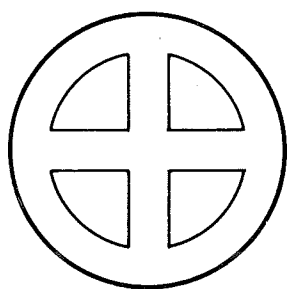


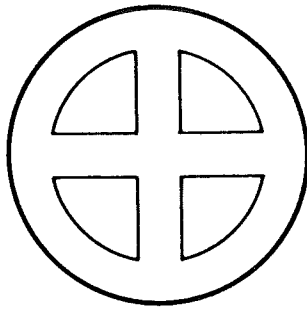
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KUHF Radio Interview with John Platt



Lutheran Brotherhood Colloquium on the Church in Future Society

The Woodlands Inn, Houston Texas • January 29 - February 2, 1979



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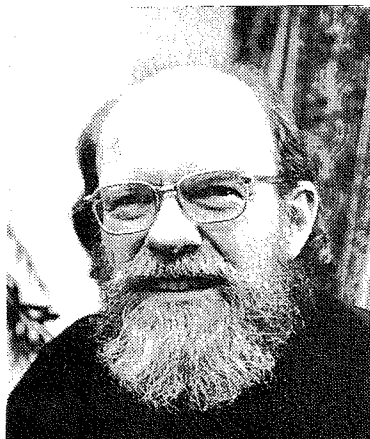
The Lutheran Brotherhood Colloquium on the Church in Future Society was a conference of 250 Lutheran leaders and ten nationally-known futurists. It was the first such event ever held by Lutheran Brotherhood, a fraternal benefit society serving Lutherans nationally, and was the result of consultations with several U.S. Lutheran church bodies. Among the concerns which were expressed by the church bodies in these consultations was the need for more disciplined emphasis on anticipated future changes as they influence congregational life.

The purpose of the Colloquium was to increase awareness of anticipated future change so that appropriate planning can be effected to strengthen the Lutheran church, especially at the congregational level.

All U.S. Lutheran church bodies were invited to take part in the planning, and nine participated by sending representatives, including six national presidents. Ten Lutheran church bodies were represented among the participants in the Colloquium.

The Colloquium was organized around five themes:

	Theme	Presentors
Monday	The Reality of Change	Alvin Toffler
Tuesday	Problems of the Future	John Platt Theodore Gordon Jürgen Moltmann
Wednesday	Human Values & Potential	Willis Harman Jean Houston
Thursday	Defining the Task	Warren Bennis Hazel Henderson Robert Jungk
Friday	The Role of Leadership	Harlan Cleveland



John Platt

Professor, Departments of Anthropology and Environmental Studies, University of California, Santa Barbara; formerly Associate Director, Mental Health Research Institute, University of Michigan.

Dr. Platt, former physicist, has worked for several years on general systems theory as applied to the problems of science and society and contemporary social changes. He is a consultant, lecturer and author on the interaction between science and society and urgent research needs for survival. As a humanistic scientist, he argues that the world needs a new structure of philosophical and religious belief if mankind is to survive in the coming decades. In an article regarding changes in belief systems, Dr. Platt states: "We are passing through a philosophical and religious transformation...consistent with our new scientific knowledge as well as with our new awareness of inner human meaning and outer global responsibility." He addresses eight evolutionary steps through which humankind is passing. We may now be experiencing the greatest of all these steps; he writes, "This metamorphosis to a new society, affecting not only ourselves but the whole ecology of the planet, is the greatest and most sudden jump in the whole history of evolution. It is a more dramatic change than the coming ashore of the land animals or the invention of speech. Yet perhaps such a culmination was implicit in evolution all along, as sure as the butterfly is implicit in the caterpillar."

He held a Guggenheim Fellowship at the University of London, received a U.S. Public Health Service Career Award, was a Fellow at the Center for Advanced Study in the Behavioral Sciences at Stanford, and received an honorary degree in psychology from Utah State University. He is a Fellow of the American Academy of Arts and Sciences, a member of the Club of Rome, and in 1976 was a Regents' Lecturer at the University of California at Santa Barbara where he is currently a professor of anthropology and environmental studies.

He has published numerous papers and two books on the structure and spectra of organic molecules and on the biophysics of vision and perception. Dr. Platt organized the widely-heralded Monday Lectures at the University of Chicago and edited the first collection of those entitled *New Views of the Nature of Man*. In addition, he has published many articles and books on the scientific creation and the world transformation today toward the evolutionary future. He has published articles in *Harper's*, *Horizon*, *Saturday Review*, *The New Republic*, *Main Currents in Modern Thought*, *The Center Magazine*, *Science*, *Futures* and *The Futurist*. His books include: *The Excitement of Science*; *The Step to Man*; *Perception and Change: Projections for Survival*; *On Social Transformation* (in preparation).

KUHF Radio (Houston) Interview with Dr. John Platt

Professor, Departments of Anthropology and Environmental Studies, University of California at Santa Barbara

Interview at the Lutheran Brotherhood Colloquium on the Church in Future Society, January 29 - February 2, 1979.

INTERVIEWER: I'm Jim Bowman from the University of Houston at Clear Lake City. Today I'm interviewing Dr. John Platt, a lecturer on anthropology from the University of California at Santa Barbara. Dr. Platt has his Ph.D. in physics. He has taught at the University of Chicago, Harvard, MIT, Stanford, and the University of London. He has written six books and over 80 articles. Among these books are The Step to Man and New Views of the Nature of Man. Dr. Platt, as a futurist, I'd like to begin by asking you to discuss with us some of what you believe to be the crises and major problems in the world today.

PLATT: I think I ought to back up a couple of minutes and say where our crises come from, because this illuminates what the crises really are. Many of our crises come from the enormous technical developments about the end of World War II: things like the atom bomb, the electronic computer, mass television, the oral contraceptive, jet planes. All these date from about 35 years ago. In fact, sometimes I call 1945 World Year 0. Then I say that 1979 is World Year 034. These developments changed our rates of communication, our global span, our rates of travel, our terror with weapons, our data processing, by many orders of magnitude beyond any previous generation. They are probably the fastest large-scale technical changes that have ever happened in such a short time in the history of the world.

The result is that all of our social institutions are now changing before our eyes. In the last 10 years, for example, since the Nixon administration (they came in as a conservative administration but they presided over the most rapid rate of social change in peacetime in American history), just think of the things that have changed: things like detente (the opening to Russia and China); or our changes in ecology (ecological consciousness, with the supersonic transport being banned and our attitudes toward nuclear energy, toward extension of highways, toward smaller cars, toward less pollution); changes in sex laws (our laws on abortion, contraception, homosexuality, pornography); our changes in birth rates (we are now below replacement level in birth rates in the United States since 1971 -- in fact this is spreading all over the world). All of these are spreading all over the world because these are global changes.

INTERVIEWER: That's pretty optimistic, but if we take the world population (and we're talking about a doubling time of 32 to 34 years and the population at present is 4 billion in the world), we're looking at 8 billion in 33 years. Would you still agree with that kind of a projection about population or are you more optimistic?

PLATT: I'd rather look at rates of change because you start turning the steering wheel on a great truck and you haven't gotten around the corner yet, but the steering wheel has begun to take hold. Worldwatch has been collecting population statistics and publishing them in four different countries. They said last year that almost 30% of the world population is living in countries where the birth rate is at or below the replacement level. This includes capitalist and communist countries, and Catholic countries -- it includes the United States, East Germany, West Germany, and Poland. It now appears that the most rapid, effective population program may be in mainland China. I've talked to people who have come back from there, both bio-chemists (who work on contraceptives) and also population people, and they seem to agree (from available evidence, statistics, and populations in nursery schools and communes). The birth rate in Shanghai is down around nine per thousand per year. The official goal for the nation is to reduce its growth rate from 2% to below 1% within the next five years. This is a real turnaround because in 1966, they were still pro-births. The main thing that has happened is that it has been shown in all of these different countries that birth rates can be controlled, and that they're subject not just to government force (not the fascist methods of putting contraceptives in the drinking water or forceably sterilizing anybody who has had two children -- in fact that backfires as it did in India -- or putting a tax on children), but consciousness-raising, as in this country. Tens of millions of couples have chosen to have fewer children or to space them farther apart. So we've shown that population is manageable in a way that you couldn't have believed six or eight years ago.

When I state these things, it's not because I think all problems have already been solved, but I think we have undergone changes in attitudes and in laws which are unprecedented in this century.

INTERVIEWER: Do you see the Third World countries going the way of industrializing? Will they try to follow the lead of the industrial nations to plan their future? Will China follow and become westernized?

PLATT: Clearly I read the same newspapers as you do, and that seems to be the pitch this month! It was different a year ago and it was different in 1966. We just have to wait and see. I think the logic of events forces some directions on us. We're in the grip of a great world revolution, a waterfall of change, and some things are going to happen simply because it is time -- simply because of the revolution of rising expectations.

For example, I'm sure that the sheiks in the Arab countries really cannot survive as a management system for more than another 10 years. The reason is that a feudal family hierarchy is not compatible with a modern industrial society. With the demands of rising expectation, the more highly educated people, the more technical people and the people who are in communication with the rest of the world, there are going to be continual demands for different forms of government there.

The same thing happens with many of our military dictatorships. We've seen in the last five years several countries which had moved in the direction of more authoritarianism move back. This is true of India, Greece, Portugal and Spain, and I think it's because of pressures of world communication, pressures of things like tourism (tourists don't go to dictatorship countries very easily or enjoyably). So when your country's income depends on mass tourism as is true all around the Mediterranean, suddenly you discover that you need democracy, you need equality in the treatment of women, and you need more tolerance of different religions and different points of view. The result is that we're in the grip of world changes which are moving us in the direction of a more integrated global society and probably a more humane global society than we've had in the past.

INTERVIEWER: I hadn't thought about the tourism aspect of that -- that's very interesting to consider. We're talking about economics, of course.

PLATT: I talk to people about the five "T's" which are forcing changes on the world: terrorism, tourism, technology, trade and television. Of these, probably the most powerful is television. It's estimated that 2 billion people will see the Moscow Olympic games next year, either simultaneously or rebroadcast by satellites. This is approximately half the human race. When India and China get their direct broadcast satellites, which will probably be in the next few years, it will get up to 80-90% of the human race. When you think about what television does to us in terms of our way of using our leisure, our minds, our eyes,

our books In the U.S., the average set is on for six hours a day. This is true in western Europe, in Canada and in Japan. The average person watches over four hours a day. In fact, it's higher in Canada and Japan than in the U.S. It's also higher for certain groups, like the unemployed or the ghetto, the poor, the sick, the old, and housekeepers. The result is that over half of our leisure time is now being spent on this mode of simultaneous mass communication. There has never been an invention like this in the history of the world before. Suddenly we all walk on the moon together, we all see Sadat, Begin and Carter shaking hands, whether it sticks or not. We're all involved emotionally. We all see the sports events. We all laugh at the same jokes, and so on. So it's making us, what the biologists call a syncytium (when many cells come together, the cell walls disappear and the nuclei form multiple nuclei in a big single cell). We're becoming a world syncytium because television is bringing us into a single world.

INTERVIEWER: This one-world concept -- do you see the world becoming more integrated, people having access to similar information? What about distorted information? You see, I have this feeling that we have a lot of distorted information through the medium of television. I think it's something that's in its infancy and is probably going to be changed dramatically in the next few years.

PLATT: The answer is yes, we have a lot of distorted information. In some countries it's distorted by commercial interests toward violence or advertising. In others it's distorted by governments toward propaganda and censorship. Every communication system, such as our own brain -- our own nervous system -- the fact that it selects information means already a distortion. The question is, has it selected a representative? Has it selected the important information and so on? It's going to take centuries of working through before we come to improved information.

On the other hand, I think there are some common aspects of the discussion of television which are somewhat distorted by the usual intellectuals or liberals who are thinking about it. Television, because it is so universal, is going to bring us everything, just as the human brain has to bring us everything. It has to bring us digestion, sports and excitement, it has to bring us adrenalin to fight, the excitement of a good yarn, it has to bring us sex. All of these things, the totality of human experience, is going to have to be on television. The totality of world concern is going to be in there somewhere.

INTERVIEWER: What about those who would suggest that television is a spectator sport and like so many of our sports and the kinds of things you've been mentioning, we're becoming spectators rather than active participants in altering our own futures or changing our own future plans? What about the damage there that can occur?

PLATT: Marshall McLuhan has discussed this. Whenever you get a new extension of the senses by any new device, you at the same time get a narrowing of your former potentialities. You get an automobile and it takes you for hundreds of miles, but it keeps you on the road so you can't go across the woods and over the river. In evolutionary history, when you get eyes or when you get books, suddenly this cuts off some of the things you did before. People use to protest about books back in the 6th century B.C. They said that if people read books it would destroy their ability to remember the great odes and the great poetry because they could simply look it up. Of course, it did. The same thing happens when a new mode comes, like television: it destroys some of our old modes of doing things. But it's worth saying something about its self-corrective tendency. Television has two messages: the first message is "buy this product, follow this establishment idea, because we're broadcasting it to you and we know better." But about two years later, you get the reaction. The reaction is they're lying to you. The kid buys the cereal and then he says, "Ma, this tastes awful." She says, "You made me buy it." Then he knows they lie.

INTERVIEWER: What about indirect advertising? Doesn't it suggest that when Archie Bunker has a beer at night on "All in the Family," it's probably more important that it's indirect than if Miller or some other advertiser comes on to advertise a specific beer?

PLATT: Yes, these images spread everywhere. But this second message is a message of protest. Even if it's only on five minutes of the day, late at night, maybe Gloria Steinem talks in New York and suddenly in a thousand centers across the country women say, "Yeah! Someone else is going to wash the dishes in this house!" Or they go down to picket City Hall and demand more jobs for women and minorities. Or, they demand a raise in pay. You have a thousand centers of simultaneous protest. It's no accident that in this last 15 years, when television has been at its strongest -- most watched in the United States, we have had the old establishment go down. Think of the things they were for: they were for the Viet Nam war, they were pro-pollution, they were pro-births, they were pro-male, they were pro-Nixon, and they've all gone down by movements of protest

which have come out of the boondocks. Many of them in a thousand centers: the women's movement, the civil rights movement, the student movement, the antiwar movement, the black power movement, the ecology movement, the consumer movement. Every one of these has been against the television establishments. They've been spread by television, but they've become a participatory mode of protest. It has totally changed the attitudes in Washington and it has totally changed the attitudes of big corporations. They've been forced to change. I think that television is more of a participatory mode even in its present form. But now when we begin to get the new forms of television in the next two or three years, the new forms of the electronics around, its going to be as different as the invention of a totally new device.

It's going to become more responsive, more diverse, and more individualized. It will be more responsive because you begin to have responsive electronics, you begin to have two-way cable, you begin to have electronic games in the living room to play with the set or play with a friend through the set.

It will be more diverse because of the enormous amount of additional channels, including cable and public television. Also because of video discs and video cassettes, you can now look at the programs you want at your own time. You can pass around cassettes or discs -- share them with friends. You can pick up this ecology lecture or this great anti-something-or-other movement movie and pass it from hand to hand. You won't have to go to the big movie theater or wait for the station.

The third thing -- it's going to be more individualized. When we begin to get those video discs there will be whole libraries of them. Now we can have ideas jumping across barriers of various sorts. It will be like the invention of books, which was a great way of spreading ideas beyond the establishment. It leaped across boundaries. One suddenly had a freedom of the press demand, so that it could carry all of these ideas which were against the establishment. I think we'll have freedom of the disc demand in world television. It will transform the nature of protest, the nature of political interaction.

INTERVIEWER: If we do that, in the future it's going to give us lots of options -- for any given time we may have 1,500 choices in terms of a program and in terms of who produces it. This would become less expensive, then.

PLATT: It will be like LP records. The disc, in principle, can be stamped out like LP records at the base price of a few cents per disc. Each one will carry on its surface at least a half hour (some people say an hour). A half-hour program has 54,000 frames, each frame containing all the information on a television frame, so it roughly corresponds. There's more information than the Encyclopedia Britannica. It's as much information as a 75-hour course, including graphics and movie visuals. The result is that you can have program texts and each student can go through the course at his or her own rate, in a direction that nobody else goes through it. It will be individualized in this sense.

The result is that we will teach ourselves all sorts of things by this visual mode that are very hard to teach by books. You can't teach tennis by books, you can't teach chess easily by books, you can't teach public speaking by books. We will go back to the original mode of human communication long before there was writing and books -- the mode of the group around the fire at night. Drama, ritual, poetry, myth, religion, imitation (where we now have Julia Child to imitate), or yoga lessons, or Japanese brush painting will be taught. Some stations have as much as a quarter of their programming on things that people will imitate, so it's more active than one supposes even now. I think that that will simply become the dominant mode of the future. If you want to cook this remarkable sort of bordelaise, you'll go and take out your disc and scan it for where the bordelaise recipe is. Then you'll watch Julia cook it for you and listen to the recipe. It will be much better than trying to read it off of a box.

INTERVEIWER: You wrote in The Step to Man that normally each of us might read about 8,000 books in a lifetime, if we worked at it. What will this disc that you're talking about do to reading? What will it do to the book?

PLATT: The same thing that the book did to oral memory: the books are now obsolete. I don't mean they'll ever disappear and I don't mean that there will be less produced than there are now. But they will increasingly become the business of specialists. They'll be in the big files in the libraries or microfilmed somewhere, where you'll go to them or certain people will go and sort among them and pull out the information. Then it will be presented visually in the old human form that everybody can watch, whether they've had a specialized technical education or not.

We have forgotten how artificial writing was when it first came in and how artificial it is now. To have to spend 12 years of a child's time learning to read and write in order to be a full adult, is a total distortion of the meaning of childhood. It's a total destruction of apprenticeship. What one needs is a mode of teaching which is by imitation, by enthusiasm, by doing things yourself rather than by reading about how they're done in this long and rather complex form of words.

INTERVIEWER: It would seem to me that our younger generation has the third parent, the television, and maybe they find reading is too passive. You talk about television as a spectator sport and you're probably saying to me that reading is also a spectator sport.

PLATT: Even more so. The great philosophers -- Socrates and Jesus -- there's no evidence that they knew how to read books or write. They were oral. All of our great philosophy, history, and music were oral in the first place. Emerson said, "Study nature, not books." Goethe emphasized being out in the woods as far more important than books. Browning makes fun of the grammarian in "The Grammarian's Funeral." Books have been artificial to the real philosophers and television will be artificial, but in a different way. It will have a different form of experience. McLuhan, I think you mentioned, has been more vivid about this than most anybody else. He says that every invention ever made, up until now, has helped the left brain. That is to say, it has facilitated the operations of the right hand, which means analytical thinking, verbal and linear logic, pointing. Television is the first mode that has ministered to the right brain. The right brain, it seems, is the brain which has pattern perception, holistic understanding, impressionism, figure recognition. Television now will develop the right brain, perhaps in the same way as speech, writing and books for two million years have developed the left brain. In two million years we will be very different people.

INTERVIEWER: Amitai Etzioni, who wrote Genetic Fix, suggests that our biggest revolution in the next few years will be a genetic revolution. I sense you're saying to me, first of all, the communications revolution, radical changes in technology. What about genetics?

PLATT: Genetics is one of the great changes. It's worth describing some of these tremendous changes of our time on an evolutionary scale. There are half a dozen or more changes in the last 40 years which are as big as any changes that have ever occurred in the four billion year history of

life on earth. One example is the jump to space: for people to be able to live and work in space. It may develop enormously over the next few years if the ideas of Peter Glazer and Gerard O'Neill come to pass. But, whether it's fast or slow, to go into space is like the coming ashore of the land animals into a new environment -- out of the ocean, into the atmosphere. We're like the first lungfish who've just come ashore and are trying to learn to breath in this hostile atmosphere. The first people in space will be like that -- space is like the coming ashore of the land animals.

Molecular biology, the recombinant DNA possibilities of genetic combination, are more radical than any genetic combinations ever. The most radical up until now, the things that have dominated all our genetic mixing, are sexual crossing. It goes back to the first bacteria three billion years ago. Even when you domesticate plants and animals, you speed up the selection process so that you create a new species in a hundred years instead of five million years, but it's still done by sexual crossing. Sexual crossing means the male and female genomes have to be very similar. They're in the same species. Suddenly we can take genes from one species and put them in another. We can probably put nitrogen-fixing possibilities into wheat and corn, which never had them before. You can go from fungi to plants to animals to bacteria, and we now have human insulin genes in bacteria in test tubes in San Francisco, which may make cheap insulin for us. This produces the possibility of a million new species. It goes as far beyond sexual selection as a method of genetic crossing as the atom bomb goes beyond rocks and sticks.

Another one is television, which probably can be compared with the evolutionary development of image-forming eyes. They have been evolved four different times (so they must have been almost inevitable). They evolved in vertebrates, in the octopus, in the mollusks, and in the insects. Recently it's been discovered in some nereid worms in the Mediterranean. The difference between eyes and eye spots means that suddenly creatures can see at a distance, and so they can anticipate. As predators or as prey, it greatly enhances their survival abilities -- they can lie in wait. My saying is that you have to have sight before you can have foresight. Suddenly we have a jump of the same sort again. We now jump to where we can see around the world -- 10,000 miles. We can see through the fog of Venus. We can see through night and clouds with radar. We can see to the people who walk on the moon or the mountains of Mars. This enlargement of our vision is one of the great evolutionary

jumps. Teilhard de Chardin, the Jesuit evolutionist, said that "the discovery of the electromagnetic spectrum was a prodigious biological event." When you hear that you think, "Why is a philosopher/biologist talking about this technical development as a biological event?" You see from what I have said that this enlargement of our capacity of perceiving things simultaneously by the billions of people is a biological event. The whole future of the human race is going to be different because of that. It's already changing our families, our schools, our diplomacy, our vision of the world, our banking, our security, our books, and the way we spend our leisure. Every aspect of life is now involved with television.

I could go on and name a few more -- I think one should name nuclear weapons (intercontinental missiles with nuclear warheads) as being the biggest jump since the development of tools and weapons. One could name something like electronic data processing as being a kind of collective nervous system in which we now share our bank cards, government records and our science analyses. It's the greatest invention since the invention of the nervous system, which happened 600 million years ago (or thereabouts). The result is that all these are happening within a 40-year period. It's a time which is, even on the scale of human history, three million years or so since *Australopithecus* in Africa. Forty years is one part in 100,000 or so, it's a knife scratch in width against this long history. In this kind of knife edge of time, this sudden single generation, we are now jumping as far beyond as any jump in the past -- and several jumps at once. In many ways, this is like the moment of birth. One has the same acceleration of things as approaching the moment of birth of a baby. Things have been going along fairly quietly for nine months. Suddenly, one begins to have the drop, then the breaking of the bag of waters, then the muscular contractions and then you know that something has got to happen in the next few minutes. Bang! Then it does happen. We are having this same sort of speed-up toward a moment of birth on the evolutionary scale.

INTERVIEWER: Let me take the baby example. I think that's a good one. It seems to me that the birth of a child, like planning the future, is critical that it be planned as much as possible. I'm wondering how much planning is going into this 40-year span that you're talking about. How much of what's happening is accidental? Where can we find real problems with so many new experiences and so many innovations and revolutions occurring?

PLATT: Some of these things were planned. They grew out of the great research and development teams of World War II (the atom bomb, the electronic computer, the jet plane). They were essentially inevitable.

INTERVIEWER: But that's not comprehensive planning. You were talking about integrated planning earlier -- that everything is coming together.

PLATT: We've been in this waterfall of change for the last 100 years ... the last 1,000 years. Once Faraday discovers that magnetic and electric fields interact and makes the first generator, you're on your way toward electric lights, radio and television even if he couldn't anticipate them. So it's like being in the grip of a great evolutionary waterfall. The baby simile is a good example. The baby is a combination of inevitability and surprise. Suddenly, just before the birth the mother says, "Hey, I didn't want this after all. Let's go back and start over." But you can't do that. Many people today are saying, "Let's go back to a simpler life. Let's have a different form of society. Let's get rid of all this technology." I think we've gone too far to back up.

INTERVIEWER: As an example, let's take the multi-national corporations. There are a lot of people who are concerned that we're losing the small farmer and that the small businessperson can't succeed. I was reading the other day in the newspaper that we haven't had as many individual entrepreneurs developing, the creative types, but rather, we're going with institutions. You mentioned Worldwatch earlier and the leader there is Lester Brown. He's talked about the multi-nationals and his argument is that within the next 20 years we'll have something like 400 major multi-national corporations that will control 80% of the manufacturing in the world. Can we expect this kind of thing to continue? Do you see this as positive?

PLATT: Yes. The world is becoming a unit in the same way that the United States became a unit with its national corporations 40 or 50 years ago. It has positive and negative aspects. The multi-nationals are good because they establish trade between countries that need trade. The guy with manganese may need oranges and vice versa. If you abolished multi-nationals tonight and set up a perfect world government tomorrow morning, by tomorrow night many of these trade networks would begin to be set up again, because we need that trade. The trouble is that they're so big. They can buy and sell small countries, and we've even discovered

that they can buy and sell the officials of big countries. What we need is checks and balances on them. The same sort of thing happened in the U.S. 70 or 80 years ago when we began to put checks and balances on the robber barons. We began to have the labor movement, we began to have food and drug acts, we began to have an anti-trust act to control the excesses of these monolithic corporations. I'm not sure we ever did it perfectly, but it eased many of the terrible troubles at the end of the last century.

I think that today we need multi-national ecology movements. It's no accident that the Sierra Club is now in 12 countries. The Friends of the Earth is now operating anti-nuclear protests in 18 countries. We need a multi-national consumer movement and we need a multi-national labor movement. Detroit workers should see that they must not scab on German workers or Taiwanese workers in the auto industry, any more than they should scab on New York or Los Angeles. If it's patriotic for a company to be multi-national it must be patriotic for a labor union to be multi-national too. We need a multi-national anti-cartel or anti-trust agreement so that they can't hold us around the throat for ransom, as they've sometimes done. We can develop some of this in the next 10 years and I think we will. It will be one of the big developments -- the checks and balances on the multi-nationals.

I'm really trying to be fairly neutral in what I'm saying about our changes because I first want to establish the fact of the greatest changes in human history in the shortest time. Once you've accepted that, now you can see. Can we live with them? Are there areas where we still have some options?

To change the simile a little bit, my wife used to say, "Don't fight the river, but steer the canoe." You can imagine the situation in which she might have said that to me in northern Minnesota. The river has inevitability once you're in those rapids and you're going down the chute. It has surprises in it. That's what is happening in the world today. Our technological developments have inevitabilities in them and they have surprises. But there's still a range of alternatives for choice. You can stick your paddle in and you can get over to the other side if you give yourself enough time. I think we still have to steer the canoe and identify the alternatives that are ahead of us. An example is checks and balances on multi-nationals.

At present, the multi-nationals form a countervailing force to the nation-state. The nation-states have been built on

sovereignty and military relation to other states. The multi-nationals are built in terms of networks around the globe and it's a different structure. I think it's a little like church and state in the Middle Ages. The fact that there are two such systems means that if one of them chases you, you can run for help to the other one. So we have a little more human freedom than if we had either system by itself. So, the nation-states will tend to curb the multi-nationals and the multi-nationals will tend to curb the nation-states. This kind of dialogue, so that we begin to make world networks, may be the most hopeful direction of our future.

INTERVIEWER: I think that's interesting. I'm still a little concerned that the nation-state can serve as the balance on that, the check for the multi-national.

PLATT: Oh but they are. Multi-nationals feel themselves very pursued. France insists on 51% ownership and other countries severely limit transfers of capital back and forth.

INTERVIEWER: But haven't corporations here in the United States considered just moving all operations out of the United States?

PLATT: As I say, it's a dialogue.

INTERVIEWER: With this computerized, as you're talking about, we don't know where their funds are. They don't have to be based in the United States.

PLATT: And so the nation will insist on more disclosure. It's going to be a dialogue.

INTERVIEWER: That's where we're at. That's the point that we start understanding one another.

PLATT: The results of these enormous changes and their prospects for the future means that we're in a pre-revolutionary era. McGeorge Bundy has written an article suggesting that 1989 might be a point of no return, that either we will have wiped ourselves out by ecological disaster, or nuclear disaster, or economic disaster, or we will have begun to organize global integrated structures (food supplies, ocean management, or a new international economic order) so that we'll be past the danger of the worst disasters. 1989 is a kind of magic number -- it's the 200th anniversary of the democracies. This is the right kind of date, within plus or minus five years, considering

the rates of change of the last 10 years or so. My feeling is that it's like trying to predict the year 2000 right now in 1979. It's like 200 years ago trying to predict the year 1800 in 1779. You had the two great democratic revolutions ahead and they depended on acts of terrorism, on acts of leadership and constitution-making, and so on. You couldn't have predicted in 1779 what the year 1800 would be like. Or 70 years ago in 1909, you couldn't have predicted what the year 1930 would be like. You had the greatest war in history, you had one-fifth of the world going communist, you had the elimination of most of the ruling aristocracies of Europe, and the flapper era. I think that it is just as impossible right now to predict the year 2000 as it was then. We're in a pre-revolutionary time and the future is not to be predicted but to be created.

INTERVIEWER: Okay, and you've been sitting here giving me alternatives. I wouldn't argue that we can predict a future, but that we can talk about the alternatives that may develop and we should know those alternatives at this point.

PLATT: This is the most important thing for futurists, to look ahead. Let's go back to that baby simile. The minute the baby is born, it has to do things it never has done in the womb. The fetus is no guide and history is no use in anticipating the future after a great system break of this sort. The baby must learn to breathe, to swallow, to sweat, to cry, to excrete -- things that it didn't do before. It must do them right or it dies. In the same way, we have to learn to use these enormous powers of nuclear energy, of electronics, of travel, and of space right in the next few years or we will kill ourselves. We can't do it the way the baby does. The baby has DNA built in that is a history of babies, it comes from a long line of babies who survived. It has the programming inside to know how to breathe. We don't have any such history. This is the first time in all of evolution on this planet that we have come to such a moment of global organization; and so we have to do it by anticipation, we have to do it by foreseeing the future, by forecasting, by looking at the alternatives, by making new constitutions, by designing new global structures, and by finding ways to deal with terrorism and disaster -- and we've got to do it urgently or we kill ourselves.