

Aldous Huxley, author of 'Brave New World', gives his speech "The Ultimate Revolution" at Cal Berkeley, 1962.

Moderator:

{garbled} Aldous Huxley, a renowned Essayist and Novelist who during the spring semester is residing at the university in his capacity of a Ford research professor. Mr Huxley has recently returned from a conference at the Institute for the study of Democratic Institutions in Santa Barbara where the discussion focused on the development of new techniques by which to control and direct human behavior. Traditionally it has been possible to suppress individual freedom through the application of physical coercion through the appeal of ideologies through the manipulation of man's physical and social environment and more recently through the techniques, the cruder techniques of psychological conditioning. The Ultimate Revolution, about which Mr. Huxley will speak today, concerns itself with the development of new behavioral controls, which operate directly on the psycho-physiological organisms of man. That is the capacity to replace external constraint by internal compulsions. As those of us who are familiar with Mr. Huxley's works will know, this is a subject of

which he has been concerned for quite a period of time. Mr. Huxley will make a presentation of approximately half an hour followed by some brief discussions and questions by the two panelists sitting to my left, Mrs. Lillian {garbled} and Mr. John Post. Now Mr. Huxley

Huxley: Thank You. {Applause}

Uh, First of all, the, I'd like to say, that the conference at Santa Barbara was not directly concerned with the control of the mind. That was a conference, there have been two of them

now, at the University of California Medical center in San Francisco, one this year which I didn't attend, and one two years ago where there was a considerable discussion on this subject. At Santa Barbara we were talking about technology in general and the effects it's likely to have on society and the problems related to technological transplanting of technology into underdeveloped countries.

Well now in regard to this problem of the ultimate revolution, this has been very well summed up by the moderator. In the past we can say that all revolutions have essentially aimed at changing the environment in order to change the individual. I mean there's been the political revolution, the economic revolution, in the time of the reformation, the religious revolution. All these aimed, not directly at the human being, but at his surroundings. So that by modifying

the surroundings you did achieve, did one remove the effect of the human being.

Today we are faced, I think, with the approach of what may be called the ultimate revolution, the final revolution, where man can act directly on the mind-body of his fellows. Well needless to say some kind of direct action on human mind-bodies has been going on since the beginning of time. But this has generally been of a violent nature. The Techniques of terrorism have been known from time immemorial and people have employed them with more or less ingenuity sometimes with the utmost cruelty, sometimes with a good deal of skill acquired by a process of trial and error finding out what the best ways of using torture, imprisonment, constraints of various kinds.

But, as, I think it was (sounds like Mettenicht) said many years ago, you can do everything with {garbled} except sit on them. If you are going to control any population for any length

of time, you must have some measure of consent, it's exceedingly difficult to see how pure terrorism can function indefinitely. It can function for a fairly long time, but I think sooner or later you have to bring in an element of persuasion an element of getting people to consent to what is happening to them.

It seems to me that the nature of the ultimate revolution with which we are now faced is precisely this: That we are in process of

developing a whole series of techniques which will enable the controlling oligarchy who have always existed and presumably will always exist to get people to love their servitude. This is the, it seems to me, the ultimate in malevolent revolutions shall we say, and this is a problem which has interested me many years and about which I wrote thirty years ago, a fable, *Brave New World*, which is an account of society making use of all the devices available and some of the devices which I imagined to be possible making use of them in order to, first of all, to standardize the population, to iron out inconvenient human differences, to create, to say, mass produced models of human beings arranged in some sort of scientific caste system. Since then, I have continued to be extremely interested in this problem and I have noticed with increasing dismay a number of the predictions which were purely fantastic when I made them thirty years ago have come true or seem in process of coming true.

A number of techniques about which I talked seem to be here already. And there seems to be a general movement in the direction of this kind of ultimate revolution, a method of control

by which a people can be made to enjoy a state of affairs by which any decent standard they ought not to enjoy. This, the enjoyment of servitude, Well this process is, as I say, has gone on for over the

years, and I have become more and more interested in what is happening.

And here I would like briefly to compare the parable of Brave New World with another parable which was put forth more recently in George Orwell's book, Nineteen Eighty-Four. Orwell wrote his book between, I think between 45 and 48 at the time when the Stalinist terror regime was still in Full swing and just after the collapse of the Hitlerian terror regime. And his book which I admire greatly, it's a book of very great talent and extraordinary ingenuity, shows, so to say, a projection into the future of the immediate past, of what for him was the immediate past, and the immediate present, it was a projection into the future of a society where control was exercised wholly by terrorism and violent attacks upon the mind- body of individuals.

Whereas my own book which was written in 1932 when there was only a mild dictatorship in the form of Mussolini in existence, was not overshadowed by the idea of terrorism, and I was therefore free in a way in which Orwell was not free, to think about these other methods of control, these non-violent methods and my, I'm inclined to think that the scientific dictatorships of the future, and I think there are going to be scientific dictatorships in many parts of the world, will be probably a good deal nearer to the brave new world pattern than to the 1984 pattern, they will a good deal nearer not

because of any humanitarian qualms of the scientific dictators but simply because the BNW pattern is probably a good deal more efficient than the other.

That if you can get people to consent to the state of affairs in which they're living. The state of servitude the state of being, having their differences ironed out, and being made amenable

to mass production methods on the social level, if you can do this, then you have, you are likely, to have a much more stable and lasting society. Much more easily controllable society than you would if you were relying wholly on clubs and firing squads and concentration camps. So that my own feeling is that the 1984 picture was tinged of course by the immediate past and present in which Orwell was living, but the past and present of those years does not reflect, I feel, the likely trend of what is going to happen, needless to say we shall never get rid of terrorism, it will always find its way to the surface.

But I think that insofar as dictators become more and more scientific, more and more concerned with the technically perfect, perfectly running society, they will be more and more interested in the kind of techniques which I imagined and described from existing realities in BNW. So that, it seems to me then, that this ultimate revolution is not really very far away, that we, already a number of techniques for bringing about this kind of control are

here, and it remains to be seen when and where and by whom they will first be applied in any large scale.

And first let me talk about the, a little bit about the, improvement in the techniques of terrorism. I think there have been improvements. Pavlov after all made some extremely profound observations both on animals and on human beings. And he found among other things that conditioning techniques applied to animals or humans in a state either of psychological or physical stress sank in so to say, very deeply into the mind-body of the creature, and were extremely difficult to get rid of. That they seemed to be embedded more deeply than other forms of conditioning.

And this of course, this fact was discovered empirically in the past. People did make use of many of these techniques, but the difference between the old empirical intuitive methods and our own methods is the difference between the, a sort of, hit and miss craftsman's point of view and the genuinely scientific point of view. I think there is a real difference between ourselves and say the inquisitors of the 16th century. We know much more precisely what we are doing, than they knew and we can extend because of our theoretical knowledge, we can extend what we are doing over a wider area with a greater assurance of being producing something that really works.

In this context I would like to mention the extremely interesting chapters in Dr. William (sounds like Seargent's) Battle for the Mind where he points out how intuitively some of the great religious teachers/leaders of the past hit on the Pavlovian method, he speaks specifically of Wesley's method of producing conversions which were essentially based on the technique of heightening psychological stress to the limit by talking about hellfire and so making people extremely vulnerable to suggestion and then suddenly releasing this stress by offering hopes of heaven and this is a very interesting chapter of showing how completely on purely intuitive and empirical grounds a skilled natural psychologist, as Wesley was, could discover these Pavlovian methods.

Well, as I say, we now know the reason why these techniques worked and there's no doubt at all that we can if we wanted to, carry them much further than was possible in the past. And of course in the history of, recent history of brainwashing, both as applied to prisoners of war and to the lower personnel within the communist party in China, we see that the Pavlovian methods have been applied systematically and with evidently with extraordinary efficacy. I think there can be no doubt that by the application of these methods a very large army of totally devoted people has been created. The conditioning has been driven in, so to say, by a kind of psychological iontophoresis into the very depths of the people's

being, and has got so deep that it's very difficult to ever be rooted out, and these methods, I think, are a real refinement on the older methods of terror because they combine methods of terror with methods of acceptance that the person who is subjected to a form of terroristic stress but for the purpose of inducing a kind of voluntary quotes acceptance of the state the psychological state in which he has been driven and the state of affairs in which he finds himself.

So there is, as I say, there has been a definite improvement in the, even in the techniques of terrorism. But then we come to the consideration of other techniques, non-terroristic

techniques, for inducing consent and inducing people to love their servitude. Here, I don't think I can possibly go into all of them, because I don't know all of them, but I mean I can mention the more obvious methods, which can now be used and are based on recent scientific findings. First of all there are the methods connected with straight suggestion and hypnosis.

I think we know much more about this subject than was known in the past. People of course, always have known about suggestion, and although they didn't know the word 'hypnosis' they certainly practiced it in various ways. But we have, I think, a much greater knowledge of the subject than in the past, and we can make use of our knowledge in ways, which I think the past was never able to make use of it. For example, one of the things we now know for

certain, that there is of course an enormous, I mean this has always been known a very great difference between individuals in regard to their suggestibility. But we now know pretty clearly the sort of statistical structure of a population in regard to its suggestibility. Its very interesting when you look at the findings of different fields, I mean the field of hypnosis, the field of administering placebos, for example, in the field of general suggestion in states of drowsiness or light sleep you will find the same sorts of orders of magnitude continually cropping up.

You'll find for example that the experienced hypnotist will tell one that the number of people, the percentage of people who can be hypnotized with the utmost facility (snaps), just like that. is about 20%, and about a corresponding number at the other end of the scale are very, very difficult or almost impossible to hypnotize. But in between lies a large mass of people who can with more or less difficulty be hypnotized, that they can gradually be if you work hard enough at it be got into the hypnotic state, and in the same way the same sort of figures crop up again, for example in relation to the administration of placebos.

A big experiment was carried out three or four years ago in the general hospital in Boston on post-operative cases where several hundred men and woman suffering comparable kinds of pain after serious operations were allowed to, were given injections whenever

they asked for them whenever the pain got bad, and the injections were 50% of the time were of morphine, and 50% of water. And about twenty percent of those who went through the experiment, about 20% of them got just as much relief from the distilled waters as from the morphea. About 20% got no relief from the distilled water, and in-between were those who got some relief or got relief occasionally.

So yet again, we see the same sort of distribution, and similarly in regard to what in BNW I called Hypnopedia, the sleep teaching, I was talking not long ago to a man who manufactures

records which people can listen to in the, during the light part of sleep, I mean these are records for getting rich, for sexual satisfaction (crowd laughs), for confidence in salesmanship and so on, and he said that its very interesting that these are records sold on a money-back basis, and he says there is regularly between 15% and 20% of people who write indignantly saying the records don't work at all, and he sends the money back at once. There are on the other hand, there are over 20% who write enthusiastically saying they are much richer, their sexual life is much better (laughter) etc, etc. And these of course are the dream clients and they buy more of these records. And in between there are those who don't get much results and they have to have letters written to them saying "Go

persist my dear, go on" (laughter) and you will get there, and they generally do get results in the long run.

Well, as I say, on the basis of this, I think we see quite clearly that the human populations can be categorized according to their suggestibility fairly clearly. I suspect very strongly that this twenty percent is the same in all these cases, and I suspect also that it would not be at all

difficult to recognize and {garbled} out who are those who are extremely suggestible and who are those extremely unsuggestible and who are those who occupy the intermediate

space. Quite clearly, if everybody were extremely unsuggestible organized society would be quite impossible, and if everybody were extremely suggestible then a dictatorship would be absolutely inevitable. I mean it's very fortunate that we have people who are moderately suggestible in the majority and who therefore preserve us from dictatorship but do permit organized society to be formed. But, once given the fact that there are these 20% of highly suggestible people, it becomes quite clear that this is a matter of enormous political importance, for example, any demagogue who is able to get hold of a large number of these 20% of suggestible people and to organize them is really in a position to overthrow any government in any country.

And I mean, I think this after all, we had the most incredible example in recent years by what can be done by efficient methods of suggestion and persuasion in the form of Hitler. Anyone who has read, for example, (Sounds like Bulloch's) Life of Hitler, comes forth with this horrified admiration for this infernal genius, who really understood human weaknesses I think almost better than anybody and who exploited them with all the resources then available. I mean he knew everything, for example, he knew intuitively this Pavlovian truth that condition installed in a state of stress or fatigue goes much deeper than conditioning installed at other times. This of course is why all his big speeches were organized at night. He speaks quite frankly, of course, in Mein Kampf, this is done solely because people are tired at night and therefore much less capable of resisting persuasion than they would be during the day. And in all his techniques he was using, he had discovered intuitively and by trial and error a great many of the weaknesses, which we now know about on a sort of scientific way I think much more clearly than he did.

But the fact remains that this differential of suggestibility this susceptibility to hypnosis I do think is something which has to be considered very carefully in relation to any kind of thought about democratic government . If there are 20% of the people who really can be suggested into believing almost anything, then we have to take extremely careful steps into prevent the rise of demagogues

who will drive them on into extreme positions then organize them into very, very dangerous armies, private armies which may overthrow the government.

This is, I say, in this field of pure persuasion, I think we do know much more than we did in the past, and obviously we now have mechanisms for multiplying the demagogues voice and

image in a quite hallucinatory way, I mean, the TV and radio, Hitler was making enormous use of the radio, he could speak to millions of people simultaneously. This alone creates an enormous gulf between the modern and the ancient demagogue. The ancient demagogue could only appeal to as many people as his voice could reach by yelling at his utmost, but the modern demagogue could touch literally millions at a time, and of course by the multiplication of his image he can produce this kind of hallucinatory effect which is of enormous hypnotic and suggestive importance.

But then there are the various other methods one can think of which, thank heaven, as yet have not been used, but which obviously could be used. There is for example, the pharmacological method, this is one of the things I talked about in BNW. I invented a hypothetical drug called SOMA, which of course could not exist as it stood there because it was simultaneously a stimulant, a narcotic, and a hallucinogen, which seems unlikely in one substance. But the point is, if you applied several different substances you could get

almost all these results even now, and the really interesting things about the new chemical substances, the new mind-changing drugs is this, if you looking back into history its clear that man has always had a hankering after mind changing chemicals, he has always desired to take holidays from himself, but the, and, this is the most extraordinary effect of all that every

natural occurring narcotic stimulant, sedative, or hallucinogen, was discovered before the dawn of history, I don't think there is one single one of these naturally occurring ones which modern science has discovered.

Modern science has of course better ways of extracting the active principals of these drugs and of course has discovered numerous ways of synthesizing new substances of extreme

power, but the actual discovery of these naturally occurring things was made by primitive man goodness knows how many centuries ago. There is for example, in the underneath the, lake dwellings of the early Neolithic that have been dug up in Switzerland we have found poppy-heads, which looks as though people were already using this most ancient and powerful and dangerous of narcotics, even before the days of the rise of agriculture. So that man was apparently a dope-bag addict before he was a farmer, which is a very curious comment on human nature.

But, the difference, as I say, between the ancient mind-changers, the traditional mind- changers, and the new substances is that they were extremely harmful and the new ones are not. I mean even the permissible mind-changer alcohol is not entirely harmless, as people may have noticed, and I mean the other ones, the non-permissible ones, such as opium and cocaine, opium and its derivatives, are very harmful indeed. They rapidly produce addiction, and in some cases lead at an extraordinary rate to physical degeneration and death.

Whereas these new substances, this is really very extraordinary, that a number of these new mind-changing substances can produce enormous revolutions within the mental side of our being, and yet do almost nothing to the physiological side. You can have an enormous revolution, for example, with LSD-25 or with the newly synthesized drug psilocybin, which is the active principal of the Mexican sacred mushroom. You can have this enormous mental revolution with no more physiological revolution than you would get from drinking two cocktails. And this is a really most extraordinary effect.

And it is of course true that pharmacologists are producing a great many new wonder drugs where the cure is almost worse than the disease. Every year the new edition of medical textbooks contains a longer and longer chapter of what are Iatrogenic diseases, that is to

say diseases caused by doctors (laughter) And this is quite true, many of the wonder drugs are extremely dangerous. I mean they can produce extraordinary effects, and in critical conditions they should certainly be used, but they should be used with the utmost caution. But there is evidently a whole class of drugs effecting the CNS which can produce enormous changes in sedation in euphoria in energizing the whole mental process without doing any perceptible harm to the human body, and this presents to me the most extraordinary revolution. In the hands of a dictator these substances in one kind or the other could be used with, first of all, complete harmlessness, and the result would be, you can imagine a euphoric that would make people thoroughly happy even in the most abominable circumstances.

I mean these things are possible. This is the extraordinary thing, I mean after all this is even true with the crude old drugs. I mean, a housemate years ago remarked after reading Milton's

Paradise Lost, He Says "And beer does more than Milton can to justify God's ways to man" (laughter). And beer is of course, an extremely crude drug compared to these ones. And you can certainly say that some of the psychic energizers and the new hallucinants could do incomparably more than Milton and all the Theologians combined could possibly do to make the terrifying mystery of our existence seem more tolerable than it does. And here

I think one has an enormous area in which the ultimate revolution could function very well indeed, an area in which a great deal of control could be used by not through terror, but by making life seem much more enjoyable than it normally does. Enjoyable to the point, where

as I said before, Human beings come to love a state of things by which any reasonable and decent human standard they ought not to love and this I think is perfectly possible.

But then, very briefly, let me speak about one of the more recent developments in the sphere of neurology, about the implantation of electrodes in the brain. This of course has been done in the large scale in animals and in a few cases its been done in the cases of the hopelessly insane. And anybody who has watched the behavior of rats with electrodes placed in different centers must come away from this experience with the most extraordinary doubts about what on Earth is in store for us if this is got a hold of by a dictator. I saw not long ago some rats in the {garbled} laboratory at UCLA there were two sets of them, one with electrodes planted in the pleasure center, and the technique was they had a bar which they pressed which turned on a very small current for a short space of time which we had a wire connected with that electrode and which stimulated the pleasure center and was evidently absolutely ecstatic was these rats were pressing the bar 18,000 times a day (laughter).

Apparently if you kept them from pressing the bar for a day, they'd press it 36,000 times on the following day and would until they fell down in complete exhaustion (laughter) And they would neither eat, nor be interested in the opposite sex but would just go on pressing this bar {pounds on podium}

Then the most extraordinary rats were those where the electrode was planted halfway between the pleasure and the pain center. The result was a kind of mixture of the most wonderful ecstasy and like being on the rack at the same time. And you would see the rats sort of looking at the bar and sort of saying "To be or not to be that is the question". (Laughter) Finally it would approach {Pounds on podium} and go back with this awful I mean, the (sounds like Franken-Humanizer anthropomorphizer), and he would wait some time before pressing the bar again, yet he would always press it again. This was the extraordinary thing.

I noticed in the most recent issue of Scientific American there's a very interesting article on electrodes in the brains of chickens, where the technique is very ingenious, where you sink

into their brains a little socket with a screw on it and the electrode can then be screwed deeper and deeper into the brainstem and you can test at any moment according to the depth, which goes at fractions of the mm, what you're stimulating and these creatures are not merely stimulated by wire, they're fitted with a miniature

radio receiver which weighs less than an ounce which is attached to them so that they can be communicated with at a distance, I mean they can run about in the barnyard and you could press a button and this particular area of the brain to which the electrode has been screwed down to would be stimulated. You would get this fantastic phenomena, where a sleeping chicken would jump up and run about, or an active chicken would suddenly sit down and go to sleep, or a hen would sit down and act like she's hatching out an egg, or a fighting rooster would go into depression.

The whole picture of the absolute control of the drives is terrifying, and in the few cases in which this has been done with very sick human beings, The effects are evidently very remarkable too, I was talking last summer in England to Grey Walter, who is the most eminent exponent of the EEG technique in England, and he was telling me that he's seen hopeless inmates at asylums with these things in their heads, and these people were suffering from uncontrollable depression, and they had these electrodes inserted into the pleasure center in their brain, however when they felt too bad, they just pressed a button on the battery in their pocket and he said the results were fantastic, the mouth pointing down would suddenly turn up and they'd feel very cheerful and happy. So there again one sees the most extraordinary revolutionary techniques, which are now available to us.

Now, I think what is obviously perfectly clear is that for the present these techniques are not being used except in an experimental way, but I think it is important for us to realize what is happening to make ourselves acquainted with what has already happened, and then use a

certain amount of imagination to extrapolate into the future the sort of things that might happen. What might happen if these fantastically powerful techniques were used by unscrupulous people in authority, what on Earth would happen, what sort of society would we get?

And I think it is peculiarly important because as one sees when looking back over history we have allowed in the past all those advances in technology which has profoundly changed our social and individual life to take us by surprise, I mean it seems to me that it was during the late 18 century early 19th century when the new machines were making possible the factory situation. It was not beyond the wit of man to see what was happening and project into the future and maybe forestall the really dreadful consequences which plagued England and most of western Europe and this country for sixty or seventy years, and the horrible abuses of the factory system and if a certain amount of forethought had been devoted to the problem at that time and if people had first of all found out what was happening and then used their imagination to

see what might happen, and then had gone on to work out the means by which the worst applications of the techniques would not take place, well then I think western humanity might have been spared about three generations of utter misery which had been imposed on the poor at that time.

And the same way with various technological advances now, I mean we need to think about the problems with automation and more profoundly the problems, which may arise with these

new techniques, which may contribute to this ultimate revolution. Our business is to be aware of what is happening, and then to use our imagination to see what might happen, how this might be abused, and then if possible to see that the enormous powers which we now possess thanks to these scientific and technological advances to be used for the benefit of human beings and not for their degradation.