### CHAPTER THIRTEEN

### THE NUMBERS AND QUALITIES OF MANKIND

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### § 1. The Increase of the World's Population

E can now take up another important aspect of the lives of these nineteen hundred million inhabitants of the human ant-hill: their multiplication. That multiplication continues as I write. In the last minute the grand total has increased by twenty. It has been increasing for a long time, for several centuries. It is increasing now by about eleven million yearly. It may never have been nearly so great in any previous time.

Is this human population too great? Is it already consuming more of the available resources than nature renews? Or is it rapidly approaching that state of affairs? In a hundred years' time (A.D. 2031), at its present rate of increase it will number 4,000 millions. In two hundred years, 8,000 millions, in three hundred years 16,000 millions. These are overwhelming figures, the forecast of a stupendous breeding storm.

The answers to the questions we have asked here are discussed at greater length in the Science of Life and we have also approached these issues in Chapter IV, § 4, of this work. The earth is not fecund without limit, and in some of the needed alimentary substances it is even parsimonious. It seems, for example, to be grudging in its supply of phosphorus. The present great multitude of our own species is not now feeding upon the spontaneous gifts of our planet as other creatures are. Earth's gifts to us are in part already forced gifts. We depend on fertilizers for the fodder of our meat supply and for our vegetable food. And there is a limit to the supply of fertilizers. Every year the pressure on that supply increases. If the expansion of population continues, a time will come, whatever our efforts, when our species will return to the normal condition of most other species; that is to say, it will return to universal want and to a competition for bare subsistence.

In some parts of the world, in parts of Bengal, for example,

humanity is now already at that level of bare subsistence. The peasants are so cheap that it does not pay to give them adequate protection against wild beasts. It does not pay. Every year thousands of them are eaten by leopards, tigers and other carnivora. Man-eating beasts will come into their villages and carry off people in the night from their houses. Locks, bolts and bars cost money, and Hindus cost nothing. They possess barely any clothing or furnishings, and though they breed abundantly, their rate of increase is kept down by their weakness and high mortality.

In a little while men of science may be in a position to estimate exactly what human population this earth can carry and go on carrying, at a tolerable level of existence, at a level of freedom, happiness, variety, direct relations to wild nature and full and complete living. At present such estimates are based upon insufficient assumptions; they are of no practical value. That estimated "optimum" of population, when we get it, may turn out to be above or below our present numbers, and it will certainly vary widely with what is taken as the standard of life. American authorities have put it as low as 350 million.\* No doubt the earth could carry at a level of bare subsistence, for a few dismal decades, an enormously greater population of degraded human beings than 1,000 million. Some authorities go as high as 7,000 million. But who wants that? However high or low our standard may be, it will still leave us face to face with the facts that there is a limit to human increase and that it can be regulated and restrained or within certain limits encouraged and stimulated.

Since the time of Malthus it has generally been assumed that the human animal, like most other animals, has a reproductive urge sufficiently strong to keep its numbers pressing steadily upon the means of subsistence. But the readiness with which almost any human community to which the necessary knowledge was made available, has accepted and acted upon the suggestion of Birth Control, throws an increasing doubt upon that assumption. In various European countries, without any compulsion or any great pressure, merely through rising standards of life and the disinclination to bring children into the world at a disadvantage, the

<sup>•</sup> See Nature, February 7, 1931, p. 217. Account of discussion of American Society of Naturalists, New Year's Day, 1930; Professors W. F. Ogburn and E. M. East.

"natural" increase of the population has been checked and even converted into a decrease.

There are many interesting subtleties about the statistics of population into which we cannot enter very fully here, but, roughly stated, between 1876 and 1926 the birth rates of various European countries have fallen as follows: England and Wales 36.3 to 17.8 (16.3 in 1930); Germany 40.9 to 20.7; Italy 39.2 to 27.8; Sweden 30.8 to 16.9 and New Zealand 41.0 to 21.1. These are birth rates per thousand living at the time, and it is obvious that New Zealand, which was subjected to a steady immigration of people round about the age of marriage, was in a very different position from Great Britain, from which such young people were emigrating in considerable numbers during the last quarter of the nineteenth century. The New Zealand fall is really more striking than these figures at the first glance suggest. The British is less so. Yet, though such considerations mitigate or intensify the crude facts, they do not do so enough to alter their essential significance.

This fall in the birth rate has been accompanied by a fall in the death rate which has minimized its effect upon population totals. The figures for the countries just named are England and Wales 20.9 to 11.6 (11.5 in 1930); Germany 26.3 to about 11.9; Italy 28.8 to about 16.8; Sweden 19.9 to 11.8 and New Zealand 11.8 to 8.7. This gives an apparent fall in the rate of increase of population of all these countries of about nine per thousand in the case of England and Wales, seven in the case of New Zealand and similarly for the others. Had the death rate not fallen also, the "natural increase" would have been wiped out altogether and replaced by an actual fall. During the period we are considering, the progress of hygiene saved so many infants that would otherwise have perished, and prolonged the life of so many people beyond middle age who would have died under earlier conditions, that the falling off at the source did not produce anything like its full effect upon the aggregate numbers. (The infant mortality for England and Wales sank to the record figure of sixty per 1,000 births in 1930.) It is only the saving of infant lives that has a real continuing effect on population. They will live and reproduce, but the increased proportion of people over the age of forty-five (from eighteen to twenty-five per cent in twenty years in Great Britain) will add little or nothing to subsequent generations. The actual state of affairs is better displayed

in another form. The number of children under fifteen in Great Britain in 1921 was no greater than in 1891; the number of scholars in Public Elementary schools in England and Wales reached its maximum in 1915 and has declined steadily ever since. In 1881, 883,600 children were born in England and Wales; in 1924 only 729,900.

So far as gross numbers are concerned, the problem of overpopulation is evidently not an insurmountable one. As modern civilization spreads a rising standard of life about the world, the fall of the birth rate goes with it. The full effects of a fall in the birth rate take some time to make themselves felt. If the birth rate in Great Britain remains at its present level, the population will cease to increase in about ten years' time and will then begin to diminish. No further cut in the birth rate is therefore needed in order to bring about a reduction of the population in the near future. The same holds good of all the countries of Northern and Western Europe.

Partly this falling off of births is due to a retardation of marriage, but nearly all authorities are agreed that it is due mainly to what is now known throughout the world by Margaret Sanger's term of Birth Control. This is the deliberate avoidance of offspring (by methods discussed more fully in the Science of Life), particularly during the earlier and formerly the most fertile years of married life (i.e., between twenty-five and thirty-five). It has become a general practice throughout the modernized Atlantic communities. Its onset follows a practically uniform course as industrialism progresses, and as production and the standard of life rise. To begin with, in the ugly and "sweating" stage of industrial employment there is a phase of expansion, and only after that does the brake come into action.

The first result of modern industrialism in its cruder and crueller phases has always been to produce relative plenty at the price of onerous labour conditions. Anyone could "get a living" under the new régime, though it is a bare living of the most miserable sort. Previously there had been plain starvation. The new factory workers, ignorant, at a low level of subsistence, mostly young and thrown together with few restraining influences, were practically unable to avoid reproducing their kind. The first result of industrialization therefore was to foster a multiplication of the low

grades or population. A rapid increase went on in Great Britain from the first appearance of factory manufacture in the eighteenth century up to the 'seventies of the nineteenth. Only then did a checking influence appear. Great Britain is the type instance in these matters. The story of the other industrialized countries upon the Atlantic, though it is not strictly parallel, is essentially similar, and the rest of the world's populations seem likely to follow these precedents one after another as industrialization reaches them; first will come proliferation through improved sanitation and increased production, then retardation.

The opening phase of proliferation has occurred in Japan and in the modernized industrial centres of India and China. In Japan, population which had been practically stationary for a century (between 1723 and 1846) at about twenty-nine million, leapt up with the extensive adoption of European methods of production to its present congestion of sixty million. Japan is now, as Carr-Saunders has pointed out, in practically the same phase as Great Britain in 1875, and there is no reason to suppose she will not presently follow the other modernized countries towards a reproductive arrest. This is the more probable since her people do not emigrate readily to uncongenial climates, and most attractive emigration areas are closed to them. They will feel the pressure the sooner for that and resort to restriction sooner.\*

We are still very ignorant of the state of affairs in China as a whole. India, from the point of view of population, is a quite abnormal mass of human beings. The heavy, protective paternalism of the British has maintained a state of peace, prevented disease and famine, the natural checks upon numbers in a barbaric community, and yet has done hardly anything to educate or raise the standard of living of this multitude. The Indian population in 1921 was 318,942,480. It had increased in spite of a high infantile and general mortality by 3,780,000 since 1911, and it continues to press upon the means of subsistence. This is a rate of increase, however, of about .12 per cent per annum, which is much lower than 1.1 per cent, that of the more advanced European countries to-day.† It is well to kecp that ratio plainly in view. As we have just shown, the natural increase even of England and Wales is still about .62 per

<sup>\*</sup> See The Japanese Population Problem, by W. R. Crocker.

<sup>†</sup> But note that the years after 1921 show a rising rate of increase for India.

cent per annum; Italy stands at 1.1 and New Zealand at 1.24 per cent. The population of Russia, which probably declined in the terrible early days of the Revolution is now (Chapter X, § 8) sweeping forward at the rate of 33 millions per annum, ten times the Indian increase. The proportion of Indians, therefore, to the rest of the world's population is not increasing; it is falling, and this is probably still truer of the uneasy multitudes of China. India and China are no doubt going forward in the population race, but the European and American communities are still going forward much faster. The popular idea of India and China as great overflowing tanks of population ready to burst upon the rest of the world is quite a mistaken one. But it is constantly appearing in the discussion of these questions. In Chapter VII we have described a cruel and systematic depopulation of equatorial Africa during this current century. The "Rising Tide of Colour" is a scaremonger's fantasy.

It is not our affair here to speculate about the possible future of India and China. Both regions are manifestly in a phase of great change and reconstruction. But it is as reasonable as not to assume that the same economic and social forces that have brought, or are bringing, the advanced communities of the world nearer and nearer to a stabilization of population, will ultimately become operative throughout the whole planet. As the obsession of jealously competitive nationalism lifts from the still crazy mind of our race, there may even be a concerted return to an ascertained optimum lower than 1,000 millions. The lean Indian in a loincloth, living in a hut with a cow-dung floor, who tethers his worn-out cow on the jungle edge for the tiger to kill, because he must not kill her himself, is no more a permanent actor in the world spectacle than were the British savages in woad, or the Arab pirates and slave traders who raided the coasts of Provence in the Middle Ages. The Indian ryot is not there for ever. The stuff that will be stirring in the brains of his grandchildren may be so different from that in his own, that his way of living may have become an almost incredible horror to them.

We are too chary with our imaginations about modern possibilities. The forces of modernization have still to play upon those Indian peasant swarms. The elementary school, the newspaper, the cinema, have not yet brought home to them that there are other ways of living than the routines they still accept as the inevitable

formula for life. There has been a certain drift of a few millions altogether from the countryside to the dreadful factories of Calcutta, Bombay and Cawnpore, where conditions recalling Lancashire at its worst phase have been produced, but the greater part of that immense village population, so poor, so weak, so monotonous in its toil and debt and hunger, remains intact. A few decades of native administration may restore the vital balance to the stability of pre-British days.

So we put the vast sad sunlit plains of Bengal and its hundreds of millions toiling only to eat sparsely, into the background of our general survey of human activities. They are playing only a passive part in the drama. They are living, as it were, in a dream, and it is impossible to anticipate in what fashion the call of creative energy will presently awaken them to take up a positive rôle in our renascent world.

So far as present conditions go there does not seem any probability worth considering of very great change in the proportions of the human population in the years immediately before us. The total in hundreds of millions is rising towards twenty; of these about seven will be the children of the Europeans and Americans at present living under the modern capitalist system, of which 7.2 will be English-speaking; there will be two deriving from the present Soviet republics; four from the Indian mass and five Mongolian, of which something approaching one may be Japanese. There are thus nine out of the twenty, of what we may call the already Europeanized peoples, or ten if we count in the Japanese. Two hundred million (or fewer) black people, chiefly in Africa, will complete the total. These are the great blocks which have to be built together into the coming world state. As their economic lives assimilate, their vital statistics are likely to move in unison, and the rate of increase or diminution become the same throughout the planet. There may be fluctuations in these proportions, but there does not seem to be the slightest probability that any section will be "swamped" by any other.

It is interesting to note how few are the people who may be considered answerable for the very great changes in the pressure of the more civilized populations we have just been considering. Until the last quarter of the nineteenth century birth control was a secret and shameful practice, known to occur but never discussed except

to be disavowed or denounced. A few obscure societies, whose publications were in constant danger of prosecution, maintained what was then called the doctrines of Neo-Malthusianism in a world that feigned to ignore them. They had been active for three quarters of a century. Birth-control handbills were circulated in Manchester in 1823, it is believed at the instance of Francis Place, and books advocating birth control were published in America, the Moral Physiology of Dale Owen in 1830 and Dr. Knowlton's Fruits of Philosophy in 1833. The Elements of Social Science was published in London by Dr. George Drysdale in 1854.

The new views spread widely but quietly. They found their maximum application at first in France. They were talked over and applied more and more extensively, but it was left for quite a small number of resolute people to break the obscurantist convention and bring this fundamentally important issue in human affairs into the full light of open discussion. They did so under the provocation and threat of new prohibitive legislation, particularly of the laws passed by Congress and various state legislatures in America at the instance of Anthony Comstock's "Society for the Suppression of Vice." Anthony Comstock was not exactly the parent, but he was the stimulant of modern popular birth control. The pioneers for outspokenness in the English-speaking world were Charles Bradlaugh and Mrs. Besant, whose defiant republication of Dr. Knowlton's Fruits of Philosophy in 1877, and their subsequent prosecution, make indeed an epoch in human biology. A marked fall in the English birth rate followed this trial. The battle for the frank popularization of this kind of knowledge was fought and won in America by Mrs. Margaret Sanger, and in England by Dr. Marie Stopes. Margaret Sanger was a hospital nurse who had specialized in obstetric nursing. "During fourteen years of nursing in the homes of the New York poor," she writes, "I was brought face to face with such unbelievable misery that I reached the point where I could no longer face my own conscience without devoting myself to the relief of that misery at its source." Although she was happily married and the mother of three children, she embarked boldly and methodically upon a campaign first for the publicity of the issue, and then for its scientific development. Both she and her husband were imprisoned under the repressive Comstock Law-she twiceand she fought a stormy battle before she could win over public

opinion to a rational attitude in the matter. Dr. Marie Stopes was a young doctor of science and a botanist of some distinction, who plunged into a parallel conflict in England, moved by the same pity for feminine wretchedness. England has had no Comstock, and it was not necessary for her to go to prison. Now in the English-speaking world at least, thanks mainly to these two valiant women, we may all talk, think and write without embarrassment of this quintessential of human biology.

But this freedom is not universal. In France and Italy, for example, the public discussion of birth control has been prohibited under penalties. In South Ireland also. Married women, in these countries, are in effect to be forced to bear children whether they want to do so or not. This does not prevent a fall in the birth rate in all three countries, but that fall is the result of forbidden knowledge. and it is associated with the utmost furtiveness, dirtiness, and shame. Indoor domestics, even when they are young married people, contrive to be as sterile in these lands of mystery as elsewhere, and the wife of the labourer and small shopkeeper no longer bears children until she dies exhausted in the good old fashion—whatever the authorities may forbid. But no one dare tell openly what is done. In France this obscurantism is by no means absolute. Those greater and better concepts of intellectual and personal freedom which are so inextricably interwoven in the French tradition, war against any such limitations of knowledge, and by way of medical and scientific conferences, more and more freely reported, and such courageous books as Victor Margueritte's Ton Corps est à Toi, the possibilities of birth control are kept before the general mind.

The attempted suppression of birth control information in the Latin communities seems to be due mainly to a grotesque alliance between military feeling and the Roman Catholic organization. In Ireland, however, it is purely religious. The teaching of the Church as interpreted by the Papal Encyclical of January 8, 1931, denounces as sinful and unnatural any use of matrimony by which the production of offspring is evaded. (It is, indeed, as unnatural as stopping a tooth or wearing clothes.) No considerations of health or economics, says the Encyclical, are to justify this abstention. The good Roman Catholic must marry and breed or abstain, or he must not marry. Happily many Roman Catholics are not good Roman Catholics. Sterilization of the defective His Holiness declares is

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equally against the law of God. Sterilization, it is conceded, may be used by the civil power for the punishment of criminals but not as a social preventive measure. You may sterilize people to hurt and humiliate them, but not to do them and the world a benefit. The prospect of a world population of 16,000 million with an increasing population of imbeciles, in which no vow of poverty will be necessary, does not dismay the Church in the least.

This is "Providentialism" to the superlative degree; man is absolved from all practical responsibility in the matter, he is to observe the dogma and trust to the Church and Heaven. An age of famine and distress will afford great opportunities for holy living. The more sufferers, the more souls to be saved. There is a dreadful logic in this teaching.

This emphatic repudiation of any birth control whatever by the Roman Church is in marked opposition to the temporizing attitude of the Anglican Bishops expressed in the Lambeth Conference of 1930, and to the general disposition of enlightened people of all creeds; and from our present point of view at least it is regrettable that the mighty and venerable Roman Catholic organization should now have been put definitely and finally in a pose of antagonism to ordinary human welfare and happiness.

The opposition of the aggressive patriot springs from other than theological sources. It seems to be grafted upon a crude, brutish, and ignorant interpretation of what is called the "struggle for existence." President Roosevelt, for example, in his most "Bull Moose" style, reviled birth control as "race suicide." Why an attempt to husband the resources of mankind should be called race suicide, is difficult to imagine. A family that has restricted itself to three or four children has no more committed suicide than did Roosevelt when he took violent exercise in the presence of the reporters to keep his weight down. But the fear of being "outbred" by some imaginary, nasty but prolific "inferior race," though it has no support whatever in the figures we have just given, can be worked up into a very savage feeling indeed. To this terror of a pullulating flood of little brown, black and yellow babies which makes strenuous white men wake and cry out despairingly in the night, we will return when we discuss eugenics.

The Roman Catholic Church forbids birth control, but it makes no direct attempt to persecute hygienic propaganda. That it leaves to

the secula. arm. In France and Italy alike it is plainly not piety but the patriotic obsession, the insane entanglement of the mind with military delusions, which stands in the way of a frank and self-respecting practice of birth control. One must bear children for la patrie. "La France" wants soldiers, Italy's "destiny" is to recover the empire of the Cæsars. The Prince of Peace plays quite a secondary rôle in the active suppression of the Birth Control movement. He is merely an auxiliary argument. He stands for the crucifixion of the flesh rather than the glories of warfare. It is not souls to be saved but sons to be shot that the patriot is after and particularly is he after other people's sons. It is to pacify the patriot rather than the priest that the poor tuberculous woman in the Parisian or Neapolitan slum is allowed, unwarned and unpitied, to bear her ninth or tenth diseased and hopeless child.

The general scheme of this work is to display human activities in one ensemble. But here we seem to be dealing for the most part with activities avoided rather than actual activities. We can add to our scene only a few figures here: a committee room with the mixed ingredients of every committee where "movements" are concerned, public halls and meeting rooms where an earnest speaker, often a woman, addresses a mixed crowd, or more intimately a special gathering of wives and mothers, or conferences of medical men. And we would evoke, too, a little room in a back street, which proclaims itself not too obtrusively a "Birth Control Clinic." Anxious furtive women with drawn faces and a persecuted expression come creeping in to tell a story in undertones.

If the reader wants to know the sort of stories they have to tell, he should read Margaret Sanger's *Motherhood* or Marie Stopes's *Mother England*.

Some of those who advocate a popular propaganda of birth control, like Professor MacBride, advocate it for others rather than for their own type and class, and they would supplement it with compulsory sterilization. Their minds are troubled by something called the "Rapid Multiplication of the Unfit," and by a gnawing vision of their own relative worthiness drowning in a sea of inferiors. This sort of birth control advocate is not really thinking of the population question at all, or, at any rate, he is making it a quite secondary consideration. What he has in mind is Eugenics, that is to say, not Limited but Selective Breeding.

It is necessary to distinguish much more clearly than is usually done between these two different and separate ideas about reproduction, the idea of Birth Control and the idea of Eugenics. The former idea is an economic one based on the plain prospect of severe pressure upon the means and subsistence ahead of us, and it insists upon our attention here. The gross increase of population creates a problem immediately confronting mankind. This was the problem Malthus had in view in his celebrated Essay on Population. But there is also this other possibility, the possibility of improving the race by selective breeding, as races of dogs and horses have been improved, and as new and better Indian corn and wheat have been produced in recent years. This is a question for the biologist rather than the economist. In the Science of Life we tell of recent work in economic biology and we discuss and point out some of the difficulties in the way of human eugenics. We will recall these conclusions in a brief section following this one, to make it clear why Eugenics is not yet to be regarded as a practical proposition.

The question of Birth Control is a fairly straightforward one so soon as it is stripped of its eugenic entanglement. It has nothing to do with a "human stud farm," as some antagonists say it has. It is independent of quality. It is essentially a question of numbers and of quite practicable checks on their inordinate increase. The experience of the past few decades proves abundantly that where the standards of life are high, human beings, directly the conditions of parenthood become at all difficult and the necessary knowledge is available, are extremely ready and willing to lighten the burthen and anxieties of parentage. The possibility of overpopulation is formidable only in a darkened and ignorant community invaded in spite of itself by life-saving and food-increasing inventions from within or without, and even then it can be but a passing phase of distress.

### § 2. Impact of Races and Cultures

Our review of human lives as they are being lived at the present time takes us from high lights of spacious hopefulness to teeming wretchedness in the blackest of shadows. Our blackest, our most horrible section has been § 7 of Chapter VII, and frightful and disgusting as that section is, it has nevertheless been mitigated and

toned down to make it endulable by the ordinary reader. It is really cannibalism that is occurring; not indeed the devouring of one man by another but the devouring of one human society by another. Whole populations have been and their remnants are still-now while the reader sits over this book—being tormented and crushed to produce salable products, very much in the same fashion as the penguins of the Southern ocean are massacred and crushed for marketable oil. There is no Humanity, no Homo sapiens, embodied in a world government to protect them; there are only competing sovereign states, not concerned by their extirpation. How the "policies" of these competing states have barred enquiry in one case, we shall note later. It would be inhuman to leave this account we are giving of human populations at this; to give merely the account of these miseries without some discussion of what is being done and what is being promised and attempted to alleviate this frightful pressure of raw and undisciplined modernism upon backward and defenceless populations.

In the preceding section we have shown that in all probability the main pools of human population are likely to remain, for at least a very long period, with their general proportions to one another and their innate characters and qualities unchanged. But they are all under the influence of parallel cultural changes, and they are all being brought now into the same economic net. At a great number of points the chief "races" are either blending or becoming joint occupants of common territories without blending, or with various political and cultural complications they are in active conflict for the possession or control of disputed areas. The inequalities of social and economic progress during the past two centuries have given the "white" races and governments an inordinate destructive material advantage over the black, brown and yellow peoples, and the absence of any world government, and indeed of any operative world ideology for the common good, makes the regions of racial and cultural overlapping regions of disastrous dominance, brigandage, subjugation and revolt, while the world-wide exploitation of natural resources by white finance and economic enterprise is the cause everywhere of a hundred distresses for the disadvantaged millions of colour.

The broad reply to the question, "How is this present enslavement, torture and conflict of races and peoples to be ended?" is plainly to press on as fast as possible from our present division of the

world's control among seventy-odd sovereign governments towards a world control and the scientific and comprehensive treatment of the matter as one whole. World controls and scientific planning are the broad remedies for most human ills. But that answer is so broad, so very broad, that it leaves us still without any clear ideas of what to advocate and what to do for the miseries of to-day and to-morrow, the immense miseries that actually oppress and threaten millions of our species who will never see and much less benefit by that world rule and world plan towards which things are moving. Nor does that broad reply give us any criterion for judgment upon the actual methods of dealing with these things at the present time.

Two preliminary questions, however, have to be asked before we can pass any judgments at all in this field. The first is the question whether, of the main races of mankind, some are "superior" and some "inferior," or whether there is a practical human equality throughout the earth. The second is whether there is anything formidable and undesirable about free mixture between the peoples of these broad divisions. Upon both questions there is a voluminous and unsatisfactory literature, only to be compared in quality and temper to the unlimited frothings of prejudice and rubbish, of which we have already complained in Chapter XI, evoked by the discussion of sexual relationships. As between white, yellow, brown and black, considered as wholes, it seems impossible to fix a scale of gradations that justifies any social subjection or servitude. The question is complicated by the existence of really primitive and undeveloped peoples in small numbers, like the white hairy Ainu or the pigmies or the Australian black-fellows, and by the fact that in populations of every colour inferior strains are perceptible. But these ethnological pockets and these bad streaks do nothing to justify broad colour generalizations. Professor J. W. Gregory\* quotes ample authorities to sustain a virtual innate equality in the case most in dispute, the case of the American Negro. The Negro is different from the white or yellow man; that gives him advantages as well as disadvantages; he is better at this and worse at that; but it is only by marking all the points of difference in the white man's favour that the thesis of the white man's intrinsic supericrity can be sustained. The "poor white" strain in Georgia compares badly with

<sup>•</sup> The Menace of Colour (1925), Human Migrations and the Future (1928), Race as a Political Factor (1931).

its coloured neighbours. In South Africa the black is so far from being inferior to the white that the Kaffir is debarred from education, skilled trades and various professions, to *protect* the white from his competition.

But while Professor Gregory admits the virtual equality of all men and would have no race subject to another, he displays a strong conviction against intermarriage. He has collected various casual opinions about the inferiority of half-breeds to individuals who are what is called racially "pure," and he brings in his own widely travelled impression of the inferiority of the "mulatto." I note his impressions with respect but not his conclusions, and against them I put the much wider and more intimate experiences of such observers as Lord Olivier and Sir Harry Johnston.\* Lord Olivier knows Jamaica as few other observers do. He was once Acting Governor, 1900-04, and once Governor, 1907-13, and he has revisited the island in 1930 and 1931. The population of Jamaica is about a million, of which 1,500 claim to be "pure white" and 150,000 mixed. The rest are definitely "black," but black drawn from very various African sources. "The administrative, professional, commercial and clerical classes are predominantly white or coloured, but include some who are pure black. The owners of the large estates are probably in most cases white, inheritors of the former white 'plantocracy,' but many are coloured, and there are great numbers of coloured and black proprietors of smaller farms and about 11,000 black and coloured landowners having from one to fifty acres. In this community there is no policy whatever in relation to contact between races. There is no colour bar and no discrimination of civil rights. There is a constant tendency to economic and social advance of the coloured and black people. The capable white people hold their own, and there is practically no poor white class in indigent circumstances. There is an aversion on the part of 'pure white' people to intermarriage with the coloured; but such marriages with near whites or reputed whites are not uncommon. The people of mixed race do not tend to disappear, nor do they constitute a separate class. Their proportion increases. Physically and intellectually they are vigorous. There is a very fine physical type of dark coloured men and women commonly called 'Sambos' which seems well established. They are energetic

<sup>•</sup> Particularly his Negro in the New World.

and independent in character."

Since he first knew the island Lord Olivier declares that the progress of coloured people has been conspicuously recognizable. There is still a certain amount of colour prejudice as between adjacent groups. But it is much less than it was forty years ago.

"Since I have been acquainted with Jaraaica," writes Lord Olivier, "there has been a great increase in the facilities for the secondary education of coloured young persons of both sexes, and this has involved improvement in hygiene and athletic nurture. Coloured and black youths now hold their own in sports with those of any other race in the world. Note, for example, the recent performance of the West Indian Cricket team in Australia. . . ."

In "Jamaica, a Racial Mosaic" (in *Opportunity*, May 1931) R. L. Buell insists that differences are more cultural than racial. "Black Jamaicans who are educated and well-mannered are received upon a basis of complete equality."

The evidence of Lord Olivier is first-hand evidence of a very competent witness indeed, and it contradicts Professor Gregory flatly. It is Lord Olivier's opinion that the half-breed is so often a moral and social failure because he is a misfit; he falls between two stools; there is no established culture for him, and there is prejudice against him; given proper opportunity he might just as probably as not prove an interesting and successful blend of qualities; and there is nothing in the uncontrolled verdicts Professor Gregory assembles to affect this explanation. Basing myself upon this evidence I do not share that fear of a free social and economic intercourse, even to the point of intermarriage between all racial types.

Another apparently successful mélange of races is to be found in Hawaii. There, says Professor Romanzo Adams, the Professor of Sociology in the University at Honolulu, practically all the main races of mankind mingle socially and genially.

Captain Leo L. Partlow, in an interestingly illustrated article in Asia for June, 1931, says:

"Former Governor Farrington once called the Territory of Hawaii 'the world's greatest adventure in friendship.' It may seem sentimental rather than scientific to suggest that there is such a thing as the 'Hawaiian atmosphere,' in which goodfellowship between races seems perfectly natural. Yet the various races in

Hawaii do seem to accept one another as a part of the environment, without prejudice or favour. I should not quite say that they freely intermingle socially nor yet that they remain good-naturedly apart. They attend to their own affairs, and, if those affairs bring them together, they come together without antagonism or self-consciousness. If any but the whites have a feeling of racial superiority, I do not detect it. . . . Racial intermarriage is practised to some extent between all the various groups, but there is no indication that it is, or tends to become, general. Indeed, the Japanese never have intermarried to any great extent with any other race, and the inter-racial marriages of the Chinese—principally with the Hawaiians and Filipinos—are decreasing rather than increasing. Whatever may be the eventual outcome, nothing now indicates a homogeneous physical blend."

To leave intermarriage free, one must remember, is not to make it universal or obligatory. It is a matter for individual preferences to settle. Mostly, I believe, like will marry like. I see nothing alarming, but much promise of varied interest, in a marginal mixed society—which is always likely to remain a marginal and intermediate society. The main pools of population will, I think, continue to absorb and assimilate what falls into them by virtue of the better adaptation of the regional type to regional conditions, and of its acquired resistances to local disease, and I see no necessity for emphasizing by bars and prohibitions racial conflicts and struggles in the areas overlapping. The setting up of racial barriers and segregations I regard as reactionary and mischievous and doomed to painful failure. These are, of course, merely personal opinions in a region of thought in which nothing better than opinion is yet possible.

So far as restrictions and prohibitions go, Lord Olivier is very insistent upon their bad imaginative results. "They will," he remarks, "produce very silly and very bloody romances."... They may produce such tragedies in great numbers. Plainly down that vista one can see race outrage and the moonlight pursuit, Judge Lyrch and the Ku Klux Klan. And no end to that vista.

Obviously, with these primary issues still so much in dispute, our judgments upon actual methods of racial adjustment to modern stresses must remain to a large extent individual and provisional.

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Two systems of will and intention play against each other in this business. This has been very clearly expressed by Lord Lugard in his Dual Mandate. On the one hand there are the urgencies arising out of the idea of a modern world economy, using all the natural products of the earth, freely and thoroughly, for power and plenty. To that economy the distinctive products of every region of the earth must contribute, and it is necessary that, in unsettled or socially and politically backward lands where the local population is living under an ancient traditional savage or barbaric régime, some methods of exploitation should be adopted to bring these natural products into the new world system. Some invasion of the indigenous culture is inevitable, if the new system cannot work and cannot balance itself without these products in abundance.

How is that invasion to be made? The gravitation of these natural products to the modern centres of manufacture is so great that if the business is allowed to occur without control, tragedies of brigandage and cruelty, legal or quasi-legal, on the Congo and Putumayo pattern are inevitable. Free invasion and uncontrolled conflict is the way of nature, and the way of nature is not only cruel but disastrously wasteful. Like all exploitation for immediate private profit, like the present exploitation of forests everywhere, like the whale and sea fisheries and the penguin massacre, the modern private-profit system in these regions of coloured labour is getting natural resources too abundantly and too cheaply now while creating a shortage in the future. And in the cases we are now considering it is enslaving and destroying human beings to do so.

As this is apprehended there comes into action the second series of motives, the other command of the *Dual Mandate*: care not only for economic output but for the present and future welfare of the native. The economic invasion of these productive backward regions, we admit, must occur, but their human and other natural resources must be protected and conserved. This means a protective interference with the social life of the native in the place of a massacre. There is no other alternative. But that interference, it is held, can be and must be for the native's ultimate well-being. The economic annexation must needs be rapid, but the assimilation of the native into the world commonweal may need a lengthy education. The haste, therefore, must be canalized and restrained. The obvious dangers of hypocrisy and of a sham and enslaving "pro-

tection" are plain enough. Just how much interference there may be and what should be the quality of the interference is the question.

Now, there are four chief methods of interference possible. The first is to push the native aside from the coveted region of mines, forests, or cultivatable soil, into reserves, and to plant workers from some other region upon the district of exploitation. Usually under this method the native in the reserve dwindles away. The reserve is all too often a shrinking area of undesirable land. Imported white labour and imported Asiatic labour have proved failures in South and East Africa, but the Negro was established in this fashion in the days of frank slavery in the West Indies and America.

Or, secondly, the native can be pushed aside into a reserve, but from that reserve he is tempted to emerge as a wage-earner in the region of exploitation. The reserve is thus made a labour tank of supply. The trouble is that usually he will not be tempted in sufficient numbers to satisfy the impatient white planter or mine owner.

So we come to the third system of treatment, dear to the whites of British East Africa, for example, "pressure" on the reserves. The natives are, for example, taxed, a head tax or a hut tax, and the tax is payable solely in money, which can be got only by plantation work. Or in other ways up to actual conscription by the chiefs the native is to be compelled to come in. And to keep him in the desired path he is to be restrained from occupations by which he may earn on his own account. Education which might "put him above" mine or plantation work, is to be denied him. So native labour, it is supposed, can be kept cheap, poor, inferior and submissive, and the white settler can have a reasonable prospect of an indolent competence while directing the exploitation of the invaded mines or lands This is the Afrikander policy. In South Africa things are making clearly towards a dangerous two-caste society, in which a minority of whites will rule over an artificially restrained, uneducated, disenfranchised coloured labour majority. Anatomy of African Misery (Chapter XI) deals faithfully with the frank economic purpose of Hertzog's Native Land and Labour Bills,\* and he has been largely instrumental in the appointment of the Joint Select Committee which has arrested the development of a similar state of things in Kenya.

<sup>·</sup> See also Olivier's White Capital and Coloured Labour, Chapters XIII and XIV.

In his book Kenya, Dr. Norman Leys indicts the white settlers of that colony very forcibly and effectively. General Smuts, in his Africa and Some World Problems, propounds a scheme for an Africa dominated throughout by a backbone of white settlers in the highlands, a scheme subjected to very destructive criticism by J. H. Oldham's White and Black in Africa. A network of restrictive legislation seems to be closing about the black peoples of the Dominion of South Africa. They are being deprived of educational opportunity and political expression. They are being driven towards the alternatives of mass insurrection or complete degradation.

A fourth line of treatment—which has a weaker appeal to the white settler in a hurry—is to treat the native fairly, to police his country, to teach and show him how to cultivate the desired product, to make it worth his while to produce it and gradually bring him into the position of a tenant farmer, with technical guidance and help and a sure market for his produce. This has been the British policy in the new cotton-growing areas of Nubia.\* It marches with what we have developed in Chapter IV on the trend of agricultural reorganization throughout the world. In this way an intelligent native population might be brought step by step and freely and happily into line with modern conditions.

In Jamaica practically the same method has been followed, and a prosperous and contented black and coloured peasantry has been raised from its original status of imported plantation labour to a level which compares favourably with many south-eastern European cultivators. It is certainly as well prepared as they are to pass on towards that scientifically organized individual farming by state tenants under central control which we have given reasons (in Chapter IV) for regarding as the probable normal method of production in a completely modernized world.

The Gold Coast and the not very distant Portuguese islands of San Thomé and Principé are interesting exhibits for us here, since they offer a vivid contrast between the system of justly treated native production and what is practically slave labour. The cocoa-growing of the Gold Coast is due to native enterprise. The cacao tree is of South American origin; it has long been grown on the island of Fernando Po, and in 1879 a native blacksmith named Tette Kwesi had the energy and intelligence to bring a few pods to the

<sup>•</sup> See Odette Keun's A Foreigner Looks at the British Sudan (1930).

Gold Coast. Other natives took up the cultivation and in 1891 the colony exported eighty pounds of cocoa. The Gold Coast government follows the policy of encouragement to native farmers and prohibits the acquisition of land and the formation of plantations by white adventurers. Buying firms insist upon standards of quality and the Gold Coast Agricultural Department provides instruction in planting, cultivating and preparing the cocoa. And behold the result! By 1929 that initial export of eighty pounds had grown to 233,000 tons, about forty-three per cent of the whole world output, all grown by free native farmers, sanely governed and guided. In Ashanti and Nigeria the same methods have been adopted with a parallel success.

In San Thomé and Principé, a few hundred miles away, the plantation system rules in all its ugliness and misery. The attention of Cadbury's, the British chocolate makers, was called to this fact in 1901 by the offer for sale of a San Thomé plantation in which among other assets was an item of so many labourers at so much a head and an inferior grade of labourer at a lower price. The offer was declined, but that listing of labourers as chattels rankled in the mind of Mr. William Cadbury and led him to investigate further. He secured the co-operation of two other British firms, Fry and Rowntree, and the German firm of Stollwerck, and an investigator named Burtt was sent to prepare a report. It appeared in 1907 and was a thoroughly black one. It was a plain case of slave labour masquerading as contract labour. Most of the workers were caught in Angola, brought chained and under conditions of great hardship and cruelty to the coast, and shipped to the islands. There, with a view to outside criticism, they were made to go through the farce of signing a contract. But none was ever repatriated. When the contract expired they were forced to sign another.

We will not go on to tell the story of the efforts to end this state of affairs. They involved a libel action and other complications from which the cocoa firms concerned emerged very honourably. Foreign policy required that Great Britain should show great consideration for Portuguese feeling. But the cocoa firms named were able to secure the co-operation of their leading American competitors in a boycott of the tainted product, and by 1918 considerable reforms had been effected. How far these reforms were permanent is unhappily in doubt. San Thomé and Principé retain the plantation

system, and in 1930 when the British Delegate at Geneva pressed for enquiry into the general question of slavery, the French, Italian, Portuguese and Abyssinian delegations opposed it successfully. France and Belgium have also refused a Forced Labour Convention with Britain. The better chocolate firms, the best known makes and names, still boycott plantation cocoa, but it finds a ready sale among their less scrupulous competitors. Thus, within an hour's flight of each other by aeroplane, you have the two contrasted systems of production in active competition. You have one black population being civilized and another being degraded and destroyed. And you have some intimation of the tangle of international politics which protects the evil method.

Let us return now to that other aspect of this problem of racial impact, which is raised by an exaggerated fear of miscegenation and by the prejudices of hates arising out of that fear. Here the writer's bias in favour of one human community is so strong that he finds it impossible to state the case against his own persuasion. He is convinced that in a properly educated world people can live in a state of racial mingling without any tragedy at all, civilly and kindly. He disbelieves altogether in bars and permanent reserves. He accepts Jamaica and Hawaii as his justifying experiments. He believes that race hatreds and conflicts are due mainly to economic tension, bad traditions and diverse conceptions of pride and behaviour. They are stupidities, they are vulgarities that the schoolmaster should anticipate and destroy. There is indeed hardly any race conflict in the world that is not deeply rooted in economic motives. But since that is an abnormal point of view, let the writer stand aside here for Dr. Malinowski, Professor of Social Anthropology in London University, who has written as follows (op. cit.):

"What is the conclusion, then, to which we are forcibly driven by facts? Obviously, that the co-existence of two racial stocks side by side is inevitably a source of serious dangers and a starting-point of a long series of troubles. Once the process of mixture and conflict begins, the best we can hope is that one race should oust the other, or that a new preserve should be founded for the new mixed race. Why, then, not avoid the tragic process with all its evil implications and consequences? Why not frankly state that the only sound

policy is that of racial and cu'tural preserves: the policy, that is, of indirect rule, of limited settlement for administrative purposes only, and the development of indigenous colonies on indigenous lines and, as far as possible, through indigenous enterprise? It would be untenable to object that this is not a practical policy. It is *de facto* the main principle of the policy of indirect rule which is, more or less, consistently carried out in the West African colonies. It has led to good results in Nigeria and in Uganda, in the Gold Coast and in the native protectorates of southern Africa.

"Moreover, the policy of racial exclusion is being carried out on a vast scale, consistently and efficiently. White Australia has resolutely closed its doors to superior Asiatic immigration, and it has deported in bulk inferior Kanaka labour. Similar racial preserves have been proclaimed in the Union of South Africa and in Canada, in Kenya and in many other white colonies. The United States of America have closed their frontiers completely on the West and very tightly on the East. Within Europe, Great Britain has excluded foreign immigrants.

"In all this we recognise a right policy, and we do not speak about violating the 'Dual Mandate,' though the 'world at large' would benefit appreciably if a score of million Asiatics were distributed over Queensland and the Pacific States, over the Northern Territory of Australia and the plains of Canada. Here is an immense wealth of fertile, unexploited regions wasted for the world, because the uplifting influence of effective Asiatic labour, of Chinese industry and Japanese organisation, is not being applied to it. This is the same moral argument as is used now to justify white settlement in East Africa. But both moral attitudes are wrong. Australia is not the yellow man's country, because, unless he could exterminate the few million whites there resident, he would create trouble for them and for himself. East Africa is not the white man's country because, again, he cannot exterminate the Negro; because he does not want to be blended racially, and because the only solution, a stratified community, is wrong all round."

Let there be a brief interpolation here. Dr. Malinowski was educated as a Pole, as a conscious aristocratic patriot (see Who's Who) in conflict with the central European synthesis. Most of us were brought up also on sound patriotic lines, and we cannot cast a

stone at him on that account. But in what follows is it the Polish patriot or the emancipated London professor who is thinking?

"One more point must be made. The steam-roller of universal Western culture is undoubtedly levelling the cultures and societies of the world. . . . But, against this universal levelling, there is developing a strong reaction. The powerful assertion of political independence by the small nations in Europe was, perhaps, its initial symptom. National languages are revived, national religions set up, forms of national art and national literature cultivated, in opposition to the prevalent internationalism. Outside Europe, Egypt has claimed and received a considerable measure of independence: Turkey, while superficially adopting European ways and manners, has reasserted her national autonomy; Afghanistan has dealt even more drastically with spurious Westernization; India is on the way to dominion status. In America, there is a strong resistance by the Latin-Indian nations against the cultural conquest of the North. Japan led the way in the fight for Eastern self-determination, and China may, in the future, completely reassert its cultural autonomy and achieve its national unity."

I repeat that I quote these views to disagree with them. This renewed fragmentation of mankind which Dr. Malinowski seems to welcome, this flickering back of his mind to nationalisms and autonomies, is a relapse from cosmopolitanism to Polish patriotism unworthy of the London School of Economics. The trend of material forces in the world is all towards unification of control, however traditional sentiment and prejudice may resist that trend. Those more elemental directive influences will not tolerate these particularisms, these reversions to nationalism, these failures to tolerate or combine. Those post-war setbacks he cites, to the movement towards one great confluent human community having darker and fairer regions indeed but with no boundaries, castes or other fixed divisions, have occurred because that movement was, to begin with, so clumsy, planless and unforeseen. What Dr. Malinowski calls "the steam-roller of universal Western culture" was in fact not a culture at all. It was a steam-roller of blind forces, that has yet to produce a conscious world culture. It was an economic rolling preparing the soil for a world culture. A halt and even a

phase of reaction may be inevitable, but at best that is no more than an interlude, a resting pause, a phase for thinking things out better, before the conscious, measured and designed establishment of a world order and a world law in which all men will live at peace together is resumed.

### § 3. Eugenics

To make our review of human affairs comprehensive we have had to plan a considerable number of sections, bringing in this activity or that possibility. Here, for once, is a section about something that hardly comes in at all, Eugenics. We have to make clear as briefly as possible, why at present the practice of Eugenics does not come into a survey of contemporary mankind, and then we can dismiss the subject and proceed to other aspects of the human spectacle.

Eugenics dates from 1885. We owe the word to Sir Francis Galton, the founder of the science. He died in 1911, leaving money to found a Chair of Eugenics at University College, London. He worked in the days before the development of the science of genetics and before the dawn of any adequate classification of human quality. He was eager for immediate applications; he wanted to set about improving the race without any close critical examination of the assumptions on which his plans were to be based. He thought there were large, indisputably superior people in the world, moving about amidst the small inferior multitudes, and that it would be possible to pick out, mate, and breed these superiors. This he termed "positive eugenics." He thought also that there were people definably inferior whose breeding ought at all costs to be prevented. That was to be "negative eugenics."

Bur human relationships are complex and subtle, and the various attempts that have been made to measure "intelligence quotients" and the like, so as to show that there are social elements which have in their heredity a class superiority or a class inferiority to the average, are all open to very destructive critical objections. The only case that has been made out with any degree of conviction is the case for the segregation and sterilization of mental defectives.

There does seem to be a reasonable assumption that congenital defects of certain types are, so far as very many of them are concerned, hereditable, and at any rate, since restriction upon popula-

tion is a world necessity, there is 1.0 reason why the slight unobtrusive and practically painless operation of sterilization should not be performed upon them. Nor is there any sound objection to the sterilization of criminals convicted of brutish violence. The balance of evidence tilts towards the conclusion that such qualities are transmissible and, even if that conclusion is unsound, nevertheless the suppression of offspring in these categories will eliminate the certainty of a number of children being born in unfavourable surroundings at a great social disadvantage. Again there is every reason for the temporary or permanent sterilization of those who have contracted hereditable diseases. For a fuller discussion of these points than is possible here the reader should consult Carr-Saunders' book on Eugenics. The sterilization of certain types of defectives is now (1930) the law in California, Connecticut, Delaware, Idaho, Iowa, Kansas, Maine, Michigan, Minnesota, Mississippi, Montana, Nebraska, New Hampshire, North and South Dakota, Oregon, Utah, Virginia, Washington and Wisconsin.

When we pass from such extreme and obvious application of negative eugenics towards positive eugenics, we find ourselves passing from a field of reasonable probabilities into a tangle of riddles.

In the early days of Galton it seemed reasonable to assume that a child was essentially a blend of all the qualities of its parents. Only a few acute observers, then, doubted that assumption. But the science of genetics has made it clear to us that the characteristics of an individual are not the expression of all his hereditable possibilities. In the Science of Life, with the help of diagram and full explanation, we have made clear how it is that this should be so, we have described the splitting of chromosomes, and we have shown how "recessive" qualities can be transmitted by parents in whose personal make-up they do not appear. Only the half of a human being's full equipment of hereditable qualities is handed on to any particular offspring, the other half comes from the other parent, and the combination of these two half-sets may be quite a different selection from what appears in either the mother or the father. To take a simple instance, having blue eyes is, it seems, a "recessive" quality in heredity. Two brown-eyed people may each be carrying this recessive latent in their reproductive cells, and chance may pick this out from both of them to blend in making a blue-eyed child.

Manifestly, then, we are not going to produce miraculous beings

with any certainty by mating people of outstanding beauty and intelligence. The delightful combination of these qualities in either case was an accident not easily repeated. All sorts of recessives' may pop out to grimace a.

cannot recall the half-handsome children or the very brilliant offspring of the genius? Now and then, of course, there may be a run of luck, but our best chance of getting any quality repeated, say the biologists, is to inbreed closely, which at the primary social sin, incest.

qualities will be eliminated altogether. Certain types of mental deficiency are supposed to be "recessive." It is quite possible, therefore, that two quite admirable people should have a defective child. Such tragedies occur. The sterilization of defectives will not end, it will only diminish, the supply of defectives. Recessives can hide from generation to generation waiting to meet a kindred gene. When, therefore, biological workers seek to evoke and fix a new variety of some plant or animal, they resort to expedients quite outside our present liberties with human material. The first thing is to discover the recessives by the freest promiscuous breeding and interbreeding. Every undesirable recessive thus brought to light is then thrown out of reproduction; every individual known to carry a recessive is also cast out. When at last a "pure" strain is achieved, all the rest are destroyed, sterilized, isolated, or otherwise put beyond the possibility of re-entering the reproductive stream.

And also, be it noted, in the case of plants and insects and so forth the breeder works for one simple quality. He wants a bigger ear of wheat, he wants resisting power to some disease or to some degree of cold. Nothing else concerns him. Everything else he can sweep away. But we do not know with anything like that much narrowness what we want in human beings. We do not want human beings to become simply taller or swifter or web-footed or what not. We want a great variety of human beings. And the qualities we want are complexes, not simple hereditable elements. It sounds paradoxical, but it is probably true that a large proportion of distinguished men and women are distinguished quite as much by a defect as by an outstanding gift. A man who has a "gift" generally needs, in order to develop it, exceptional freedom from secondary

motives. He will specialize and concentrate all the better if there is no other strong impulse in his composition to distract him from the call of his gift. So we hear that among distinguished people so and so is sexless; so and so, strangely heartless with women; so and so is incapable of managing his household or his business affairs; so and so, absent-minded and forgetful of engagements to the pitch of gross incivility. Yet one of these is, say, a great artist, another a great mathematician, a third a distinguished lawyer, the fourth a statesman. All of them might give the most disconcerting results with intelligence tests. A story is told by Einstein against himself that comes in amusingly here. He is a great mathematician, but he is not a ready reckoner, and during the crisis of the mark he thought that a tram conductor had given him back too much change—a hundred thousand marks or so-and had to be convinced of his error. "Everybody," said the kindly tram conductor, "hasn't the gift of calculation with these big figures. I mustn't take advantage of you . . ." And Laplace, one of the greatest mathematicians the world has ever known, was dismissed from the Ministry of the Interior by Napoleon for the grossest incompetence. But our organizing world requires these exceptional individuals far more than it does an endless multitude of fairly good-all-round people.

That is how things stand at present. Biology, like all sciences, may spring the unexpected upon us at any time, but unless some such surprise occurs, no deliberate improvement in human quality is likely to be attempted. We must tolerate much that is odd and weak lest we lose much that is glorious and divine. For man reproduction is so slow, and his conditions of survival so complex and individual at present, that no natural process of selection can now be in effective operation, whatever may have been the case with his shorter-lived ancestors. There is considerable finality about Homo sapiens. For many generations, and perhaps for long ages, we must reckon upon a population of human beings not very different from those we have to deal with to-day. We shall meet with the same mental and temperamental types and the same racial characteristics that we encounter in the cast of the human drama to-day. The deliberate improvement of man's inherent quality is at present unattainable. It is to a better education and to a better education alone, therefore, that we must look for any hope of ameliorating substantially the confusions and distresses of our present life.