago. By the middle of that period the Australopithecine people were in various parts of Africa, in Asia, and perhaps in Europe. To get so far, they must have been well able to take care of themselves. Their effectiveness had at least three bases: they ganged together for the big jobs; they had weapons: bone weapons in some groups, pebble weapons in others; they were adaptable.

Another type of Australopithecus had been developing in Africa for more than a million years, using for the most part different areas than the dry stretches where the antelopes roamed and Australopithecus Africanus pursued. These other Australopithecines were larger, bigger-boned, thicker skulled, and more largely root-eaters than Australopithecus Africanus was. The number of those whose mineralized bones or bone fragments have lasted through the hundreds of thousands of years, and have recently been found, is about 80. Dr. Robert Broom found several; called them Paranthropus. Mary Leakey found one, called it Zinjanthropus. They were all Australopithecus Robustus.

The date of Zinjanthropus, and his pebble tools, seems to be, by the Argon-40 method, at least 1,300,000 years old. Some members of this classification, a little later, even used hand axes—and they, as well as Australopithecus Africanus, had reduced-size canine teeth —even with the other teeth, but with inordinately big roots.

Ardrey believes that though Australopithecus Robustus got to the stone tools first, and so would be in the culture sequence to modern man, yet physically he needed more mutations to fit his pattern to ours than Australopithecus Africanus would have needed. So Ardrey suggests the possibility that eventually Africanus met Robustus and overpowered him and adopted his stone-tool culture—and then evolved to modern man. However, the intermediate stages of man, now becoming better known because of new discoveries, show the physical characteristics of Robustus too, such as the front to back ridge on the top of the head to which the heavy jaw muscles would have been anchored.

There is what seems to me a probability that when clashes occurred between groups of Africanus and groups of Robustus, the women of a defeated group would be prizes for the victors, so that the favorable mutations that had developed in both groups would be passed on to descendants.

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We pause at the Pithecanthropus erectus stage of homo—homo meaning man. The first specimen of Pithecanthropus bones had been discovered by Eugene DuBois, a Dutchman, in the island of Java, now a part of Indonesia. Australopithecus bones were there too, named Meganthropus paleojavanicus. Von Koenigswald found a jaw of one and P. Marks, a Dutch geologist, found the other. Both jaws were from Sangiran, in Java.

Australopithecus was already erect. Perhaps he evolved to the more advanced Pithecanthropus stage in Java, though Dr. Coon suggests a possibility that a more advanced stage may have occurred earlier in Siam, the changes in Java possibly resulting from invasions and interbreeding there. And Coon thinks that possibly, later, there was a further gene flow from a Mongol

source—enough to act as a yeast, which would spread because it conferred special survival ability.

"Pithecanthropus" combines Greek words "Pithekos" meaning ape, and "anthropos" meaning man. The name "Pithecanthropus *erectus*" was applied at a time many years before it was known that his Australopithecine ancestors had for several hundred thousand years walked upright too.

The ape-man fossils in Java are represented by Pithecanthropus 1, 2, 3, and 4, and B, and the Sangiran fragment which is the skull top of an infant. The original Pithecanthropus erectus discovered by DuBois is designated as Pithecanthropus 1. On that one and No. 2, the heavy brow ridges are present. On the others the parts are too incomplete to be evidence. P-4 was 200,000 years older than the others. 1, 2, and 3, were found at Trinil, in Java, and with these later skulls there were tools. These people had been tool makers for some time.

Solo man was from the Solo River Valley in Java, not far from where P-1, 2, and 3, were found. C. ter Harr, a Dutch paleontologist, unearthed the specimens of Solo Man in 1931-33; discovered eleven skulls and two leg bones. Though cannibals had eaten the brains, S (for Solo) - 1, 5, 6, 9, 10, and 11, were complete enough to measure.

These Solo Man skulls ranged from 1055 cc. to 1255 cc., whereas the largest brain of Pithecanthropus was 900 cc.

Eugene DuBois, besides finding Pithecanthropus 1, made other important discoveries, particularly Wadjak 1 and 2, in Central Java. They had lived later than Solo man, in the late Pleistocene—perhaps as late as 10,000 years ago. They had brain cases of 1475 cc., modern in conformation.

Wadjak had a chin. A chin is notable in evolution;

it is a brace that makes a heavy jaw unnecessary. Wadjak's jaw, incidentally, had a chin and was heavy too. Australopithecus had no chin, and Heidelberg man in Europe had no chin.

Australia was inhabited late; much later than Java.

Kartan artifacts are in evidence, estimated to have been produced at about 9,000 B. C. A skull found in 1940 in a sandpit in Keilor, a short way north of Melbourne, is dated at 6550 B. C. It is very much like the Wadjak 1, skull, and it had a brain case of approximately the same size, 1464 cc: larger than the average of living Australian aborigines, but within their range.

A so-called Talgai skull, dug in South Queensland in 1884, is smaller than the Keilor skull: 1300 cc., and is more primitive.

Still another skull, found in 1925 at Cohuna, Victoria, has a brain size near that of Keilor, and has heavy brow ridges.

Coon is convinced that these three skulls link with the Java series on the one hand and with living Australian aborigines on the other, and since the Java series includes Australopithecine individuals, they form a relatively simple hereditary line reaching from living men back to their and our African ancestors of more than a million years ago.

Australian aborigines receive occasional attention. At some time in their past one of their creative minority invented the boomerang, a remarkable weapon which if it fails to contact its target curves back to its thrower. We were left wondering about these heavy featured people on August 4, 1964, when Lowell Thomas took us via TV on a searching party to Australia's "outback" country. One Harold Bell Lassater, a dramatic prospector for gold, had died out there in 1936. Lowell Thomas with two local aborigines and a staff of White men had the objective of finding Lassater's grave. One

of the aborigines in his boyhood had known about the prospector; possibly had seen the burial. Without hesitation he took the party to a spot on the desert that looked like any other. About three feet from the surface the skull came into view. Before that, the native guides had, on at least two occasions, been able to point out precisely where to dig for water. At one of the places the water was only a few inches below the surface of the desert; at the other, water was reached at perhaps four feet. When Thomas asked the guide how he knew water was there, he lifted a handful of sand close to his nose. Apparently the sense of smell of these people is very keen and discriminating.

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The heredity of the Mongoloids channeled through the surviving relatives of Sinanthropus: "Sinanthropus pekinensis": Peking Man.

Peking Man is not a single individual, but rather, more than forty individuals who were eaten by cannibals (other Sinanthropi) about 360,000 years ago, and whose bones, along with the bones of deer and other animals were thrown into crevasses in Choukoutien, a limestone cliff 30 miles south of Peking. The bones mineralized. After 1903, but particularly from 1927 to 1937 there was much of digging and cleaning and classifying, so we have a rather reliable composite from which to judge their physical characteristics. We know something of their culture too. They had fire, and they used rather crude stone tools.

Sinanthropus had brain sizes from 1,015 cc. to 1,225 cc.; so his brains were larger than those of Pithecanthropus, and equal to those of Solo man, though Sinanthropus lived 200,000 years before Solo man.

The American Indians separated from their Mongol relatives perhaps 10,000 years ago, and crossed the causeway which now is the Bering Strait.

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Did some of the Australopithecines follow their meat supply to Europe and Asia, there to evolve into separate races? It so appears.

Glaciers and interglacial mildness influenced the careers of Europeans. There were four ice-caps. Their time spans are not yet surely ascertained. I report them as rounded out as snowballs. Be alert for time corrections as specialists with dating techniques work on the problem.

Name of Glacier	Occurrence, Years Ago	Duration in years
Gunz	600,000 to 560,000	40,000
Interglacial	560,000 to 500,000	60,000
Mindel	500,000 to 410,000	90,000
Interglacial	410,000 to 210,000	200,000
Riss	210,000 to 150,000	60,000
Interglacial	150,000 to 80,000	70,000
Wurm	80,000 to 10,000	70,000
Recent	10,000 to now	10,000

The man who used the Heidelberg jaw for chewing died at the time of the onset of the Mindel glacier. Stone axes were already in use in that German area a half million years ago, as well as in Africa. Heidelberg man seems to have been at Pithecanthropus stage. After the Mindel ice melted, the relatives of Swanscombe Man lived in England, and those of Steinheim men lived in Germany. Evolution seems to have proceeded rapidly.

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Africa is the earliest home of all of us; the present home of at least two races.

In Dr. Coon's classification of the races, Congoids (mainly Negroes and Pygmies) are separate in their heredity from Capoids (Bushmen) as well as from

Mongoloids, Caucasoids, and Australoids. The "oid" ending is not of the nature of the same sound in Brooklyn's "birds"; it merely makes the words inclusive of individuals who may not be "full-blooded" in one of the specified categories but are predominantly there. Thus, not only are most Europeans Caucasoid, but so is a particular French Canadian whose sources are three-fourths French and one-fourth American Indian. His Indian ancestry is of the same far-back source as is that of Chiang Kai-shek: Mongoloid, but mainly his forebears were European.

Both Congoids (Negroes) and Capoids (Bushmen) have their start in Australopithecines, as do all other human beings. The Capoids, according to Dr. Coon, seem to have evolved in Northern Africa, along the Mediterranean, and then, near the end of the Pleistocene period to have been endangered by the invasion of that homeland by Caucasoid peoples: the Moulliens (Afalou men) and Capsians, who came from Europe. The Sahara desert had given isolation to the Capoids (Bushmen), from the Negroes farther south, in which isolation they could and did evolve to a distinctive subspecies. When crowded out, the Capoids journeyed, perhaps with long way-station stops, to their present home in South Africa by way of the East African highlands. They are now small-statured yellow people, but both characteristics may be recent.

The migration started perhaps 12,000 years ago. At a much later date, according to Dr. Dart, there seems to have been a considerable intermixture of Chinese. A culture developed in the South Africa area with terraced irrigation, mines, pottery, and a hilltop fortress with balanced rocks ready to roll on an advancing enemy. The culture was complex enough to be called a civilization.

One may wonder if some Chinese traders of perhaps

3,000 years ago had settled among the Capoids, and if the civilization had been developed under their leadership; wonder if, as sea contact with the north was lost, and the heredity of the Chinese settlers was diluted in its intermixture with the Capoids, the civilization rapidly faded out.

The Negroes, as I understand, developed in an African area from 10° south latitude to 20° north latitude, west of Africa's watershed mountains. However, fossil evidence is very scarce. Of the five races, least is known about the origin of the Negroes. Apparently, in the area where their evolution took place, the geologic conditions were unfavorable for fossilization, or even for the preservation of weapons. What little there is is recent. Remains of ten individuals have been found about 23 miles southwest of Bamako, 500 miles north of Monrovia, not yet studied. Several skeletons of Negroes mixed with Hamites were found in 1948 in Khartum, which are probably 2,500 years old. Khartum is in the Egyptian Sudan on the Nile River, at latitude 15 north.

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What were we saying? Men were not created equal; they were not created; they evolved—as the horse evolved from little eohippus, a dog-sized creature with four toes and a thumb on his front feet and three toes on his hind feet. The variation, mutation, and death that are bases for evolution are illustrated by the story of the scrawny dogs that Spaniards left on a nearly barren island with nothing to eat but scrawny native goats. The fastest goats eluded the dogs and bred the succeeding goat supply. The fastest dogs ate the slowest goats, and, surviving, engendered faster and faster dogs; whereas the slow dogs died of starvation. So both species developed more and more speed.

That was evolution of a simple sort, developing

the specialty: speed. Other animals developed other specialties which adapted them to particular types of environments. Environment has made the animal what it is, but it has done so by way of heredity. The gorillas became specialized for swinging from branch to branch, but, since the forests have contracted, their specialization is a handicap.

Australopithecus had the good fortune of remaining rather generalized. He did specialize enough to be a ground animal; he was not expert in tree-climbing. But being for the most part unspecialized, he did many things not too badly.

But there are differences among people. Equality is inconsistent with evolution.

The assumption that *races* are equal is not only contrary to demonstrated facts but is unreasonable. Environments influence heredity, as we have seen. If Group X is in an environment for a long period, and separated from other groups in contrasting environments, the variations and mutations which favor survival in Group X will be transmitted by heredity to the whole group. In the meanwhile if the environment is especially harsh, the members of Group X who lack the favorable trait will be eliminated in much greater proportion than those who have it.

Some traits are based on multiple genes; so it isn't always a question of whether you have the trait or not, but how much of it do you have. Those who have more than average of a favorable trait, survive in greater than average proportion.

Thus those Australopithecines or Pithecanthropi who wandered into Europe were subjected to cold weather not only seasonally, but as a consequence of ice ages. The weeding out of those who made inadequate preparations must have been terrific!

CHAPTER FOUR

THE RISE OF CIVILIZATIONS

Civilization itself is a population phenomenon; for us it is the central galaxy of population facts.

A civilization comes about as a consequence of the continued biological evolution of human beings far beyond the emergence of man from the other animals.

But what is a civilization?

Complexity and *specialization* distinguish those cultures that become civilizations—even the earlier ones, which were simpler than our own. The pervading feature of any civilization is *specialization*. There has to be specialization, some measure of it, in the economic use of areas and in activities directed to the production of economic goods. Specialization in production makes surpluses possible; surpluses which permit the support of a variety of other activities, which usually become specialties too: music, art, architecture, formal education, library management, gladiatorial combat, professional baseball; and also trade, transportation, communication, and government. The more the specialization the greater is the complexity because the various specialized activities have to fit together in a system—an orderly and harmonious pattern.

Notice this: *complexity of the civilization does not necessarily correlate with complexity in the life of an individual.* For many of the individuals, life is simpler as a consequence of the specialization that makes up the complexity of the social organization. In fact, for some of the individuals the specialization has simplified the tasks to a degree that practically no human judgment is required. On the other hand, however, the mental acumen functional in some individuals in the vast array of occupations ranges upward from the almost zero level to include a concept mastery that

encompasses all the organizational interrelationships of the whole world.

In other words, in some unskilled labor jobs, individuals can qualify who have so little problem-solving ability that they would have been speedily wiped out in pre-civilization times; whereas, at the other extreme, some of the managerial positions are so demanding that very few individuals have problem-solving ability of a sufficiently high order to meet the need. Some of the problems, particularly those in government are repeatedly bungled, partly because qualified men are few and partly because our processes for finding the right men are inefficient.

To continue our definition of civilization, *trade* is one of its characteristic activities, necessary to the specialization. The products of the specialists are usually in excess of the needs of their makers, and the specialists are eager to acquire products that many other specialists produce. Exchange, by buying and selling, re-allocates the products.

An effective *transportation system* is correlated with the trade to implement the specialization.

Communication has developed far, in all human societies; in almost all civilizations *writing* has been in use. *Printing* was not present in the older civilizations, but has been instrumental in escalating the recent civilization to much greater complexity than any others reached.

Voice recording, microfilming, picture taking, and electrical transmission of sounds and symbols, make an inverted pyramid of additional specializations.

A civilization is, in one aspect, a super organization of institutions, and thus is largely psychological. Friederick List, brilliant German-American Economist and Statesman of the early 1800's expressed that angle of it. He is quoted by John M. Ferguson in *Landmarks of Economic Thought,* 2nd ed., p. 149:

> The power of producing wealth is therefore infinitely more important than wealth itself. The present state of the nations is the result of the accumulation of all discoveries, inventions, improvements, perfections, and exertions of all the generations which have lived before us; they form the mental capital of the present human race, and every separate nation is productive only in the proportion in which it has known how to appropriate these attainments of former generations and to increase them by its own requirements.

A civilization is a complex culture, and the measure of a civilization is the degree of its complexity. That is not to say, of course, that greater complexity makes a civilization more serviceable or satisfying or desirable. I think that a civilization has tremendous benefits for individuals, and is precious—but very often, and now, we need the reminder that there can be too much of a good thing.

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Our civilization is in trouble, as you may have already come to realize. We will analyze that trouble in later chapters, but before you are ready for that you must know *how a civilization comes to be.*

To know that, you must be aware of two prerequisites not mentioned in the foregoing brief definition of a civilization; namely *leadership* and *problem-solving ability on the part of the general public.* They are necessary not only as preludes to a civilization but as a continuing requirement for its survival.

The need for leadership is well expressed in *The American Economy* by Dr. C. Lowell Harriss. By permission of its publisher, Richard D. Irwin, Inc., I quote from pages 79, 438, 451, 479, and 481 of the 3rd edition.

> Great talent is rare, and society has overwhelming reason to try to discover and develop talent and to use it most effectively.
>
> Competence in business management looms as a great social need—competence in many fields, personnel, engi-

neering, finance, to name a few. Most important, perhaps, is *competence to select and run a team of widely varied skills.* A high degree of native ability and training, as well as rare personal traits, are needed.

Managements serve different masters: owners, consumers, employees, the rest of the public. Sometimes interests conflict; the management that might suit employees best, might sacrifice owners or consumers. Yet for the economy as a whole, there is a high degree of mutual interest in the quality of corporation management. Everyone benefits when business runs well.

Nature gave men and women widely varying physical, mental, and emotional characteristics. Some of these characteristics, and especially *the right combination of characteristics,* which are highly useful are also, it seems, scarce. Truly superior capacities appear to be distressingly rare, yet exceedingly desirable.

. . . Some decisions are vastly important. The man down the line cannot make them, but he has a huge interest in having them made *well.* His future depends upon the decisions of those who work with him, especially those in the top spots. Except for a good wife, no one may help a man's future more than the person (or group) at the top of his company. High salaries for key officers do not assure that they will be extremely competent, but low salaries will likely mean that the best talent will not stay long with the company. Everyone down the line will likely suffer. A worker who has great talent on his team has the equivalent of a legion of slaves working for him. Advice to a person getting a job: Pick an employer who pay the top men fabulously.

Efficient use of that scarcest of resources, the time of people with great responsibilities, is rarely discussed. Equality may be served if everyone must wash dishes or grow his own potatoes. Yet we know that efficiency is served by specialization, and specialization means that we serve each other. The persons who serve many of us in important ways—from entertainment through invention and business direction to statecraft—must, in return, have many of us to serve them if they are to concentrate. A large income to pay us is then necessary. The 'one-class' society is a sure-fire weapon for inefficient use of rare capacity.

Carleton S. Coon, Physical Anthropologist, in *The*

Origin of Races, p. 72, recognizes the importance of leadership, not only in civilization but in the stretch of time before civilizations, and not only in the mastery of cold and drought, but "to manage human relations skillfully." Nathaniel Weyl and Stefan T. Possony in *The Geography of Intellect,* published in 1963 by Henry Regnery Company, make leadership, and qualities necessary to it, a central consideration.

Arnold J. Toynbee in his *Study of History* makes use of the "creative few," and also of "challenge and response." Can a group, or individuals in a group, meet a new challenge of the environment? Those concepts are valid and they do explain a civilization's development—but, be it noted, only to the extent and in the same way that they explain success in the long eons *preceding* any civilization.

A group receives a challenge from the environment. The challenge may be a problem which arises from geographic conditions or a problem which arises from the action of other groups or one within the group. The way the group handles the problem is its response. A response is likely to change the environment enough to present another challenge, and over the years the challenges are in a long series. In effect "Necessity is the mother of invention," and invention makes a new necessity which calls for another invention.

The challenges are not met by all the individuals in a group but by a creative minority. And there we have the point at which Toynbee's analysis and mine are mutually re-inforcing. A group in which the creative individuals are too few or insufficiently inventive does not bring about a civilization, but a group which effectively solves its successive problems does initiate the activities and institutions known as a civilization.

"It is clear," says Toynbee, "that if the geneses of civilizations are not the result of biological factors or

of geographic environment, acting separately, they must be the result of some kind of interaction between them."

"Society is a 'field of action'," according to Toynbee, "but the source of all action is in the individuals composing it."

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Quotations from Arnold J. Toynbee are via D. C. Somervell's Abridgement of *A Study of History* and are used by permission of The Oxford University Press.

Leadership is of different sorts. The obvious sort depends on gregariousness. For *wise* leadership, even of that sort, the gregariousness must be mixed with a high degree of intelligence. Intelligence plays an even larger role in leading society to new ways via invention and adaptation.

George D. Stoddard in *The Meaning of Intelligence,* (1943), explains intelligence as leading to persistent and sustained action involving "(1) difficulty, (2) complexity, (3) abstractness, (4) economy, (5) adaptiveness to a goal, (6) social value, and (7) the emergence of originals." But Stoddard suggests that the use of those qualities in testing intelligence requires intelligence in the test maker. Ability in overcoming difficulty, for instance, is not well tested by requiring the spelling of long but little-used words; it is better tested by demanding lower to higher levels of abstraction. Facility with difficulties can be meaningfully tested by using related items so that systems and generalizations can be discovered.

Intelligence includes a general capacity which can be turned to any use, plus some special capacities. British Psychologist Spearman, in *The Abilities of Man,* specified six of these special areas (which, however, have overlaps): verbal ability, numerical ability, mech-

anical ability, attention, imagination, speed. As to the general capacity, Spearman thought it might be of any one or more of several qualities, such as a mental counterpart of physical energy, and an ability to respond to new situations, and power of attention. The general capacity has been conceived as the fuel which functions through the special abilities.

Louis M. Terman has suggested that there are shortcomings in our definitions of intelligence as there are shortcomings in our definitions of electricity, yet both can be measured and investigated.

For my purposes intelligence is problem-solving ability. It is measurable, and it has a hereditary base in brain cells, and though in an individual we cannot measure the hereditary element by itself, we can arrive at useful statistical deductions.

As has been pointed out by various scholars, intelligence tests, whatever the details of their composition, depend for their validation upon correlation with known performance of tested persons in life situations. Problem-solving ability *as shown by results* is not only important in its own right but it is the criterion by which the tests are tested.

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In the college in which I have just spent eight years, two faculty members, gentle and genial and lovable persons though they are, have nevertheless corrupted our students, in general assemblies, with the insane error that "all men are created equal." Along with some other millions who never spent more than ten minutes apiece in analysis of the subject they think that environment is exclusively important in matters of minds. So, although in Chapter 3 I already dealt with that foundational fallacy of faulty philosophies, I shall hit it again from another angle.

Let's start with Dr. Hall's mice. *Time,* April 21,

1947, reported an experiment by Calvin S. Hall of Western Reserve University. Two strains of mice were tested for "audiogenic seizures"—convulsions from fright at a sudden noise.

Hall put a loud electric bell inside the rim of a washtub. Then he put in some of each of the two strains of mice. One strain was black, the other brown; that assured identification.

When Hall rang the bell, nearly all of the brown mice in the tub scurried around, had convulsions, and died. Nearly all of the black ones survived.

But maybe their mothers had trained the brown mice to be scared? Dr. Hall had thought of that possibility, and tested that too. He had transferred fertilized ova from a brown mouse to the womb of a black one. All of the heredity of those ova was from brown mice ancestors; all of their environment was with black mice.

When the special brown mice were given the bell treatment, two-thirds died. Dr. Hall concluded that the tendency to die of audiogenic seizures is hereditary.

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Professor R. C. Tryon of the University of California has conducted an experiment relating to the influence of heredity on mind stuff. His account of it is in the 39th Annual *Yearbook* of the National Society for the Study of Education. It is relayed in Norman L. Munn's textbook in *Psychology*.

This time, learning capacity is in focus—in rats; does a rat's ability to learn its way through a maze depend on heredity?

Tryon tested a rat in the maze, then mated it according to the results. In the beginning generation, composed of 142 unselected rats, the number of errors made in 19 trials ranged from 5 for the "brightest" rat to 214 for the "dullest" rat. The rats that made

few errors were mated with others that made few errors. Those that made many errors were mated with others that made many errors.

By the eighth generation, that is the 7th generation of descendants of those 142 rats, there were two distinct strains. The bright strain, made up of 85 rats, averaged approximately 20 errors for the 19 trials. The offspring of the dull rats averaged approximately 100 errors for the 19 trials. Almost no descendants of the high IQ ancestry made as many as 50 errors. Almost no descendants of the dull rats made as few as 50 errors.

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One does not bump into the limits of his problem-solving capacity suddenly, but in terms of diminishing results from mental effort. Some people have a lot more hereditary mental capacity than other people, and the capacity is roughly reflected by achievement. Achievement is evidence of capacity to achieve; is a workable test of hereditary capacity.

Think of that in terms of physical ability. Consider some difficult objective, like running the 220-yard low hurdles in 24 seconds. Everyone who accomplishes that objective must have *everything* that is required to accomplish that objective. The heredity alone isn't enough; the training alone isn't enough. Both are necessary. Not merely 50 percent of the winners, not merely 90 percent of them; 100 percent of those who attain the objective—*every one of them*—must have *both* the necessary heredity and the sufficient training.

Line up a hundred men who have run the 220 low hurdles in 24 seconds or less. There can be no slightest doubt that each of them has, or at least had, what it takes.

Now line up a hundred men picked at random. Have they as good heredity for running the hurdles

as the first group? No; maybe some of them, with training, might be able to do it; but train them all to the nth degree, and yet not all of them could ever match that 24-second mark. Average heredity doesn't provide what is necessary.

Pick one of that second hundred, at random. Could he match 24 seconds? Maybe, but since he is in the group who never have done so, he may lack the required heredity. In fact, since fewer than 50 percent of people, no matter how hard they train, can ever match the 24-second time, the *chances* are that this Mr. X doesn't have the necessary hereditary capacity.

The same reasoning applies if the "difficult objective" is the passing of an intelligence test with a score of 130. Those who do it have the necessary heredity and the necessary education. They have *both*. A person who gets a 115 score lacks something. Maybe it is the education; maybe the quality of brain cells; maybe both. Since fewer than half of the people could ever score 130, the chances are he lacks the necessary hereditary capacity. This 115 scorer fits in with a group most of whom never could under any circumstances score 130.

However, even he has something that the average person lacks. The chances are that his heredity is better for problem-solving than is the heredity of the man who scores 100.

The school system involves, in part, a weeding-out process. To graduate from high school in the top fifth of one's class requires some capacity to learn. Maybe the lad who got discouraged and quit school in the 5th grade has as much capacity—but the chances are against that, because his conduct is like the conduct of a lot of kids who are dumb.

If you had to choose the fathers for the country's future, would you select the students in the top fifth

of the high-school graduating class, or the students who quit school in the fifth grade?

Would the country's future be safer in the hands of the children of men with IQ 130 or those of IQ 90?

You may protest that we shall have no chance to make such a choice; why be bothered?

But I think that unconsciously we have been favoring the IQ 90 people in their reproduction, by the laws and customs that we make. It hasn't been exactly a *choice,* since there has not been a conscious weighing of alternatives, but the results have been as if we had made a choice, an antisocial one.

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Old policy conclusions die even harder than the errors that supported them. A student of mine had convinced one of his friends who had previously been an environmentalist that men are not created equal and that they are not equal. But the friend had not gone along with the generalization that a civilization requires much problem-solving ability on the part of the general public. His argument was that since nobody uses his mental faculties to his maximum anyway it makes no difference whether he has much mental power or little.

The premise that "nobody uses his mental faculties to the fullest" is misleading—and even if that premise were correct the conclusion does not follow from it.

Could one say that since the four-mile runner takes a slower pace than the 100-yard man, the distance runner is not using his running capacity to the fullest? Does one have to sprint in order to use his running capacity to the fullest? Let's recognize that if the distance runner did his short-distance best he would not complete the four-mile run.

Similarly, anyone's mental best for an hour is too much of a strain for his all-day best, and a mental

pace one might maintain for a day is much too fast a pace for a year. Probably, for the long grind most purposeful individuals engaged in mental work *are* using their mental abilities to the fullest. Those who use their one-day best for weeks together get stomach ulcers and nervous breakdowns—and yet even they, since their all day best is less than their one-hour best, are not, according to the misleading premise, using their mental faculties to the fullest.

But suppose, in any interpretation, John Doe uses his mental faculties to only 60 percent of capacity. Even so, his achievement will be much greater than that of Richard Roe, whose mental capacity, at its best, is only a fifth as great as that of John Doe.

And have we any reason to believe that Richard Roe will use his mental faculties in any greater proportion than Doe uses his? No; and 60 percent of Roe's capacity is only a fifth as much as 60 percent of Doe's capacity.

There is no escaping the importance to a society of a high average quality of heredity in its citizenry, and the presence of many individuals whose inherited brain quality is excellent.

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Harriss has impressed on us that leadership is in part inherited; that it is rare; that others benefit from what the leaders do. Yet leadership is an attribute of leaders not in any exclusive way but only in degree. The members of a group have the adaptability, inventiveness, creativity, organizing ability, and any other qualities involved, in varying measure.

Actually, of course, it can be shown that there is no sharp line between the "creative minority" and the others. If on the basis of their adaptive qualities the whole population were arrayed, they would probably form a bell-shaped curve.

Not only as to abilities but in practice, leaders are not a definite, sharply separate group; rather, most members not recognized as leaders do engage in some amount of leading. The quality of leaders improves if the quality of the mass improves; if the quality of leaders deteriorates it is because the mass from which they spring is deteriorating.

Where whole segments of population, either geographical segments or classes within an area, are bungling their problems, the chances are not only that the leaders are inadequate as leaders, but that the masses are mostly composed of far-down specimens of humanity, biologically incapable of producing wise leaders. Essential to wise leadership are high quality brains. The only source of brains is heredity, and brains have been acquired by a group as a whole, as we have seen, by the early death of individuals whose brains were in short supply.

In generation after generation, as below average individuals were wiped out, the average moved up the scale. When intelligence increased sufficiently, a culture emerged. And when intelligence increased still more, mankind was ready for specialization and exchange, and transportation and communication; ready for music, art, theater, literature, and the organization of knowledge.

Most people are aware that it was biological evolution that gave the human species more ability to meet problems than other animals have. But most people have given little thought to the fact that *biological evolution made some human beings better able to meet problems than other human being are.*

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What would have been the difference in the environment of groups in which the creative individuals are in great proportion, compared with the environment

of a group that changed only a little from its primitive level?

Suppose a group were in an environment in which it tended to be in balance with its foes and the limitation of its food supply when it consisted of about 1,000 members. When members exceeded that number, the individuals had to go too far from the protection of home in order to get enough food. They were, enough of them to keep their numbers down, picked off by tigers and pythons and crocodiles and enemy tribes and various other predators; and some were often hungry.

Suppose a weather disaster trimmed them down to 700, and then as they approached 1,000 again, and some noticed the increasing dangers and difficulty in getting a living, a sub-group of 200 decided to leave the others and go far beyond the mountains to find a new home.

They traveled on and on, getting little encouragement from the geographic conditions until their 200 members, in spite of several births, were reduced to 70. At that stage they finally found surroundings that seemed favorable. But conditions were favorable only because the summer season was at hand. They were far to the north of their starting place. They had had some variation of seasons before, but this time when the winter struck it was a harsh surprise, and took away all but 25. The 25 stayed on, and made some provisions against the next winter, though that took away a few more. Those that were left were both hardy and foresighted; they had to be! Their numbers began to increase. There were animal foes as well as the winter itself, but their total grew, and finally came to a balance with their valley. Again a band branched off and went even farther north. There their animal foes were fewer, but the winters were worse, and the weeding out was at first very severe.

Now think of these pioneers as the actual migrants from mid-Africa to Europe. The point is that their successive surroundings were each different from the earlier ones, and, in combination, they eliminated more types of weakness and rewarded greater adaptability better than their ancestral land could have done.

Not only was there more interregional migration in Europe than in Africa but the greater contrasts in the climate made the cullings-out more thorough. At least R. Gayre of Gayre, and Coon, and Weyl and Possony, have emphasized cold as an important element in human evolution. Survival in a cold region has depended not so much on the ability of the body to withstand cold as on foresight in preparing for it. That means not alone planning shelter and making clothing, but arranging, months in advance, for a *supply of food*. When frost hits hard, the earth becomes bleak and unproductive, and remains so for months. The families or clans in such surroundings that dried some fruits and stored some nuts and seeds stood a much better chance of survival than those that made no plans. The weeding-out of individuals and whole groups that lacked foresight must have been much more rigorous in a northland than in those sunny regions where there was no sharp break in nature's offerings. Each year the bleak months constituted a new test and a new excuse for the executioner.

The glaciations, too, those that occurred after the Europeans became such, necessitated new major migrations. Those families that were too tardy did not live to reproduce, and if they were inadequately prepared for the journey the hazards were great. If they were too little organized, they were not ready to meet the resistance of the people whose homesites they invaded.

By the time the glaciers receded their own popula-

tions must have been too crowded, and new migrations were stimulated—each with its special dangers.

And there were those Neanderthals! They were a rugged people, and it appears that for some thousands of years they had the best of the encounters, and our ancestors, sorted more rigorously than perhaps ever before, and much reduced in numbers, seem to have gone to isolated spots, and perhaps to Asia Minor and/or Africa for a time, but eventually must have built up the necessary numbers of a very superior quality.

Altogether, a thousand times and more in half a million years there came a need to adapt to strange conditions, and almost every time there was the *extra* weeding out when the weaker brothers and sisters and cousins were starved to death and frozen to death and battered to death and clawed to death and drowned. Weeded out, and weeded out, and again and again weeded out, they were. For half a million years they bred only from the best because all the rest were dead!

These, the offspring of those who tried and survived, were the people who could originate a fishing culture and a farming culture and a culture of commerce and later of industry. These were the men who had the brains to build galleys and triremes and schooners and sloops and Yankee Clipper ships, and to invent the wheel, the lever, and the rudder; to make plows and saws and steam engines and submarines. They brought fire from a burning bush and put it in a Franklin stove; they took electricity from a flowing stream and tamed it to operate a telegraph. Good judgment was available for any situation. They improved their problem-solving ability by solving problems that rewarded the solvers with survival and meted out to the bunglers a quick oblivion. And we must not lose sight of the fact that the selective deaths were the method of improvement. Death subtracted from the gene stream

of a group the individuals who could not pass the tests.

In contrast, those who stayed near the original home site were weeded out on the basis of only one type of environment, and almost never were they very thoroughly culled. That environment kept their numbers down to "the limits of the food supply," and no doubt there was some increase in facility in carrying out the regular activities for keeping alive, but the situation would have been somewhat like that of those Spanish dogs and the native goats: the weeding-out process was on a narrow basis.

Dr. Wesley Critz George, former head of the Department of Anatomy in the University of North Carolina Medical School, submitted a report, in 1962, to the Governor of Alabama on *The Biology of the Race Problem.* It is available in paperback at 50¢ from The Citizens' Council, 315 Plaza Building, Jackson, Mississippi.

Dr. Coon and Dr. George and Drs. Weyl and Possony think fire is important in determining a stage in evolution. There is evidence of the *use* of fire in the Choukoutien Caves of China 360,000 years ago; in Europe 250,000 years ago; in Africa no earlier than 40,000 years ago. Europe furnished the earliest evidence of *making* fire, according to Dr. Carleton S. Coon's *The Origin of Races.* That landmark was registered about 100,000 years ago. Dr. George thinks the Whites have an evolutionary lead over the Negroes of about 200,000 years.

But Dr. George, time is only one factor. The Negroes had just as many centuries for evolutionary development as the Whites had. Another 200,000 years *in the same sort of environment* would make up only a small part, if any, of the gap—because the weeding-out would be on the same basis as the previous weeding

out. The *multiplicity* of environments, which killed off inadequate Whites for a *variety* of shortcomings, and gave the reward of survival *on a basis of adaptability*—that accounts for the greater average intelligence of the Whites!

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Though some Negroes are intelligent and constructive the evidence indicates that the net contribution of Negroes to a civilization can be expressed with a minus sign; Negroes at their average seem not to have carried their own weight.

Are the Negroes as an average on a different level of intelligence from the Whites?

There are few items of solid evidence in general publications. In *U.S. News and World Report,* however—issue of September 21, 1956, page 98—there is an article by W. T. White, Superintendent of Schools in Dallas, Texas, entitled "What Dallas School Tests Show." Enrolling in the 1st Grade in September 1955 were 1,623 Negro children and 5,676 White children. They were given standard types of tests, in use throughout the country. In the category "Superior" there were ninety-two hundredths of 1 percent of Negro children; there were 10.14 percent of White children. In the "High Normal" groups were 6.47 percent of Negroes and 26.50 percent of Whites. There were 18.43 percent of Negroes classified as "Average" and 31.96 percent of Whites. "Low Normal" Negroes constituted 41.71 percent of the Negro total, whereas 24.50 percent of Whites were "Low Normal." Still lower were 32.47 percent of the Negroes and .9 of one percent of the Whites.

Combining some of these groups we find 7.39 percent of the Negroes above the average group, compared with 36.64 percent of the Whites. Negroes below the average group were 74.18 percent of their total compared with 31.40 percent of the Whites.

In Grade II the Scholastic Aptitude Index was 98.50 for the Whites, whereas for the Negroes it was 83.89. In Grade IV it was 104.71 for Whites; 82.01 for Negroes. In Grade VI it was 101.20 for Whites; 80.08 for Negroes. Those tests for Grades II, IV, and VI were given in the school year of 1954-1955.

In the same issue of *U.S. News and World Report,* beginning on page 92, Dr. Frank C. J. McGurk tells us that between 1935 and 1950 about 140 studies of Negro intelligence were reported in psychology journals. Of those studies, 63 presented data. In all 63 the Negroes' average scores were lower than the Whites' averages.

One of the studies was conducted in 1939 in Ontario, Canada, testing Negroes whose ancestors had gone north during the Civil War or before. Their scores showed an overlapping of only 13 to 20 percent. That expression means this: A median line was drawn through the array of scores of the Whites. Fifty percent of the scores of Whites were above the line; fifty percent were below. The Negro scores, fitted on that array in their numerical positions, were above the line to the extent of not more than 20 percent; at least 80 percent of them were below the line.

Others of the six studies which McGurk details showed from 18 to 41 percent of Negro scores above the median lines.

In 1958 a book was published entitled *The Testing of Negro Intelligence*. The publisher is J. P. Bell Co., Lynchburg, Virginia, and the price of the 366-page volume is $4.00. The author is Audrey M. Shuey, Chairman of the Department of Psychology, Randolph-Macon Women's College.

Dr. Shuey's Chapter 2 reported nine studies by various examiners: studies of children between the ages of 2 and 6, mostly in kindergartens, nursery

schools and day nurseries. There were 1,173 Negro children and 12,711 White children. The Negro IQ average was 96.3. The IQ average of the Whites was 105.9.

There were 101 investigations of school children in the grades, including 310 Negro-White comparisons, direct or with White norms. In 297 of the comparisons the colored children scored the lower; in 144 they were lower than in White groups tested; in 153 they were lower than the White norms. In at least 23 of the 101 investigations the testing was done by colored psychologists or colored graduate students. The 101 studies covered approximately 51,000 colored children.

Dr. Shuey reported 32 studies of colored high school students. In 11 of the 32, White students were also examined, the Whites in each of the 11 studies receiving higher average scores. In 21 studies the comparison was with White norms. The scores for colored students averaged lower in 20 of the 21 studies. In one study the colored students had an average score of 103.25. In the high school studies considered together, 5,379 Negro students averaged an IQ of 85.03. The White norm is 100.

Studies of a total of about 15,000 colored college students are reported. About 97 percent of them were enrolled in colleges for Negroes. In general they showed an even wider difference between colored averages and White norms than the studies of younger students.

A representative study reported is that made by Brooks in 1942 of 184 Negro college first and second year students in Norfolk, Virginia, using the 1939 form of the American Council on Education Examination for College Freshmen. Their mean gross score was 59.55 compared with a published norm of 94. That score corresponds to the 9th percentile of the national score for Whites.

In a test conducted by Dr. Shuey herself in 1942, Negro and White students in New York University were paired as to background facts. Thirty-three Negroes scored 177 compared with 217.76 for the 33 paired Whites.

Most of the testing of the 15,000 Negro college students was with ACE examinations, and the average colored student scored about 60 percent of the norms.

The evidence which White and McGurk and Shuey have set forth seems to indicate that the Negroes have a biological basis for intelligence which is substantially lower than that of Whites.

Besides that seeming meaning of the IQ evidence, there seems to be meaning in the same direction in various facts of a general sort. There have been thousands of Negroes in the North since the underground railroad activities a century ago. They must have had environments as advantageous as those of the people who migrated from Europe in that time. Yet many inventions and achievements of various other sorts are attributable to the offspring of immigrants; very few to the Negroes.

Negroes in Liberia have had opportunities in government and industry since their country was started in 1820, yet the government and the economy there have been notorious for their inefficiency.

Negroes have been merged with the Whites in Haiti and some other Latin American countries. How do these countries compare with other new countries, or even with any European country? Not favorably.

Many Whites and Negroes believe that any lack of achievement of Negroes results from unfavorable environments. Some of them believe the Negroes biologically superior for athletics but can't believe the Whites biologically superior for anything. Some of the studies reported by both McGurk and Shuey in-

volved paired Negro and White students according to matched environments. In those as in the others, the achievement of the Negroes was less.

The *U.S. News and World Report* dated September 6, 1965, transmitted information from a report of the U.S. Labor Department's Office of Policy Planning, printed in March 1965 but not officially published. The report contains an impressive array of statistics comparing Negro and White behavior. They may well raise a question of whether or not the Negroes are economically and socially second-class citizens, whatever their political status may be.

	Whites	Negroes
Proportion of illegitimate babies for the U.S. as a whole in 1963	3.07%	23.59%
Children on relief at some time in their lives	8%	56%
Children on relief currently	2%	14%
Women with husband absent in 1960	7.9%	22.9%
Births for women of childbearing ages in 1963	10.43%	14.93%
Mental test failures of draft inductees (1962)	15.4%	56.1%
Northeastern States	26.4	50.1
East Central States	12.1	44.5
Southeastern States	19.1	67.7
South Central States	13.5	62.3
North Central States	8.9	46.9
Western States	12.1	31.1

A striking contrast was in crimes. The figures were given for 1963, totaled for 2,892 cities with population above 2,500. For murder, nonnegligent manslaughter, forcible rape, and aggravated assault, the total for Whites was 24,805, to compare with 35,520 for Negroes. Since there are eight and a half times as many Whites as Negroes in the general population, the figures show more than twelve times as much crime

committed by a thousand Negroes as by a thousand Whites.

In its issue of September 20, 1965, *The U.S. News and World Report* relays data from The American Medical Association showing 3.7 cases of syphillis per 100,000 Whites in 1964; there were 75.3 cases per 100,000 Negroes: 20 times the White rate. White cases of gonorrhea were 49 per 100,000; Negro cases 951: more than 19 times the White rate.

The so-called Moynihan Report of the Office of Policy Planning and Research of the U.S. Department of Labor (1965) makes some straight-from-the-shoulder generalizations about the Negroes:

> The harsh fact is that as a group, at the present time, in terms of ability to win out in the competitions of American life, they are not equal to most of those groups with which they will be competing.
>
> . . . Equality of opportunity almost insures inequality of results.
>
> The most difficult fact for White Americans to understand is that in these terms the circumstances of the Negro-American community in recent years have probably been getting worse, not better.
>
> . . . The gap between the Negro and most other groups in American society is widening.

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Civilizations arise because the weeding-out process has lifted the average problem-solving ability to a height at which the advisability of cooperation and organization and law and order are widely comprehended. Behavior is made to conform to the social well-being.

The Negroes furnish a sharp contrast to what is necessary for the rise of a civilization—or its maintenance.

I think this chapter shows that good heredity is an essential prerequisite to a civilization, and that the evolutionary processes have furnished that heredity;

that people differ greatly in the quality of their heredity and not all populations are capable of creating or maintaining a civilization; that of the populations capable of creating a civilization the main work in that direction has been done by especially capable individuals: leaders; that nevertheless there has to be a great reservoir of ability and understanding on the part of the general public, to keep up the supply of leaders, to select the best leaders, and to keep the leaders appropriately motivated.

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The *German* people suffered a special application of the evolutionary process in the Thirty Years' War. The Cambridge History entitles its volume IV *The Thirty Years' War*. That war was fought in the years 1618 to 1648, when war was still in considerable measure a man-to-man combat. That war was a slaughter of the innocents that involved millions. We are told on page 418 of the Cambridge History Volume IV that the population of Germany was diminished from over 16 millions to under 6 millions. Wives and children often followed the armies, and suffered a terrific death toll. There was much emigration, too, but the persons who clung most tenaciously to their old homes and places of business were those who had ownership claims. Most of the peasants starved or were killed by roving brigands or emigrated.

It took Germany 200 years to recover from the Thirty Years' War, yet it is probable that to that conflagration we owe the concentration of talent that resulted in the music of Bach and Beethoven and Brahms and Mozart, the poetry of Goethe and Schiller, and the scientific achievements of Bunsen, Humboldt, Mendel, and a host of others.

It was rough going for the builders of America, too. In the fall of 1620 the first of the Pilgrims arrived

at Plymouth. George F. Willison gives a fascinating account of the adventure in *Saints and Strangers*, a 1946 book published by Reynal & Hitchcock. Within three years, 234 persons had arrived or died on the way. Of those, 85 were "Saints," 123 were "Strangers," 5 were hired men, and 21 were servants. Of the 234 persons, 108 were men, 51 were women, and 75 were children.

The question has occasionally been raised whether or not the early settlers of America were a select group, a superior people.

The Pilgrims were Separatists, who in disapproval of the easy-going ways of the Church had broken away and established separate congregations even while in England. There may have been some sorting in that separation, and further sorting in the escape to Amsterdam, in the decision to go from there to Leyden in 1609, and still another weeding out for the hazardous prospects of the New World.

The "Strangers" were in a majority and were mostly impelled by a hope of worldly advantage. But enterprising people they must have been. The biological-evolution type of sorting applied to all.

The killing process was severe and obvious in the rigors of the first New England winter. One voyager had died at sea; 6 died in December of 1620; 8 of the 104 on the *Mayflower* died in January, 1621; 17 (which is practically 17 percent as well as 17 people) died in February, 13 in March. Of the 41 men who had signed the Mayflower Compact, only 20 were left alive by the end of March—less than four months later. There were 6 more deaths by the time the ship *Fortune* arrived in the fall of 1621, making a death toll of 51 of the original 104.

Besides those deaths of the first year, there were others resultant from famines, in 1622 and 1623.

Not many of the details were known until recently, and in the haze of legend that enveloped the subject, most Americans overlooked the tremendous truth that had shaped their country's course. The truth is that *the process of biological evolution, the weeding out of the less hardy and the less adaptable and the less wise, which applied among wild creatures and among primitive people, was reapplied to the Founding Fathers of the New World.*

Conditions were not so deadly by 1630, yet of 2,000 who migrated to the Massachusetts shores in that year, 200 died in the winter of 1630-31. At that time most of the settlers came to the Massachusetts Bay Colony. The year in which that Colony was chartered was 1629. There was a sorting there in the fact that a considerable proportion of the investors who financed the enterprise were prosperous merchants who themselves came over as settlers.

But you still may ask, is there evidence, besides the logic of the evolutionary process itself, to show that the surviving Pilgrims and Puritans were superior to average Englishmen?

Ellsworth Huntington reported a profound series of studies in his 1945 book, *Mainsprings of Civilization,* published by John Wiley & Sons, Inc. He sorted New England names according to dates of first appearance in America; classified them in four groups: those arriving 1620-1635, those coming 1636-1643, those appearing 1644-1692, and those of 1693-1790. He found what proportion of people in 38 cities of the United States bear those names; and then found how they rank according to the proportion of them that have achieved distinction. He pointed out that the present bearers of those names are diluted, yet "the differences between people descended from Puritans who arrived in America early in contrast with

those who arrived later are surprisingly great." Of the fourth group, arriving 1693-1790, "which did not undergo such difficulties as beset the earliest migrants," not nearly so large a proportion have achieved distinction.

One of Huntington's studies is of entries in *Who's Who*. In each occupational field the people whose ancestors came into this country 1620-1635 are achieving distinction in much higher proportion than are the persons whose ancestors came 1693-1790, averaging about twice as high. A "control" of British names arriving at all dates: Adams, Brown, Edwards, Jones, Smith, Stone, Williams, and others, are achieving distinction in still less proportion, though not remarkably less than the descendants of the 1693-1790 group.

As one of his tests, Huntington investigated the name groups in relation to persons taking out more than one patent per year in 1907, 1908, and 1937-39. He found the same direction of differences, though the extent of difference was substantially less. It appears, then, that the Founding Fathers, at least those of them who survived and became the actual fathers of their colonies, *were a superior people.*

In this connection we should also refer to a scholarly study by Stephen Sargent Visher, entitled *Scientists Starred,* 1903-1943, in *"American Men of Science."* This book gives a great amount of interesting and useful information about the scientists who have been voted by their fellow scientists to be the outstanding contributors to scientific knowledge. It was published by the Johns Hopkins Press in 1947.

Visher found that of the fifty *women* who were starred between 1903 and 1943 as outstanding scientists, almost all are of Puritan descent. Of the starred men, a larger number are from Puritan ancestry than from any other group.

The beginning of the American civilization was unique in its details, but not in its general pattern. The weeding out of the weaklings, and the consequent improvement of the average biological level of the group seem to have been a condition precedent to civilizations in general—and the more rigorous the weeding out, the more phenomenal the subsequent achievements. The rise of civilizations has been based on the elimination of the unadaptable as surely as the rise of man above the other animals has been based on the elimination of the unadaptable.

I have referred to Massachusetts as an example of the culling-out process, but *Virginians* paid for their later achievements too. Five thousand people had migrated from England to the vicinity of Jamestown in the 18 years from 1606 to 1624, but by 1624 only 1,200 had survived. Three-fourths of the migrants had succumbed to starvation, and Indian attacks, and malaria and other maladies.

It is appropriate that we carry the American Story a little farther. The "creative minority" to which Toynbee refers, has been dazzlingly inventive.

Let's call in Benjamin Franklin. In 1742 he invented the Pennsylvania fireplace. (Later he wrote a treatise on smoky chimneys.) In 1746, at age 40, he began his studies of electricity. He was on completely new ground—not only new for him—new for the whole human species. He found that static electricity is positive and negative. In 1752 he invented the lightning rod. In that year too he experimented with conductors of heat; particularly he tried out fabrics of different colors on snow. In 1768 he wrote of the cooling effects of evaporation. In a later year he found that boats of slight draft move faster in a canal than those of deep draft. In 1769 he charted the Gulf Stream. In 1748 he invented bifocal glasses.

His social inventions are even more amazing, as are his insights as a statesman, but let's keep our attention on the civilization's bony framework.

Exhibit 2 is Eli Whitney, and for the story I draw on Roger Burlingame's *March of the Iron Men* published in 1943 by Charles Scribner's Sons. In 1798 the U.S. government gave Whitney a contract to make 10,000 muskets, with two years in which to make them. The time had already expired and only a few of the muskets had been made. The government men were disturbed at what appeared to be an almost complete failure of Whitney to live up to the contract. But Whitney took to a conference the unassembled parts for ten muskets, and gave an early demonstration of interchangeable parts and the related mass production technique. The government men were convinced that they could have their 10,000 muskets in a hurry, and as many more as they wanted. Earnest John Knapton, in *Europe 1450-1815,* published by Charles Scribner's Sons in 1958, tells us on page 394 that Christopher Polhem, of Sweden, was "a pioneer in producing standardized interchangeable parts" around 1700. But the genius of Polhem dims not at all the genius of Whitney and the heredity-reflecting culture he represents.

Samuel Colt learned of mass production from Eli Whitney's son, and applied it to the Colt revolver. And before 1820 Eli Terry made 5,000 clocks by the method.

The intellectual climate in America was favorable to invention. In 1791 the Congress provided economic advantages too, by passing a law granting patent rights to inventors.

It is impressive to look over, in Burlingame's *March of the Iron Men,* a list of some of the early inventions, and individuals in America's "creative minority" who made the inventions.

In the direction of mechanical ingenuity the achievements of America's creative minority have been extraordinary.

There is another approach. Those colonists demonstrated a marvelous capacity for adaptation.

The use of waterpower in running the saws in their sawmills was their own invention. We don't know to what individual to credit that invention but those saws were the first waterpowered saws in the world, and according to James Blaine Walker in *The Epic of American Industry* (Harper and Brothers, 1949) the invention took place as early as 1631.

A saw in 1631 was a single straight blade, toothed, of course. Later a number of such blades were arranged in a gang that would saw several boards or planks at once. The still more efficient circular saw was invented later.

Timber was abundant: white oak, pine, hickory, maple. The colonists used the saws to cut up timber into lumber, for export, and for houses, furniture, barns, boats, and ships. What is the difference between a boat and a ship? The colonists were building boats about as soon as they arrived. John Smith and the men with him built some fishing vessels on the coast of Maine in 1614. And the successive boats were larger and larger.

The "Trial," says William B. Weeden in *The Economic and Social History of New England 1620-1789,* was completed at Boston in 1642, a sturdy craft of at least 160 tons—approximately the size of the Mayflower. Bear in mind that Boston, first permanent settlement of the Massachusetts Bay Colony, was established, with John Winthrop as its governor, June 17, 1630. That was only 12 years before the launching of that ship, twice as long as your house.

Let's pause next at 1676. There is something un-

usual about the year 1676; several writers use it as a marker. Maybe they are just reaching back a century from the time of the Declaration of Independence.

By 1676, 730 vessels had been built in New England, says Arthur Cecil Bining in *The Rise of American Economic Life;* about 300 of them were working out of Boston in the coastal trade, says Walker. Notice that the first settlers in Massachusetts had arrived only fifty-six years earlier.

A hundred years later, at the beginning of the Revolutionary War, New England citizens owned as many as 2,000 vessels in addition to fishing boats, says Bining. Almost a third of the ships of Great Britain had been built in the colonies.

There was a connected industry of sailmaking, another of rope making; and there were anchor forges. Where did the iron for the anchors come from—and for the rudder fittings and the spikes and the chains and the chain plates? Walker tells us.

About 1643 some partially solidified mixtures of vegetable mold and iron oxide were found at the bottom of ponds and bogs near Lynn, a few miles northeast of Boston. Some samples were sent to England for testing. The report was encouraging. John Winthrop, Jr., son of Governor John Winthrop of the Bay Colony, organized a company, with both English and colonial members, and a capital of 1,000 Pounds, for the purpose of making iron from the bog ore. They set up a furnace, used charcoal as fuel, sea shells as flux, and a bellows powered by a waterwheel. The enterprise was promptly successful.

In a few years deposits of ordinary ore were discovered, and other iron works were started. After 1710 the development of the industry was rapid. By 1775, Bining reports, "there were more blast furnaces and forges than in both England and Wales," and the

colonies were producing more pig iron and bar iron than England.

Hat making, cloth making, flour milling, lumbering, fishing, and several other industries were of importance, but in the fact that the new region, so soon after its establishment, surpassed its parent and led the world in two of the basic industries, whatever else it means, must mean that the people there had, in very unusual measure, the inborn capacity to achieve. There have been other transplants of civilizations. Has there ever elsewhere been such an abundance of fruit?

Arnold J. Toynbee in the Oxford abridgement of his *A Study of History,"* says:

> All acts of social creation are the work either of individual creators or, at most, of creative minorities. Growing civilizations differ from static primitive societies in virtue of creative individual personalities. They never amount to more than a small minority.

Toynbee told of the delta near the outlet of the Tigris and Euphrates rivers. The marshmen there, who came under observation of the British soldiers during World War I, had learned to adapt themselves to the environment in a passive way. "But they have never yet girded themselves for the task which the fathers of the Sumeric Civilization accomplished in similar country nearby some five or six thousand years ago, of transforming the marshes into a network of canals and fields."

As to the manner in which the quality of a group is improved, Toynbee uses figurative language—but it seems to report the elimination of weaklings. Repeatedly he concluded that, except for extremes, if the challenges are tough many groups will fail but the eventual response of the successful group will be the more brilliant. The Cossacks were under crushing pressure from Mongol nomads. They met the pressure; they transformed the nomad cattle ranges into peasants'

fields. They have been "tempered in the furnace and fashioned on the anvil of border warfare."

Pitirim A. Sorokin, on page 541 of his 1947 monumental volume, *Society, Culture, and Personality,* published by Harper & Brothers, included *heredity* as one of five basic factors in the rise of new social systems. He apologized to the narrower institutionalists for the inclusion thus: "One is not obliged to subscribe to the claims of extreme hereditarians and racialists to perceive that a fortunate heredity is a prerequisite condition."

Then, listing several creative persons who had made notable changes in our ways of living, he observed that training alone could not account for their achievements—and in some cases the achievements had been made in spite of the training having been very meager. Those men had a special start in heredity. And finally, said Sorokin, the fact that few social groups have been creative suggests that those that were creative had a favorable biological heredity, "especially when it can be shown that the environmental opportunities of many uncreative groups have been better than or as good as those of the few creative groups."

We find substantiation for the heredity thesis—which is the thesis of biological evolution—in many places, if we are alert to it. The Semites of Akkad, who, at about 2900 B.C. began nibbling at the Sumerian civilization in the area which became Babylonia, were able to develop such master minds as that of Sargon in the 25th century B.C. and that of Hammurabi in the 20th century B.C. The Sumerians, as such, disappeared after Hammurabi's time, absorbed by the conquerors, and the language of Babylonia became Semitic, though supplemented by words conveying Sumerian concepts.

Something of the biological basis for the rise of

civilization can be learned from China. The great plateaus, deserts, and mountains by which China proper is surrounded have been sources of repeated invasions. Resistance to the invasions accounts for the Great Wall of China. One notable invasion was that of the Tartars, about 588 A.D. Another notable event was the rise of Genghis Khan, during which he conquered China by 1215.

There is drama in the story of Genghis Khan, that nomad who came out of the Gobi desert with his wild riders and conquered most of the known world. He had been a herder of beasts, but he outgeneraled the armies of three empires. He could not write—but he drew up a code of laws for 50 nations. Harold Lamb tells about it in his book named for the Asiatic warrior. Genghis Khan was representative of a "scourge that comes every so often out of the desert to destroy decadent civilizations."

Genghis Khan was born 1162 A.D.; began his rule in 1206. In the great Oriental desert the people were always in want, Lamb reported, with little to eat in the cold months. Tribes raided each other's cattle and horses. His father had been master of 40,000 tents, but a rigorous turn of events forced Genghis Khan to begin his career at the bottom. Can there be any doubt that the explanation of his abilities is in the ordinary process of biological evolution?

And for every civilization its originators must have developed by the process of biological evolution to a heredity level which would support a civilization. Says Ellsworth Huntington, "That some of the invading races achieved great things because they possessed innate ability seems certain." Yes, of course; they all must have had what it takes, and in most situations it takes, among other things, innate ability to achieve great things.

I put emphasis on the *rise* of civilizations, and the reasons for it, because therein, I think, lies the key to an understanding of the later declines. I have presented evidence that *the weeding-out aspect of biological evolution has worked in the human species as well as in other species. The culling* of human flocks was basic to the development of mentality. We know that any large group of people have wide variations, and that with regard to any one measurement they conform to a normal curve. In a primitive environment, to be at the left end of a normal curve representing almost any helpful quality is to be in jeopardy of loss of life. The variations among the offspring of the survivors lead to an average endowment of a high order, and at the right end of the normal curve, of leaders capable of accurate appraisals and efficient judgments.

In summary, variation, and mutations, and death for the less adapted, taken together, raised the level of certain groups above the other animals and above other groups of human beings; and raised individuals above their group average and family average to constitute "creative minorities" which successfully responded to the challenges of the group's environment.

Thus evolution has developed human quality to a level capable of building civilizations.

CHAPTER FIVE

INTERPRETATIONS OF THE DECLINE OF CIVILIZATIONS

Once a civilization has been painfully established, do its component people live happily ever after?

There have been several civilizations, most of them lasting four hundred or five hundred years, then gradually sinking into a condition of muddling government and miserable people. Egypt had successive dark ages of disorganization spacing its periods of magnificence. The parade of civilizations in the valleys of the Tigris and Euphrates Rivers—Sumerian, Babylonian, Assyrian, and Chaldean—followed invasions and infiltrations by outlanders. China's civilizations have been rhythmic in their flow and ebb.

Some areas have had a single heyday, like that of Persia, and then what seems to be a cultural slumber.

But whether in any one geographic region a civilization has been a single flash in the long dark of the eons or has been one unit in a series, it has followed a pattern of rise and fall; there has been no permanence.

The realization that civilizations have not been very durable is, in our own civilization, a recent concept. Until the end of last century, people had not thought much about it. Boys in their play had known that "all that goes up must come down"; physicists had known that for every action there is an equal and opposite reaction; and in a variety of common experiences men have been aware of rhythm in the universe. Night alternates with day; sleep with waking; a butterfly is in rotation with the grub in a cocoon; sunspots show at eleven-year intervals; an eclipse is repeated every eighteen years and 10 days. Halley's comet comes every 76 years. The tide flows and ebbs and flows again. We come to expect these and similar pulsations;

we build our lives accordingly. The seasons are in an orderly succession: after spring comes summer, then autumn, and winter; then spring again. Year after year the same cycle repeats.

Such phenomena were in the consciousness of some of the ancients. As Greece took its place in the yesterdays, and the Roman Republic was about to be transformed into a dictatorship, the Roman poet Lucretius presented his readers with the thought that nations die. Toynbee says the concept was commonplace in ancient philosophies.

It was in the mind of Louis Wallis, too, as he wrote the book, *An Examination of Society,* published in 1901. Egypt, Babylonia, Assyria, Phoenicia, and Israel gradually succumbed to assaults from without, yielding to Elamites, Kasshites, Ethiopians, Scythians, Medes, Persians, Greeks, and Romans. "It would seem," said Wallis, "that Oriental Society, having waxed powerful up to a certain stage, ought to have repelled these enemies instead of offering a weaker and weaker front to their assaults. But the contrary was the case; and the genius of progress at length departed from the eastern world."

Those Middle East regions, through all the shabby centuries that followed, have been unmindful that their lands were once the center of a civilization. And the conquerors whom Wallis mentioned took the spotlight each for its brief while, then it too weakened and joined its earlier victims in dull oblivion. In 1818 George Gordon, Lord Byron, summarized in *Childe Harold's Pilgrimage*:

> There is the moral of all human tales:
> 'Tis but the same rehearsal of the past,
> First Freedom, and then Glory—when that fails,
> Wealth—Vice—Corruption,—Barbarism at last.

In the Earnest Hartley Coleridge edition of the *Poetical Works of Lord Byron,* Coleridge in a footnote

quotes from an 1823 publication of another Englishman, Conyers Middleton. Middleton was discussing the low opinion of Britain which Cicero and other Romans of his time had held:

> From their railleries of this kind, on the barbarity and misery of our island, one cannot help reflecting on the surprising fate and revolutions of kingdoms; how Rome, once the mistress of the world, the seat of arts, empire, and glory, now lies sunk in sloth, ignorance, and poverty . . . while this remote country, anciently the jest and contempt of the polite Romans, is become the happy seat of liberty, plenty, and letters; flourishing in all the arts and refinements of civil life; yet running, perhaps, the same course which Rome itself had run before it, from virtuous industry to wealth; from wealth to luxury; from luxury to an impatience of discipline and corruption of morals: till, by a total degeneracy and loss of virtue, being grown ripe for destruction, it fall a prey at last to some hardy oppressor, and, with the loss of liberty, losing everything that is valuable, sinks gradually again into its original barbarism.

It is easy to imagine now one of those curious pictures in which the portrayed persons are looking at a picture identical with that of which they are a part. For example, a couple in the main picture are looking at their own portrayal in a smaller picture, in the same pose and the same setting. And in that smaller picture they are looking at themselves in a still smaller picture—and on and on. And similarly Americans see America's pattern in England; English scholars saw England's future in Rome's past; and probably Romans looked back to Greece, Greeks to Crete, Cretans to Egypt and Ur.

Britain was on the long upswing in 1818 and 1823 when Byron and Middleton observed that her course might be a repetition of that of Rome. She had not yet reached her golden age. By 1905, when Coleridge published those twin passages, England had risen to her pinnacle, with "dominion over palm and pine." She

was balanced on the highest peak that mankind had ever reached. Perhaps some crumbs of English glory remain for the future, but there can be no doubt that the high point is past. "History hath but one page," said Byron. England is settling into its place with ancient Egypt and Greece, and Carthage, and Rome.

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F. L. Lucas gave us the picture in "Beleaguered Cities" quoted in the *Literary Digest* for November 24, 1928, from *The New Statesman* (London):

Build your houses, build your houses, build your towns,
Fell the woodland, to a gutter turn the brook,
Pave the meadows, pave the meadows, pave the downs,
Plant your bricks and mortar where the grasses shook,
The wind-swept grasses shook.

Build, build your Babels black against the sky;
But mark yon small green blade, your stones between,
The single spy
Of that uncounted host you have outcast;
For with their tiny pennons waving green
They shall storm your streets at last.

Build your houses, build your houses, build your slums,
Drive your drains where once the rabbits used to lurk.
Let there be no song now save the wind that hums
Through the idle wires while dumb men tramp to work,
Tramp to their idle work.

Silent the siege; none notes it; yet one day
Men from your walls shall watch the woods once more
Close round their prey.

Build, build the ramparts of your giant town;
Yet they shall crumble to the dust before
The battering thistle-down.

The battering thistle-down? Yes; shall crumble for no apparent reason. Lucas, like Byron and Middleton, has expressed the cycle theory of nations and civilizations.

Dr. Houston Cole, on August 5, 1958, summarized the story of the past with a sentence from Voltaire which was approximately this: "History is only the

patter of silken slippers descending the stairs—to the thunder of hobnail boots coming up."

Voltaire was saying that a nation, grown too luxurious, is likely to yield its place in the sun to some coarse and swashbuckling, but energetic and confident new arrival. He was adding just a touch of explanation to the cycle theory: *nations grow soft as they become successful.*

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Ruby Altizer Roberts is editor of *The Lyric,* a magzine of poetry published at Christiansburg, Virginia. She is Poet Laureate of that State, having been so designated in 1950 by Virginia's General Assembly —the only woman ever to be so honored. One of her volumes of poetry is *Command the Stars.* On page 31 she warns that England's wane may be more tragic —even more tragic—than those others. I quote the poem with the author's permission.

FOR THOSE DISPARAGERS

Speak in dispraise of England if you must
Now that her flower hangs frail upon the stem.
Air each old prejudice and breathe distrust,
Crown valor with a thorny diadem.
We who forswore the rose because we found
Liberty's bud more sweet and freshly-fair,
Though some would yet deny, are truly bound
With ties beyond the noble root we share.

We are the final links within the chain
Of humankind before the last dark foe,
One last frontier against extinction's claim,
The hour grows late; life's certainty burns low.
Weigh well the promise of eternal night
With Shelley's lark and Livingston's brave light.

England and the U. S. constitute a defense "before the last dark foe"? I wonder if that may be a reference to "the rising tide of color": the fact that the people of Asia and Africa constitute about two-thirds of the earth's people and are increasing their proportion.

Charles Scribner's Sons once published an impressive book by Lothrop Stoddard entitled *The Rising Tide of Color*. Stoddard also wrote *The Revolt Against Civilization,* now available at $1.50 in paperback from The Noontide Press, publisher of the volume in your hands. Mrs. Roberts is reaching for something other than the cycle theory of civilizations to explain the insecurity that seems to engulf us.

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Eric Fischer, in *The Passing of the European Age,* revised edition of 1948, gives us a little light on what happens. That book, published by the Harvard University Press, has its major theme in its subtitle: "A Study of the Transfer of Western Civilization and its Renewal in Other Continents."

A civilization rarely repeats in the place of an earlier civilization, says Fischer. Even in countries that seem to have had a recurrence of brilliance the *center* of the new culture has usually been a new center. Chinese civilizations, Fischer says, had successive centers in the Valley of Wei, in the middle of Yangtze Kiang, at the lower estuary, and in the Northern Plain. In the valley of the Tigris and Euphrates Rivers the Sumerian civilization, the Akkadian, the Assyrian and the Chaldean, had different focal points. Even in the Egyptian rhythm the centers changed.

But a civilization may be transplanted to new soil, and the new culture spots do not necessarily fade out with the decline of the parent. They are likely to carry selected features of the old society and discard the inconsistencies, and thus be ready for further growth.

Thus, Fischer pointed out, the culture of Greece was transferred to the Hellenistic world—and the culture of Europe has been yeast for the Americas.

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But why, why does not the cumulative knowledge that comes with experience result in greater wisdom and an improving response to new problems? Why does an old culture lose its luster, its creativeness?

Wallis worked on that paradox in terms of the effect *of concentrated land holdings* on morals and morale —an environmental analysis of some merit. But that analysis is inadequate to explain the fall of very many societies; too narrow to explain the hazards for our own, to which he attempted to apply it.

Fischer helps a little on that problem too. He tells us that the early creative ideas in a new country, when they reach fulfillment, jell and harden. The revolutionary forces, having reached the new position, entrench themselves. Then anything new is disruption. *When one's Utopia becomes an actuality one fights to keep that.* Fischer also has a point that the new centers themselves are a reason for the decline of the old ones. There is a shift in the center of gravity—by which I suppose he means the center of banking and trade, and publishing, and organizing.

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A thesis that I think deserves repeated attention is that of W. C. Lowdermilk, given to us in his *Conquest of the Land Through Seven Thousand Years.* That is a 33-page mimeographed publication of the U. S. Soil Conservation Service, MP-32. Lowdermilk, who was Associate Chief of the Soil Conservation Service, concluded that *civilizations die when their supporting agriculture fails.* When erosion steals the soil, or silts up the water supply, the social order is in desperate straits. He tells us that in ancient Mesopotamia, when the great public works of cleaning silt out of canals were interrupted from time to time by internal revolutions and by foreign invaders, the people faced their

greatest disaster in canals choked with silt. The silt "depopulated villages and cities more effectively than the slaughter of people by an invading army."

Lowdermilk reported results of the accumulation of silt on a Cyprus plain, so persistent that the level of the land was 13 feet above the old level of a church floor there. And he told of great Roman cities in North Africa, buried, until recent excavations, by dust.

He pictured an opposite effect of erosion too—in a hundred ghost towns in Syria, where land has washed away from the buildings and has left the doorsills 3 to 6 feet above the exposed rock that has been rained clean before them. The accent, of course, is not on the fact that the towns have become uninhabitable—that is merely a graphic measure of the force that ruined the food sources.

Lowdermilk described the silt-laden Yellow River of China, winding 40 to 50 feet higher than the farm land on the floor of the valley, kept up there—when it is kept in control—by bare hands carrying baskets, working on dykes. He followed the course of silt to its sources: the raw hills, that for a thousand years had been repeating their protest against the ravage of the forests that once protected them and all the plains below.

Of the people whose food sources were jeopardized by the prevalent shortsightedness there may have been some who saw the danger, but they were not enough —just as now, a few but only a few are uneasy about the prevalent practice of burning the autumn leaves; only a few refrain from installing a waste disposal sink because it routes organic matter to the sea; only a few would vote against incineration of garbage in favor of composting most of it; only a few are concerned that the Mississippi dumps "four hundred million tons of top soil into the Gulf of Mexico every year." It takes

better brains than most people have to comprehend the nexus between the cutting of a brush lot in Ohio and the requirement for increasing the height of a levee in New Orleans.

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Brooks Adams thought of *concentration of power* as the major cause for the decline of civilizations; thought it would be reason for the decline of our own civilization. We should follow the idea briefly. *The Law of Civilization and Decay,* by Brooks Adams, was published in 1896. Incidentally, that was twenty years before Oswald Spengler's far-famed publication, the *Decline of the West.* Charles A. Beard, in an introduction to a 1943 Knopf edition of Adams' *The Law of Civilization and Decay,* speaks of it as one of the outstanding documents of intellectual history.

Before Brooks Adams wrote, there had been in America a vague but widespread assumption that history is a one-way street toward better and better conditions. In its vagueness it seems to have been a comfortable assumption that whatever *is* is somehow better than whatever *was,* but not so good as things in the trend, which are yet to be. It was an assumption of social improvement, of "progress," of major movement in one direction, an approved direction.

Brooks Adams replaced the beautiful illusion of a one-way social evolution with the stern fact that earlier civilizations had not only risen but had fallen. He thought that the direction to decline was through *an increasing centralization of power.*

Felix Morley, in *Power of the People,* makes clear the fact that economic power transferred to a government administration is power still further concentrated than when it is in multiple lesser organizations. The stultification of individuals is consequently surer.

Brooks Adams' thesis that concentration of power

is a cause of the decline of civilizations is in harmony with the thesis of Willis J. Ballinger that *democracy* declines as a consequence of concentration of economic power. Ballinger's analysis is contained in a 1946 book, *By Vote of the People.*

Concentration of power is the same thing as concentration of decision-making. It may reasonably be maintained that the concentration is primarily the result of managerial efficiency. Yet that does not settle anything. With scattered and smaller scale decision-making a wrong decision is likely to be of local effect, whereas a wrong decision after the concentration is a hazard to the whole structure.

In the 5,000 years of history, government by the people or by their elected representatives has been a rare and fleeting experience. In civilizations relatively few people have lived under rules of their own making, and it appears that all earlier civilizations have eventually diluted the rights of individuals and then eliminated those rights. With the passing of the years our own country's government has taken over in larger measure the making of economic decisions. And lately the centralization of decision making has accelerated.

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About two decades after the publication of Brooks Adams' volume, Oswald Spengler, a German schoolteacher, came out with a study which in its English edition is called *The Decline of the West.* Spengler observed the succession of the seasons, and likened the stages of a civilization to the course of a year. In its springtime it is organized around agriculture; by the time of its autumn its efforts have turned largely to industrial production.

After Spengler's publication, the next important treatment of the general subject of the rise and fall of civilizations seems to have been by S. Colum Gilfillan,

who had an article in the *Political Science Quarterly* for September 1920, called "The Coldward Course of Progress." He presented the thesis that later civilizations have, as a rule, been successively farther north than those of long ago. That same point was made by Vilhjalmur Stefansson in articles, and in his book, *The Northward Course of Empire,* published by Harcourt, Brace & Co., in 1922. The theme is carried along in *New Compass of the World,* a 1949 book of which Stefansson is one of the editors and one of the authors.

In the studies of Gilfillan and Stefansson there seemed to be a tacit recognition that civilizations have weakened and died—but no elaboration of that; no discussion either of the causes of the rise of the next one; there was attention only to the question of where the next one arose, and the answer: it arose farther north.

Dr. Gilfillan has done additional high-powered work on the subject. I shall report a 1965 publication of his in the next chapter.

Another observer with the long view is Dr. Carle C. Zimmerman. In his book, *Family and Civilization,* he has interpreted the declines as a result of the fact that members of a family become so independent of each other and so wide apart in their interests that *the family itself disintegrates, and with it the civilization.* That dispersion of interests has been correlated with the disintegration of the family in other civilizations as in our own.

Leaving Zimmerman's doctrine, but continuing to examine the area he studied, one must observe that a large part of the reason for the contraction of family influence is the creation of new institutions which take over the family's functions—and the new structures are themselves attempts at adaptation to previous partial inadequacy of the family. Education is one of

the functions which the family has been losing; amusement is another. Economic opportunity for women is still another. Guidance of members of the family is another.

There is government aid in bringing about the amputation of what in earlier stages were functions of the family. The government's hastening of family disorganization conforms to majority conscience, and follows the failure of *some families* to perform a function themselves. Thus a local government sets up or extends a school system, because educating becomes too skill-requiring for *some* dads and mothers to carry it on as a side line. The rest of the families are induced if not forced to terminate most of their educating too. For general education that happened a century ago. A generation ago the change occurred as to instruction in cooking. Right now it is occurring in sex education.

Amusement gradually loses out as a *family* function when *communities* start competition in amusing. After a while commercial enterprises, specializing in amusing, terminate the amusement entirely in some families, reduce it in most. The movies and TV promote interests which tend to disintegrate the family and the civilization. Currently their most devastating influence is perhaps in picturing intoxicants as if they were a casual and appropriate part of everyday life. The TV *ads* for intoxicants and *cigarettes* are also deadly.

Let's not fall for the usual fallacy that television is an influence that tends to revitalize the family. The divorce rates do not support such a conclusion. And the 13 murders per day which are telecast from six Los Angeles stations cannot be expected to strengthen family psychic patterns, even though all the family may be in one room when they experience the stimulation. The net impressioning of the auditor-observer is not from his living room but from the portrayed story.

What sticks in mind is not what Brother Bill said as he switched off the screen, but what the villain said as he pulled the trigger.

Another amusement medium which tends to destroy the family and civilization is the pornography which floods the newsstands.

The specialized units that take over family functions do not hold the integration of society or the correlated psychological conditioning of their patrons as an objective.

To be sure, most of the tangible functions that used to be family functions *are performed,* though by other institutions, and most people think they are performed more satisfyingly than most *families* could perform them. In effect a man expresses the opinion that economic opportunities and educational opportunities and amusement opportunities are better in institutions other than the family. He expresses that opinion by his *participation* in those other institutions. Most people join in destroying the family institution by depending on it so little. It becomes almost useless compared with its previous status. The disintegration of the family is correlated with a high degree of complexity of the social environment. The complex of newer institutions, with no integrating objective among them, seems to be a cause for the chaos into which a civilization evolves. Perhaps we should say it is the unintegrated complex, which is accompanied by the decay of the family that takes the life out of a civilization.

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One of the frightening items in the present exciting environment, probably applying, to some extent, in some of the earlier civilizations too, is that tremendous changes come in such rapid succession, increasing the complexity and making harder the problems relating to organization. (This point is closely tied-in with

concentration of decision making, already before us.)

The worsening problems will be seen by those readers who have had contact with Arnold J. Toynbee's *Study of History* as the *challenges* in Toynbee's widely-used tool formula "challenge and response." One terrifying challenge at the present stage is that confronting educators. For example at a year-end meeting of more than 250 societies of the American Association for the Advancement of Science, about 1500 papers are read. How can anybody keep abreast of all that information? He can't. The Tower-of-Babel effect on people's thinking is in part this: no matter how important a particular contribution may be, only a small proportion of people are likely to read it or know about it, because there are too many other discoveries and inventions competing with it for public attention.

And the books are legion. A book which may contain an important analysis is likely to receive only passing notice and be forgotten.

Some time ago *Newsweek* piled on the evidence from the National Academy of Sciences. In a year's time 55,000 journals are published containing one and a fifth million articles. And there are 60,000 books and millions of research reports. How well educated can a well-educated man be?

Since the Russian launching of sputnik on October 4, 1957, there have been many criticisms of America's educational methods and academic subject-matter. Most public men have urged greater emphasis on science. But some have protested, including President Harold C. Case of Boston University who is quoted as saying: "To attract money into purely technical fields would limit funds already critically needed for social sciences and the humanities. Civilization cannot live through education in technical affairs alone." We face assorted difficulties whether we put our money on the Case case or the contrary.

Harold H. Smith had an article in *The Saturday Review* for January 8, 1955, which clarifies the threat. He used increasing speed of human travel as an index of culture-wide change. When horses were domesticated, over 5,000 years ago, the maximum rate of travel was stepped up from about 15 miles per hour for foot travel to about 38 miles per hour. For several thousand years that was top limit, until in 1829 a steam locomotive went 44 miles per hour. By 1901 a train went 120 mph. Then in 1910 automobiles took over, with a speed of 131 mph. In 1939 an air record of 409 mph was set, and in 1953, jet propelled planes went as much as 753 mph in level flight. Supplementing Smith's data, in September 1956 the Bell X-2 plane reached 2,178 mph. Early in 1959 the X-15 plane flew at or near 4,500 mph. At 7:55 a. m. on Sunday, August 29, 1965, L. Gordon Cooper, Jr. and Charles Conrad, Jr. ended a space journey in which they circled the earth 120 times in just short of 8 days in Gemini 5, having traveled at a speed of about 17,500 mph. With supersonic jet planes and vertical take-off, passenger planes are soon to fly 2,000 mph, and even underground trains are planned for 300 mph.

Smith points out that speed is only an index; fundamentally the change is in knowledge—in many specialized fields, and in the resulting impact on environment.

Then comes Smith's observations of the plight of educators in trying to give to students what they will need in a world mosaiced with specializations. And incidentally Smith shows an aspect of the increasing vulnerability of the social structure itself.

He errs in thinking of the biological basis of intelligence as having been the same for many thousands of years and likely to remain the same far into the future. The truth is, instead, as the next chapter will show, that man's capacity for problem-solving is not

static; it has been undergoing wave-like changes. It is less now that the need for it is great than it has been at times in the past.

That slip in Smith's analysis does not invalidate his main point, however. The actuality makes the task of education even more Herculean. I proceed with Smith's main point. With organized knowledge accelerating, and with a limitation of learning power, the successive individuals must necessarily comprehend a decreasing proportion of all there is to know. "No matter how long or how intensive the schooling, each generation will know relatively less per individual of the total cultural heritage than the previous generation."

The individual, amid the multiplying inventions and in the organizational pyramiding, is confronted with an ever more elaborate array of problems. And as the new information cascades on him in expanding volume the evaluation of the relative significance of its separate items becomes more and more superficial. So the typical person is crowded into a narrowing closet of facts in which he can feel at home, and that which surrounds him, farther out, is, in his mind, impressionistic and often chaotic. His role as decision-maker is that of an amoeba in a boundless ocean.

And the typical educator? He struggles for light and for vision, but, almost, he is the blind leading the blind; the complexity is too much.

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Overpopulation has caused the termination of some of the civilizations which were dependent on irrigation. This thesis is given us by Nathaniel Weyl and Stefan Possony in *The Geography of Intellect,* p. 84. Irrigation permits the growing of far more grain in a given area than would be possible without it, thus permitting an agricultural economy to become compact enough to develop specializations. Such a civilization depends

on grain *surpluses*. These authors list as the main irrigation civilizations, those of Mesopotamia, beginning about 4,000 B. C., of Egypt, beginning about 3,000 B. C., of the Indus Valley, beginning about 2,500 B. C., and of China in the Shang Dynasty, beginning about 1,500 B. C.

Overpopulation can wipe out grain surpluses and thus destroy the power of the rulers. But in which of the named societies overpopulation was an identifiable cause of decline was not specified except as to China. Chi Ch'as-ting, in a 1936 book *Key Economic Areas in Chinese History* published by Allen & Unwin, is reported to have shown that overpopulation "led to class struggle and peasant wars, breaking down centralized authority."

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Overpopulation has lately been widely recognized as a threat to civilization, and particularly a threat to the aspects of our own civilization which we have treasured. Early in the exposition of that thesis was the book *Population Roads to Peace or War* by Guy Irving Burch and Elmer Pendell, published by the Population Reference Bureau in 1945. Walter B. Pitkin wrote a Foreward *and a Postscript* for that book. Burch and I had shown the then-current application of the Malthusian tendency. Pitkin in the Postscript carried the ball for a touchdown:

> The consequences of this tendency have been set forth clearly in the foregoing pages. They will please no Pollyannas. The most optimistic fact I can cite is the almost certain increase of food supplies through the lately developed edible yeasts and through the as yet wholly undeveloped but fairly simple increase of fish by scientific breeding. I do not deceive myself, however, as to the finalities. For it is primitive man's nature to breed up to the limit of his food; and most people on earth are still primitive or first-cousins to primitives. Even if we were to find new food for the three billions on earth by

the year 2000, these citizens would blithely breed and breed and breed until the world held four billions, then five billions, then 10 billions. And man, the individual, would at length vanish in his own multitudes. Nobody would ever ask about personal liberties, for what would a person be? Just something many places to the right of some decimal point. Something next to nothing.

I would like to go on record as believing that, unless the round table conferees who will be working on peace problems in the coming five years face and at least partly solve world population problems in a way that ends, once and for long, this menace of the erotic herd, and prevents low-grade people from pushing everybody else off the the earth, this immense war will have been fought in vain.

CHAPTER SIX

THE THIRD PRINCIPLE OF POPULATION

In Chapter 5 I reported interpretations of the declines of civilizations, including these:

Concentration of land holdings;
Concentration of power and of decision making.
Destruction of resources, particularly of food sources;
Disintegration of the family.
Multiplicity of new institutions and their lack of coordination;
Rapid change, and the vastness of the sea of facts.
Rising tide of color;
Population increase.

All of those interpretations are important; several of the conditions discussed are applying now, and may have adverse consequences for our current civilization.

We saw in Chapter 4 that as a pre-requisite for the rise of a civilization good problem-solving ability is necessary. If ability is necessary for the rise of a civilization is it not necessary also for its continuance? Of course it is! Those challenges set up in Chapter 5 show how very necessary the problem-solving ability is. Do we have it?

The United States is losing its brainpower, and fast! Heredity, in the past, made available the brainpower that was necessary. Heredity is no longer making it available in sufficient measure.

We got the right kind of brains by evolution.

We have not only stopped the normal action of evolution, but we have put it into reverse!

There is no fallacy more void of analysis than the old cliche that "heredity doesn't change." Of course it doesn't change in an individual after he becomes such, but it does change in groups and nations. In any mixture of two elements, change of quantity of one element at a different rate than the change of the quantity of the

other element, changes the *quality* of the mixture. Thus the heredity of a civilized group deteriorates as it protects its duller members, inasmuch as the dullards have a disproportionate part of the baby-making, and increase their proportion of the population.

In Chapter 5, I cited England as having recently been at a summit of excellence, but without distinction now; soon to be only an echoing hall with all its greatness gone. Byron and Middleton dreaded the prospect as repetitious fate—not knowing cause and cure.

The British census holds the secret, and S. J. Holmes, in *The Trend of the Race,* passed on a fragment of it that applies. Some occupations require much forethought and planning, and so, in large numbers, can be interpreted as a rough indication of the comparative problem-solving ability of those who work in them. The surviving offspring of Britons in various specializations at the time of the census taking in 1911, as percentages which show comparisons with the *average* number of offspring, were as follows:

Average number of British offspring as	100%
Coal miners	120.2
Agricultural workers	119.6
Farmers	109.1
Boilermakers	107.3
Carpenters	98.7
Cotton spinners	86.7
Non-conformist ministers	85.0
Clergymen	82.0
Cotton weavers	76.9
Teachers	76.1
Doctors	72.1

The birth rate differences gave a sinister threat that the later generation would have a larger proportion of people with little capability for problem-solving than adult Britains of that census time. If Byron and Middleton had known, 90 years before that 1911 census, what

we know now could they have done anything to change the prospect?

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Birth rate differences are not limited to any one race or religion. There are many tables of census figures showing that no-account Negroes have more offspring than accomplished Negroes have; and that shiftless White trash exceed the reproduction rates of purposeful Whites. The Census Bureau has not shown the differences among Catholics, however. Nevertheless such data as are available show that the general rule applies among them as among the rest of us: the dumber they are the more babies they have.

Rev. Thomas Francis Coogan made a careful study entitled *Catholic Fertility in Florida,* which was published by The Catholic University of America Press in 1946. The Catholics are subject to the same sort of differences as are the rest of the population. The more rent they can afford, the fewer children they have; the more responsibility there is in their jobs, the fewer children they have; the more education they have, the fewer children they have.

Rev. Mr. Coogan found that for families practically completed—with wives of ages 40-49—in which both husbands and wives were Catholic, the numbers of births per 100 wives were as follows:

Education of Husband and Wife	Births per 100 Wives
3 or more years of college	216
1 and 2 years of college	262
4 years of high school	244
3 years of high school	324
2 years of high school	247
1 year of high school	289
8 years of grade school	291
7 or fewer years of grade school	416

There was not a very smooth working out of the rule, but unmistakably it is there; observe especially the

contrast between the number of children of the parents with three or more years of college, and the parents with seven years of grade school or less.

As to occupations, too, 100 wives of managers and professional people had 158 births, whereas 100 wives of unskilled laborers had 302 births.

Dudley Kirk made a study of *Eminent Americans* as measured by inclusion in *Who's Who in America,* which was reported in *Milbank Memorial Fund Papers,* 1957, and in *Family Life* for December 1957. He found that as to their eminent men "Catholics have the lowest number of children per man, even when priests are excluded—this result being due to the relatively larger number of unmarried men among Catholics."

Let us turn now to the U. S. Census reports, a vast storehouse of data which almost announce The Third Principle of Population by themselves: *Problem-makers reproduce in greater percentage than problem-solvers, and in so doing cause the decline of civilizations.*

The census puts the birth rate differences in the glare of comparisons, and every comparison hammers home to consciousness, in microcosm, the cause of the decline of our civilization.

The 1960 statistics show how uncoordinated marital behavior is with economic conditions of the families; in other words what little judgment most people use about marrying and having babies. The figures correlate housing characteristics with number of children ever born per thousand wives 45 to 54 years old.

Condition of Housing and Plumbing	Children Ever Born	
	Per 1,000 White mothers	Per 1,000 Non-White mothers
SOUND		
With all plumbing facilities	2,617	3,148
Lacking only hot water	3,596	3,789
Lacking other plumbing facilities	3,880	4,778
DETERIORATING		
With all plumbing facilities	3,590	3,737
Lacking only hot water	4,324	4,080
Lacking other plumbing facilities	4,700	5,201
DILAPIDATED	5,001	5,201

In the United States as a whole, White mothers in dilapidated housing had 91 percent more children than those in sound houses with all plumbing facilities —almost twice as many.

These figures are from PC (2)-3A, U.S. Census of Population, 1960 ($2.25) *Women by Number of Children Ever Born,* Table 41. The full table gives a break-down showing urban and rural differences, an additional age classification, classification by value of property, money rent, and number of rooms.

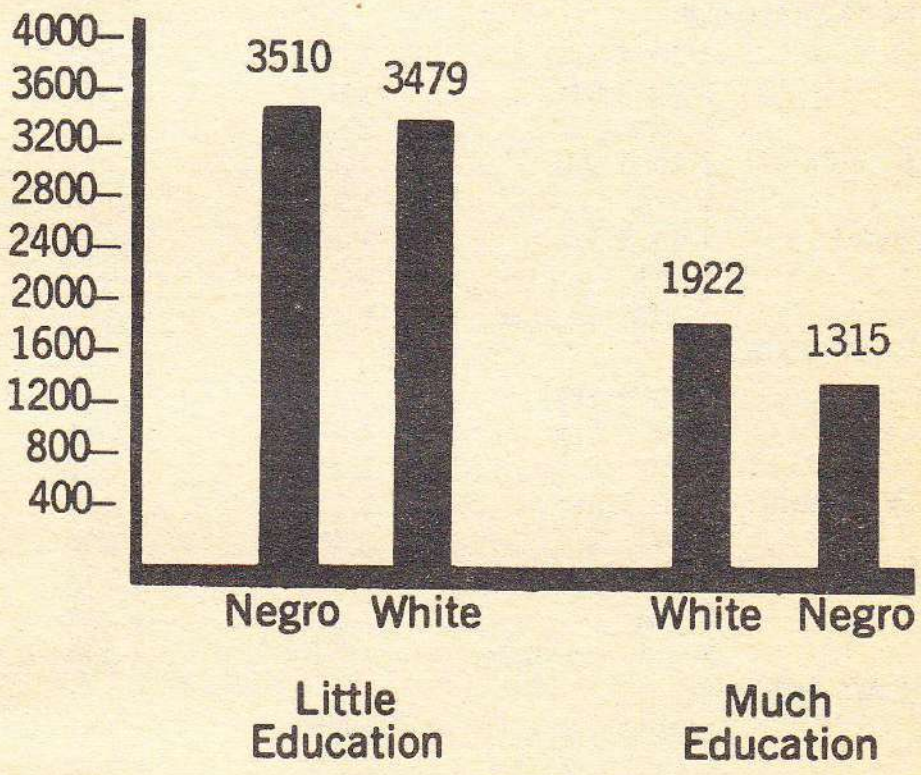
The figures that follow are from the same Government Printing Office volume, tables 26 and 25 and 37. Since tables 26 and 25 disclose number of children according to amount of *education* of parents they yield the most meaningful comparison we have of birth rate differences. Understand that some people of high intelligence quit school young, and are therefore included in the figures of those with only a few years of school completed. But those classes also include *practically all of the dumb ones* who quit because they were having too much difficulty in making the grade, so the reproduction behavior of those classes as a whole is of tremendous significance when compared with the reproduction behavior of the well-educated classifications.

In Table 26 we have the number of offspring correlated with education of *both* parents. College graduates did not replace themselves. The couples with 8th

grade education or less had 81 percent more children per thousand of them than the college graduates had.

Years of School completed by Husband and Wife	Wives 45 to 54 Years Old	
	Children Ever Born	
	Per 1,000 White women	Per 1,000 Non-White women
U.S. AS A WHOLE		
Husband and Wife: With Less Than 8 Years of School	3,479	3,510
Husband and Wife: College: 4 Years or More	1,922	1,315

Let's put those contrasts on a chart:

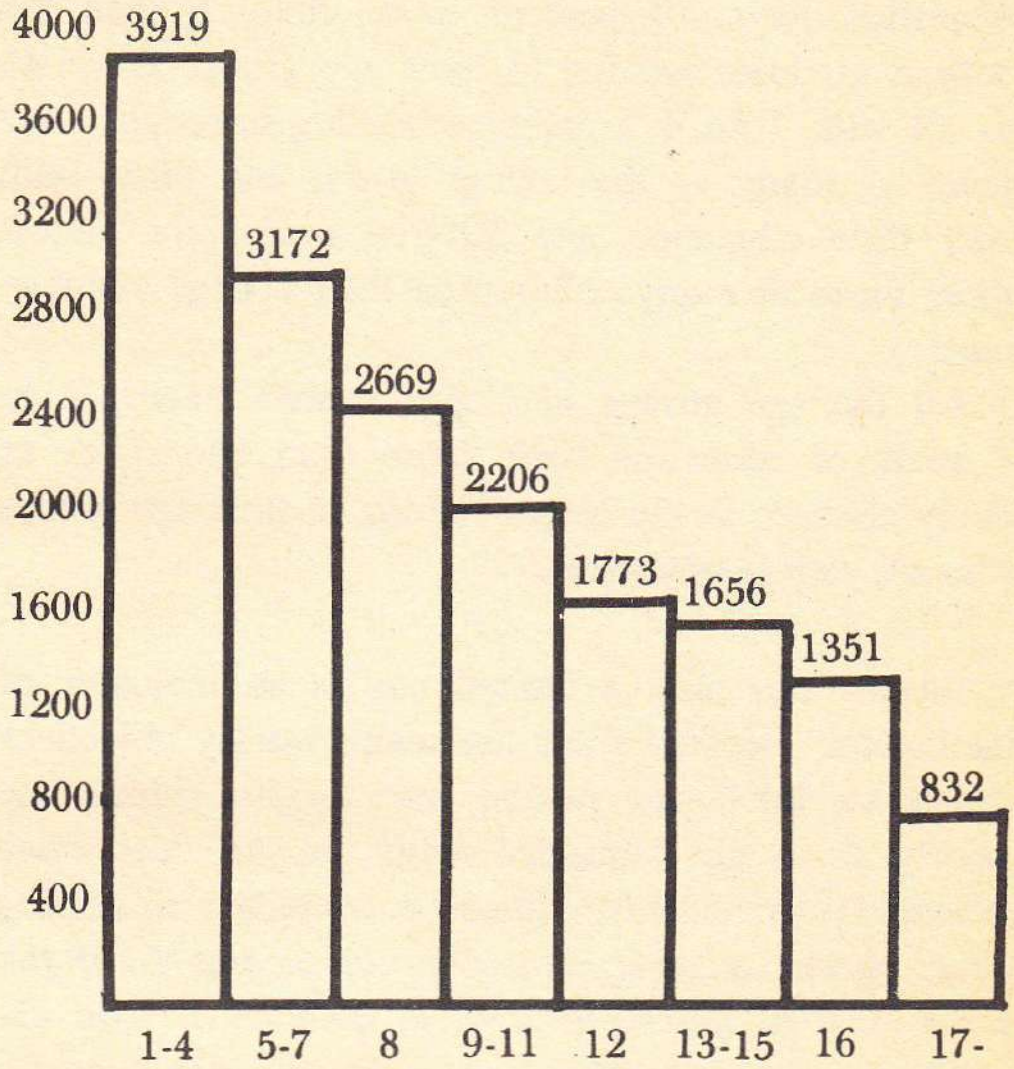


Children Ever Born Per 1,000 Wives 45 to 54 years old in families in which both husband and wife had less than 8 years of school contrasted with families in which husband and wife both had 4 or more years of college education, as shown in the U.S. Census of 1960.

I gave only representative parts of Table 26, and limited the report to completed families.

From Table 25, which shows children ever born per thousand *women* of different age groups, I report age groups from age 35 up.

Age, and years of school completed by women		Children Ever Born Per 1,000 White women	Children Ever Born Per 1,000 Non-White women
35 to 39 years old			
	1 to 4 yrs.	3,464	3,666
	5 to 7 yrs.	3,075	3,563
	8 yrs.	2,750	3,042
High School:	1 to 3 yrs.	2,582	2,929
	4 yrs.	2,320	2,280
College:	1 to 3 yrs.	2,297	2,045
	4 yrs.	2,212	1,675
	5 yrs. or more	1,558	1,227
40 to 44 years old			
	1 to 4 yrs.	3,494	3,442
	5 to 7 yrs.	2,984	3,303
	8 yrs.	2,636	2,835
High School:	1 to 3 yrs.	2,438	2,688
	4 yrs.	2,148	2,117
College:	1 to 3 yrs.	2,126	1,920
	4 yrs.	2,044	1,567
	5 yrs. or more	1,477	1,113
45 to 49 years old			
	1 to 4 yrs.	3,538	3,148
	5 to 7 yrs.	2,861	3,055
	8 yrs.	2,475	2,626
High School:	1 to 3 yrs.	2,228	2,497
	4 yrs.	1,879	1,870
College:	1 to 3 yrs.	1,825	1,724
	4 yrs.	1,679	1,255
	5 yrs. or more	1,201	877
50 years and over			
	1 to 4 yrs.	3,919	3,393
	5 to 7 yrs.	3,172	3,206
	8 yrs.	2,669	2,775
High School:	1 to 3 yrs.	2,206	2,563
	4 yrs.	1,773	2,119
College:	1 to 3 yrs.	1,656	1,775
	4 yrs.	1,351	1,320
	5 yrs. or more	832	1,052



Children Ever Born Per 1000 *White Women* 50 *years of age and over, classified according to years of women's education as shown by the U.S. Census of* 1960.

I figure that White women ages 35 to 39 of 1 to 4 years of schooling have 56 percent more children

than the college graduate women in that age group have; those of ages 40 to 44 years having very little education have 70 percent more children than the college graduate women in their age group; those 45 to 49 with 1 to 4 years of schooling have just over twice as many as the college grads, and those with very little education age 50 and over have almost three times as many children as their college counterparts.

All the age groups of Negro women having 1 to 4 years of education have more than two times as many children as the Negro women of their age groups who are college graduates.

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Income has only a limited use as an indicator of intelligence, because there are many worthy objectives which an intelligent person may pursue which are poorly if at all connected with income. Yet *since practically all objectives must be secondary to staying alive, getting a survival amount of income is of the same level as getting a survival amount of food directly in pre-civilization times;* if you don't do it, the chances are strong that your brain power is less than that of the people who do. Yet those people who do not earn that much have more children per thousand of them than those who earn more.

The contents of both of the following income tables are from table 37 of the Census Bureau volume *Women by Number of Children Ever Born.* We could get more from the first table if that income range $1 to $1,999 were broken down further.

	Children Ever Born	
	Per 1 000 White women	Per 1,000 Non-White women
Women 35 to 39 yrs. old		
with incomes of $1 to $1,999 or less	3,097	4,195
with income of $15,000 or more	2,733	2,673
Women 40 to 44 yrs. old		
income $1 to $1,999 or less	3,066	3,974
income $15,000 or more or more	2,482	2,414
Women 45 to 49 yrs. old		
income $1 to $1,999 or less	2,949	3,675
income $15,000 or more or more	2,156	2,293
Women age 50 yrs. and over		
income $1 to $1,999 or less	3,281	3,591
income $15,000 or more or more	1,875	2,563

This second set of comparisons startled even the students in my Population classes.

	Children Ever Born	
	Per 1,000 White women	Per 1,000 Non-White women
Women 35 to 39 yrs. old		
without reference to husbands' incomes	2,664	3,299
Those whose husbands had no income	2,905	3,472
Women 40 to 44 yrs. old		
without reference to husbands' incomes	2,550	3,156
Those whose husbands had no income	2,860	3,974
Women 45 to 49 yrs. old		
without reference to husbands' incomes	2,377	2,951
Those whose husbands had no income	2,785	3,309
Women age 50 yrs. and over		
without reference to husbands' incomes	2,586	3,126
Those whose husbands had no income	3,108	3,614

So the fact is glaring that *families dependent on government doles,* for every one of the age groups shown—in other words as a regular and statistically predictable practice—*have more babies than the average of the taxpayers who support them* and *more babies in every mature classification than average families* in their various age groups. Considering that compound interest rates apply here, as in Chapter 2, how many generations could a civilization survive the increasing burden?

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Can we state a conclusion from the foregoing deluge of evidence? Yes; though one could find many exceptions, statistically the truth hits hard: *The dumber the couples are, the more babies they have.*

A March 3, 1962 *Science News Letter* has meaning for us. In it Ann Ewing reported "a survey of 31 women who participated in the first and second Science Talent Search of 1942 and 1943." Most of them had attained high positions in science, by 1962, but "Of the 31, 20 were married while 11 remained single." That's the point: the influences which arouse persons of special talents to follow "careers" tend to take them out of reproduction. In this case 35 percent of these women didn't even get married—compared with about 10 percent of women in the general population.

So the truth bears repetition that under usual and current influences the least accomplished offspring of the least accomplished people will continue to inherit the earth.

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Aldous Huxley, in "Whose History," an article in the September 1947 issue of the magazine *'47,* wrote as follows:

"Fertility in the democratic countries is in inverse ratio to ability. . . . Whether a qualitatively deteriorating society is capable of democracy remains to be seen."

Channing Pollack, writing in *The American Mercury*, was convinced that democracy could not withstand the adverse birth-rate differences—that civilization itself must vanish. "Among civilized races," he said, "the unfit are a multiplying majority which recurrently overwhelms civilization, until its destruction destroys them."

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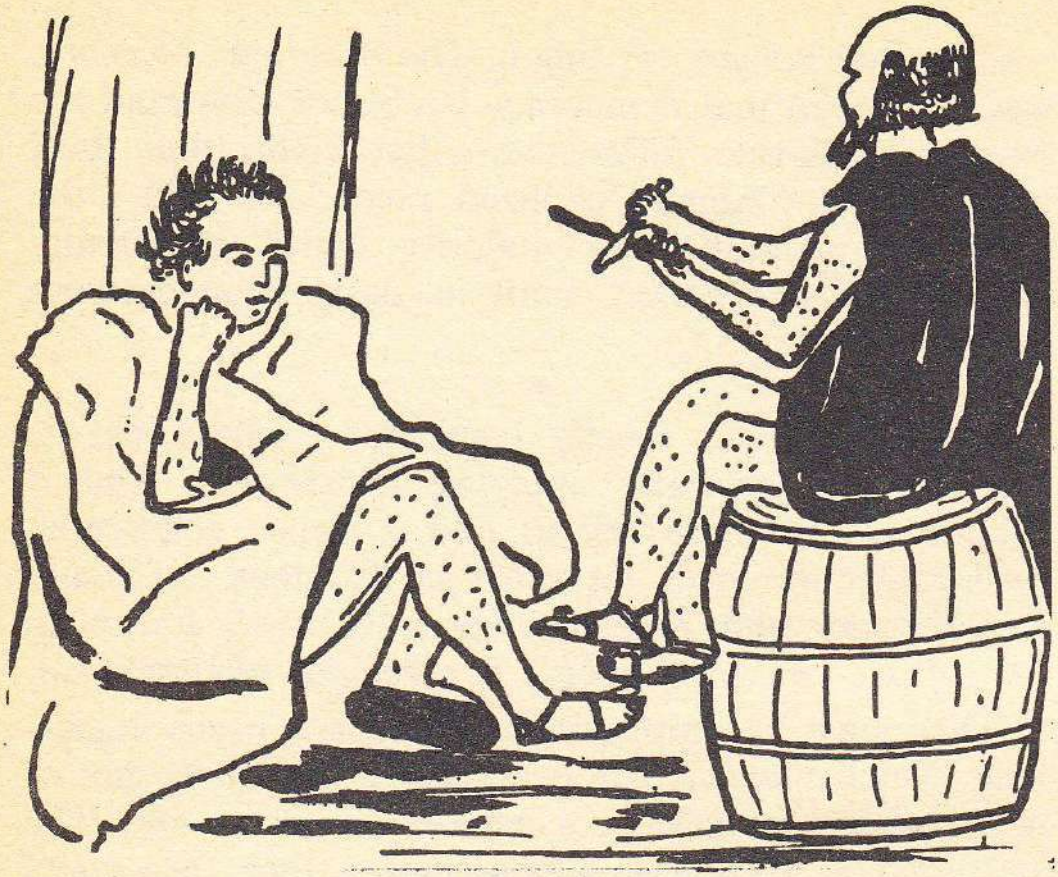
Pollack did not specify particular civilizations; he expressed a generally applying conclusion. And it should not be necessary to find evidence concerning birth-rate differences for other civilizations. *It should be necessary only to show that a relatively low birth rate of accomplished people is a regular phenomenon.*

That must be emphasized. There are psychological facts which make it so: *a relatively low birth rate of accompished people is a regular phenomenon.* The alertness of intelligent people makes them especially sensitive to stimuli which guide them away from reproduction. As a rule capable couples marry at later ages and have fewer children than relatively stupid couples. The environment is there for all to share, but the difference of impact on behavior varies according to brains.

1. The cost of raising children does not directly affect the having of children. What affects the having of children is, rather, the *attitude* toward cost. Not the cost, but the prudence, the psychological quality of restraint, is the determinant. The French Economist Sismondi made that point in 1819.

1819? Isn't it distressing that in all the time since then nothing has been done with so important a fact?

The relatively thoughtless couples are likely to marry younger, and then to reproduce with less thought of the future than are those who have prudence built in via heredity. Sensitiveness to cost of raising children



LET'S *DO* SOMETHING

***Apollodorus**: The future belongs to Greece, Socrates! Greece will always be the center of the world's culture!*

***Socrates**: Doesn't that assume, for one thing, that the heredity of the Greeks will remain excellent?*

***Apollodorus**: Perhaps so; anything wrong with the assumption?*

***Socrates**: What brought the Greeks to their present high level of heredity?*

***Apollodorus**: The elimination by a rigorous environment, of people who were comparatively low in problem-solving ability. The early death of the dull brothers of our remote ancestors raised human beings above the other animals—and raised the Greeks above other human beings.*

***Socrates**: But is that process continuing?*

***Apollodorus**: No; it is too cruel for civilized people. But we have, as a permanent possession, the heredity that process gave us.*

***Socrates**: A permanent possession? Isn't it true that people of less than average abilities have more children than people with more than average abilities?*

***Apollodorus**: Yes, that is true.*

***Socrates**: Then can the future generations retain the present level of abilities? Will the average remain as high as now?*

***Apollodorus**: Socrates! What are you saying?*

***Socrates**: Can Greece continue as the center of world culture if the abilities of the Greeks continue to decline?*

***Apollodorus**: Hellas no! Let's DO something!*

(But they didn't do enough.)

is keener in capable couples than in those who are less capable.

2. A sensitiveness to knowledge in general would assure that capable couples would be more likely to have a knowledge of birth control and of the availability of improved methods, which less capable couples would be less likely to have. So, the dumber they are the more babies they have.

3. In some people there is a sensitiveness to a lively environment, which sensitiveness is basis for many and intense *interests*. The intelligent people are the ones with that sensitiveness. And they are more likely to see that there are difficulties between themselves and their goals which may leave them little time or money for children. Since the capable couples have a readier sensitiveness and more intense interests, the fulfillment of their interests permits them to have fewer children than the less capable ones.

4. The quantity theory of value applies to human beings as surely as to apples and to money: the more there is of something the less each unit of it is worth. That may not be true in the relations of parents to children after they are born and become distinctive but in general and in prospect it is true; the more people there are around, the less prospective importance another one has for you. Improved transportation puts one in touch with more people, too—has the same effect as more people: a diminishing utility per person. The people most sensitive to the decrease in the value of human beings and so of children are the most intelligent ones, so they are the ones who would most readily restrict their reproduction rates as a consequence.

5. The recent tyranny of children in bossing parents around or at least cajoling them into unwise concessions is often seen in advance by capable couples, so they have fewer children. Less capable couples discover

too late that they are slaves of TV toddlers and tempestous teenagers who justify the definition of *gratitude* as "the lively expectation of further favors."

6. The British Royal Commission on Population in 1949 found, as a reason for the decline in British birth rates, *standards of parental care*. Which elements of the population would those standards affect most? The most sensitive, the most intelligent, of course.

The various *reasons for refraining from reproduction do not apply evenly over the population.* They apply with different force to people of different levels of intellect. The more sensitive, alert, intelligent, a person is, the more likely he is to have few children. And maybe we should number one more reason:

7. He is quickest to generalize on, and to see a lesson for himself in, the prosperity of the small family and the poverty of the large one.

Sensitivity, alertness, and responsibility, by capable couples, which lead to fewer children than average, result in a succession of generations reproduced disproportionately by the less capable segments of the previous generations, so the problem-solving requirements of a civilization are met in declining measure, and the civilization proceeds via crisis after crisis to its collapse.

It is probable that the development of interests which would compete with family would have applied among intelligent and alert persons throughout the ages—in civilizations and in dark ages; and the cheapening effect of denser populations would register psychologically among them earlier. There seems to be a biological rule, applicable not only within the human species but between and within other species too, that the lower the intelligence is, the higher is the birth rate. For the human species at least, such a rule was relatively unimportant in the rough going of pre-civilization condi-

tions; the weeding out of weaklings more than offset it. Thus 1,000 intelligent mothers might give birth to 5,000 children, and have 3,000 of them survive to reproduction age. And 1,000 stupid mothers might have 8,000 children but have only 2,000 of them survive to reproduction age. Survivals were directly correlated with intelligence, even though birth rates were inversely correlated.

In civilizations, in contrast, as they increase in their efficiency, the survivals are, as a rule, directly correlated with the births, and so inversely correlated with intelligence.

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Some of the long-view analyzers have supported the heredity analysis. Sorokin explained the *rise* of a civilization as necessarily dependent on a favorable heredity. But Sorokin didn't think of heredity as dynamic, and he did not discuss the development of the especially favorable heredity. Also, because he failed to take account of the fact that the heredity of a group undergoes changes as its personnel changes, he did not follow through to identify the decline of heredity as a cause of the disintegration of a civilization.

Brooks Adams thought of a civilization as dependent on human energy, including mental energy. He thought that a society disintegrates because, in part, the energy of its people has been exhausted, and the group "must probably remain inert until supplied with fresh energetic material by the infusion of barbarian blood." Since Adams linked the energy restoration with new "blood", in effect what he said was that the breakdown of a civilization results from some sort of failure of heredity, and that a revival, or a new civilization, depends on a capable heredity. Though the social processes which lead to changes of heredity were out of Brooks Adams' picture, nevertheless he seems to have believed that in

heredity a group does change, and that deterioration of its heredity is connected with the downfall of the group.

In Arnold Toynbee's thesis the successful responses to challenges depend on the presence of creative individuals in the group. As to the *breakdowns* of civilizations—what happens to the supply of creative individuals? Toynbee doesn't say— except— there has been a "failure" of it.

Ancient Rome seems to have suffered from the same sort of differences of birth rates that we have now. The people without abilities were having more children than those with abilities. Guglielmo Ferrero made frequent references to births in *The Women of the Caesars*, published by G. P. Putnam's Sons. Observed Ferrero: "That glorious Roman aristocracy which had escaped the massacres of the proscriptions and of Philippi, ran grave danger of dying out through a species of slow suicide." Among a variety of social laws which the emperor Augustus proposed and had adopted in 18 B. C. was the "Lex de maritandis ordinibus," which attempted by penalties and promises to constrain the members of the aristocracy to contract marriage and to found families, thus to combat the increasing inclination to celibacy and sterility. The law fixed at three the number of children which every citizen should have "if he wished to discharge his whole duty toward the state." But some complied with that injunction by adoptions. Adoption was common. The aristocracy was becoming "less numerous, less prolific, less virtuous."

Tenny Frank had his emphasis very definitely on the failure of heredity as the key reason for the decline in Rome. The genetic lines that had brought Rome up the long grade had been lost to Rome in the process. On page 567 of his *History of Rome,* he said, "The original peoples were wasted in wars and scattered

in migrations and colonization, and their places were filled chiefly by Eastern slaves."

Frank's mention that early Romans were wasted in wars necessitates a pause. It is possible that one war would have a beneficially selective result and another war an adverse result. The Thirty Years War in Germany might have been severest against unplanning civilians. The Roman wars of conquest might have kept picked men in so many successive battles that they would be almost surely killed no matter how skillful and well organized.

We can be sure, however, that even if the descendants of the original Romans had continued to govern Rome, Rome would have fallen—because of the adverse birth-rate differences among Romans, and the consequent decline of Roman intellect.

Frank eulogizes the early Romans:

> That calm temper of the old state-builders, their love for law and order, their persistence in liberal and equitable dealings, in patient and untiring effort, their deliberation in reaching decisions, their distrust of emotions and intuitions, their unswerving devotion to liberty, their loyalty to tradition and to the state, are the things one expects to find so long as the old Roman families are the dominant element in the Republic.

We cannot speak of the spirit of Rome or the culture of Rome, says Frank, "without defining whether the reference is to the Rome of 200 B. C. or 200 A. D."

> History must take cognizance of this change, and in doing so it is difficult to escape the conclusion that the change is primarily due to the fact that the Romans partly gave way before and partly merged their inheritance in a new brood which came largely from Asia Minor and Syria. According to this view the decline of Rome had begun in the last decades of the Republic.

Frank notes other causes of the decline, but mostly they indicate faulty judgment and thus declining intelligence. They include excessive taxation, debasement of coinage, slavery, unemployment among the skilled

labor, exhaustion of the soil. Nevertheless, "the economic factors to be considered in discussing the decline of the Roman empire, while numerous, do not seem to be the most vital ones. Most of them may be defined as symptoms of a general decay in the intelligence and vitality of the people then in possession of the government and its policies."

> If from these many causes of Rome's decline we must select the more potent ones, we should be inclined to name first Rome's rapid and ill-considered expansion, the existence of slavery on a vast scale, and as an immediate consequence of these two, the thorough-going displacement of Romans by non-Romans.

Again, Frank's basic conclusion that the loss of hereditary quality is one of the main reasons for the decline of Rome seems sound, but again it must be stressed that the displacement of brain power and character is the important aspect of the change. Whether the smaller caliber successors were from Asia Minor or were from bred-down stock of the Roman founders themselves is incidental.

Theodor Mommsen also, in *The History of Rome* gives evidence of the disappearance of the heredity of the founders. A 1905 translation by William Purdie Dickson, Volume 5, page 337, reports: "The patrician body . . . had dwindled away more and more in the course of centuries and in the time of Caesar there were not more than fifteen or sixteen patrician *gentes* still in existence." Caesar himself sprung from one of them. He got the right of creating new patrician gentes, but that group soon bred out too.

Mommsen in his several volumes reported various facts that show the biological decline of the Romans. G. M. McCleary, M.D., searched the great scholar's writings for the evidence; reported it in *The Hibbert Journal* for April 1947. "Childlessness was common," says McCleary, "and among the upper classes families

of more than one or two children were rarely found."

According to Augustus, as Brooks Adams reports, the Romans—some of them—were conscious that sterility must finally deliver their city into the hands of the barbarians. Legislation was passed in 4 A.D. to encourage marriage. Since that legislation was not effective, it was supplemented in the year 9. Some of the nobility protested and asked for the repeal of the laws. Augustus called them to the Forum and gave them a lecture which was passionate, even violent, in its earnestness. Those who were single were the worst of criminals—destroyers of the race. Did they expect men to start from the ground to replace them? "While the government liberated slaves for the sole purpose of keeping up the number of citizens, the children of the Marcii, of the Fabii, of the Valerii, and the Julii, let their names perish from the earth."

But Augustus might as well have spared his intensity and left his bitter plea unspoken, for the trend continued.

"The bearing of children was unfashionable . . .," says McCleary. "The local bourgeoisie and *nouveaux riches* strove to emulate their betters in Rome. Their families died out."

In *The Mankind Quarterly,* edition of January-March, 1965, (102 Great Russell Street, London, W.C.1) is a penetrating study by S. C. Gilfillan entitled "Roman Culture and Dysgenic Lead Poisoning." The birth rate differences were even more pronounced in Old Rome than ours are now, and Gilfillan uses Karl B. Hofmann, Rudolph Kobert and others, and his own investigations in maintaining the additional reason, which seems to dwarf all the others: the practice in the upper classes of drinking wine which was prepared and kept in jars lined with lead.

Lead was plentiful and more easily worked than any

other metal, and since its harmful effects were not known, it was in general use among those who could afford it. Frequently it was the material in which food and water were kept. Acid foods if stored in copper or bronze produce a copper acetate, green looking, bad tasting, and sickening; but in lead, though that too is poisonous, its harm was not detected.

Lead vessels and pottery containers lined with lead were used more often than any other kinds for storing wine. Wine drinking was mostly a practice of the upper classes, so their members consumed damaging amounts of lead. The rest of the population used relatively little lead for anything, and did not participate very much in the wine drinking, so they were not so much exposed.

Among its various effects lead "produces sterility, miscarriage, stillbirth, heavy child-mortality, and permanent mental impairment in children."

A low birth rate among the aristocratic families resulted in every succeeding generation among the wealthy being made up largely of persons adopted from the poorer classes or selected as managers, etc. Apparently that brought the cream of each crop to the top and then sterilized it with lead.

One could wonder that the Roman civilization lasted so long!

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In overall view it appears that the cause of a new people rising to the heights of adaptation and invention necessary to establish a new civilization is the same cause that brought about early civilizations; the same cause as that which made civilization possible at all. It is the process that made human beings possible: the process of biological evolution. Many more individuals are born in a wild primitive environment than can possibly survive through the reproduction period.

There are struggles in that wild environment, in which the unadapted die early. Those who can think fastest or clearest have a better chance of surviving than the dimwits have. The clear-headed ones know better when to run and where to run, when to fight and how to fight. They know better how to avoid exposure, and how to combat diseases. They survive, and the lesser folk die young. Thus, *generation after generation there is a weeding out of the mentally weak; and generation after generation those who reach the reproductive stage are those who are relatively capable.*

So a civilization is a precious thing, paid for in advance through many generations of pain and bloodshed and suffering that kill off weaklings, and leave increasingly those with good bodies and sound minds.

Finally a stage is reached when there are seen to be advantages to individuals in cooperation. Cooperative living, interdependence, is the essence of civilization. And since one man's work must tie in with the work of others, orderly, systematic patterns of behavior are necessary. Interdependence (in an obverse view which is frequently neglected) is mutual service. In a complex civilization the importance of an individual's part in the production processes is not often clearly observable, and that seems to account for the neglect of mutuality of the service—not only on the part of those who should but do not render service but on the part of those who are in a position to apply social pressure to them.

When cooperative living gets much developed, there ceases to be so much weeding out; there comes to be almost none. The strong build a pattern of living that protects themselves but also protects the weak and the uncooperative. Then the adverse birth rate differences register in correlated survivals; the weak multiply more rapidly than the strong. Thus evolution, in net effect, doesn't merely stop; it goes into reverse.

There comes a gradual weakening of the essential humanness, the brain power of the group. Eventually the wisdom necessary for the complex organization is available in too small a proportion of the people. At the same time the problems become more complex. Judgments are more often misfits. Government gets farther from the people. Issues have to be settled by force. Suffering increases. Long-time objectives play less part in people's lives; they live more for the moment. The civilization may then be overcome by conquering invaders, or it may sink into dark ages.

Civilizations crumble because for capable people the incentives for breeding are often superceded by incentives for social accomplishment. The breeding is left mainly to those who are not capable of achievement of any sort.

(1) The culling out, which improves average intellect, accounts for the rise of civilizations; (2) The differences in birth rates, which impair average intellect, account for the fall of civilizations.

Essentially, as I have pointed out, a civilization is cooperative living. But basically it is made possible by a widespread possession of high quality brains.

In our own civilization there has come to be very little struggling for survival; "programs do away with natural selection," and nothing in our environment substitutes for the death phase of evolution to prevent the enemies of society from participating in the making of the subsequent generations. Compassion, meaning mercy and sympathy, operating with no precautions as to its results, is paving the way for our destruction.

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A civilization is, in part, an accumulation of skills, and of know-how, and of buildings, and of tools, and of means of transportation and communication. Notice

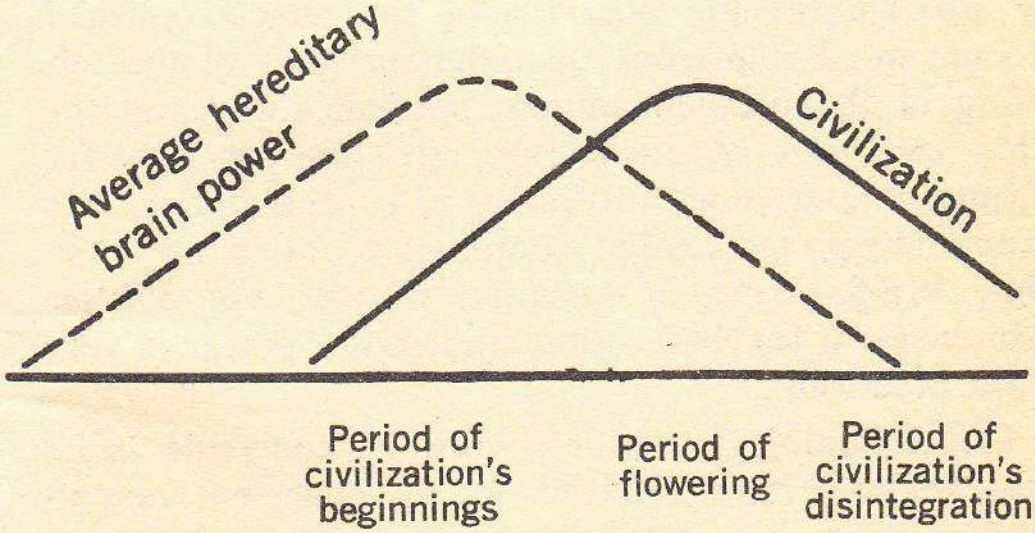
that in regard to its physical artifacts and its patterns of living, and also its knowledge, it is an accumulation.

Civilizations are in an interwoven pattern with intelligence. Since a civilization is an accumulation it must necessarily *lag behind the concentration of brain power on which it depends*. The biological evolution of intellect that makes possible inventions, adaptations and knowledge is a condition *precedent* to the artifacts and practices and knowledge that constitute the accumulation.

Likewise, since the manifestations of a civilization, its visible structures, are an accumulation, they may linger on for decades after the average intellect, the inherited brain power, has declined far below the level that would have been necessary to initiate it.

The following chart suggests the lag of a civilization behind the rise and fall of the brain power on which it depends:

Lag of a civilization behind the rise and fall of the brain power on which it depends



Explaining the curves, time flows from left to right. At the left end of the curves the environment is harsh. Though shallow-minded people have more children than problem-solvers, the children of the problem-solvers *survive* in greater numbers, so average brain power increases.

As the curve showing hereditary brain power gets rather high, group activity—cooperative activity—becomes a prevailing aspect of living, and is soon developed to such an extent that even the people of less than average brains are kept alive, and since their birth rate is higher than that of the people of high intelligence (not regularly so, but statistically so), the less than average folks survive in larger numbers, so brain power declines.

Thus (1) the cause for the rise in the civilization curve is the antecedent rise in the brain-power curve. And (2) the cause of the leveling out and the downturn of the brain-power curve is the rise in the civilization curve—since that reports the cooperative living through which the weeding-out process is reduced and then terminated.

At the stage in the social organizations at which the *survivals* of the offspring of the unaccomplished become more numerous than the survivals of the offspring of the problem-solvers, specialization, and the other attributes of civilization, are not yet very far advanced, but since artifacts and organization are accumulating, civilization continues to build up, even while brain power is declining through the adverse differences in survival ratios, until brain power is very much diminished.

The terminology requires care in analyzing these transitions. I have referred to survivals but not to survival *rates*. It is clarifying to the main point to see why "survival rates" may be misleading.

What is important to the civilization, affecting its rise and fall, is *the change in the proportions of problem-solvers and the problem bunglers*. It matters not at all that in actual life there is no sharp line between the two classifications. I'll tell the simplified story of a civilization with steady attention to those proportions of solvers and bunglers. We'll call the problem-solvers the S classification, for solvers, and the rest of the folks the B classification, for bunglers.

At all stages of any civilization the bunglers as a whole have birth rates higher than the birth rates of the solvers as a whole. What an important rule that is! But that truth is not the predominant truth in the rough going preceding a civilization. If it were the predominant truth there would never have been any civilization.

Let's consider the S women in a tribe as the base for one comparison. We want to see how their female offspring who live to be old enough to reach their own reproduction age compare with the mother generation in numbers. Let's call the answer the npm rate; the new-potential-mother rate. The npm rate is the number of female children who survive to their own reproduction age, compared with the number of women of their classification in their mothers' generation. A thousand women in the S classification typically would have 4,000 female babies, of whom 3,000 become new potential mothers, so the npm rate of the thousand women is 3. A thousand women in the B classification have 8,000 female babies of whom 2,000 become new potential mothers. The npm rate of the B mothers is 2. That 3 to 2 ratio is characteristic of pre-civilization days and is the cause of the rise of a civilization. Since the S people have a higher npm rate than the B people the tribe becomes more intelligent with each succeeding generation.

In that stage the higher *birth rate* of the B group

doesn't count; the npm rate is the predominating truth.

In those days, social structure is at a minimum—not yet developed. That is merely another way of emphasizing that those are pre-civilization days. The B people have to look after themselves and their babies, and they can't do that very well, so their infant death rate and childhood death rate are high, and their npm rate is low.

The solvers are getting along better, having a lower birth rate but a higher npm rate.

Now let's comment on survival "rate." It is ordinarily taken to be the number of survivals compared with the number of babies in their own groups when they started. At any stage of the civilization the survival rate is higher in the S group. But after the mutual aid arangements of a civilization raise the survival rates of everybody, though the survival rate of the S classification is still a little higher than that of the B group, the B group has the higher npm rate.

From the time the npm rate of the B group becomes greater than the npm rate of the S group, the civilization is doomed, because in each successive generation the offspring of the B parents are a larger proportion than in the preceding generation.

For decades or centuries the civilization continues to accumulate. It is a striking fact that most of a civilization is worked out and built up after the brain basis for it has passed its peak; worked out with the ability that improved further and further in the dark ages when problem solving meant life, and problem bungling meant death. The creativeness of a population remains effective for generations even with evolution in reverse, but finally its manifestation is weaker and rarer.

Then Toynbee's "challenges" can no longer be met, and disintegration begins. Whether or not a new civilization can start in the same geographic area has depended on (1) whether or not the conditions are again right for generations of weeding out of the more inadequate people, or (2) whether or not invaders arrive who have been weeded out for generations before their coming.

Those curves are interacting and are worth a thorough understanding. What causes the beginning of the rise in the civilization? Answer: The earlier rise in the problem-solving ability.

What causes the problem-solving ability to *cease* to rise? Answer: The civilization, which includes cooperation, protects people indiscriminately; one no longer needs brains and character to stay alive. In other words, the weeding-out process ceases. Thus the dotted line flattens out—before the civilization line has risen very high.

What makes the dotted line turn downward? Answer: The normal birth rate for dimwits is higher than the normal birth rate for problem-solvers, so, when the weeding out ceases the surviving dimwits become more numerous than the survivors with superior brains. Consequently the average brainpower decreases.

Why can the civilization curve continue to rise for a long while after the intelligence curve has been descending? Answer: Civilization is in part an accumulation of patterns of living and of artifacts. A smaller and smaller proportion of people solve problems, but such solutions as are worked out are cumulative with previous patterns and artifacts, and make the social structure increasingly complex.

Why is there a final downturn of civilization's curve? Answer: While the problems get tougher, the problem-solving ability gets thinner.

The importance of brains to civilization is generally

overlooked because of the lag in the accumulation of the visible structures after the evolution of the brains, and the lag in the timing of the crumbling of the visible structures after the decadence of the brain power, the biological basis of the civilization. The *lag* is the chief reason why the birth-rate cause of the crack-up of civilizations has not been seen.

If one is, let us imagine, on the heavy line, a little to the right of its intersection with the dotted line of the intelligence curve, he would not be likely to see that the rising sweep of his civilization would in a little while change its direction. Few men would have any idea of a trend of intelligence that had already descended far below its crest. Few would sense the fact that the downturn in that dotted line resulted from the most treasured aspect of the civilization, its security for all against death.

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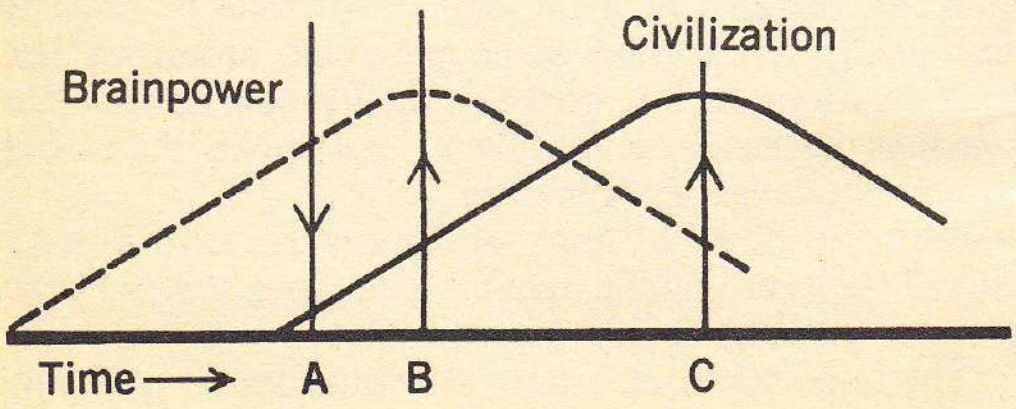
We need to bring into focus the whole process: 1. The building up of average intellect and the resultant accumulation of a civilization; 2. The increasing complexity with the increasing difficulty of its challenges; 3. The birth-rate differences and the resultant collapse; 4. The lags which have blinded people to what was going on.

The symbolism in the curves helps show the causal connections between the phenomena they represent.



At stage A the civilization curve comes into existence because the brain power curve has risen so high as to represent judgment making of a high enough level to make cooperative action successful. The influence at that stage is from brain power to civilization.

At stage B, civilization has become so effective that the weeding out process is just offset. The problem makers still have a somewhat higher death rate than average, but their birth rate is higher and their proportion of the population stays for a while the same. At that stage the influence is from the civilization to the brain power, saving lives of problem makers and thus keeping brain power from going higher, and as, proceeding to the right of B, the civilization becomes still more efficient, it causes the brain power to go lower because the higher birth rate of the problem makers increases their proportion of the population.

At the C stage the average brain power has sunk far, through the birth rate differences, and the civilization therefore begins to deteriorate.

I want to drive home this point that seems hard for people to grasp: The benefits of a civilization are closely connected with its decline: are really the cause of its decline. Now get this: Civilization is a product of cooperation, and cooperation provides *security* as well as greater productivity of economic goods. Security in what? Mainly some minimum of income, which may be in money or directly in the form of food, housing, clothing, etc. The security is not limited to those persons who can and do carry their part of the load. The weaklings, the ne'er-do-wells, the anti-social persons share the security, and the social organization is weakened through the *increase* of its weaklings, its ne'er-do-wells, and its anti-social persons. They constitute its burdens. If the burdensome members of society could receive the special benefits only by

agreeing to refrain from increasing the burdens (in other words by agreeing to refrain from reproduction) the social organization would be more enduring. But *normally* security kills itself through wrecking the organization that provides it, wrecking the organization by the increase of its burdensome people.

Sylvia Porter's column of December 2, 1964, retails some recent census statistics showing that "in the 14-15 age group nearly half of today's boys whose parents never finished grade school are now classified as 'retarded scholastically', and for Negroes whose parents failed to complete grade school the 'retarded scholastically' rate climbs to a sickening 52.3 percent."

Porter thinks the cause is environmental, but whether environmental or biologically hereditary, since biologically these people reproduce at more than average rates, they are an increasing threat to the social structure that is burdened by them.

William B. Shockley is one of our "creative minority," prominent for instance for developing the transistor. The UPI quoted from an address he made on January 7, 1965, at Gustavus Adolphus College:

> In effect, the same acceleration of technological advance that has led to death control has also led to the elimination of survival of the fittest as an important mechanism of evolution.
>
> Many thoughtful persons are now concerned about possible genetic deterioration due to selective multiplication of the lower classes in society.

The problem may be viewed as involving the "social instincts," sympathy, kindness, generosity, and the herd instinct itself. Group functioning depends on them, but under civilized conditions *they have to be tempered by reason;* those on the benefit end must be prevented from doing harm.

Earnest A. Hooten, famed Harvard anthropologist, told us, in *The Twilight of Man,* published in 1939 by G. P. Putnam's Sons:

> Material prosperity encourages the preservation, pampering, and reproduction of the biologically inferior elements which are parasitical upon rich civilizations. Then some cleaner-blooded, and culturally crude stock crashes in and wipes clean the slate. . . . We can either prune off our own rotten branches or submit to a ruthless cutting down and thinning out by more vigorous conquering stocks.

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There is good evidence that various developments have been instrumental in the decline of civilizations. Lack of coordination in the specialized performances of functions that once were functions of the family has a weakening influence on a civilization. Economic specialization leads to controls which increase centralization; centralization proceeds until rigidity of organizations including governments smothers individual initiative and prevents adaption in emergency. It seems true, too, that when governments increase their functions they seem never capable of a sufficient coordination of the activities they regulate or manage; and that when governments increase their proportion of judgment making they take much of the spark out of individual living and thus reduce the vibrant and virile quality of a civilization. It seems probable, further, that overpopulation complicates the problems and stupefies the individuals, and thus contributes to the disintegration of a social order, and that the destruction of geographic resources, especially the land sources of food, is a powerful cause of the waning of a civilization. Any one of those influences would be important, and under the impact of multiples of them a civilization would have rough going.

All those influences have been operative in various previous civilizations, and in different measures have been causes of their declines. But if those are validly causes of the declines of civilizations, are the differences of birth rates to be placed in parallel with

them as just another contributing cause? I don't think so. My point is that, if brain power were increasing instead of declining as the problems of a civilization become more complex, the people would be able to synthesize the objectives and functions of their institutions, control their population numbers, conserve their resources, and even prevent the increase of the degree of complexity. In short, if capable, intelligent people had most babies, society would see its problems and solve them.

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The clutter of people reported in Chapter 2 piling up in all of earth's remaining crannies, has finally aroused the American public. The reaction is a cry for birth control, birth control, birth control. You hear it everywhere—as if we are about to win a great victory. But we are not even on the battleground yet. The 1970 census will tell us what classifications of people will have responded to the new social stimulus. My guess is that those who are already limiting their families most will limit them more. The vogue against discrimination will probably prevent anybody from hinting to people on relief that *they* are the ones who ought to take the pill or be equipped with the coil or be sterilized. So the usual burden bearers will take it on themselves to handle this newly realized problem by changing their own plans—some of them—from a 3-child family to a 2-child family, or from a 2-child family to a 1-child family.

They will whip their assumption of central position into submission and "co-operate."

This is one big truth they could well consider. Its expression as a conclusion had to await the arraying of those statistics on birth rate *differences* in this chapter. *There is no overpopulation of educated people.* That is true in the U.S. and it is true world around.

The people who form a part of the social structure—a part of civilization—are not in excess. If they reduce further their proportion of the total population, they thereby make the social structure more likely to collapse. Their remedial effort on overpopulation will amount to nil and the damaging effect of their reduced reproduction on the quality of population will be serious.

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The name of this chapter is *"The Third Principle of Population."* You knew from the very first chapter that the third principle has to do with people in *civilizations*. This chapter has put civilization under a microscope. In careful examination a civilization is seen to be *normally* (though not necessarily) self-terminating.

In our investigation three relevant facts have come into focus:

1. Civilization relies heavily on people working together, and, as the specializations multiply, the connections between the cooking and the eating get lost, so some people help themselves to the goodies without having brought any covered dish at all to the party. They are beneficiaries without having been contributors. Mostly they have nothing above the ears, so they couldn't contribute if they wanted to, and they have no reason to want to. They are burdens, and problem-makers.

2. For the most part the problem-makers are slow-minded, maladjusted, "underdeveloped," stupid, retarded, or/and less bright, and they have more babies than, the citizens who bring the nicest covered dishes. The dumber they are the more babies they have, and what makes them deadly to the civilization is that they increase faster than the problem-solvers.

3. Since human beings are gregarious, our psychological leanings include social inclinations such as kindness, sympathy, "compassion." In a civilization, as we as individuals philosophize to justify our existence, some of our members idealize those social leanings as ends in themselves. In other words they glorify some of our

emotions—so that even when we discover the inadequate and other non-cooperating members in our midst, they are inclined to think of them as nice to have around: an excuse for our living.

In a few generations the problem-makers constitute so large a proportion of our total number that there are too few covered dishes to make a party. The civilization declines.

The first principle of population is that human beings tend to increase and the earth does not. Malthus gave us that.

The second principle is that evolution raised the quality of human beings to a height at which they could initiate a civilization. Darwin gave us that.

But human beings do not tend to increase equally. Malthus did not tell us what classifications of human beings do most of the increasing. Darwin told us that the main instrument by which evolution conferred ability was the removal of incompetence from the gene stream by death. But Darwin did not call to our attention that civilization bans that instrument of evolution. When we contemplate those facts we derive the following: *problem-makers reproduce in greater percentage than problem-solvers, and in so doing cause the decline of civilizations.*

And *that* is the Third Principle of Population.

CHAPTER SEVEN
WHERE ARE WE NOW ON CIVILIZATION'S TIME CHART?

That chapter title takes me further than I like to be from science. I feel neither confident nor comfortable. "Where are we now?" I stand too close to the picture to have a sufficiently objective view. Yet in the many times I have taught a population course, invariably that question came up, and the students thought there ought to be some sort of treatment of it. With the guess that many of my readers will have that view too, I explain why I think we are far along the descending side of the *intelligence* curve and have only a little way to go to exhaust our upward momentum on the *civilization* curve.

In a sense the civilization of the United States is the same as that of Western Europe, yet probably, for the most part, it should stand on its own separate record for comparison with the course of earlier civilizations and other contemporary countries. For instance, there may be significance in the fact that England, which led us all for a century, passed the summit before World War I.

You may think our recent achievements, compared with those of our past, in music and literature and invention, in engineering and acting and painting, are good criteria on which to judge our present status. Those probably have merit, but this time I narrow my treatment of our place on civilizations' time chart to *government policies* as indicative of our waning wisdom.

Government policies are closely connected with popular ideals, and we must note that some of the ideals seem to have been considered as objectives of universal application: equality, freedom, government by the governed, rights. Our government leaders, to justify their role, should have been able to separate wheat from

chaff. In such matters, in this 20th century, in neither domestic nor international affairs have they shown very much understanding—and that means that our government leaders have been and are of little wisdom.

Those objectives—equality, freedom, government by the governed, rights—are good but they can't be absolutes; there can be too much of a good thing, perhaps of *any* good thing.

Too much equality of income would leave no economic incentive for economic effort.

Too much individual freedom of action would leave us with too little dependable order; that is why the phrase "freedom *under law*" developed.

Too much of government by the people (by the immediate majority) makes for tryanny by the majority toward minorities. So government by the people has to be subservient to a constitution. The primary function of a constitution is the protection of minorities.

Government by the governed has been a rare and fleeting will-o'-the-wisp. It is precious, and we want as much as circumstances permit. But government by the people can exist only if the masses have a considerable measure of intelligence and of education.

Rights, all around their periphery are tight against the rights of others. We cannot have rights increased without diminishing rights of somebody else.

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I think we should pursue the topics *government by the governed and equality*. I am taking their misuse as a basis for estimating the stage of our civilization in the usual rise and fall pattern. You should have my reasoning in mind as you appraise the validity of my estimate.

Government by the governed or their elected representatives in some circumstances is good because it can yield more of satisfactions than oligarchy or one-

man rule; and not the least of the satisfactions is that of knowing one is taking part in molding his own destiny. But government by the people cannot be universalized; it is not, in every relationship, possible. Why have we had a minimum age requirement for voting? (It is 21 years in 46 of our 50 states.) Because years give opportunity for experience and observation. The years do not give assurance of wisdom by which a voter can judge what is appropriate legislation or which is the best-qualified candidate, but the years make the wisdom a little more likely. Should we reduce the voting age requirement to 18? Then to 15? Then 12? Then 9? Such a procedure would harmonize with the bare unmodified ideal of government by the governed, but it would make a travesty of government, and would harm not only those who blundered but all affected by the faulty decisions.

The greater the range of decisions to be made by direct vote of the people the greater must be the requirement for intelligence and education. Decisions have to have some measure of wisdom. And even for matters in which elected representatives make the detailed decisions the voters must have enough problem-solving ability to know if the representatives are doing a good job. So, since democratic decisions are likely to be faulty where intelligence or education is scattered and skimpy, government-by-the-governed in such circumstances is subjected to greater strain.

If poverty is present the workable measure of democracy is greatly narrowed because the people cannot afford repeated mistakes; they yield up some of their right of self-government for a promise of bread.

Apparently, too, there are other considerations than intelligence and poverty. There is a consideration relating to size of self-governing units. Splitting off a county of Louisiana in the Civil War was going too

far in self government for workability. And President Woodrow Wilson, in setting the stage for the separation of Austria and Hungary, and a number of other splinter nationalities, was going too far: making them prey to possible aggressors.

We pass a lot of stupid laws, but we have hoped our key laws will be wise, so that our government structure will be efficient. To grant the suffrage to children would be folly. One is frequently amazed that even adults know so little about what goes on. A Gallup poll released November 7, 1965, revealed that 81 percent of the sample do not know how their congressman voted on major recent legislation.

Our legislators appear to have gone out of their minds. Federal legislation was signed August 6, 1965, under which illiterate people are permitted to vote! Literacy tests are taboo as a qualification for registration and voting!

The law was passed by Congress obedient to the insistence of a President of the United States and there was enthusiastic endorsement by most of the press.

Such a law violates the Constitution by overriding a state's function of determining voter qualification. Also it demonstrates a lack of respect for the fundamental law by the President, the Congress, and the people—and, just as important, a lack of understanding of the power, in a real government-by-the-governed, for good or evil that voting can carry with it.

The adoption of such an irresponsible piece of legislation as that voting law seems to indicate that there is not much time left for any real government by the people, and civilization itself can't have very far to go.

Illiterates are likely to be tools of persons already in power—so in effect there is less of government by the people as the suffrage is broadened. In this con-

nection it is interesting to notice that larger percentages of citizens vote in dictatorships than anywhere else.

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Our fixation about the right of a people to govern themselves depends on fantasy. A straight look at the facts now discloses and would at any time have disclosed that many nations have very little education and the chances are that only a small proportion of their citizens are educable. A government cannot be run on either ignorance or stupidity. One man rule, or at most rule by a few, or by some sort of overlordship, in such a situation, is inevitable.

Again, government by the people is wonderful; but it cannot be universalized!

The U.S. citizens, or at least their spokesmen, hoped that the UN would do a policing job, keeping aggressive nations from over-running those which might be incompetent or submissive, and keeping internal order. That notion too depended on our misplaced trust that the nations represented in the UN would have the same ideals as our own citizens, including an ideal of self-government for areas. The UN has not fitted the role which our spokesmen envisioned. So now as an alternative the U.S. has some of its own Army divisions in various parts of the world, trying to do what a dozen nations did in colonial days: keep order. No wonder many people in foreign lands, reading of U.S. soldiers in this, that, and the other small country, see little difference between our dominance now and the "imperialism" of the colonizers of last century. And the other members of the UN see no point in joining us in policing operations.

Whether or not we assume for ourselves a duty to maintain world order, we invite endless difficulties if we cling to the key fallacy that all men are capable of self-government.

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Britain is suffering from the same hallucination that beclouds the American mind, the fallacy that just anybody can run a government; and the British are equally determined not to learn by experience. They have seen Ghana, their African possession probably most painstakingly trained for self-government, promptly become an inefficient dictatorship with Communist leanings as soon as it was given independence, and then overthrown by other ambitious natives. In Kenya they have seen the 60,000 people with English heritage robbed and in many instances treated with violence following the British abrogation of sovereignty there. And various other erstwhile parts of the empire have failed to make a success of self-government.

Yet now, in the twilight of England's competence, the British government is scheming to sacrifice the 220,000 Whites in Rhodesia on the altar of the colossal hoax that all races are equal and all conglomerates of them capable of self government. The Whites there, realizing that they are being betrayed, want independence as their one chance of saving the civilization that they and their White forebears have built. The British Labor Government, closing out the Empire, would be glad to yield up sovereignty over Rhodesia, but insist that they will do so only if plans are made for self government by the nearly four million blacks there.

Rhodesia has been successfully self-governing for more than 40 years. The current Constitution took effect in November 1962. It was agreed to by the British Government, which relinquished almost all of its earlier powers.

A *Declaration of Rights* is "entrenched" in the Constitution and is applicable without distinction as to race, color, or creed.

Another entrenched section is a Constitutional Coun-

cil of 12 members, one of which must be a Negro. Its function is to act as a court in assessing the constitutionality of legislation.

Both Whites and Negroes, to become voters, must be able to fill out, unassisted, in English, an application for a voter's form.

Voters in Classification A elect 50 of a total of 65 legislators. As a minimum requirement, besides being able to fill out the voting form, the voter, to be listed on the "A" Roll, must have

(a) Income of 792 Pounds;
or (b) Fixed property valued at 1,650 Pounds;
or (c) A primary education, plus
Either Income of 528 Pounds or Property worth 1,100 Pounds;
or (d) Four years of secondary education, plus
Either Income of 330 Pounds or Property of 550 Pounds value;
or (e) He must be a Chief or Headman.

Voters in Classification "B" elect 15 legislators. An applicant for entry on this "B" roll is permitted to qualify in any one of a number of ways too. The *greatest* income requirement or property requirement for enrolling in Classification "B" is less than the *lowest* requirement for enrolling in Classification "A." Besides being able to fill out the voting form, a voter must have as a minimum:

(a) An Income of 265 Pounds or Property worth 495 Pounds;
or (b) Two years of secondary education, and
Either Income of 132 Pounds or Property of 275 Pounds value;
or (c) 30 years of age, and primary education, and
Either an Income of 132 Pounds or Property worth 275 Pounds;

or (d) 30 years of age, and
Either an Income of 198 Pounds or
Property of 385 Pounds value;
or (e) One must be a kraal head with a following of 20 or more heads of families;
or (f) One must be a Minister of Religion.

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I am retailing this information about the Rhodesian Constitution from the 1965 volume of *Europa Yearbook*, Vol. II, pp. 987, 988.

Obviously The Constitution makers intended to provide a government in which the more capable citizenry would exercise the greater influence. Even as recently as 1961 the British Government went along with that plan: ratified the Constitution. The Negroes were given a right to vote if they were qualified, and yet there was a safeguard against the type of political irresponsibility that prevailed in the American South in "Reconstruction" days, and that has been reinstituted in the Voting Act of 1965, and that now prevails in Kenya.

To show the type of people whom England's Prime Minister Wilson wishes to rule Rhodesia, I quote from a letter I received in February 1966 from C. R. Moore, of Salisbury, Rhodesia, a retired banker:

> One of our conservation officers asked the chief in his area to co-operate with him to improve their cultivation methods. He taught them modern methods of cultivation and fertilisation, and was pleased with the co-operation he received. At the end of the year he was transferred to another area, but a year later he returned to see how much fruit his teaching had borne. He was surprised to see that nothing whatever had been cultivated. The chief explained that the previous year they had reaped three times the usual crop, so that they had enough over for two more years, so there was no need to cultivate anything for two years.

That Chief already has and has had the right to vote. Those tribesmen can vote if and when they can

meet the requirements of the Constitution. What Wilson demands is that the voting requirements be abrogated.

In November 1965, at the request of Britain, the UN Security Council voted economic sanctions against Rhodesia. The U.S. joined in that vote, aimed, be it noted, to destroy one of the remaining oases of civilization in Africa.

On April 9, 1966, again at the behest of Britain, the UN Security Council voted to authorize Britain to use force to maintain a blockade intended to choke off Rhodesia's oil supply. Again the U.S. voted for the destruction of Rhodesia's civilization.

It is clear, isn't it? that if Britain wins this contest there will be no civilization in Rhodesia? Control will go promptly to the four million blacks, of whom only a negligble number can write their own names or read anything at all.

And what utter lack of justification there is in Britain's basic position!

Mr. Wilson's demand is not that the blacks retain something which the British have given them or promised them, but rather that the blacks get something new which until the last few months had never been contemplated before. Mr. Wilson itches to do away with the safeguards—to throw the voting rights open in about the same reckless way that the U.S. voting law of 1965 has abandoned reason here. Nowhere else in nature can one find an animal that turns against his kind as the British and American Government Administrators are doing. I believe it is only in a *civilization* in its final phase, its suicidal phase, that such an attitude could prevail.

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The doctrine of self-government of all people, unworkable as it is, lends itself to grotesque distortions—

and we, the people of the United States, through our officials have grotesquely distorted it! An important instance is that of Netherlands New Guinea, which is the west half of a large island just north of Australia.

Indonesia, before World War II was a Dutch territory covering many islands called The East Indies, containing, besides the descendants of Netherlanders, twelve widely different major tribes and some lesser ones.

The Japanese occupied the territory during World War II, and when the Dutch attempted to take up, in 1945, where they had left off in 1942 they were resisted by Achmed Sukarno, who announced a "Republic" August 17, 1945. After four years of fighting, a treaty was signed in 1949 which established a Netherlands-Indonesian Union. That was broken up August 10, 1954, but The Netherlands retained West New Guinea. Sukarno began new demands for West New Guinea in 1957. The U.S. sided with him and pressured the Dutch to leave. Somehow our action was supposed to be in support of the doctrine of self-government. That is why this is a good example of the doctrine in use; it is so far afield from what it pretends to be. Incidentally, Sukarno confiscated all the economic institutions.

Let's see if we can put some flesh on that skeleton of events.

It is as if somebody like Charles DeGaulle were to tell me and all the other Alabamians that we'd have to go "back" to England. England? I've been in the South only since 1957, but I'd resent being told I'd have to go "back" even to *New* England. As to *England,* my family left there at about the time some of the Dutchmen were leaving the Netherlands for the East Indies.

If Charles DeGaulle, now, assuming he had umpteen

times as much power as he has, were to make it clear to me that I'd have to get out of these United States and give any property therein which I might own to the Comanches—that would be comparable with the pressure the United States put on the White New Guineans to force them to turn the place over to Sukarno. Sukarno's tribe had never had any connection with the New Guinean aborigines, yet our State Department told the Dutch descendants in Dutch New Guinea to get themselves out of there, "back" to the Netherlands. The New Guinean aborigines have no more representation in government now than they had under the Dutch; they are subject to the dictates of Sukarno.

That the American public could sponsor that outrage against the Dutch, and do so on the pretense that our principle was "government by the governed," seems to me to indicate that we have too little of what it takes above the ears to maintain our own government-by-the-people very long, or even our civilization.

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Because of that same fixation about government by the governed we made the international climate unfavorable to the Belgians' retention of the Congo, and unfavorable to colonialism in general. We thereby opened the way in Africa for war and murder and cannibalism and chaos. Disorder and bankruptcy there are still widespread.

When self-government breaks down, as it is sure to do when ignorant people constitute the bulk of the voters, the Communists offer their own government machinery—by internal agents. They have something that is better than chaos, and they succeed in convincing their victims of that.

Also they manage to keep a fairly harmonious rela-

tionship between the people and the government. That is done by suppressing all but one political party, and by maintaining strict control of the press and other means of communication. The government in a Communist country does not reflect the will of the people; rather it *directs* the will of the people by its systematized propaganda program. That is the exact opposite of government by the people, but the people under Communism, mind-molded by the government press, are unaware of that.

America's ideal of government by the governed has been so all-out, so unmodified, so blind, that OUR government has been used to pull the chestnuts out of the fire for the Communists. The fact that our officials would repeatedly put our country in such a role shows either malice aforethought or a distressing lack of alertness.

Now that many of the erstwhile colonies of various countries are well along in the Communists' digestive system, the Communists set the pattern for our further aid to their plans. We are to go around the world looking for any little dictators that have not yielded already to Communism. We are to dislodge them, as we dislodged Batista, to "let the people rule." Then the Communists will take over, as they took over Cuba.

What we need most, to keep the facts meaningful, is a realization that where ignorance prevails there *has* to be dictatorship, or oligarchy, or some sort of overlordship such as colonialism or "protectorates"; *government by the people is utterly impossible.*

The Communists find a dictatorship; they send a few of their members into his realm. The Communist members or fellow travelers find a few unfortunate citizens and interpret their misfortune to them as oppression by the dictator. The unfortunate people, thus prompted, ask for U.S. intervention. So we help them

overthrow the dictator, and give to the resulting "people's government" U.S. foreign aid. The Communists, having no illusions about government by ignorant people, do the organizing.

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The program of the Communists within the United States is cut from the same pattern. Restless groups are sought out by Communist agents, or Communist sympathisers such as Martin Luther King, reminded of the American ideals, and are led to believe that they are discriminated against; that they are not getting their rights. Labor unions, college students, nudists, Negroes: any group pressing for more freedom, will do. The Negroes are a natural. They usually require only a little prompting to demand their "rights." Democracy, freedom, and individual liberty, can be interpreted to cover anything they want. Government officials are helpless to resist them because they, the officials, extolled those very ideals in winning their elections. Also, a large proportion of graduation addresses at educational institutions glorified democracy, freedom, and liberty, with no strings attached. The U.S. Supreme Court is fitting into the plan. A large part of the clergy, too, will carry anybody's banner if the said anybody claims that he has been the victim of discrimination. That is a broad generalization; let me be definite. The *U.S. News and World Report* for Nov. 2, 1964, disclosed that a move to approve Civil Rights demonstrations had been before the house of delegates of the Episcopal Church on October 20, 1964. The proposed resolution stated that some laws are "in basic conflict with the concept of human dignity under God" and that "This Church recognizes the right of any person for reason of conscience to disobey such laws or customs." Of course if individuals choose which laws they will conform to there

will soon be no law, no order, no civilization. The delegates included not only clergymen but laymen, and the laymen voted against the resolution—but the clergymen voted three to one in favor of chaos. Fortunately a majority of each group was required for passage of the resolution.

Many persons seriously contend that the various groups should demand that the police, and the army if necessary, should protect demonstrators whether they are breaking laws or not. There is a right, they think, to stand, sit, lie down, parade, in the streets, the parks, the movies, schools, dance halls, clubs, college classes and campuses, the churches, the restaurants, hotels, motels, bars, wash rooms, toilets, and the White House.

The major tools of the Communists in America, are the American ideals themselves, but without the modifications and limitations that the Founding Fathers applied. By putting just a little of the yeast of "rights" in scattered spots they can keep society in a turmoil.

Yes, I think the evidence is strong that Americans as a whole have too little sense to keep their government by the people very much longer, and that our civilization itself is soon to reach its peak.

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So far I have pointed out that government by the governed is not a normal relationship; it is an organizational plan that can work well where the general levels of intelligence and education are high and the problems not too complex. In such a situation most men have enough of problem-solving ability so that in varying degress they have a little more than enough to understand the issues. I have shown how unreasonable is the U.S. attempt to universalize the doctrine of government by the governed. I have expressed the view that a nation which has so little problem-solving

ability that it makes a crusade of setting up self-governing units where education or intelligence is lacking, often destroying orderly institutions in the process, is very likely soon to lose its own government by the people.

Incidentally, the misuse of other American ideals has been touched on because the ideals are interwoven.

Now I examine the other basic blunder of our recent and present leaders: their uncritical acceptance of the fallacious doctrine of *equality*.

Equality, as we have seen is not a fundamental truth; it is not true at all. Is there *any* use for the concept? I think yes, but only as an organizing tool. If one sees the assumption of central position as an orientation requirement for an individual, one appropriately recognizes the same thought tool for each person. And to facilitate cooperative action it is better not to raise any question of the order of peck right. Thus the simplest organization of society is a linking of what are for operational purposes accepted as equal units.

Such a simple structure cannot be strictly adhered to. If it were, it would be unadaptable. In practice our governmental organization has departed from it, for example, in giving civil service examinations to sort out unequal applicants for jobs. But we have managed to maintain at least a show of the equality doctrine in politics.

But to make an objective of equality as an aggressive policy takes for granted that what is good for Peter is good for Paul and everybody else, and what Peter is good for, Paul is good for too; and so is Alice!

To test the recently-enacted Civil Rights law a man who had the unorthodox conviction that there are some differences between men and women made a formal application to join the WAC's. As I recall Paul Harvey's report of it they hunted until they found

some basis for rejection other than sex; flat feet, maybe!

In dealing with the equality fallacy it seems appropriate to take it up in connection with "Liberalism."

The hub—the center—of the "Liberal" philosophy is, I believe, the equality doctrine. The Liberals don't quite say that all men are *created* equal or that they *are* equal, but that they are close enough to biological equality so that their *differences in behavior are the result of environment*. So if we make their environment equal their behavior will be equal. That this peculiar notion is communistic is not as important as that it is a denial of evolution.

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The equality ideal requires the elimination of distinctiveness. Probably the ant hill would be its model, except that in getting the liberal program adopted the emphasis is not on conformity but on *rights*—everybody is to be taken care of; the central government is to supply "welfare" and in fact to enforce welfare "from the cradle to the grave."

John Grenier, in contrast with such an emphasis, is a Conservative, and stresses the U.S. Constitution. On September 21, 1965, in analyzing "Liberalism" he emphasized as *its most definitive aspect its centralizing feature*. All the welfare programs are to be managed *from Washington,* and all the funds for all of the programs are to be channelled *through Washington,* with strings attached to keep the beneficiaries not only informed as to who supplies the gravy, but kept in line with conditions stipulated by the central organization. And decisions about conditions of economic production are to be made increasingly in the central government.

One friend of mine who had been somewhat inclined toward Liberalism commented that as he understood it the Liberal doctrine was that funds for "worthwhile

objectives" were to be more readily available from a liberal administration than from a conservative administration. In that expression we get the "something for everybody" aspect of it; also the high taxes aspect.

Increasing *socialism* is implied in Liberalism, though it may be of the Nazi type; that is, close regulation and control, with the empty form of private ownership retained, or it may be the government-ownership-and-operation type, or both. Recent Liberalism as an *economic* concept is about the same as is its *government* concept; the government is to run an increasing part of the economy.

To a Liberal a balanced budget is anathema. Increasing the government debt puts more dollars into the market; that makes a rising price level, which the Liberals want for its stimulating effect on the economy. How do the holders of government bonds like the prospect of getting back less purchasing power than they parted with? So far, they haven't complained; have continued to buy bonds. When the day of reckoning arrives from that problem, to meet the "emergency" of "uncooperative capitalists" there will be a major expansion of socialism. One should bear in mind that the "emergency" has been predictable years in advance of its occurrence.

Liberalism has many interwoven phases. They include (1) the equalitarian undertone, (2) conspicuous welfare programs, (3) magnification of the central government and the submerging of the states, (4) the emasculation of the Constitution, (5) increasing socialism, (6) increasing Federal government spending, (7) high taxes, (8) steadily rising National debt, (9) avoidance of a balanced budget.

The "complete culture" of Liberalism reaches further. Grenier believes it involves an international mechanism which would include a way of making the welfare state world-wide, and he quoted President

Johnson's expression at about the middle of September 1965 that a war on poverty ought not to stop at the U.S. shores. Grenier's interpretation was re-enforced by a three-page article in the *U.S. News and World Report* for October 11, 1965.

I came away from that meeting of September 21, 1965, with the hypothesis, at least partly second-hand, that the top of the Liberalist hierarchy is reaching for a world super-state which is to be socialistic. That seems to explain various U.S. actions which would otherwise remain utterly unreasonable, and particularly the direction of flow of much of our foreign aid.

I raised a question somewhere along the way as to what difference the Liberalist top brass thought they saw between Socialism and Communism. Popular election of officials is supposed to attach to Socialism. But, I am convinced, Socialism on a large scale is likely to control the news media to an extent that makes elections almost meaningless. If also they contrive means of preventing rival parties or keeping them besmirched, a central committee can steer the nominations and can have a monopoly in formulating the propaganda. So if the Liberals do get very much further with their socialism, even as a national project, dictatorship is a logical probability. That could be the route for the passing of our government-by-the-people, and a step in the decline of our civilization.

I recently paid $5.95 for one of the most important books I own: *The Liberal Establishment,* by M. Stanton Evans, published 1965 by The Devin-Adair Company. It brings out clearly what Liberalism is and where it is taking us.

Evans shows the hypnotic grip that the Liberals have on the country as evidenced, for one thing, by the reception of the murder of President Kennedy.

With the publishers' permission I quote excerpts from pages 28 to 32.

> From 1961 forward, the speeches of governmental functionaries, the airwaves of radio and TV, and the headlines of the daily press were crammed with warnings about "the radical right"—set against a soothing counterpoint of assurances about the essential tameness of domestic Bolshevism.
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> Memory does not recall an episode of equal scope in which men whose task it was to discern the shape of things had been so stunningly wrong. . . . They had fixed the nation's gaze upon an illusory danger on its right, and ignored an all too corporeal danger on its left. The Oswalds of the world, they had said, were *not* menacing, but those who criticised the Oswalds *were* menacing. They had supported everything which made Oswald possible, and attacked everything which would have made him impossible. Now they stood bankrupt among their prophecies, every assurance they had uttered wrong, every warning a miracle of irrelevance.
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> Yet here was the incredible thing: . . . In the very teeth of the evidence that the crime had been committed by one of their own, the forces of the left unleashed a vengeful attack in which guilt for the tragedy was to be pinned upon conservatives.
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> To acknowledge the implications of Oswald would have meant recanting, not a single and therefore retrievable mistake but an entire mindset and vocabulary and store of passion; unraveling, not a single error, but every strand of ideology which supported and sustained them in their address to the happenings and portents of their time. There was nothing for it but to press forward.
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> The mind capable of blaming Oswald "on the radical right" could have with equal facility indicted Laocoon for the fall of Troy, Cicero for the treason of Catiline, or Churchill for the disaster of Munich. The nation capable of believing that mind is doomed.

I think Evans is not sure yet that the U.S. is doomed. He knows there are millions of us who do

not go along with the mixed-up Liberal logic, and he probably thinks that some of the millions who have thought of themselves as Liberals are awfully confused but still educable.

Two especially illuminating chapters of Evan's *The Liberal Establishment* report tolerance and sympathy accorded by the Liberal Establishment to Communist-promoting behavior, and contrast that attitude with the actual harrassment meted out by the Liberal Establishment to the Anti-Communists. The four illustrative individuals whose behavior in Communist relations was questionable or worse, and yet unjustifiably condoned or even applauded by the Liberals are J. Robert Oppenheimer, Owen Lattimore, John Stewart Service, and William Wieland. Evans presents clear-cut reports of facts which made those men questionable security risks but even after the facts were known the four were placed in positions of special trust by the Liberals in our government. In contrast, some persons who have been trustworthy, and watchful of America's security but oppressed by the "Establishment" are Otto Otepka, Michel Struelens, Don B. Reynolds and Mary K. Jones. Again Evans presents the evidence. These latter four are patriots, yet by the Liberals in government they were prevented from doing their duties as security agents.

The reason for the tolerance and sympathy by Liberals toward the leftward-leaning persons, and the oppression against patriots is that the philosophy of the Liberals—at least of those Liberals who are in the seats of the mighty in the U.S.—is closer to that of the Communists than it is to that of the Constitutional Americans.

The *economic* ideal of the Liberals is centralized decision-making, which is precisely that of the Com-

munists, and is opposed to private decision-making—which the Communists usually refer to as "capitalism."

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The Liberals use equalitarianism as an emotional tool for manipulation of various groups who might feel that they have been getting too little of the world's goodies. Equalitarianism has an influence on government policy too, and in that it constitutes the second major blunder of our officials.

Equality, as we have seen in Chapter 5, is inconsistent with the facts of evolution; if one is true the other cannot be true. If men had been equal the killing phase of evolution's process would not have resulted in an improvement of the species.

The equality fallacy grows from the same root as environmentalism. It results from playing down heredity.

Nobody—not even a hereditarian such as I—would deny that environment is important in influencing the behavior of X, but a hereditarian would insist that the *behavior of X is partly the result of his heredity.* Also, the *environment* of *X* is partly the *behavior of Y,* and the behavior of Y is partly the result of *Y's heredity.* So the behavior of X is influenced not only by his own heredity but also (by way of X's environment) by the heredity of Y. Thus heredity influences behavior through multiple channels, and to belittle heredity is to belittle important truth.

Since the Liberals believe that environment plays such an overwhelming role in behavior, they hold that nobody is really to blame for anything. If a person does harm it is because his environment has been faulty; change his environment and he will be all right. And if whole classifications of people constitute a menace, "educate them."

But a point that the Liberals neglect is that if society releases offenders from responsibility, the release

modifies the environment of other potential offenders—removes their restraints—and offending increases. Liberals have been excusing offenders, even promising soothing things to them about improving their surroundings and their incomes, as if society, rather than the trouble makers, have been at fault. With such encouragement, the trouble makers have increased their numbers and practically made a profession of their wrong doing.

Observe the contrast in the pre-civilization way, the way of evolution. In those other times, for one little mistake a man suffered some, often much; for a big mistake he ceased to exist. The overall result was a steady improvement in both heredity and environment.

We could as readily say of the bad actors of those days as of the offenders of now that they were not to blame for their actions. But without the penalties, personally applied as they were, there never would have been a civilization.

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Time was when a *court of law* was a pillar in the social structure, dependable in its support of tested principles and standardized interpretations of the Constitution. But for more than a decade now we have had the amazing spectacle of our courts, and especially our Supreme Court—and most aggressively the Chief Justice of the Supreme Court—doing everything humanly possible to weaken our social structure.

The most damaging single blow to the social framework which the Court has delivered was the decision of May 17, 1954, in the case of Brown vs. Topeka, reversing Plessy vs. Ferguson, an 1896 decision which required that Negroes be provided separate but equal educational opportunities. In Brown vs. Topeka the Court decreed for us all a future completely disjointed from our past, with a decline in White heredity which, unless the influence is somehow offset, in a

few decades will probably be almost as rapid as that of the Romans. Incidentally, the Negro unrest which has already resulted in race riots in several cities would have been unlikely except for that decision. The Liberalist philosophy of the Court is basic, that philosophy being in an essential aspect equalitarian.

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That philosophy is also chiefly causal of the increase in crime, at least permissively.

Five of the decisions by which the Supreme Court of the United States has encouraged crime and tied the hands of the law enforcement officers are listed in the *U.S. News and World Report* of March 22, 1965:

The Court ruled in 1961 that State and local authorities must use the same rules for search and seizure as are used by Federal agencies. Except as there is "probable cause" no search and seizure can be made, and any evidence found cannot be used.

The Mallory rule of 1957 makes it necessary for officers to arraign an offender immediately after his arrest. In some cases it leaves to the officers too little time. The Mallory rule requires that if there is delay a confession must be thrown out and even that a convicted criminal be set free. Andrew Mallory was caught the day after he had committed rape, in the District of Columbia. Seven hours later he confessed, and after another hour and a half he dictated a confession to a typist. In the subsequent trial he was sentenced to death for rape. The case was taken to the Supreme Court, which set him free. The police had tried to find an official before whom to arraign Mallory the night he confessed but could not find one, so they went through that procedure next morning.

Mallory, a short time later, did get 60 days for attacking another woman, and eventually got a long term for "burglary and for assault on a housewife."

A third rule by which the Court has hampered justice, formulated in 1964, is that an offender is entitled to a lawyer *before he is questioned,* and he must be warned that anything he says may be used against him.

Fourth, a confession made by an offender after indictment cannot be used against him *if his lawyer was not present* at the questioning.

The fifth innovation by which the Supreme Court has encouraged crime is an extension of the application of the Fifth Amendment of the U.S. Constitution. "Taking the Fifth" has been a much-worked procedure by which wrongdoers have avoided disclosures, in Federal criminal courts and Congressional committee hearings, that might have been incriminating. The phrase in question is "nor shall be compelled in any criminal case to be a witness against himself." Inasmuch as it is a part of the "Bill of Rights," it was assumed to limit only the Central Government. That was changed in 1964 by the Warren Court, as that phrase was handed to criminals for use against state and local government.

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The lower courts reflect the Supreme Court softness for the offender.

In the *U.S. News and World Report,* March 22, 1965, an instance is reported of a man threatening people with a broken bottle. Two policemen drew pistols and told the man with the jagged bottle to drop it. The offender refused, and when officer De Sutter attempted to take the bottle he was jabbed in the face to an extent that required 27 stitches and 23 days in the hospital. When the bottle wielder was brought before Negro Judge George N. Leighton, former president of Chicago's NAACP, he was set free—on the

ground that by drawing a gun the policeman had used excessive force.

Concerning that softness toward criminals, I have heard a Liberal argue that the unhappiness which the crime itself causes is already set in motion by the act, and cannot be undone by what is done to the criminal; that punishing the criminal is merely revenge and increases total unhappiness. What a myopic view! That Liberal didn't see that the punishment of the criminal conditions the behavior of a thousand other potential evil-doers, helps them to go straight; and thus helps prevent the suffering of the thousand victims of the thousand persons who would have followed the criminal path.

There is also the idea on the part of many that whatever treatment we give an offender should be to rehabilitate him. That view has no leg to stand on. Dr. S. Sheldon Glueck and Mrs. Glueck have made a number of convincing studies showing that a very large percentage of offenses are committed by persons who have been in correctional institutions. By the time they commit a crime most of them are past the stage of readiness for new directioning. Our major concern must be, how can the majority of law-abiding citizens best be served.

J. Edgar Hoover is quoted in *U.S. News and World Report* of August 9, 1965: "We mollycoddle young criminals and release unreformed hoodlums to prey anew on society. The bleeding hearts, particularly among the judiciary are so concerned for young criminals that they become indifferent to the rights of law-abiding citizens."

In the *U.S. News and World Report* for March 22, 1965, was an interview with Fred E. Inbau, Professor of Criminal Law at Northwestern University, in which Professor Inbau attributed the increase in crime very

largely to the courts. He remarked that crime does pay, and the reason it pays centers in the Supreme Court.

Prof. Inbau suggested, "I think it would help if the President got the idea across that the next appointee to the Court is going to be someone who takes into account the rights of the public more than some of the present Justices do."

Could Professor Inbau have imagined that the vast increase in crime in recent years had caused some change in President Johnson's attitudes? Johnson had been as consistent in his environmentalism as Warren. And like Warren he either had no concern for the social structure or failed to see that his own behavior is steadily weakening that structure. He makes an irreversible change in the social framework as casually as if it were a rearrangement of furniture in the patio. So in appointing a new member of the Court he chose Abe Fortas, sworn in October 4, 1965, a man as environmentalist, as Liberalist, as Johnson himself, and Warren. Representative John Ashbrook, top Republican on the Un-American Activities Committee, remarked that if the President had searched for the man *least* fitted for the job he couldn't have found anybody who would better fit that description than Abe Fortas.

Like Warren himself at the time he was made Chief Justice, Fortas had never had a day on any court, but Fortas is all for the rights of the accused, and in a "Durham case" in the District of Columbia Court of Appeals in 1954 he argued the liberalist position so well that it is said he thereby brought legality more fully into line with the modern view of Psychiatrists, which view is that some misfortune in the criminal's childhood made him that way and so he is really not to blame.

It is interesting that such an appointment came so soon after a presidential statement that crime in the District of Columbia must be brought under control. With the appointment of Fortas he could be reasonably sure, and we can, that crime will *not* be brought under control, either in the District of Columbia or in any other urban area in the United States.

On March 9, 1966, President Johnson harangued Congress to step up the "war on crime and its causes," naively unaware that he himself is a major cause of crime through his concurrence with the bias of the Supreme Court in favor of criminals, and his appointment of justices on the basis of their sympathy with criminals.

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Richard Starnes, in the Birmingham *Post Herald* for July 30, 1965, observed that crime in 1964 was 13 percent greater than in 1963, and since 1958 crime had increased six times faster than the increase in population. And he commented that "It takes no prodigies of insight to understand that a crime rate ascending at that dizzy pace suggests deep and possibly fatal structural flaws in our society."

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Justice in the United States has become a mockery of the word, as our judiciary strains to ease the lot of the wrongdoers, with little consideration for the victims of crime. That the public is too feeble-witted to see the cause-to-effect connections is some evidence that average intelligence in the country is on the down grade rather far from its high point.

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This chapter has as its theme that our American ideals have been given lip service by those who are destroying those ideals. That John Doe is too dumb to see the fraud, indicates that we are not likely to hold our civilization much longer.

I have stressed two ideals particularly: government by the governed, and equality. Both have to be limited in order to be valid. Government by the governed cannot apply widely; can apply only where intelligence and education are high. For the U.S. to attempt to make a crusade to apply that ideal world around can cause only trouble for all concerned.

Equality, since it is utterly false as a report of reality, has to be limited to equality of opportunity, and although in that aspect it is appropriately a rough and ready guide to policy it cannot be pushed very hard because to arrive at some of the opportunities a person must qualify by doing creditably on preliminary opportunities. If he failed on those, or has gone by them without recognizing them, he has no appropriate claim on the big opportunities.

I believe that the professional Liberals have not been sincere. They trumpet the ideals but do not limit them; and in their programs they tend to destroy them.

For instance, they are pressing for more and more centralization of power. That is directly against government by the governed in America. The Federal government, under Liberal initiative, exercises more and more control over American business, and spends a rapidly increasing amount of the National income. In other words the Liberals are saddling socialism on us. Since the day-to-day problems of government become very complicated when the government plays so large a part in the economy, the government becomes further removed from the citizenry, and by fostering that condition the Liberals are working against government by the people in America.

The Liberals broaden the suffrage to include people who cannot read and write, thus making a show of government by the governed though by thus disconnecting

the voting process from the reasoning process they make government by the governed in America less meaningful.

They shout even louder for equality.

As they assert and proclaim equality, they, for instance, work for a law that will make union membership compulsory; they enforce equality *in subservience.* They terminate independence.

That the citizenry as a whole accepts the Liberalist program seems to me to demonstrate a level of intelligence that in its further reduction will soon be unable to hold a civilization together.

CHAPTER EIGHT
NATURE'S LAW RAW? OR IN GENTLER FORM?

The Third Principle of Population, as you learned in Chapter 6, is that in the normal course of events mankind in a civilization deteriorates by way of birth rate differences until eventually the creative individuals are too few and too inadequately creative to maintain the social structure.

As the offspring of the less human citizens (meaning the less intelligent ones) in a country become a larger proportion of the total population there comes a stage at which the peak of civilization is reached and passed. The downslope is characterized by unhappiness and suffering. When the Roman civilization collapsed, marauding and vandalism and robbery become so general that feudalism was developed as protection. Also, high stone walls had to be built around the towns throughout Europe, and watchmen were posted at various stations on the walls to warn of danger.

In the prospect of a collapse of a civilization almost any dream castle an individual may have is built on sand. There has to be a future; the normal goals have to be put in mothballs until a future can be arranged for them.

Yet the census figures in Chapter 6 showed us that our own civilization is following the usual pattern.

Knowing now what's wrong, can we change our course?

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Guy Irving Burch was one of the early leaders in population analysis. It was he who in 1929 founded the Population Reference Bureau, which has ever since been a major source of population information, and its *Population Bulletin* is now quoted in probably every newspaper in the United States. Robert C. Cook

is its efficient president now, and he is also doing a good job of editing its publications. Burch died young in 1951. Burch maintained that society had a "blind spot" about population dangers because to admit population problems would seem to imply a guilt in any yielding to the sex instinct.

He and I wrote a book, published in 1945 by the Population Reference Bureau. I told you about that book at the end of Chapter 5. I think it is the only book ever published by that organization. We called it *Population Roads to Peace or War*. In a revised edition published by Penguin Books in 1947 under the title *Human Breeding and Survival,* 80,000 copies were sold. C. M. Goethe, California banker and population pamphleteer, called our *Human Breeding and Survival* the breakthrough that finally awakened America to its greatest threat. In that book Burch and I shared authorship in a chapter which we called "Psychiatric Aspects of Population Fallacies."

I think Freud is much too sweeping in his use of the sex instinct in explaining behavior. We have inherited a lot of other instincts besides sex, but population blindness does qualify as a psychic repression based on the sex instinct. The general assumption, erroneous though it is, that sex instinct would have to be inhibited in order to avoid overpopulation, caused the prospect of overpopulation to be glossed over and pushed out of consciousness and into the "unconscious" because the sex instinct made the population realities unwelcome.

There is another detail of the psychology of sex that requires attention, namely *the imperiousness of an instinct.*

Very often we hear the world's predicament, or a country's predicament, described as *a choice.* For instance, in a lecture on world population before a

regional conference of the American Association of University Women in Indianapolis, quoted in full April 24, 1964, in the Bloomington, Indiana, *Herald-Telephone,* Dr. Halene Hatcher Visher stated:

> The mounting pressure of population, caused by the sharp reduction of death rates without a corresponding reduction of birth rates, requires a choice. We must either control our numbers or we must resign ourselves to continuing lowering standards of living, increasing instability, mounting social problems, and intensifying worldwide and local tension.

That paragraph is quoted with the lecturer's permission.

I considered the lecture excellent—including that part of it. But we must raise questions about the choice. Who has a choice? You have and I have, because we are voters. But does the couple who have babies in excess of their deserving have a choice?

Some of them know they are in for trouble if they have another child. They do not really choose to suffer. In advance they expect to be reasonable, but instinct takes over so suddenly— without much warning. And that is the detail of psychology that has received too little attention. A man expects to be reasonable; then suddenly he is not. Reason usually loses out when confronted with instinct.

However, decisions are possible while instinct is in abeyance. One has a choice, but only if he acts long enough in advance. In deciding on a social program we as voters have choices, impersonal choices, but we have to be aware of the compelling nature of the sex instinct on individuals, and make our legislation accordingly.

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Recently, research has made notable strides resulting in "the Pill" and "the coil"; and *more important, there has developed a wide recognition of the need for them.*

That recognition has been hard bought! A dedicated and growing army of workers devoted lifetimes of patient effort to the cause of birth control, and overlapping and gradually merging with that, population control. Burch was one of the stalwarts. Margaret Sanger led us all.

As a nurse in New York City, in close contact with suffering resulting from too many babies, Margaret Sanger rebelled at the stupidity of it, and initiated the half-century struggle which at desperate last has opened minds.

The *Population Bulletin of* August 1965 reported "The Emerging Concensus" of Court, Congress and the Administration in the conclusion that birth control must be an important part of government policy. Birth control information and facilities are being made available to 380,000 Indians on government reservations, who have been birthing 42.4 babies per 1000 of them—twice the national average. Birth control is to be available hereafter also to the inhabitants of the Caroline Islands, the Marshall Islands, and the Mariana Islands; and to the Indians, Eskimos, and Aleuts in Alaska, as well as to the occupants of the shacks of Appalachia and to all other Americans.

Congress held hearings in June 1965 on a bill to permit various federal agencies to function in part as population agencies. Ten Congressmen and five specialists were among those who testified.

Representative R. D. Matthews of Florida pointed out that "a majority of people in today's world are hungry and an increasing number are becoming more hungry." He said a *majority!*

General William H. Draper, Jr., Vice President of Planned Parenthood, testified: "In 1945, world population increased by 25,000,000, or about 1 percent. Last year the increase was 65,000,000 and the rate

had more than doubled to over 2 percent."

Dr. John Rock, Gynecologist, is worried that population growth rate threatens "all that civilization has achieved unless something is done to reduce it."

Said Congressman Morris K. Udall of Arizona, ". . . during the past five years the U.S. has paid out over 15 billion dollars in foreign economic aid. And yet in that same period of time over 250 million additional people have been added to the population of this planet, most of them hungry."

As to the U.S., Congressman Udall quoted a study reporting that "among couples in which the wife's education was grade school or less, unwanted children were born to 32 percent of White couples and to 43 percent of Non-White couples."

Senator Joseph D. Tydings of Maryland said, "I keep returning to one central thought; in our society there is no effective solution to the crime and delinquency problem, which does not include prevention of the births of unwanted children."

Congressman O. C. Fisher of Texas has reason to believe that "lack of access to modern, effective child-spacing techniques is a primary reason why more than half of the 8 million persons now on direct relief are mothers and their dependent children."

Representative James H. Scheuer gave results of a Gallup poll in which 80 percent of Protestants favored distribution of birth control information; 12 percent opposed. Among Catholics 60 percent favored and 28 percent opposed.

Robert C. Cook, President of Population Reference Bureau reminded the Congressional Committee that *reduced deaths* resulted from *the application of the human mind* to disease, to agriculture, to transportaiton.

And Cook brought to my mind that, *via minds,*

births can be reduced and their pattern made consistent with the requirements of a civilization.

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But what effect does birth control, in the usual meaning, have on the biological heredity of a country —on the brain cells of the citizenry?

When birth control, in the usual meaning of contraception, is new in a country its effect is to *lower* the heredity quality. That is because the relatively intelligent people learn of it first and, as a rule, use it first and more effectively; they have smaller families, while their neighbors of less intelligence continue in the old helpless ways.

The extension of birth control to people of less than average intelligence (which is now occurring) reduces the rate of heredity decline because it brings the birth rate of the foggy folk more nearly into line with the birth rate of the brighter ones. But since there is never any actual offset to the greater use of contraception by the more intelligent, there is never any actual net beneficial influence of contraception on heredity.

The growing awareness that our artificialization of social life, particularly death control, has been and is building up an intolerable problem of population quantity puts us under psychic pressure to formulate courses of action to apply brakes to reproduction.

But if restraints were left entirely to the initiative of individuals the reduction of births would, as usual, make worse the birth rate *differences*. Persons least alert, least human, would fail to see the amassing problem, fail to see any reason why impulse and instinct should be restrained. They would do least to put on any brakes, and the later personnel of society would worsen as a very result of the restraints of those who came nearer to an understanding.

An experiment was reported by Christopher Tietze,

M.D., and Clarence J. Gamble, M.D., in *Human Fertility* for June 1948. Doctors Tietze and Gamble wanted to test the effectiveness of a type of contraceptive suppositories, but doctors who otherwise would have been glad to help felt that, to persons who came to them for birth-control information, they must advise techniques which had a degree of effectiveness already known. With the aid of the Alabama State Board of Health and the Alabama League for Planned Parenthood the test was arranged in the venereal disease clinics of two counties. The suppositories were offered without charge to women being treated for syphilis. The offer was accepted by 709 patients. These women already had an average of 4.5 pregnancies, and 3.7 live-born children. However, 142 cases were closed in less than a month; a fifth of the women failed to return. Per hundred women in the test in one of the counties, only 52 were known to be using the method after six months; 36 after one year; 27 after two years. In the other county 64 percent were using the method after six months; 45 percent after a year; 18 percent after two years.

The method under test seems to have been moderately successful among those who actually used it.

"Most of the shortcomings of the Alabama investigation appear to be connected with the population that had to be used for the test," said the investigators. "Although there must have been numerous exceptions from this generalization, as a group the patients drawn from the venereal disease clinics were backward, poorly educated, shiftless, and irresponsible." That's what I mean! Among people whose reproduction is most harmful, ordinary contraceptive practices will not work.

There have been other tests which made the same point clear: the usual contraceptive methods are not a remedy for the adverse birth-rate differences.

But the hope among Planned Parenthood groups has been that when a simpler contraceptive method was developed the irresponsible persons would be eager to use it in order to avoid the burden of children.

Now at last we have it—something that has been looked forward to as the ultimate in simplicity: The Pill!

Experiments are still in progress with the different kinds. The progestins, so far most successful, are chemicals which act like progesterone. Progesterone is a hormone which the body produces during pregnancy to prevent additional ova leaving the ovaries. Progesterone, artifically administered, was studied for its results by biologist Gregory Pincus of Worcester, Massachusetts, beginning in 1951. Because of the large dosage required for the ova-inhibiting effect, he prevailed on drug companies to produce synthetics which would be more powerful. The synthetics are classed as progestins.

Dr. John Rock was experimenting with the same substances, and they joined forces.

One major test for the progestins in the form of "the Pill" was carried on near San Juan, Puerto Rico with the aid of The Family Welfare Association there. In every case in which the directions for taking the pill have been strictly followed there has been complete success.

"The Pill" is made, under various trade names, by at least these companies: Eli Lilly & Co., G. D. Searles & Co., Mead Johnson & Co., Ortho Pharmaceutical Corporation, Parke Davis & Co., Syntex Laboratories, and Upjohn Co. The Number of women so far taking the pill has been estimated at six million.

A test of the pill in its earliest authorized brand, Enovid (5 mg), was reported to the American College of Obstetrics and Gynecologists at a meeting in San Francisco, according to *Science News Letter* of April 17, 1965. The test had been administered in 38 Planned Parenthood Centers to 11,711 women, and the total contraceptive experience was more than 29,000 years—with no pregnancies.

The Pill is wonderful! Paeans, esteem and glory to Dr. Gregory Pincus and to Dr. John Rock, for their tremendously important discovery and development! But let's not lose sight of the fact that our chief concern is for heredity; that civilizations fade out because of adverse birth-rate *differences*. The Pill makes those differences even more conspicuous than before. The Pill is effective in preventing pregnancies *if directions are followed*—in other words if the women are regular in taking it: one pill a day for twenty days in a menstruation cycle. Sixty women in a hundred do take the pills regularly. But in the early Puerto Rican test twenty-five women in a hundred took them somewhat irregularly, and *fifteen women in a hundred dropped out of the test completely*.

The differences in human responsibility are impressive. It has been thought that if a reliable contraceptive were more convenient than the previous types it would be used at all levels of the social, educational, and mental pyramids. Yet the problem with the Pill is the same as before: the people who need contraception most are least likely to get it. And if the once-a-month pill now being worked on is successful we will still have the same old problem.

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But perhaps "contraception" and "birth control" should include *sterilization.* Certainly "population control" includes it.

In London, S.W. 1., at 64 Sloane Street, are the headquarters offices of the International Planned Parenthood Federation. In its official publication for January 1959 is an article by Dr. L. N. Jackson, Honorary Editor. He pointed to the formidably increasing population in various sections of the world, and remarked that if men do not apply brakes soon, nature will. He suggested that one means, namely *sterilization,* had been too little used; said sterilization is preferable to "the alternative of breeding a surfeit of children doomed to starvation or near starvation." He brought out that the chances are good for the rapid spread of the sterilization practice.

Throughout the centuries, civilizations have interrupted and reversed evolution. Yet without the benefits of evolution civilizations have been unable to endure. What we are trying to do is to get a program with an over all beneficial effect comparable to that of evolution, though without its suffering. We've got somehow to make sure that the npm rate (new potential mother rate) of society's human burdens is lower than the npm rate of the problem solvers.

Geneticist George W. Beadle, head of the biology division of the California Institute of Technology, addressed a forum on January 8, 1959. His lecture was reported in a UPI news item of that date and more fully in *Science News Letter* for January 24, 1959. Man has long since learned to direct the evolution of plants and animals to his own purposes, he said, and could apply his knowledge to direct his own evolutionary future. "Can we go on indefinitely," he asked, "defending as a fundamental freedom the right of

individuals to determine how many children they will bear, without regard to biological or cultural consequences?"

Freedom is important, but with freedom, as with anything, there can be too much of a good thing. So we limit freedom. In a thousand ways we limit the freedom of a child. We don't let him play in a busy street, or throw rocks at the neighbor's windows. We limit the freedom of criminals, for the welfare of the rest of us. And unions limit the freedom of a workman who might like to remain out of a union. Particularly, in this matter of reproduction there is reasonableness in establishing limits since the governmental structure itself, on which many of our freedoms depend, is jeopardized if freedom of reproduction is not limited. Really we would work for the maintenance of the structure in which the whole array of freedoms can endure—by limiting the irresponsible use of freedom in reproduction.

Robert C. Cook, in *The United States Population in 2000 A.D.*, the article I reported in Chapter 2 herein, said, "To substitute birth selection for death selection—which has been an essential factor in organic evolution—is essential in the long run."

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But before we get to possible programs, the Third Principle of Population ought to be personalized. Let the following sentences soak in; they are carrying weight that words are not often called upon to convey.

The logical result of the normal birth rate differences is that you, the specific reader, will be represented in future generations, if at all, by descendants of less intelligence than you have. That is the meaning of the birth rate statistics.

The barbed reality can be handled under two topics: (1) the meaning of birth rate statistics as the sensitivi-

ties discussed in Chapter 6 exist in your own family; (2) the impact on your own family of the birth rate differences in the society surrounding you.

Now I analyze those two topics.

(1) Let's assume first that you are one of those exceptional parents who has a high IQ and yet has half a dozen children. Among a half dozen of them some are likely to have more intelligence than you; some less. Let's assume that three are above your level; three below. Here is the point: Almost surely *the three who are above your level will have a total of fewer children than the total number of children of those who are below your level.* That is the meaning of the birth rate statistics.

Thus, although your children will have, as an average, intelligence the same as the average of you and your spouse, your *grandchildren* will have less intelligence. And that is the meaning of the birth rate statistics which consistently show a high reverse correlation between achievement and number of offspring.

Now imagine you in a frame work that is more usual. You and your spouse belong to a club of some kind in which there are eleven other couples, much like yourselves as to age, intelligence, education and social status. Altogether you and the other couples have 24 children. About 8 of them are close to the average intelligence of the club members; about 8 are above that level and 8 below. Which group of 8 children will in turn have the most children? If they conform to usual behavior those below the parental average will have most children; and those above parental average will have fewest. That is the meaning of the birth rate statistics.

(2) In the general population the people among whom your children and grandchildren will normally mingle will be of lesser intelligence than the people

with whom *you* have associated. That is the meaning of the birth rate statistics. The range of choices of mates has been steadily declining to lower levels of intelligence and character; and the trend continues. So your children and grandchildren will normally be confronted with a lower range of choices for mates than is available at this moment. Since the less gifted citizens have most babies the array as a whole, of choices of possible partners, goes lower with each generation. That is the meaning of the birth rate differences reported in the birth rate statistics.

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Knowledge of the first principle of population, the Malthusian principle, has finally gotten around, in this country. Population quantity facts are discussed everywhere now, and birth control clinics are being set up in many places—even in Watts, the colored section of Los Angeles, financed by Federal, State or city agencies. And the clients are so many that they have to wait in line, I am told. The difference in attitudes on birth control between now and twenty years ago, when G. I. Burch and I wrote *Population Roads to Peace or War* is encouraging.

Possibly the Third Principle can ride into the halls of learning as an amendment, a supplement, and become common knowledge in much less time.

Assume that we don't like the prospect of the crack-up of civilization and the consequent misery of Dark Ages; and assume that the idea of our own descendants being less intelligent than we are is disturbing. We want to reverse the trend of heredity.

First let's consider a method that has some "pilot plants" already in operation. And, giving credit where credit is due, we'll call it the Mencken Plan.

Henry L. Mencken, prominent literary figure in the years between the World Wars, published in August

1937, in *The American Mercury,* "Utopia by Sterilization."

Mencken proposed that a government—or a philanthropist—pay a man a hundred dollars to be sterilized. The sum would be made available, under the Mencken plan, to any man who felt that the world was treating him badly and who would be willing to receive the sterilization operation. It would thus be voluntary.

The idea was that the person interested in the payment would be among those whose offspring would probably be burdensome to both him and society. The payment was to be some standardized amount but not necessarily so much as a hundred dollars; possibly more.

A philanthropic gift of $100,000, Mencken thought, would give the plan a tryout; "ten or fifteen million dollars would be enough to rescue the whole of Arkansas." The method would be "immensely cheaper on all counts than supporting an ever-increasing herd of morons for all eternity."

Mencken believed there could be no better use for a philanthropist's wealth than thus improving the country's heredity. "I therefore suggest," he said, "that some well-heeled lover of humanity come forward with a donation to start the campaign." . . . "The birth-controllers already have an effective propaganda in operation, and it is possible that they may be induced to lend it for the purpose."

Just short of 20 years later, Mr. Graham French did set up a fund with the Association for Voluntary Sterilization (AVS), 515 Madison Avenue, New York, N.Y. 10022. Incidentally, the Chairman of the Medical Committee of that organization, Dr. Alan F. Guttmacher, is also President of the Planned Parenthood Federation. The Graham French fund was not large enough to pay any bonuses, but was intended to pay

surgeons' fees. Between 1957 and October 1961 about 3,000 applications were received by the AVS but because the money was scarce they were screened to a relatively small number which actually resulted in operations. I understand that some of the operations were on men and some on women.

Sterilization is done by cutting the tubes, cutting out a half inch, and tying the ends. They heal with the ends closed. In men the operation is called vasectomy; in women it is salpingectomy. For effectiveness it doesn't matter which it is, since in either case the sperm cells are prevented from reaching the ova. However, for a man it is a simple operation, done in a doctor's office in a few minutes, whereas in a woman, since the doctor must cut through the abdomen wall it is considered a major operation. Nothing is done to the glands and there is no interference with sex relations.

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A hundred thousand persons in the United States are now sterilized per year, according to estimates, and there are among us a million and a half persons now sterilized. In Puerto Rico, where the operation is done at the expense of the Commonwealth government, 20 percent of women of child-bearing ages have been sterilized. For people who have decided not to have any more children it is the most convenient form of birth control, even less bothersome than "the pill."

In *The New Republic* for November 14, 1964, in "Birth Control by Surgery," James Ridgeway quotes Dr. Milo Ellik of Long Beach, California: "If this office is representative the operations are running into the hundreds per day." "In the Los Angeles basin area, 84 percent of all urologists now will perform sterilizations. This office averages four a week. . . . Almost all are for men between 21 and 46. They are

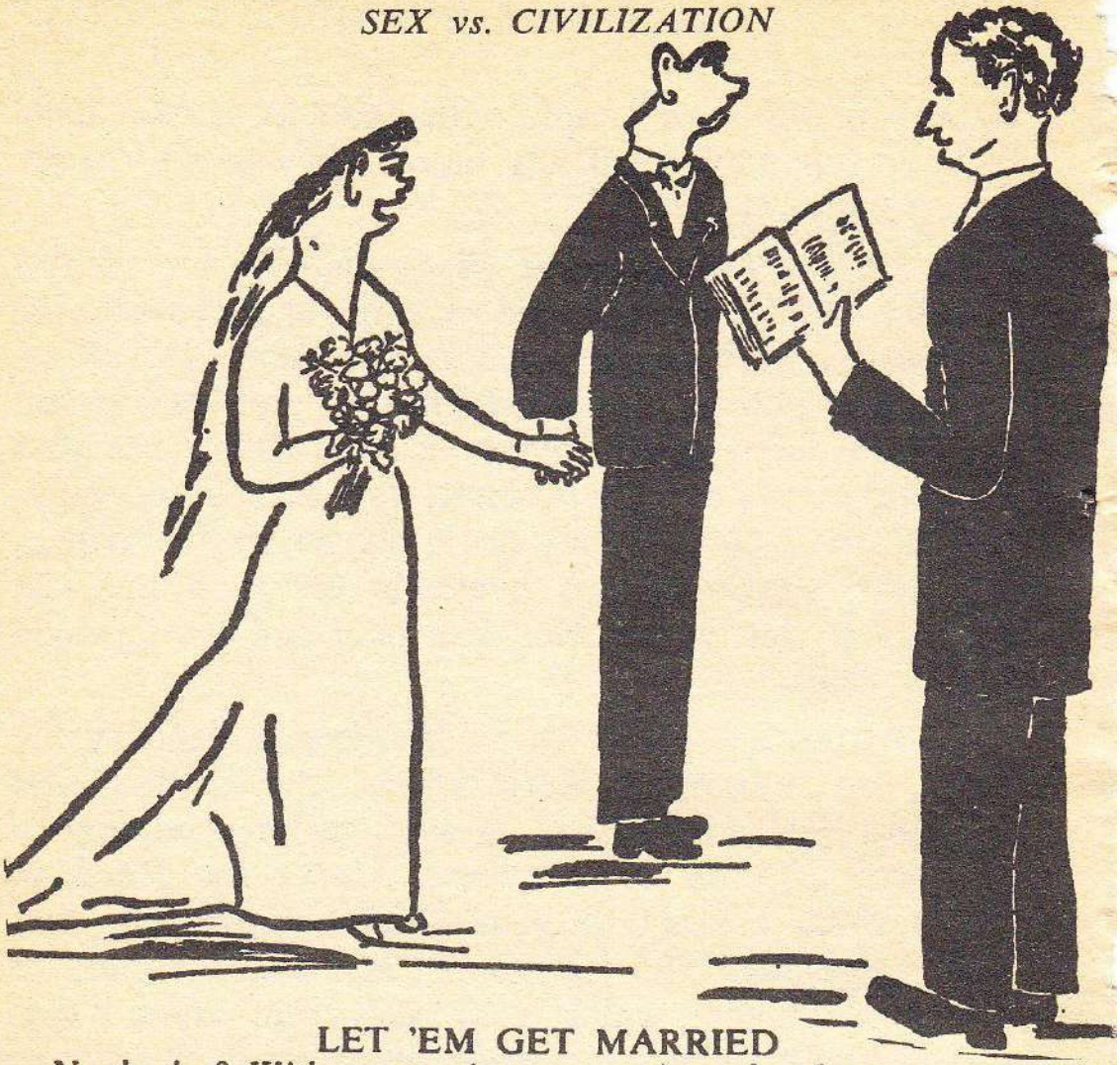
largely middle-class people with good jobs, who have children but don't want any more. They pay $100 for the operation."

In *its everyday use,* as illustrated by Dr. Ellik's practice, sterilization would not be any remedy for the quality problem involved in the birth rate differences. The people who get themselves sterilized would use some other contraceptive if they didn't use that one; and mostly there is probably very little overpopulation of them, and they are not a danger to the civilization. But sterilization is available for such a social purpose as that of the Mencken plan and the Graham French plan.

As to the fee, in an article in *Time* of January 15, 1965, on Voluntary Sterilization, it was said that surgeons' fees are $200 as an average for a salpingectomy and $75 for a vasectomy. Under the Hartman plan, which I bring to your attention next, the fees were averaging $195 for women and $40 for men. In Gadsen, Alabama, which is 20 miles from where I live, I understand there is a standardized price of $50 for men. In one of the big industrial plants there the convenience of sterilization has become general knowledge, and many of the men have had it done. The cost is covered by the company's insurance policy.

A New York City real estate man named Jesse Hartman took up where Graham French left off, contributing $25,000 to the Association for Voluntary Sterilization to finance about 300 sterilizations in selected Kentucky counties with the idea of demonstrating that "sterilization is an effective weapon against poverty."

The Kentucky pilot project was started July 8, 1964, and inaugurated in Berea, Kentucky, with a luncheon meeting. Chairman Mrs. Louise G. Hutchins, M.D., President of the Mountain Maternal Health League,



LET 'EM GET MARRIED

No brains? With appropriate precautions, let them get married anyway.

Thirty of our states now require a physician's certificate attesting absence of syphilis—as pre-requisite to getting a marriage license. The requirement is evidence of the welfare use that can be made of marriage laws.

There are various other qualifications for marriage. For examples, the Delaware and Oregon laws prohibit the marriage of drug addicts. According to the laws of those two, and Ohio and Washington, licensing officers are not to give licenses to persons of "unsound mind." Nebraska and New Hampshire and South Dakota and North Carolina permit the marriage of people of unsound minds AFTER STERILIZATION. That seems more humane, and much more protective for society, than to deny marriage altogether to such people. The law could be made effective, and extended: Along with one's blood-test certificate, a candidate for marriage might be required to present a certificate showing that he is of sound mind, has a socially advantageous I.Q., and has a little education. But if he cannot qualify for such a certificate he might nevertheless be allowed to marry if he accepts sterilization.

introduced her husband, Dr. Francis S. Hutchins who is President of Berea College, and he "led us in prayer." Dr. H. Curtis Wood gave a brief talk. He was formerly a prominent gynecologist and obstetrician in Philadelphia, but gave up his practice to become a lecturer and field consultant for the Association for Voluntary Sterilization. He remarked that "Communities and governments cannot afford to shun this method of fighting poverty when they consider the long-range costs of supporting growing families of unwanted children indefinitely. . . ." Millard A. Shepherd, M.D., Kentucky State Health Officer for the Appalachian region, said, "The people who need this operation the most are the ones least able to pay for it." The Kentucky Committee had an outline for using the Hartman grant. Ten hospitals and the Frontier Nursing Service had agreed to cooperate.

I have been putting my emphasis on heredity. The Kentucky Committee put theirs on environment; but as to practical program there may be no conflict. The introduction to the Committee's outline for action had this to say: "Appalachia's most tenacious and devastating problems are created and perpetuated by the continuous avalanche of babies amidst poverty-stricken families. These unfortunate children are doomed to a life of deprivation. Not only is there not adequate food and shelter, but the most essential elements for emotional growth, such as being wanted, loved and appreciated, are denied them. They are deprived of social, cultural and educational opportunity. These children then have no alternative when they are adult but to join the vicious poverty cycle."

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In India in all the government hospitals sterilization is at government expense. India's State of Madras comes closer to the Mencken prescription than any

other of the pilot plants, in that bonuses are paid to those who take the operation. The payments, however, are for only $6.

Dr. S. Chandrasekhar, often a visiting professor in some of the leading universities in the United States, and founder and editor of *Population Review,* published in Madras, has been the chief proponent of India's sterilization program. He believes that the bonus would be really effective if it were as much as $20. India doesn't have that kind of money. When I think of all the U.S. foreign aid poured down ratholes, I wonder why the foreign aiders, who are spending our money, don't manage to spend some of it where it might be really beneficial!

For details of the Madras program I depend mostly on a report by Mrs. Ruth Proskauer Smith in a publication of the Association for Voluntary Sterilization dated "Spring 1963." She had been in Madras just before that and got much of her information from Dr. P. Lakshmi, a woman physician who is Family Planning Officer for the State of Madras.

Mrs. Smith and Dr. Lakshmi went to one of four Madras State Government General Hospitals in Madras City. There, as in the others, is a vasectomy clinic. It is manned by three surgeons who give full time to sterilizing men. They have developed so much skill that a team of one of them plus a male nurse and a male orderly, complete an operation in seven minutes. The day was Monday, and 90 men had come to that one hospital for the vasectomy operation. Mondays are big days because "persuaders," who have already been sterilized, are busy over the weekends rounding up candidates. A persuader gets $2 for bringing in a qualified candidate.

The qualifications are that a man must be between the ages of 25 and 50, must already have three chil-

dren, and must have his wife's signature agreeing to the operation.

Why the requirement is for *three* children, I wonder. Madras could never *reduce* its population under that stipulation, even if every man there became sterilized as soon as he could qualify. Perhaps money is in consideration. However, in Madras State, by sterilization and a highly organized effort to increase the use of contraceptives in other forms, they are holding the *increase* in population to a lower figure than any other of India's states: 11.85 percent increase between 1951 and 1961, compared with India's average of 21.5 percent and an increase of 34.3 percent in India's worst offending state—Assam.

The decade increase of less than 12 percent in Madras was that low in spite of the fact that the sterilization part of the program had not yet been started in the first years of the decade.

In 1956, says Mrs. Smith, there were 25 vasectomies and 670 salpingectomies. The program became a major objective in 1957. In 1962 there were 43,200 vasectomies and 2,924 salpingectomies.

In Madras State as a whole there are 144 hospitals and 123 rural health stations where sterilizations are now performed. There are 372 "community development blocks"; and the plan is that in each of them sterilization facilities will soon be available. So the present total of 267 will be increased by at least 105.

The effectiveness of the Madras program results partly in that it keeps alive a consciousness of the seriousness of the population quantity problem.

The constitution of the State of Madras provides that units of self government, called Panchayats, be organized, with powers and responsibilities. The Madras Panchayats Act of 1958 provided organization details, and by October 1960 all regions of the State had Panchayats and Panchayats Union Councils, among

whose duties it is to maintain Maternity Centers "offering advice and assistance to mothers in Family Planning." And in 1960, detailed specifications were made applicable to all villages and towns in Madras State for popularizing sterilization.

A Panchayat staff are responsible for exhibiting birth control films provided by the government, and for staging dramas to give publicity to family planning. Also, distribution of handbills and posters is arranged for.

The educational systems in the Panchayats are used in the population control program, the official educational committees being instructed to influence parents "to whom child births of the fourth and higher order occur" to become sterilized; and every three months in a Panchayat a list of such parents is posted.

For each educational committee a woman is chosen to be a member who will be able and willing to give birth control instruction to any woman who requests advice. And a man on each committee has a comparable role for giving instruction to men. The health inspectors are to give birth control instruction also, and they have a responsibility to popularize sterilization. Training in birth control is provided for committee members.

With famine staging a dress rehearsal already, and full scale repeat performances scheduled for the 1970's, one would think the other Indian states would "do something"—at least follow the Madras lead. Perhaps they have no Chandrasekhar.

The Madras plan is not intended to and probably would not improve the *quality* of population, because information about it is used by the literate and the alert sooner and in greater measure than among the illiterate and the sluggish.

But if the sterilization part of the Madras plan

were adopted in America the probability is that the money phase of it, even if the amount were multiplied, would make its greater appeal with those far down the economic scale.

The world's people are too many. New offspring of many of them are burdensome and a danger to other individuals and to the social structure itself. So having babies ought to be a right only with limits and with requirements. Just being a human being, married or not, is not a sufficient qualification. There should be as a requirement an assurance that the burdens on society will not be increased by any act of reproduction.

Some years ago, with those points in mind, I formulated a *minimum wage law*. It seems worth considering as a replacement for some of the burden-amplifying measures now on the books.

A MINIMUM WAGE WITH PROTECTION FOR THE STATE

In the existing Federal Minimum Wage law, the real problem, which is the excessive supply of relatively unproductive labor, has been ignored.

Minimum wage laws in this country came into existence as state laws, Massachusetts passing the first one in 1912. Several other states including Oregon got on the band wagon the next year. The Oregon legislation was typical, and it was used as a pattern by Congress, legislating for the District of Columbia.

If the required minimum wage is high enough to be at all effective, there will be some workers who cannot earn so much. Quite obviously if the legislated minimum is as high as $90 a week there will be more who cannot earn the amount of the minimum than if the legislated minimum were $30 a week. The District of Columbia law provided that if a worker could not earn so much as the applicable minimum then the

Minimum Wage Commission could give him a *substandard permit* under which he would be allowed to work for whatever amount he could earn.

The flexibility allowed by the substandard permits was discussed in the Second Annual Report of the Minimum Wage Board of the District of Columbia for the year ending December 31, 1919. On page 28 is the following:

> No piece of constructive legislation can be put into effect without causing some destruction; so it is with the minimum wage law. The putting into effect of the minimum wage orders revealed the existence of a considerable number of able-bodied persons who because of lack of initiative, education, and opportunity, were unable to compete on an equal footing with the other workers in a particular class of work. For example, some women who had been employed as saleswomen were dismissed when the order became operative on the ground that they were incapable of earning the minimum rate. Many of these women were not qualified to serve customers, although in another occupation having different requirements they might easily earn a living wage. This shifting into new lines of work for which the woman is better suited makes for the ultimate good of the individual as well as the community. . . .
>
> There are other groups of women for whom no occupation can possibly be found in which they can compete successfully with workers of ordinary ability. Those whose earning capacity has been impaired by age or physical or mental disability are permitted under the law to secure special licenses authorizing their employment at a rate less than the minimum. This provision has made it possible for certain women to retain their jobs when otherwise they would have been dismissed.

There is nothing like the substandard permits in the Federal Minimum Wage law. If a person cannot earn the specified minimum he is expected to apply for some form of welfare payment — with no strings attached. Thus the substandard people become wards of the state or federal government — with no responsibility, no incentive to have any thought about the wellbeing of

the social structure, no restraints on reproduction. Under the proposed minimum wage with protection for the state, the safeguard would be a restraint against reproduction. However, it should be noticed that *compliance is optional; merely, the benefits are withheld from those who do not care to shoulder the responsibility.*

In the proposed plan the *substandard permits would be restored,* and a person who chose to work for what he could earn would not be restrained in the number of his children.

A sum, according to this plan, is to be made periodically payable *by the State* for service rendered; payable to any adult person who applies, which sum must have as an upper limit an amount set as a minimum wage. With the granting of such payment there must be *a requirement that the person receiving it shall have no offspring* during the time of such state payments, and for a period of let us say three years after such payments have ceased. The minimum wage must be a purchasing power wage, as, for example the current equivalent of X number of dollars of year's end 1965. Variation in the usefulness of a dollar makes a definite number of dollars as a standard unreliable. The purchasing power standard as at first put into effect should be low, and should be increased gradually, to allow for a gradual adjustment of industry. Also, with the plan coming into effect gradually, its results can be checked up and appraised; and changes, if any are appropriate, can be made accordingly.

The law should apply to workers at their own option only, but the gradual increases in the minimum wage provided should in time be sufficiently advantageous to insure its probable use by all those for whom the benefits and responsibilities are intended.

Substandard permits would be given as under pre-

vious state laws, and persons allowed to work under such substandard permits if they choose, and at whatever wages they and their employers agree to. But when applying for such permits they would be informed of their opportunity to receive the amount of the established state minimum with only the requirement that they refrain from having children.

The stipulation that they refrain from having children would have to apply for a period of perhaps three years after the state payments had ceased, in order that individuals could not withdraw from the benefits merely long enough to avoid the responsibility. Those who receive the direct benefit of the law would need to be instructed by the state in the technique of contraception in order that they could avoid increase in numbers; in other words, in order that they could comply with the law. Such provision would be a necessary part of the plan to prevent the maintenance of a labor volume where the laborers, in the judgment of employers, are least effective in value production. The old members dying in their due proportion would gradually cut down the supply in these ranks and so, unless the standard minimum continued to advance, relieve the tax-payers of the burden of their support.

In case any person receiving the state payment provided in the law, or who within the three years stipulated in the agreement, should by accident or carelessness or other reason become a parent, then there would have to be measures to prevent the recurrence of such an event. Sterilization of either the husband or wife appears to be the logical way to handle such cases.

In paying the minimum wage the state should make good use of the persons employed, and thereby offset some of the costs, as well as avoiding the evils of the public trough.

Of course restrictions must be enforced against employers, else a law would come to nothing. The Legislature would have to make it a misdemeanor for them to employ for less than the standard minimum wage any person who did not possess a substandard wage registration card.

The provisions, as stated, would prevent unemployment in depression. It is not maintained that our minimum wage law would solve all the problems of depression, or that it would prevent depressions. It would not even take the place of ordinary unemployment insurance; insurance would rest on its own merits as protection for vast numbers of workers who would never call for state aid and who would have no dependence on our present proposal. However, since the administrative machinery for the minimum wage would be in operation in depression as well as in prosperity, the measure described would furnish compensated employment to the needy in the business cycle trough.

The need for the legal stipulation that those who are burdens must refrain from giving birth to more burdens is glaringly apparent in statistics of the 1929-1942 depression. The reports are numerous. FERA figures, for example, show that between October 1929 and October 1933 there were 1,612,891 babies born in families on relief rolls; that those babies constituted 12.7 per cent of the total relief roll population; whereas children born in the same period in the general population constituted 9.6 per cent of the general population. As a rule, the less capable people are of carrying the responsibilities of parenthood, the more children they have. We must, of course, take care of the unfortunate elements in our population; but to let those persons who are a burden unrestrainedly increase the extent of the burden, while more prudent citizens delay their marriages till better times, is lack of social adjustment.

•

If we take no action; in other words if civilization is allowed to drift, it comes to chaos. Then the merciless laws of nature take over, in which only the strong survive. Nature's law *raw* is the rule of tooth and claw and club and cold: the savage struggle that destroys all but a few.

Robert W. Service caught the feel of the law in the Klondike region 70 years ago, and from close contact he wrote "The Law of the Yukon." I quote fragments from that poem.

* * *

Send me the best of your breeding, lend me your
chosen ones;
Them I will take to my bosom, them will I call my sons;
Them will I gild with my treasure, them will I glut
with my meat;
But the others—the misfits, the failures—I trample
under my feet.

* * *

Wild and wide are my borders, stern as death is my sway;
From my ruthless throne I have ruled alone for a million
years and a day;
Hugging my mighty treasure, waiting for man to come,
Till he swept like a turbid torrent, and after him swept—
the scum.
The pallid pimp of the dead-line, the enervate of the pen,
One by one I weeded them out, for all that I sought was—
Men.
One by one I dismayed them, frighting them sore
with my glooms;
One by one I betrayed them unto my manifold dooms.
Drowned them like rats in my rivers, starved them like
curs on my plains,
Rotted the flesh that was left them, poisoned the blood
in their veins;
Burst with my winter upon them, searing forever
their sight,
Lashed them with fungus-white faces, whimpering wild
in the night;
Staggering blind through the storm-whirl, stumbling mad
through the snow,

Frozen stiff in the ice-pack, brittle and bent like a bow;
Featureless, formless, forsaken, scented by wolves
in their flight,
Left for the wind to make music through ribs that are
glittering white;

* * *

This is the Law of the Yukon, that only the Strong
shall thrive;
That surely the Weak shall perish, and only the
Fit survive.
Dissolute, damned and despairful, crippled and palsied
and slain,
This is the Will of the Yukon.—Lo, how she
makes it plain!

In a democracy or a republic, if the civilization is deteriorating, logically the *majority* of voters *must* have been *wrong* in important decisions or the deteriorating could not have occurred. But deteriorating has occurred and is occurring, as the preceding chapter showed, especially in the crime statistics.

Some of the important wrong decisions relate to population. In that area of judgment the majority of voters have been wrong on at least two counts:

(1) They have assumed that the heredity of a country's citizens is near enough alike so that likeness of environment would result in likeness of behavior. So they have voted for conditions aimed at making the environment more nearly alike for all, expecting more well-being and improved behavior as results. Actually, the heredity of individuals is wide apart. Intelligence, for one thing, differs importantly, and is greatly affected by heredity. And since levels of intelligence are so unequal, the sensitiveness to stimuli among individuals is vastly different; and even among those whose environment has been substantially the same there has not been a sameness of behavior.

(2) The voters seem to have thought that they could, via government, control the environment to produce substantial sameness of all individuals. But

individuals have much to do with making their environment, so the government finds it impossible to make a sameness of environment for all. (And how uncreative and drab we would be if the government could be successful in that attempt!)

The deterioration that has been taking place stems from the fact that, at best, those population judgments left unremedied the real problem—which is that most babies are born to people below midway in heredity and below midway in the quality of environment they can give to their children.

One country is not resigned to the deterioration of its civilization, and is approaching the problem as a problem of quality of population. That country is *Denmark.*

Denmark is one of the smaller European countries. With its 16,619 square miles it is about the size of Massachusetts and Connecticut together. In 1964 its inhabitants numbered 4,773,000—about the same as the population of the United States in 1795, and about what the State of Indiana has now.

DENMARK'S PROGRAM

We are brought up to date concerning Denmark's program in a copyrighted article entitled "The 'Unfit': Denmark's Solution" in *U.S. News & World Report* of March 7, 1966, from which the following passages are quoted:

> Denmark is turning up as the world's first nation to commit itself to sterilization of the unfit as an important means of solving its social problems.
>
> Here, as in the U.S. and other countries, authorities are worried by a tendency of "problem" individuals to breed unlimited numbers of children likely to populate the jails, mental institutions and welfare rolls of the future.
>
> Unlike most other nations, Denmark is doing something about it.
>
> Last year about 2,000 women and 200 men—in a

country of 4.6 million—submitted to sterilization, and 4,500 women underwent legal abortions as a part of the Government's program.

Included were mental defectives, "normal" persons with hereditary defects in their family backgrounds, and such derelicts as the chronically jobless, alcoholics, pyschotics and criminals. These were in addition to women whose lives would have been endangered by childbirth.

By contrast, the number of people sterilized under laws permitting such treatment in 27 states of the U.S. is constantly declining, and in 1963 came to fewer than 500.

Danes were shocked recently when they read of a U.S. woman with an intelligence quotient of only 55, who had produced 17 illegitimate children, some of them criminals. Said one official:

"In Denmark, she would not have been allowed to mingle with ordinary people unless she agreed to sterilization."

"Voluntary compulsion." Sterilization in Denmark goes back to the 1930's. In recent times, however, laws have been strengthened, and today the program operates under what amounts to "voluntary compulsion."

Danish doctors and social workers go to great lengths to persuade "problem" individuals to be sterilized. Criminals are offered release from prison as an inducement. Couples applying for a marriage license and found likely to transmit a serious defect to offspring cannot get the license unless they agree to sterilization.

At the center of this program is Copenhagen's University Institute of Human Genetics, which keeps an almost complete record of Danes who have serious defects of a hereditary nature.

Included are all cases of mental retardation diagnosed in Denmark during the past 25 years, almost all cases of psychosis, a high proportion of neurological cases, and lesser compilations of congenital malformations such as harelip.

* * *

A special law provides for sterilization of feeble-minded persons with an I.Q. of less than 75. Initiative usually comes from the chief physician of the mental institution where such a person is confined. Decision in such cases is made by a special board composed of a

Supreme Court judge, a psychiatrist and a person experienced in social work.

* * *

One official sums up the results:

"It's clear to us that many children who would have grown up in miserable conditions or would have suffered from hereditary diseases have never been born—and living conditions for tens of thousands of people have improved due to our sterilization practices."

●

There is one other formulation you may wish to ponder, as better than Nature's law raw. This one is gentle too, and more thorough in its processing than any of the others: a proposed marriage law. Read first a synopsis:

The purpose of the proposed State Law is to protect and improve the quality of the State's population, and to stabilize its quantity.

In the proposal, almost anybody is permitted to marry, but in some cases, only after sterilization.

An exception is that persons with a communicable venereal disease are not permitted to marry under any circumstances.

Couples permitted to marry only if one of a couple's members has been sterilized are (a) those ignorant of contraceptive methods, (b) those who cannot earn a living, (c) those of very low IQ's or less than four years of education, and (d) those with a defect or disease or addiction which in case of offspring might lead to low quality of offspring.

All adults except the small minority above-mentioned may marry without previous sterilization.

At the time of a marriage the number of children which the marrying couple are permitted to have is determined according to the degree of merit demonstrated by IQ tests and educational achievements, or by non-standard but demonstrated and socially valuable qualities. As a couple's quota of offspring is

reached, one person of the two is to be sterilized, except as by that time an enlargement of the quota is justified by a showing of improvement of qualifications.

Clauses of the law put applicable responsibility on unmarried persons and on persons temporarily in the State.

The administration of the proposed law is to be the responsibility of salaried licensing officers employed by the State, appointed and supervised by a board the three members of which are highly educated and have a knowledge of genetics.

MARRIAGE LAW

WHEREAS, unfavorable differences in birthrates have existed in earlier civilizations and seem to have been a basic cause of the collapse of those civilizations, and

WHEREAS, as shown by United States census figures unfavorable differences in birthrates prevail in this State, and

WHEREAS, we believe that both the heredity and the home influences of our citizenry are deteriorating as a result of the existing unfavorable differences in birthrates, and

WHEREAS, any State, by the nature of its marriage provisions, necessarily determines in large part the heredity and the home influences of its future citizens—

THEREFORE, as this State's Marriage Law, be it enacted:

1. That this Act shall not in any way affect marriages heretofore consummated; that the organization for the law's operation shall be established as soon as efficiently possible and before a date nine months after the passing of this Act; and, that after the establishment of the Marriage Organization all marriages must take place under the terms of this Act; that persons who marry between the date of the passing of the Act and the setting up of the organization for its operation are to be tested and assigned offspring quotas as promptly as possible.

2. That no marriage have validity except as it follows a license.

3.a That licensing officers be few enough so that the collection of information concerning marriage candidates, the granting of licenses and the keeping of records, can be their entire work, in order that they can know their duties and their responsibilities.

3.b That the licensing officers be on salaries and not on a fee basis. If on a fee basis a licensing officer might be tempted to grant a license when to do so would be contrary to the public interest. He might also be tempted to neglect the collection of information and keeping of records.

4. That no woman under the age of 50 years, or man of any age unless he marry a woman over the age of 50 years, be given a license to marry unless he or she give ample evidence in an examination conducted by the licensing officer or a member of his or her staff that the person is well informed in contraceptive technique. That this limitation be not applied if one or both of the prospective marriage partners are sterilized.

5. That no woman under the age of 50 years, or man of any age unless he marry a woman over the age of 50 years, be given a license to marry except as she or he, or her or his prospective spouse, is employed at a net return per month before taxes which is at least as high in purchasing power as $150 in December, 1965, with a reasonable prospect of continuing to be employed at a return at least that high. That this limitation be not applied if one or both of the prospective marriage partners are sterilized, or if, on any other ground, a convincing case is made before a licensing officer who certifies his conviction that no social burden will result from the marriage.

6. That no person be given a license to marry except as he or she presents to the licensing officer a physician's certificate evidencing (a) that he or she has had a blood test and such other tests as are necessary to disclose venereal disease; that he or she has no venereal disease, or, if he or she has, it is not in a communicable form or a form that can become communicable; (b) that he or she has no other serious disease.

7. That no woman under the age of 50 years, or man of any age unless he marry a woman over the age of 50 years, be granted a license to marry except as he or she pass a standard IQ test in the 20th percentile or

above, and except as he or she pass, satisfactorily, examinations demonstrating an education at least equivalent to that which an average student would acquire in four years of schooling, the examinations to be administered by a board set up for that purpose. That this limitation be not applied if one or both of the prospective marriage partners are sterilized.

8. That no woman under the age of 50 years, or man of any age unless he marry a woman over the age of 50 years, be granted a license to marry, if he or she is an habitual criminal, habitual drunkard, or a drug addict. That this limitation be not applied if the candidate for marriage is sterilized.

9. That no woman under the age of 50 years, or man of any age unless he marry a woman over the age of 50 years, be granted a license to marry if the person be, through heredity, blind, deaf since early infancy, dumb, deformed in serious degree, or insane. That every candidate for marriage be examined for these characteristics by an approved examining board, and that the licensing officer be not authorized to issue the license except as a favorable certificate from the said board is in his possession. That these limitations be not applied if the candidate for marriage is sterilized.

10. That any unmarried person who engenders a child, or who becomes pregnant, shall be examined by the licensing officer and the other officials above designated, concerning his or her eligibility for marriage, and if he or she is not eligible, except if sterilized, he or she shall be sterilized through arrangements made by the licensing officer, to prevent a repetition of society's misfortune. It shall be the duty of any physician or nurse under whose care the person comes, and of any state, county or city employee learning of the circumstances, to report such cases to the licensing officer.

11. A person entering this state from another jurisdiction must register within one month with a licensing officer and conform with this law as a citizen would have to, except as he or she can show that residence within the state is temporary and that she will not give birth to a child while in the state. Reports every two months to

the nearest licensing officer are required, with the alternative of being treated as a citizen of this state.

12. That each couple who are given a license to marry must have stipulated on the license and on the state's records, by the licensing officer, a maximum number of children permitted the couple under the laws of this state. They are required to report each child to the office of the licensing officer six months before it is born and at the time of its birth. After the conception of the final child for which the couple are authorized, but before it is born, they may submit to the licensing officer the records of any qualifications which they think may entitle them to a still larger number of children. If the couple qualify for a larger number, they are to be given, by the licensing officer, a certificate indicating the new maximum. If they submit no evidence, or having submitted evidence, still do not qualify for a larger number, they or either one of them may, at that time or later, if they so desire, be sterilized at the expense of the state. Arrangements for the sterilization are to be made by the licensing officer. If, in any case, they have a child *in excess* of their authorized maximum, then at the time of its birth the parent with the lesser qualification is to be sterilized. In case a child has died before its parents' quota is complete, it is not to be counted in determining the completion of the quota.

13. That the licensing officer make arrangements for the sterilization without fee of persons for whom it is required under Articles 10, 11, and 12, of this Act, and of such persons as request it for compliance with the provisions of Articles 4, 5, 7, 8, and 9.

14. Couples complying with other legal requirements are to be authorized for reproduction according to the following scale:

A couple with their average IQ as high as the indicated percentile	And with their completed school work averaging as least as high as	And with their average standing in classes having at least 9 students as high as	Are to be authorized to become parents of children as follows
20	4th grade		1
50	6th grade	Top 3/5ths	2
60	High school or college	Top 3/5ths	3
70	High school or college	Top 2/5ths	4
80	High school or college	Top 1/5th	no limit

If a candidate for marriage has been exposed to education at a level in which a high attainment would have raised his offspring quota, but in which his actual achievement was insufficient for that result, the largest number of children for which his IQ and previous educational record have qualified him shall be his quota.

15. There shall be a State Board of Human Genetics composed of three members appointed by the Governor, one for 1 year, one for 2 years, and one for 3 years. Thereafter, each appointment is to be for 3 years. Each appointee must be well trained in genetics, must have a doctor's degree from an institution accredited by the Association of American Universities, and must, as prerequisite to taking office, publicly declare his or her approval of the purposes and method of this law, in the administration of which he or she is to participate. He or she need not previously have been a resident of this state.

16. The Board shall appoint the licensing officers, and shall oversee their work. It shall keep such records and conduct such studies as it thinks appropriate. Funds shall be allocated to its use for the purposes herein set forth.

17. Persons with socially beneficial qualifications which are not regularly allowed for in the foregoing provisions

may apply to The Genetics Board for a higher quota of children than that dependent on their IQ and educational attainment. Musical ability, special achievement in the sciences or the liberal arts, in mechanical invention or in organization, are illustrative. The Board shall consider each case in view of the employment conditions, and the number of special allocations already made, as well as of the likelihood of social contribution by the prospective children. Always the burden of proof is on the applicant, to justify a deviation from the standard quota. Not more than a tenth as many children are to be authorized in any one year by special action of the Board as the number that is authorized under the IQ and educational provisions. However, with the rule of law as an objective, it is provided that the Genetics Board shall not have power to reduce the number of children which a person may have under the law. The Board shall have power only to enlarge a person's quota. But the Board is invited to recommend to the legislature, when it sees fit, any changes in the classifications and quotas which its members believe would be of benefit to the State, setting forth in writing the recommendations and the reasons for them.

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There are other possible programs; especially there are various steps that would retard the worsening of our plight—such as the correction of recent errors like the 1965 immigration law. All the propositions presented in this chapter and some besides, except the Denmark Program, were discussed in my population class. Near the end of the Spring semester of 1965 I handed out ballots, giving my students an opportunity to vote or not to vote on propositions they had discussed. In the formulations there were some overlaps. The students were to score each proposition from zero to 10 according to their conclusions as to its merits. The ballots were unsigned. There were 36 of them.

Here are the results of the balloting:

88% Sterilization as under the Jesse Hartman Plan; free to the poor by private philanthropy, administered through state agencies.

88% Higher than present requirements for immigration.

86% Sterilization free to the poor at State or National expense.

86% Tie foreign aid money to population control programs.

82% Free voluntary sterilization to all who apply—no matter how provided.

76% The Marriage Law.

73% The Mencken Plan: a bonus to those who volunteer for sterilization, to be paid by State or National government or by private philanthropy, on the theory that the bonus would be most alluring to inadequate persons.

70% Minimum wage payable by State or National government, but applicant agrees not to have children, and if he breaks his promise he is to be sterilized. A person may if he prefers receive a substandard work permit.

The marriage law would actually reverse the birth rate differences so that the dumber the couples are the *fewer* children they would have, and the more intelligent they are the more children they would have. With such a law in operation every additional child would be another certificate of merit; there would be an incentive to fill the yard with them. Yet some of the partial measures, as you see, got a more favorable response from the students. I don't know why, but my guess is that since the marriage law came later in the discussion there had not been so much time for it to soak in. But even the marriage law, if our class had been a legislative body, could very handily, if necessary, have over-ridden a veto.

This impresses me: The reversal of birth rate differences would take place in less than 20 years after the passage of the marriage law, as most of the persons

who are married now complete their families and the new crop of young people is made up more largely of the offspring of the mentally well-endowed. In 50 years the results, in terms of wholesome social attitudes and responsible behavior, as well as in terms of lightened social burdens, would be richly rewarding.

If some of the other proposals were adopted at the same time, the results would be even more immediate.

(I think it should be realized that the proposals would have beneficial social results even if the environmentalists were correct in their assumptions.)

CHAPTER NINE

THE ANSWER MAN GETS A WORKOUT

If one gives a lecture on an important phase of Population, or hands out for study an essay that may be preliminary to a chapter, next day he gets a batch of comments and questions. Some of them stimulate small revisions. Others ought to be handled *somewhere*. Comments in editorials and questions in conversations are arousing too. This caboose chapter seems to be the somewhere for all sorts of odds and ends.

•

Question: My Aunt Agatha thinks human beings are precious in some absolute sense. But I have heard that Chou En-Lai has confronted the Western countries with the threat, "We can afford to lose 250 million soldiers; how many can you lose?" Would you say human value depends somewhat on circumstances?

Answer: Probably "absolute value" in relation to human beings could not be made very meaningful. Often people have a demand-and-supply aspect. That, however, is presently under attack. A December 5, 1965, Associated Press news story said the young men in Nairobi, the capital of Kenya, have recently formed a protest movement to combat the high price of wives; and in Nigeria another such group has resolved to pay the fathers no more than $75 apiece. However, a black market is likely to develop for the more attractive offerings. And since $75 is set as the ceiling price, I wonder if the earlier bargaining method will continue at lesser figures for those with lesser figures whom the fathers find difficult to dispose of.

Relativity of values of human beings seems to be disclosed in a consideration of the results of the Black Death in England, which struck in 1348. Within two years, according to the *Encyclopedia of the Social Sciences,* "a loss of one-third of the population appears

to be indicated in many cases, and a much greater loss in a few villages and towns," the range having been from as few as 4 percent to as many as 75 percent. Enclosure of lands was hastened thereafter; and wages went up several percent. Some economists have analyzed the agricultural revolution and the mercantile revolution and the industrial revolution, in England, as successive results of the surpluses available to Englishmen because of the Black Death. The fewer Englishmen after the plague were, in some sense, worth more per capita to other Englishmen, and perhaps to the rest of the world, than the more numerous Englishmen of the earlier time had been.

One could find many other examples which show that quantity affects value in human beings as well as in money or apples or secondhand autos.

I wish to throw in an additional hypothesis too, relating to the Black Death. It is based on two items reported in the *Encyclopaedia of the Social Sciences*:

(a) The Black Death seems to have been bubonic plague in combination with primary pneumonic plague. Fleas getting transportation on rats were the main carriers for at least the bubonic plague. The primary pneumonic plague seems to have been transmitted that way too, in part.

(b) The proportion of deaths among "the richer classes" was low.

I assume for purposes of my hypothesis that the "richer classes" included *more* than an average proportion of capable people, and the crowded slums had *less* than an average proportion of capable people.

I assume, too, that intelligent people, whether rich or poor, are more hostile to rats than unintelligent people are, and so a smaller percentage of intelligent people would have been bitten by the fleas.

So my hypothesis is that the Black Death was a selective factor, the average intelligence of later Eng-

lishmen having been superior to the average intelligence of earlier Englishmen. Superior intelligence, I think, is part of the reason those multiple production advances took place first *in England*.

The *famine* now getting under way in India, and those famines which are due soon in Red China and in South America, are likely to do some sorting too.

I wonder if the idea of absolute value goes along with the so-prevalent and so-wrong notion that all men are created equal. I think your Aunt Agatha should enroll in this class next semester!

•

Question: What are results of overpopulation?

Answer: That could be a tremendously broad question. Malthus saw a connection between overpopulation and undernourishment, disease, famine, and vice. Others have seen connections between overpopulation and increase of various dangers, and of crime, reversion to primitive ways, illiteracy and ignorance, distrust. But here we can have only a cursory view of the subject.

People in the past have usually weakened gradually and have been ready victims of disease, malnutrition and starvation. Now that people in most countries have come to depend more on governments, when food is scarce they sometimes go wild. Thus a UPI item of August 11, 1965, informed us that mobs were rioting in India's State of Bihar in eleven towns; that angry crowds had attacked railway stations and government offices, and had looted both government grain depots and private grain depots. In Calcutta, food rationing was in effect. By November 1, 1965, severe rationing was imposed in all the large cities of India. The United States had been shipping 600,000 tons of wheat per month and seemed likely to continue to do so. Prime Minister Shastri was scheduled for a trip to Washington in January 1966, presumably to

try for an agreement which would put the grain shipments on a longtime basis.

As you may have realized as you saw the lists of offending countries in Chapter 2, many of them are plunging headlong toward catastrophe, and will soon be a burden or a danger for the rest of the world as well as quarrelsome among themselves. Brazil is one such. Its population increase of 3 percent a year will double its numbers in a mere 23 years. Will it be able to double its school rooms as well as to provide replacement and upkeep in that time? The answer is a flat "no." Illiteracy will increase.

What about jails and prisons; what about water supplies?

Government by elected representatives of the people has sometimes been insecure in Brazil. If the present rate of population increase continues, representative government will die out entirely. Direct suffering from hunger will apply to millions. And a tormenting aspect of such a course is that the future takes on intensifying shades of darkness.

•

Question: Are the people in the United States now giving appropriate attention to the quantity problem of population? (I know they are virtually unconscious about quality.)

Answer: Among the alert and public spirited Americans there is now a deep and intensifying interest. But not nearly so many as half of Americans think any farther ahead than next Saturday night. Seven of ten persons interviewed told George Gallup's pollsters that they had heard or read the figures about population growth. To those the question was put: "Are you worried or not worried about this population increase?" Maybe that word "worried" was not the best word. At any rate 30 percent were worried; 66 percent were

not worried; 4 percent had no opinion. Persons of under $3000 a year, who are the ones soonest to get any adverse effects, are least worried. The poll was published April 29, 1965.

•

Question: Now that we are becoming proficient in outer space travel, is there a possibility that we could take care of our excess people by sending them to some other planet in our own solar system or a planet of one of the stars?

Answer: No; earth is the only planet of the sun on which conditions are right for people to make a living. We know nothing about the planets of the other stars but at any rate they are too far away. Professor Garrett Hardin of Santa Barbara College did some figuring on that problem, and had the answers in the *Journal of Heredity* for March-April 1959.

Hardin estimates the time and cost of getting to Alpha Centauri, the nearest star, which he says is 4.3 light-years away. He figures that at 19,000 miles per hour, which is about the speed at which our moon shot will soon be made, a comparable journey to our nearest stellar neighbor would take 129,000 years.

That is too long!

And of course through all of the 4,300 generations enroute, there would have to be population control to the nth degree on the capsules or missiles or flying saucers in which the journey would be made!

Using some calculations of L. R. Shepherd, Hardin plays with the notion that eventually our science magicians can up our transit speed to an average of 7,000,000 mph, in which event the journey would take a mere 350 years. The speed would have to be more than 7,000,000 mph for part of the way, to allow about 50 years for acceleration and 50 years for deceleration.

There would still have to be population control, so let's keep in mind that what hatched the hypothesis in the first place was a reluctance to approve population control.

When Hardin gets into the cost figures for interstellar shipment of even one day's increase of earth's people (123,000 at the time he made his study; about 180,000 at the end of 1965) the price comes high: more than the U.S. national debt for the exodus of just one day's excess of births over deaths.

Hardin presents some other obstacles too; but these are enough to show that we can't just fly away from the population problem.

•

Student: I've been thinking about the sort of place that would have been necessary to eliminate the slower-brained members of a tribe of apes in bringing them across a dividing line into human condition.

Answer: Realize that the dangers were spread out over a long period; one had to be habitually watchful, yet his heart was not forever in his mouth, nor his hair on end.

Student: Yeah, but I was trying to think of it as Eden, and it has a few surprises.

•

Review: You put a lot of attention on death, and always premature death. You connect *premature* death with the sorting process of evolution. Is that right?

Answer: Right; and the special attribute of human beings to which I gave attention is *intelligence*. Death is a main element in the multi-million-year process by which intelligence was acquired. Good things usually cost something. Intelligence is one of the good things. It cost plenty. *The group of people ancestral to those who have the highest intelligence now have been through the most rigorous and varied weeding out.* A

large proportion died young and those who survived risked life in many crises, and in some of them suffered as much as those whom the crises killed.

Question: Would you say that death has not been very accurate in its sorting?

Answer: True; it has been effective only in large numbers. Not all who die are weak, but a larger proportion of the weak ones die young; a larger proportion of the strong survive. That is in a pre-civilization environment. As a civilization becomes advanced its life-saving activities annul death's sorting function almost completely, and the birth rate differences set the stage for what is to follow.

Question: Is there another function of death than killing weaklings?

Answer: Yes, it serves to keep the earth from getting cluttered up with unlimited numbers of individuals—of any species. Civilization interferes with both of death's functions.

Comment: One might think you are *complaining* at chemists for making life-saving drugs, at M.D.'s who restore people to health, at farmers for producing nutritious food, and at food processors and cooks and bakers and dietitians.

Answer: On the contrary, I have a healthy appreciation for these people; they represent civilization, and I think civilization itself is something we should try to keep. But to keep it *we will have to restore the wholesome effects of evolution.* That does not mean that we must restore early death. The limitation of numbers and the sorting could be resumed through a marriage law for instance.

•

Question: You used the expression "The Klineberg Twist." What is that?

Answer: It is probably the most widely used hoax

purporting to show that the Negroes have as an average an inherited basis for intelligence as high as that of the Whites. It is so widely used because practically all of the real evidence points to the conclusion that the Negro average is far down the scale. It is called the Klineberg Twist because it was first used by Otto Klineberg, a social psychologist at Columbia University. He compared the First World War Army IQ scores of Negroes of four Northern States where Negro scores were highest, with the Army IQ scores of Whites of four Southern States where White scores were lowest. The Negroes had the better showing.

But in those same Northern states the White average was much higher than the Negro average; and in those Southern states the White average was much higher than the Negro average.

The comparison of mental failure among draft inductees in 1962 is given on page 72 with the Whites compared with the Blacks in each section of the country. In the North Central states, for instance, 8.9 percent of the Whites failed; 46.9 percent of the Blacks failed.

Fallacy: A report which was supposed to be science said that African babies show more achievement a few weeks after birth than White babies. The implication was that the African babies were brighter; in fact the report said they don't retain their lead because of the customs of their people.

Answer: I have no doubt about the early alertness of the African babies. However, if those alleged scientists had made a further comparison they would have found that a baby chimpanzee is still further advanced in the early days and weeks. A White child is, at first, one of the most helpless infants of all the animals. That characteristic developed in correlation with an adult intelligence capable of taking care of it. A help-

less infancy leaves the individual freer from inherited behavior patterns and it is therefore capable of greater learning than other animals are.

Sid Moody, an Associated Press Writer: In his story of April 1965 on Population, quotes a U.N. Official: "It's the White who has the food. It's the brown, black, and yellow who has an empty belly."

Pendell: To one who is oriented in evolution that is another way of saying that the Whites, decadent though they are, still have better average brains than the browns, blacks and yellows. Food is the prime necessity as it always has been, and that a group stay hungry generation after generation is strong evidence that as an average there is a shortcoming in its analytical ability and/or self control.

There are sub groups within the browns, blacks and yellows whose members do analyze and who exercise self control, and there are sub groups within the White classification who do not analyze and have too little self control. Yet for policy determination the haves have reason in the generalization for attaching conditions to their largess—for insisting that burdens be not increased.

•

Student: It seems to be established that human beings resulted from the process of evolution, but I don't think evolution has been brought to my attention before as an explanation of *the origin of civilizations.*

Pendell: The *creativeness necessary to a civilization* is just an extra refinement of what it takes to make human beings out of lesser primates, namely, brains.

Question: Suppose some of the usual conditions for a civilization are absent. Can a civilization develop nevertheless?

Pendell: With other factors favorable, a civilization can start with an X amount of brainpower. With the setting

more hostile the weeding-out process continues and brain-power becomes perhaps 2 X, so that even without the favorable factors of the environment, or with less than all of them, the problem-solving ability of the people becomes so pronounced that as the creative individuals strive to meet particular situations a civilization is likely to emerge.

•

Table of Ranges of Skull Capacities in Cubic Centimeters

Living Europeans and Chinese	1200-1530
Cro-Magnon and Afalou	1500-1880
Neanderthal	1100-1530
Palestinian	1285-1550
Sinanthropus	900-1225
Pithecanthropus	775- 935
South African Australopithecus	440- 650
Apes	325- 650

Artist: The chart shows that the skull capacity of Cro-Magnon people was very much greater than that of present-day people. Does that signify that they were more intelligent?

Pendell: Over the ages there has surely been some degree of correlation of skull sizes and intelligence. We can be reasonably sure that the Sinanthropus people could think better than the Australopithecus people; that Neanderthal man could think better yet. Cro-Magnon was probably a better problem-solver than those others. Greek stock was probably directly descended from Cro-Magnon ancestors. There have been scholars who thought the Ancient Greeks had better brains than Americans have. Professor James Field, in whose population class I was a student at the University of Chicago, thought so. Chances are that Cro-Magnon people did not just vanish; they probably bred down, as Americans are now doing—and then, I suppose, the Greeks evolved up from Cro-Magnon dregs after Cro-Magnon culture crumbled.

Question: Do you think comparative skull sizes are a good test of comparative problem-solving ability in the contemporary population?

Answer: Nathaniel Weyl and Stefan T. Possony, in *The Geography of Intellect* have assembled some data on this. On pp. 53-59 they transmit R. Ruggles Gates, Stanley D. Porteus, F. W. Vint, H. L. Gordon, J. C. Carothers, Cornelius J. Connolly, Alfred Louis Kroeber, Rudolph Martin, Karl Saller, David Wechsler, Leona E. Tyler, H. J. Jerison. Size is only one of brain variables which are related to intelligence, but in large numbers, there is a positive correlation between brain sizes and intelligence. Thus in a study of 9,000 persons at Melbourne University, Porteus and Berry found that above-average intelligence was more frequent in the tenth of the brains that were largest than in the other deciles; mental dullness was more frequent among the tenth with the smallest brains.

Question: You made a point in both Chapter 4 and Chapter 6, did you not, that civilization is a result of evolution?

Answer: That is right! I've made that a big point at least since 1951. *Except for* variations and mutations and the culling out of the less intelligent individuals, there never could have been enough sense in the human species to organize the specialties that accumulate into a civilization. From another angle, *with* a continuing buildup of intelligence a civilization would have been inevitable, because intelligence leads to efficient behavior, and efficient behavior in many activities comes to be civilization.

Question: Were you the first to formulate the connection between intelligence and civilization?

Answer: Probably not; the logic compells the conclusion. Perhaps I could be accused, on this subject, of being the first to belabor the obvious. I had a purpose

in that; namely to lead up to, and make emphatic, the reverse direction of influence. Not only has the *increase* of intelligence been the basis for civilizations, but *decline* of intelligence has been the basis for the *disintegration* of civilizations. Evolution leads to the *amplification* of *intelligence,* and by way of intelligence, to a civilization, but civilization normally causes a *decline* of intelligence by terminating the weeding-out process, thus permitting the higher birth rates of burdensome people to set the direction of change.

Question: Why do you think the boost of civilization by an increase of intelligence is fairly easily seen but *the decline of civilization is not so easy to see as a result of the decline of intelligence?*

Answer: The main reason is the fact that civilization is an accumulation, and it keeps on accumulating even after the problem-solving abilities are limited to a declining proportion of people. The evidence of weakness in the civilization itself doesn't become apparent until the whole structure becomes shaky. The birth rate differences that weaken the structure may have been less and less offset by death rate differences for a century or more. The birth rate pattern would be taken for granted, and rarely thought of as a weakness because, after all, the civilization had been increasing in efficiency while the birth rate differences were present. The up sequence is of the distant past but is compelling because there is nothing in the facts to obscure it. The down sequence is currently with us, and in the logic of it is equally compelling but is largely hidden by the fact that the civilization continues to accumulate.

•

Report: Robert Ardrey in *African Genesis* interprets that from an ape stage to civilization our forebears were hunters. Our fierce past, he thinks, is basis for the success of violence themes in movies and TV. They

respond to a long-established appetite for conflict.

Question: Do you think such themes are thereby justified as the chief stock in trade of the movies and TV?

Answer: No; I believe they stimulate crime.

But this needs to be said: The drift of literature as well as of movies and TV toward sex and violence goes along with the reverse action of evolution. As intelligence evolved, interests became widely diversified; violence and sex were a diminishing part of life. But as successive generations get their majorities from lower and lower levels of intelligence, the interests become fewer; we get back to the simpler minds again, which, being less capable of complex thinking, are more largely and more directly occupied with instincts.

•

Question: You have in several instances emphasized that there can be too much of a good thing. Is that a universal rule?

Answer: I suppose so, though I haven't attempted to test it out. It is usually so because conditions of life have to be in balance; with too much cold we freeze; with too much heat we roast. I mentioned *freedom* as in balance with *social structure*. Social structure is made up of laws and customs, precedents and attitudes including inhibitions. It gives order, regularity, predictability, and safety. Freedom is leeway for individual action. If there comes to be more and more freedom there comes to be less and less safety. Individualistic instincts are often in clash with safety. Freedom is one of those good things of which there can be too much.

•

Problem: Your showing in Chapter 8 that *descendants* of Wiseman X, if present trends continue, are sure to be of lower intelligence than that of X is frightening. I think you are convincing that if we could get the marriage law passed it would reverse the trend, and

Wiseman X would have descendants brighter than he is. But what about the descendants of the *below average* man Y?

Answer: Suppose Y is in the 45th percentile from the bottom. He is permitted to have one child. By chance that child of Y has a higher IQ, and for his own quota is in the 2-child classification. So Y can have twice as many grandchildren and the chances are they will both be of higher intelligence than Y.

The higher their intelligence the more children they are permitted to have (and are likely to have, because number of children becomes a badge of relative distinction.) That's one point: so long as they stay low in the scale they have few offspring. As soon as they attain a good rating their number increases.

Another point is that inasmuch as the people around them will be brighter with each generation there is an improving chance that one of Y's descendants will get a brighter mate, which will be an influence, over the long run, of establishing his descendants in a higher classification.

A few will by chance go comparatively lower, and get into the lowest 20 percent.

If they go up, they increase, if they go down they go out, and are represented only by distant cousins. So everyman can be sure that under the marriage law, if he has any descendants a thousand years from now they will be brighter than he is.

•

Question: That Marriage Law, if it could be adopted, seems well planned to improve heredity, but is it reasonable to suppose that people will vote such restrictions on themselves?

Answer: The proposed marriage law does not assume

that people will vote any restrictions on themselves. Notice that most voters are married; people who are already married at the time the law is passed, according to its terms are not subject to its provisions. In that respect it is like a law raising the standards for practicing medicine in a state; those persons already having complied with earlier requirements and practicing medicine at the time the stiffer standards are applied are not held to the new rules. Such provisions are usual in tightening the requirements for practicing law, for upping the standards for teachers, for airplane pilots' qualifications. Just the people newly coming into some privileged status are required to meet the new and more exacting provisions. The new marriage law would work in the same way. None of its clauses would apply to people already married. Some of the single voters, the brightest of them, could vote for the law without placing any restriction on themselves; and all of the married voters could vote "yes" without placing any restriction on themselves.

•

Question: A man I know still believes that heredity is not so influential as environment in determining behavior. Is there any reason why one should not argue for your marriage law as a means of improving the *environment* of the coming generations?

Answer: No doubt the marriage law would improve society by way of environment as well as by way of heredity. What you emphasize should be up to you.

•

Question: Can't the quantity problem and the quality problem be handled separately? With hunger already causing distress in much of the world we may be able to get action in slowing population growth, but with environmentalists chanting "equality," the quality campaign may take a lot of time.

Answer: I do think some of the recent programs are likely to fit the need in some measure, but never fully. And there is danger in working on the population problem as a quantity problem only, largely *because* of the equality doctrine. The people who achieve difficult objectives are the ones most likely to be influenced to refrain still further from reproduction, unless they are made to realize that we *need more* of the kind of children they are likely to breed. So the blunderbuss battle against births is not what I think necessary. Reduce the birth rates in those segments of society where babies are too numerous; not among educated people, whose babies are usually too few.

•

Thrust: Some people think they have a *right* to reproduce. You seem not to share that view.

Parry: Oh yes, I do share that view. And at this moment practically any dimwit in the country has a right to have a dozen children or more, no matter how handicapped their minds may be. That's what wrecks a civilization. The right ought to be changed.

Question: You think there is no *inalienable* right to reproduce?

Answer: True. Unrestrained reproduction is reason for wars, famine, undernourishment, disease, ignorance, and decay of civilization. Actions which get all of society into such predicaments have social importance. The right of a moron to have twenty babies need not remain a right.

Question: You think society should have the right to sterilize?

Answer: Yes; society faces the problems which uninhibited reproduction brings about. Society acquieses in its own destruction if it doesn't take the necessary precautions.

•

Newspaper Commentator: The young people do have some weird dances, and they go to questionable movies, and the morals are different from what they used to be; the art is crazy; the music can be called music only by courtesy—and there is very little courtesy left. But these changes are such as occur continually, and they dismay us mainly when we see a whole set of them displayed a decade or so after our own comparable youthtime or our grandfather's time. People have been protesting against change since the earliest civilization, yet, so far, the world has managed to get along pretty well.

Response: Our news commentator in this instance has skipped analysis and has given an expression of faith in human beings, apparently as a tranquilizer for disturbed old people.

"So far," he says, "the world has managed to get along pretty well." One often hears that—hears that ancient scholars predicted the downfall of civilization, yet civilization somehow blossomed more and more luxuriantly. But did it? What civilization? Whose world? Egyptian scholars thought Egyptian practices might lead to Egyptian decline. They did lead to Egyptian decline. Learned men of Greece predicted that trouble lay ahead. "Civilization" rounded out then in Caesar's Rome. Was that a total recompense to the Athenian whose land was just a memory? Studious Romans felt misgivings concerning maladjustments in the empire; Augustus was one who was unhappy about the topsy-turvy birth rates; but other Romans thought "the world has managed to get along pretty well"—why be bothered? As a Roman of 900 A.D. would have seen it, which was right?

And if the punier Americans of 2,000 A.D. are incapable of handling the complexities of social organi-

zation, will it be complete compensation to them that in some place far from here "the world has managed to get along pretty well"? And should a dim possibility of some other civilization in some imagined elsewhere be sufficiently solacing to us now to compensate for the passing of the glory of America? Or is it perhaps justifiable that we try to do something about it?

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