SIR JULIAN HUXLEY, M.A. D.Sc., F.R.S. The Impending Crisis^{*}

IRST OF ALL I want to begin by reminding this audience that this conference has two functions—one to discuss the population crisis and the other, to honour Margaret Sanger. Margaret Sanger, as you all know, is a great woman, whose work has blossomed out through the decades since she initiated it—first of all, her work for birth-control in the interest of individual compassion and justice, then her work for family planning, which soon branched out to become a social movement of great importance, and took root in other lands, and finally is today being transformed to a world-wide movement concerned with population the world over.

As regards the Impending Crisis of Population, your Chairman has reminded you that I am a biologist; accordingly I shall try to take the broad view of an evolutionary biologist, who must try to look at things in the light of the enduring process of evolution of which we all form a part. Seen in this light, the population crisis is part of a very critical period in the history of the world.

Thanks to the new vision which we have attained through the knowledge explosion which has gone on parallel with the population explosion in the last half-century, we have a new vision of our destiny. To-day evolution in the person of man is becoming conscious of itself.

I do not want to amplify this at great length. I would remind you, however, that all reality is, in a perfectly genuine sense, evolution; that biological evolution on this planet has been going on for nearly 3,000 million years, and that in the course of that period life has advanced (not only increased in variety, but advanced in organization) so that its highest forms, instead of being submicroscopic, tiny, pre-amoebic

units, grew larger and more powerful, and after hundreds of millions of years, vertebrates, then land vertebrates, and eventually the final dominant type, now spreading over the world—man.

And man is now, whether he likes it or not, and indeed whether he knows it or not (but it is important that he is beginning to know it), the sole agent for the future of the whole evolutionary process on this earth. He is responsible for the future of this planet.

Now to come back to the present crisis. I would describe the present crisis as one in which quantity is threatening quality, and also one in which the present is threatening the future. Before we make up our minds what we ought to do in the present crisis—it is no good just getting into a flap and saying that we ought to do something—we must try to find what our ultimate aim is as agent or leader of evolution on this earth.

Surely, it isn't just power. Surely it isn't just to eat, drink, and be merry, and say, "Well, what's posterity done for us? To hell with posterity!" It isn't just mere quantity of possessions or mere quantity of people. Nor is it only preparation for some rather shadowy afterlife. I would assert that it must be to hold in trust, to conserve and to cultivate the resources of the earth and the resources of our own nature. And so our aim should be to increase the richness of life and enhance its quality.

"Fulfilment" is probably the embracing word: more fulfilment and less frustration for more human beings. We want more varied and fuller achievement in human societies, as against drabness and shrinkage. We want more variety as against monotony. We want more enjoyment and less suffering. We want more beauty and less ugliness. We want more adventure and disciplined freedom, as against routine and slavishness. We want more knowledge, more interest, more wonder, as against ignorance and apathy.

We want more sense of participation in some-

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thing enduring and worthwhile, some embracing project, as against a competitive rat-race, whether with the Russians or our neighbours on the next street. In the most general terms, we want more transcendence of self in the fruitful development of personality; and we want more human dignity not only as against human degradation, but as against more self-imprisonment in the human ego or mere escapism.

If we look at the present scene in the light of some such vision as this, what do we see? I might begin by telling a little of what I saw in Africa last year. I was sent there to report to UNESCO on the conservation of wildlife and natural habitats. And in the wonderful Queen Elizabeth National Park in Uganda the animals had been so well preserved that the hippos were over-multiplying and had trampled down the margins of the lakes and the channels; they had eaten up all the surplus food, and in fact were destroying their own habitat. The point I want to make is that man is now busy destroying his own habitat.

As Professor Harrison Brown will tell us, man has been over-exploiting the natural resources of this planet and has been ruining its soils and doing all sorts of other unpleasant things to it. He has wasted enormous amounts of resources which he ought to have conserved. He has cut down the forests and caused floods and erosion. As Mr. Fairfield Osborn put it in the title of his book, he has plundered our planet. (Can we expect another book from him, with the title *Our Blundered Planet*?) And so we are well on the way to ruining our own material habitat.

The further point I want to make is that we are beginning to ruin our own spiritual and mental habitat also. Not content with destroying or squandering our resources of material things, we are beginning to destroy the resources of true enjoyment-spiritual, aesthetic. intellectual. emotional. We are spreading great masses of human habitation over the face of the land, neither cities nor suburbs nor towns nor villages, just a vast mass of urban sprawl or subtopia. And to escape from this, people are spilling out farther and farther into the wilder parts and so destroying them. And we are making our cities so big as to be monstrous. They are growing to

such a size that they are becoming impossible to live in. Just as there is a maximum possible size for an efficient land animal—you can't have a land animal more than about twice as large as an elephant—so there is a maximum possible efficient size for a city. London, New York, and Tokyo have already got beyond that size.

Mr. Chagla has said that civilization has already imposed a grievous burden on the future. I entirely agree. We have to try to lighten that burden and in any case to prevent its getting heavier. To take another metaphor, man is losing his claim to be the lord of creation, and is in danger of becoming the cancer of the whole planet. Not a very nice prospect, but a perfectly genuine one. In the message which the Australian scientists sent to this conference, they made a profound and depressing remark that unless we took some care, the peoples of all countries all over the world would soon become underprivileged.

To look at the crisis more specifically, first of all there are nearly 3,000 million people on earth. Whatever happens, there will be about 6,000 million people by the end of the century, well within the lifetime of many of our children already living. Even at the present moment, over half the world's population are under-fed, under-healthy, under-housed, under-wealthy, under-educated and in general under-privileged. There is an immense gap between the "haves" and the "have-nots," the privileged and the under-privileged; and the gap is widening instead of narrowing.

The world's present rate of population-increase is something phenomenal. It is about 50 million a year, and increasing every year both for simply arithmetical reasons and because the compound interest rate of increase is still itself increasing. That means the equivalent of one good-sized town every twenty-four hours—a hundred and forty thousand odd. If you like to think of it in terms of minutes, it is the equivalent of ten baseball teams complete with coach every minute. And yet there are people who have so little quantitative sense that they talk of getting rid of our surplus population by sending them off to other planets!

Then there is the other great myth of the present day, that this crisis can be solved by Science—Science with a capital S—a sort of mystical magician. "Science will find a way." Well, it's not finding its way very well at the moment; Japan, for instance, has done a wonderful job in bringing its population rate of increase down, but it is still increasing at nearly 1 per cent per annum and is already bursting at the seams. Science is not finding a way to make our traffic problems in big cities much easier. And it is completely unable to cope with the appalling problems of health and housing in great overlarge cities in under-privileged countries, such as Calcutta.

Then there is the point that our Chairman made with reference to what Mr. Eugene Black has recently said—the point that science cannot find a way of successfully industrializing underdeveloped countries if their birth-rate is too high. That is one of the important points that has emerged from careful economic studies. In order to industrialize an under-developed country, you need a great deal of capital and a great deal of human skill and expertize. If you have too many human beings to feed, house, educate and service, that capital and skill will be used up in looking after the growing generation, and you won't be able to industralize.

This comes out very clearly in the study of possible industrialization in India by Professors Coale and Hoover in which they pointed out that unless India got its birth-rate down by about 50 per cent in the next thirty-five years or forty years, it would never be able to break through to a successful, advanced, industrialized economy.

The same sort of thing applies even to developed countries. You can't develop your educational system adequately if too many children are coming along. I noticed in the paper that the classroom deficit in the United States had not been reduced but had actually increased in the last year of the last administration. I was once Director-General of UNESCO, and there we are all the time struggling to keep up with the enormous deficiencies of educational systems all over the world: how can we do this when increasing floods of new children are coming along all the time?

One thing that science could do would be to

discover better methods of birth-control. That indeed is the key to the whole matter. Physiological and medical science has already brought about what we may call "death-control," with the result that population is exploding; but it has not done the necessary converse of this discovering what to do about birth-control. I would say categorically that the control of population by means of birth-control applied on a large scale, is a prerequisite for anything that you can call progress and advance in human evolution, even in the immediate future.

The time has now come to think seriously about population policy. We want every country to have a population policy, just as it has an economic policy or a foreign policy. We want the United Nations to have a population policy. We want all the international agencies of the U.N. to have a population policy.

When I say a population policy, I don't mean that anybody is going to tell every woman how many children she may have, any more than a country which has an economic policy will say how much money an individual businessman is going to make and exactly how he should do it. It means that you recognize population as a major problem of national life, that you have a general aim in regard to it, and that you try to devise methods for realizing this aim. And if you have an international population policy, again it doesn't mean dictating to backward countries or anything of that sort: it means not depriving them of the right (which I should assert is a fundamental human right) to scientific information on birth-control and it means help in regulating and controlling their increase and planning their families.

It was said that there are three countries which already have a population policy. Actually there are at least six: India, Pakistan, Japan, Singapore, Barbados and Puerto Rico. They have population policies, and in some cases they have been reasonably successful. It is most important that these countries should be given every aid in pursuing these policies.

When it comes to United Nations agencies, one of the great scandals of the present century is that owing to pressure, mainly from Roman Catholic countries, the World Health Organization has not been allowed even to consider the effects of population density on health. It is essential and urgent that this should be reversed.

There is great frustration in the minds of medical men all over the world, especially those interested in international affairs, who, at the cost of much devoted labour, have succeeded in giving people information on how to control or avoid disease. Malaria in Ceylon is a striking example. As a result of all this wonderful scientific effort and goodwill, population has exploded, and new diseases, new frustrations, new miseries are arising. Meanwhile medical men are not allowed to try to cope with these new troubles on an international scale-and indeed sometimes not even on a national scale. I think I am correct in saying that even in this advanced and civilized country there are two States in which the giving of birth-control information, even on medical grounds, is illegal.

It is essential that this whole question of population policy should be raised in the United Nations itself. The U.N. Assembly should be a forum for airing this major problem of our times. It is already a forum for airing other major problems—disarmament, atomic warfare, and so on. We must not, out of deference to religious or national or political prejudice, put our heads in the sand or pretend that the problem does not exist. We must get it discussed in the most public way in the world's greatest forums.

I do not want to stand between you and the

remaining speakers. I would simply like to go back to where I started and repeat that we must look at the whole question of population increase not merely as an immediate problem to be dealt with *ad hoc*. We must look at it in the light of the new vision of human destiny which human science and learning has revealed to us. We must look at it in the light of the glorious possibilities that are still latent in man, not merely in the light of the obvious fact that the world could be made a little better than it is. We must also look at it in the light of the appalling possibilities for evil and misery that still remain in evolving human life.

This vision of the possibilities of wonder and more fruitful fulfilment on the one hand as against frustration and increasing misery and regimentation on the other is the twentieth century equivalent of the traditional Christian view of salvation as against damnation. I would indeed say that this new point of view that we are reaching, the vision of evolutionary humanism, is essentially a religious one, and that we can and should devote ourselves with truly religious devotion to the cause of ensuring greater fulfilment for the human race in its future destiny. And this involves a furious and concerted attack on the problem of population; for the control of population is, I am quite certain, a prerequisite for any radical improvement in the human lot.