How Original is Original Sin? Aldous Huxley

# How Original Is Original Sin?

Until now I have talked about the human situation in relation to the planetary scale, which is the largest possible one. In this lecture I want to bring it down to the much smaller scale of the individual and to discuss genetics and environment and their relations with our general philosophy of life and political ideals.

I shall begin with a question, and the question is this: How original is original sin? This is a question which has preoccupied men in all countries for a very long time. How original is what seems to be the fundamental badness of man, so strongly stressed in orthodox Christianity? And how original is what may be called 'original virtue', which is stressed more strongly in the Taoist and Hindu traditions (where the basic nature of man is called the 'Atman', and is identical with the basic nature of the Godhead), but which is also within the Christian tradition—what Quakers called the 'inner light' and the medieval mystics used to call the 'scintilla animae' (spark of the soul) or the 'synderesis'.

This question of original sin and original virtue has been asked ever since man started philosophizing about himself, and it has been answered in a great variety of ways. Within the Indian tradition it has been answered in terms of the theory of karma: each of us comes into the world with the end product of innumerable past lives, which somehow have to be worked out life after life. This is an idea of heredity; our original destiny is pre-ordained for us by previous existences, which we inherit. In the Greek tradition the problem is discussed in terms of the relationship between man and the gods on the one side and necessity on the other, a necessity which nothing can change and which dominates even the gods. Finally we come to the Judaeo-Christian tradition, where in the past the question was discussed in terms of grace and free will, of nature and grace, of predestination and salvation by works.

The problem of predestination is summed up in four curious lines from a poem by Matthew Prior—a most surprising poem, because Prior generally wrote rather frivolous and charming lyrics while this is a long reflective poem about religious problems.

Cou'd destin'd Judas long before he fell

Avoid the terrors of a future Hell?

Cou'd Paul deny, resist or not embrace

Obtruded Heav'n, and efficacious Grace?

In the history of Christian theology the whole problem was thrashed out in the beginning of the fifth century in the great controversy between Pelagius and St Augustine. It is worth going into this in some detail because it seems to summarize in the context of an earlier tradition a problem which still vexes us: the problem of nature and nurture.

Pelagius was apparently a Briton, either from Scotland or, possibly, from Ireland. He was brought up in the tradition of the British Church of that

period, which was profoundly affected by the Eastern Church rather than the Roman Church, and he made his way to Rome as a middle-aged man in about 400. He found Rome then, as it generally was for many centuries thereafter, a real sink of iniquity; but he also found, and this disturbed him very much, that the Romans were justifying their behaviour in terms of the Augustinian doctrine of the total depravity of man and the bondage of the will to evil. Granted the truth of this doctrine, why make any effort to behave a little bit better?

Pelagius was evidently an early example of British practicality and empiricism, and he decided that what was necessary was a reform of social institutions and self-help. He was convinced that man could improve himself, both by individual effort and by making respectable and decent social institutions. He denied the originality of original sin, and this was his profound heresy. He denied that the sin of Adam affected anybody but Adam himself; he denied that it went on affecting the entire human race, and he insisted that all children were born innocent even as Adam had been born innocent. This was the opposite of the doctrine of St Augustine, who affirmed that children were born in original sin and, unless baptized, would certainly be damned. St Augustine even asserted, in very picturesque terms, that hell is paved with a mosaic of infants less than a span long—which we find a somewhat frightful doctrine, but which nevertheless follows logically from the assumption of the originality of original sin.

We cannot go into the details of the controversy, which was extremely important in the history of Christian dogma, but it is worth pointing out certain peculiarities in the Pelagian doctrine. Pelagius insisted that men are born without any inherited characteristics. He said they are born ‘non pleni’ (not full) and without a character; that they are born ‘sine virtute, ita et sine vitio’, that is to say without virtue even as without vice, without inborn tendencies either to good or to evil; and that each man becomes what he is, for good or for evil, in virtue of his surroundings and of his reactions to them. These ideas were profoundly at variance with the Augustinian doctrine and with the orthodox view of the Church of the time and were condemned; but for the next twelve centuries or so theological compromises had to be worked out between Pelagianism or semi-Pelagianism on the one hand and extreme Augustinianism on the other.

The next important Pelagian figure who appears is Helvétius, one of the thinkers of the eighteenth century, when people began to believe in inevitable progress—a belief which entails the conviction that man is determined primarily by the nature of his environment and can advance by improving it. Helvétius was extremely influential in his time, though very little read now. He reaffirmed the Pelagian doctrine that man is born without any hereditary characteristics and that he becomes what he is in virtue of what he learns and of how he reacts to the influences around him. Helvétius made the somewhat astonishing statement that any shepherd boy of the Cévennes could be turned into an Isaac Newton by suitable education. This sort of view prevailed to a considerable extent among the thinkers of the so-called Enlightenment of the eighteenth century, and certain elements of it were still to be found among the utilitarians of the nineteenth.

On the biological level we find, again in eighteenth-century France, the interesting figure of Lamarck, who insisted that environment could create hereditary factors—in a word, he insisted on the heritability of acquired characteristics. This view was controverted in the nineteenth century first by Darwin and then, in their detailed study of genetics, by Mendel and his followers. Today I don’t think any geneticist accepts Lamarck’s

view, except possibly certain geneticists in Russia, followers of Lysenko, who claim that they can modify a plant species by environmental changes in such a way that the changes within the individual plant will be inherited. These claims, as far as I know, have never been substantiated, and the great majority of geneticists remain completely opposed to the idea.

Somewhat before Lysenko began his preaching in Russia, we had the phenomenon in this country of J. B. Watson's behaviourism, in the early days of which Watson made some quite remarkable statements which exactly parallel those of Helvétius. He affirmed, for example, that he could find no evidence of inherited human faculties of music or mathematics, and that man's behaviour was entirely determined by environmental causes. I think there has been some modification of this point of view, but even today the behaviourists tend to play down hereditary factors to an extraordinary extent. In Professor Skinner's monumental Science and Human Behavior there is exactly one page devoted to hereditary factors, and all the rest is devoted to the determination of behaviour by environmental conditioning. In theological terms, we may say that people with the behaviourist turn of mind tend to be Pelagians, whereas those with the geneticist turn of mind tend to be Augustinians.The truth as usual lies somewhere between the two extremes. It seems perfectly clear that hereditary factors—nature—and environmental factors—nurture—are equally important and that in point of fact we can never isolate the two.

In view, however, of the fact that there has been for a long time a down-playing of hereditary factors, I think it is worthwhile to go into what is original—inherited—in the human individual. In general we find that as we go up the evolutionary scale, the variability of species increases, and there is no question at all that when we reach man we find the highest level of variability of any species that we know. There are extraordinary inherited differences, such as anatomical differences, between human individuals. Perhaps the best of the recent atlases of anatomy, Anson's, published in 1950, is probably the first to stress the profound variability of human beings on the anatomical level.

Anson uses eight different plates to show the common variations of human hand. He has to use no fewer than twelve to show the human heart in its commonest variations (there are people who have written of the heart who say that it is if anything more variable than the human face—an amazing statement when you consider how variable is the human face).

There are many other ways in which human beings vary anatomically. Take, for example, that very important organ, the intestine. In long and skinny people, as compared with round, soft people, the difference between the weight and length of the intestine is something fantastic: the intestine in the fat person may weigh twice as much as in the thin person and may be at least 50 per cent longer; it is consequently a great deal more efficient in doing its job, which is why the fat person tends to become fat even when he eats little, whereas the thin person does not become fat even when he eats a great deal. We find the same kinds of differences in the ductless glands.

The pituitary can weigh from 350 milligrams to 1,100 milligrams in perfectly normal people. The thyroid can vary from 8 to 50 grams, the parathyroid from 50 to 300 milligrams, the male gonad from 10 to 45 grams. The ovaries may range in weight from 2 to 10 grams, and the number of ova contained in normal ovaries may vary from as few as 30,000 to as many as 400,000. The pineal gland can weigh as little as 30 or as much as

400 milligrams and a normal pancreas can have as few as 200,000 Islands of Langerhans, or as many as 1,800,000.

Similarly, there are great differences in physiological reactions. As experimenters in taste perception such as Albert Blakeslee recently pointed out, there are substances which some people taste as salt, some as sour, some as bitter, and some as sweet. There are also enormous differences in the acuity of peripheral visual perception. In general we can say that these indubitably genetic anatomical and physiological differences are of immense importance because they must be reflected to some extent in our mental and psychological life.

The enormous mental and psychological differences which we perceive among human beings are correlated, first of all, with differences in the structure of the nervous system. It is quite certain, for example, that brains are very different from one another in the number, shape, and arrangement of their neurons. Although we don't know exactly how these physical differences affect people psychologically, undoubtedly there is an effect upon our way of thinking and our character. The second genetic correlate of character and temperamental differences is the difference in the capacity of different individuals to produce various of the enzymes which control metabolism and nervous action. It is becoming clearer and clearer that this is a matter of immense importance. The third correlate is probably blood supply, which is likewise of great importance and which varies greatly among human beings: some people's hearts pump much more blood than others and much more rapidly, the arteries in some are more efficient in carrying blood to different parts of the body, and so forth. Thus we have here the genetic basis for many of the psychological differences which we see; they are not determined by environmental factors alone.

One of the reasons why modern psychiatry has so astoundingly neglected the genetic factor in psychology is precisely because it has neglected the bodily factor in man. If you examine the body it is perfectly clear that there are enormous genetic differences between human beings. But if you ignore the body and concentrate solely on psychological traits, then this is not so obvious, although by inference it is perfectly clear that the enormous physical differences between human beings must be reflected in psychological differences. I am always astounded, when I read the literature of modern psychiatry, to see that the founding fathers of the science, Freud and Jung and Rank, paid almost no attention at all to the physical side of human beings and therefore completely ignored the genetic side of their problems. You can read the so-called case histories, and never be told who the subjects are. You get a description of Mrs X but you are never told if Mrs X weighs 90 pounds or 250 pounds; yet there is obviously a considerable psychological difference between a woman who weighs 90 pounds and one who weighs 250. Here is Mr Y, who is in a bad way, but you are never told whether Mr Y resembles an ox or a daddy-long-legs, whether he is like a panther or like a jellyfish. This obviously makes a prodigious difference, but one can read book after book of modern psychiatric case histories without ever finding such obvious facts mentioned. Only in Adler do we find some references to the physical aspect of human personality.

As it is very important that the doctors of the body should realize that the mind has effects upon the body, so it is important that psychologists should realize that the body has effects upon the mind, that many of these bodily effects are obviously genetic in character, and that therefore there are hereditary factors in practically all psychological disturbances. The most obvious case in point, which as far as I know is

never discussed in the psychiatric literature, is the question, If all our psychological troubles are due to traumatic experiences in childhood, why aren't we all crazy? We have all had very grave traumatic experiences, and yet only some of us are crazy and quite a number remain relatively sane. Again, it is quite obvious that such phenomena as Oedipus and sibling rivalry must act upon a biological substratum which is different in different cases.

There are certain people who have no psychological resistance, just as there are certain people who, undoubtedly for genetic reasons, have very little physical resistance to infection. This is of immense importance, for, as we can do something by biochemical means to correct a lowered resistance to infection, so it is perfectly possible that we might, by biochemical or nutritional means, do something to correct or to mask the genetic anomalies that make certain people much more likely to be affected by a psychological trauma than others are. Unfortunately, one finds almost no reference to this at all in the psychological literature; there is instead a kind of dogma, which may be called the dogma of environmental determinism, which almost systematically ignores the physiological factor.

This state of things is not universal and I am glad to say that within recent years there has been within psychiatry a strong unorthodox movement towards what is called constitutional psychology. The pioneer work in this field is being done by William H. Sheldon and his collaborators, as well as by George Draper and C. W. Dupertuis (in the field of constitutional medicine), who are investigating the relationship between disease and certain hereditary body peculiarities.

What Sheldon has shown is that we are perfectly wrong in thinking of 'types' of human beings. The trouble is that the nature of our language is such that we like to think in terms of pigeonholes and substantial types, and it is very difficult to talk about a continuum of any kind. In the world of physics, when people had to talk about the universe as a continuum, they had to invent a special ad hoc language, the language of calculus, and other forms of mathematical language. The same thing happens in psychological problems. As Sheldon has shown, and as is perfectly obvious must be the case, human beings do not vary by jumps and therefore cannot be put down as one type or another. Rather, there is a continuous variation among them; and this is not a variation between two poles—we always have a frightful tendency to think in terms of dichotomy—but it is much more realistically described as being a continuous variation within a three-pole framework.

I cannot go into the Sheldonian classifications today, but I do think they are extremely realistic classifications, and that his system does to some extent help us to see how the different genetic variations between body type and temperament—the relationships between physique and character—have always been intuitively understood by dramatists and story-tellers. No dramatist is sufficiently idiotic to put the character of a Falstaff in the body of a Cassius; no storyteller would give the character of a Pickwick to the body of a Scrooge. The logic of Caesar's speech in Julius Caesar is perfectly obvious to us:

Let me have men about me that are fat,

Sleek-headed men, and such as sleep o' nights.

Yond Cassius has a lean and hungry look,

He thinks too much: such men are dangerous.

Cassius thinks too much, but he is unlike what Sheldon would call the extreme ectomorph who thinks a great deal but never acts, or acts only feebly. He is one of those extremely dangerous persons who think a great deal and have enough of what Sheldon calls the 'mesomorphic factor' to act very strongly and efficiently—and too little of what he calls the 'endomorphic factor', the factor of geniality and of outgoing jolliness and kindness. Cassius is the typical fanatic, and I think we can imagine his physique to be closely related to that of Savonarola, who had the same tremendous power of thinking connected with terrific drive and a minimum of human kindness and compassion.

Take, for another example, a poet I happen to be very fond of, Chaucer, and read the prologue to The Canterbury Tales. You will be amazed at the amount of pure character drawing which comes through simply in the very accurate descriptions of the physique of each of the personages in the poem. It is an extraordinary example of how much can be done with a minimum of psychological analysis but a maximum of setting forth of the physical differences between people. We have a very good idea of who these people are simply because there has been an admirably vivid description of their outward characteristics.

Sheldon's tri-polar system is also interesting inasmuch as it corresponds very closely with the tri-polar system which we find in the religious tradition of India. (In the Christian system we have much more of a dichotomy between the way of Martha and the way of Mary, the way of action and the way of contemplation, although even within the Christian system it has been recognized that the way of Martha probably has more than one aspect to it.) One can read the full development of Indian psycho-theological theory in the Bhagavad Gita. Human beings are divided into three main classes: those who worship by means of devotion and practise what is called bhakti yoga or devotional worship; those whose worship is predominantly in the field of action, in performing duty in a selfless way, and who practise karma yoga; and those who worship through contemplation or through knowledge, the practitioners of jnana yoga. These correspond closely to the Sheldonian three poles. The extreme endomorph would inevitably be led towards the practice of emotional devotion; the mesomorph would be led towards a path of action dictated by duty; and the extreme ectomorph would be led towards the life of introversion and contemplation.

Here we may remark on a very curious thing, that insofar as the psychiatrists have recognized these kinds of temperamental differences they have recognized only a dichotomy. Jung's insistence, for example, on the difference between the introvert and extrovert is a division into two. He failed completely to see that there are two very different kinds of extrovert: there is the driving extrovert, who wishes to dominate either things or people—the Sheldonian mesomorph; and there is the emotional, kindly extrovert—the Sheldonian endomorph—who wants to spill the emotional beans and to bring everybody into his confidence, to be on good terms with everybody. These two kinds of extrovert are as different from each other as both are from the introvert—the Sheldonian ectomorph—who does not want any of those things.

The tendency at the present time to underplay the importance of genetic factors generally is related to certain political and philosophical doctrines. Orthodox Marxism, for example, is based upon the idea of

environmental determinism, and it does not like the idea of congenital differences. In this country, possibly because of a wrongly interpreted view of democracy, it is felt that too much stress upon the congenital and unchangeable differences between people is somehow undemocratic—and also very depressing. I remember years ago my brother telling me that he had been asked by one of the slick magazines to write an article on genetics. He wrote the article, and I am glad to say he was paid for it, but the editor said that he was sorry, that he couldn't use it because the conclusions in regard to the ingrained and inborn genetic differences between people would be found too depressing by readers.

Unfortunately the nature of nature is that it is not particularly democratic in the Napoleonic sense of the word—where he said that what he was doing was opening the careers to talents. It is interesting that the Russians, in spite of the fact that Lysenko is allowed to go around saying that he can turn barley into wheat, which he certainly cannot, have decided that for the sake of finding men and women capable of exercising efficient leadership they must make a careful selection of genetically highly endowed people. We see that Russian education, as it has developed now, is essentially an aristocratic education concentrating on the people with the highest IQ and the greatest drive and not making much effort to impose a veneer of universal education on everybody.

The universal education, in fact, stops fairly soon, but there is a most intensive education of the upper crust for the sake of creating an efficient oligarchy. It is a curious thing to find that, although Marxist theory is opposed to stressing genetic factors in man, the demands of practical life in a Marxist country have made it necessary for the Russians to devote more attention to the highly endowed than is being given at the present time in the democratic countries. But this kind of aristocracy or, more accurately, meritocracy—a word which has been used recently in Britain by anthropologists, who speak about its gradual emergence there—will certainly develop everywhere as technological societies demand it. We will have stratified societies based mainly upon the different capacities of people to pass examinations and go through more and more specialized and intensive forms of training.

These have been more or less factual discussions; we must pass now to the other end of the bridge. What are the consequences in the world of values and the world of thought of the enormous genetic variability among human beings? One consequence of the fact of variability is that liberty is a very precious thing. After all, if we were all the same, as Helvétius, Pelagius, or Watson in his early days believed, then there would be no point in liberty; what would be good for one would be good for all. It is human variability—the fact that one man's meat is another man's poison—that imposes upon us the duty of preserving individual liberty and of encouraging tolerance, of preventing majorities from repressing minorities, of permitting people to have a certain measure of self-determination in their lives.

In the religious tradition, inherited variability has been expressed in the doctrine that individual human souls are of infinite value, although this has not prevented the organized churches from trying to dragoon the faithful into a single pattern. We always have this tension between the fact of genetic variability and the fact that society does on the whole like to create a single manageable pattern of human life. The problem, as usual, is to make the best of both worlds, to find out how we can have a stable and viable society which yet gives scope to the enormous variations which, as a matter of empirical fact, do exist among human beings.

The extent to which societies have imposed patterns upon their extremely unlike individuals has varied greatly at different times in history and at different levels of culture. In the more primitive cultures, where societies are small and bound by very tight traditions, the pressure to conform is naturally very high. Anyone who reads the literature of anthropology must be astounded by the fantastic nature of some of the traditions to which men have had to conform. The advantage of a large and complex society such as ours is that it does permit the variability of human beings to express itself in a great many ways; there does not have to be the kind of intense conformity which we find in small primitive societies. Even so, in every society there is always a drive for conformity which is imposed from without by law and tradition and which individuals impose upon themselves from within by trying to imitate what the society regards as the ideal type.

I recommend in this context a very valuable book by the French philosopher Jules de Gaultier, which was published about fifty years ago, called Bovarysme. The name is derived from the heroine of Flaubert's novel, Madame Bovary, in which this unfortunate young woman was always trying to be what in fact she was not. Gaultier generalizes this and says we all have a tendency to try to be what we are not, to be what the society in which we are brought up thinks is desirable. He says that everybody has a 'Bovaric angle'. That of some people is fairly narrow; what they intrinsically are by heredity is not too different from what they try to make themselves by imitation. But some people have Bovaric angles of 90 degrees, and some even of 180, and are trying to be exactly the opposite of what by nature they are. The results are generally disastrous.

Nevertheless, one of the mechanisms by which society gets people to conform is to set up an ideal and rely on individuals to imitate it voluntarily. (It is not for nothing that what is probably the most influential and most widely read book of Christian devotion is called The Imitation of Christ.) Unfortunately, as we see only too clearly from the study of juvenile delinquency, the ideal imitated by many of us is not the highest ideal. There is imitation of Al Capone, unfortunately, and imitation of the young tough who goes around beating up people; there is imitation of rock-and-roll performers; and so on and so forth. The process is always present in any society, and it always has to be present. What we have to discover is some method of making the best of the social drive towards conformity while at the same time safeguarding the genetic variability of individuals.

It is important to stress the fact that in order to make the most of genetic variability we have to improve the environment to the greatest possible extent. It is only when everyone has equal nutritional and educational opportunities that we shall be able to see to the full what his native capacities are. For these capacities will not then be masked by the effects of bad nutrition or by the absence of any educational facilities, and they will have the possibility of developing to their fullest extent. Contrary to what many of the earlier eugenists said, it is not enough just to sterilize the unfit or to try to breed differentially from the more fit; it is absolutely necessary to have a society which shall stress the importance of good environment, so that we may be able to see what the full genetic possibilities of individual men and women, boys and girls, are.

We can sum up then by saying that what these facts about human variability seem to show is, first, that liberty and tolerance are of

immense importance and, second, that a decent environment—equal for all and being equalized upwards for all—is of immense importance. It is vital not to bully people who are genetically different into being like everybody else, and, within the limits of law and order, to try and permit each individual to develop according to the laws of his own being and in accord with the principle laid down by religion that the individual soul is of infinite value. Our ideal should be what Charles Morris, the Chicago philosopher, described in his book The Open Self: an open society composed of open selves.

The end