

PRESENTED BY JAMES ALLEN DATOR,
ASSOCIATE PROFESSOR OF POLITICAL SCIENCE
UNIVERSITY OF HAWAII
BEFORE A JOINT SESSION OF THE LEGISLATURE
OF THE STATE OF HAWAII

January 26, 1970

I very much appreciate this extraordinary, indeed unique, and, I suspect, ground breaking, opportunity to address this joint session of the Legislature of the State of Hawaii. Not only has your invitation to me been a great source of personal satisfaction, but it further reinforces my frequently-voiced contention that the leaders and citizens of this State are eager and able to show to the world how better to live humanly in a multiplistic society. This State, through its leaders, is, I believe, bravely opening the doors to a new faith-affirming era, that faith being that you can and must rise above the petty jealousies and fears of his near and distant past, and daringly face the necessity of creating a profoundly new, more human, and freer world.

Now, I have been asked by the leaders of this body to present to you my understanding of the necessity and possibility of this legislature's taking a more specifically "futuristic" approach to its constitutional tasks. They have heard me make my presentation before, and I presume they wish me to bring to you here essentially the same message that they have heard, presented in much the same style as before, which is to say, urgently fervently, candidly, and (I hope you will see), honestly; with the full recognition that the opportunity and responsibility of acting to create a better Hawaii lies with you and with all the citizens of Hawaii. I stand before you today, however, to pledge to you all of my time and abilities, most certainly feeble though my talents are, to seek with you how we might undertake this task, than which there is none more important.

I will tell you what I know and what I believe. Some of the things which I will say in this talk will be common knowledge; others may strike you as being absurd flights of irresponsible fancy, spun by a dweller in an ivory tower. Whichever, I hop that I can convince you of the essential validity of my position.

What I wish to do here is simply this:

First, I will explain briefly what I mean by "futuristics," a term that may be new to some of you, and slightly add to all of you.

Secondly, I will attempt to show why I believe that some kind of a futuristic perspective, whether precisely my own or not, is necessity, and not merely an option, for our public decision-makers today. The reason, to anticipate the point I will develop in a moment, is that mankind very literally is on the verge of extinction, and we must act promptly if we wish to prevent this.

Thirdly, I will try to outline what I believe we can do to prevent these disasters, and indeed, to do more: to create a better, more human, and freer world--while we have the chance.

And finally, and throughout with your indulgence, I will attempt to suggest some of the immediate, as well as intermediate, steps this legislature might take to act on the imperatives that I believe are before us.

FUTURISTICS as I understand it, is the study, forecasting, design, and realization of alternative social values, environments, and organisms for the immediate, intermediate, and distant future.

(By the way, many labels to identify this area are in current use--in more or less order of declining popularity, they include, futurology, futures research, futuribles, delphology, fustory--or futury [both contractions of "future history"]

futurontology, and mellontology--the last being Greek for "the study of the being of the future.")

Some people who call themselves "futurists"--and their numbers are rapidly growing: the World Future Society, of which I am a member, began in 1966 and now has well over 4,000 members in 50 countries--some futurists may state their area of concern somewhat differently than this, but whatever the precise definition may be, the fact is that a unique combination of dire necessity and new understandings and capabilities has occurred within the last few years giving birth to what George Chaplain likes to call, "a new breed of men."

The "dire necessities," the impending disasters, I'll get to in a minute--if they don't overtake me before I get to them--but among the new awarenesses and "new capabilities" that have given rise to "futuristics" are these:

First, there is the recognition that it is present human actions and present expectations that determine the future. As Robert Kennedy said, "Our future may lie beyond our vision, but it is not...beyond our control." That is, we are coming to understand that we are now creating our future, and if that is the case, we should try to do a better job; to design more consciously and purposefully, that we are at present.

Secondly, we are coming to recognize that not only is everything in the world around us changing, but that the rates of change are changing too. I have formulated a little rule for this, which some of you may have heard before, and I have pompously named it "Dator's law." Here are several versions of it: "The present is more like the past than like the future." In other words, "Today is more like yesterday than like tomorrow," Or if you prefer a longer time span, "The 20th Century is more like the 19th Century than like the 21st Century."

The point is, many of us are coming to see that change is so much a part of all aspects of our life--and that change itself is changing--that not only is the past an increasingly poor guide for living in (much less designing) the future, but that even the present is a pretty poor guide as well. Thus, we are faced with the positively unique situation of having not only to plan for a shifting future, but also to re-think through our most basic values and their current institutional manifestations: seriously, courageously, thoroughly, and honestly to examine everything we believe and everything we do.

Thirdly, and I believe following directly from that last point, some of us feel that a great deal of the anomie, alienation, and apathy we see around us--manifested for example, in seemingly "senseless" rioting, violence, and disorder, or bedrugged withdrawal --is simply "future shock." That is to say, many of us are familiar with both the concept and the experience of "culture shock," that sense of frustration, confusion, and perhaps rage that comes from living for a time in a bewildering foreign culture. "The world just isn't right. People aren't behaving as they should. These foreigners are shifty and devious, and taking advantage of us. I want to go home where people do things properly."

You know, we understand this phenomena of culture shock, and our Peace Corps training centers, for example, try to prepare their people for it. But I understand that even though the volunteers comprehend intellectually what is happening, to them, they still suffer from culture shock to some extent anyway when they move to their assigned foreign country.

What I am suggesting, then, is that many people today are suffering from a phenomena similar to culture shock because they are not adequately prepared to cope with the enormous changes going on around them. They are suffering from future shock, and as the rates of change themselves continue to change--and if our socializing methods and contents do not--then we can expect this problem to increase in extent, severity, and danger.

An alternate designation for "future shock" is "neophobia"--"fear of new

things." Whatever its label, it is a fact of the present, and, if unplanned for, an enormous problem for the future.

Now, I have listed three "awarenesses" above, three things that futurists have come to see demand that someone needs to anticipate and plan for the future.

But in a way, there is nothing new about that need. Man always wants to know what the future is going to be like, and he certainly has always had an interest in seeing that the future would be favorable to him. So what's new? Essentially this:

We have developed, and are perfecting, theories, methods, and hardware which enable us to do an increasingly better job of predicting, forecasting, and designing social events.

We are all familiar with the physical scientific revolution which has given man such fantastic (though, of course, still not complete) control over the environment. We know that, but many of us may not realize that we also are in the early stages of an even more profoundly revolutionary development in the biological sciences--I'll go into that a little later. But perhaps only a few of us recognize that we may also be about to witness the takeoff of the social sciences--they've certainly been taxiing around the runway long enough--due to the development of new theories of human behavior, and equipment--especially the computer--for understanding, predicting, and influencing human behavior.

Both business and government--especially the military branch of government--have discovered that there are social scientists around who can help them understand what people are doing, why they are doing it, and how to get them to continue doing it, or to do something else. By no means are these techniques or theories complete or even wholly adequate yet. But I don't see how anyone can deny the relative increase in power which these developments have brought, nor the fantastic increase in precision and specificity that we can reasonably expect to see as social science research continues and social scientific recommendations are incorporated into public and private decision-making.

But all of this is really prologue to the urgent message that I want to bring you today. What I've tried to suggest so far is simply the desirability of future planning, and that we possess some of the information, theories, equipment, and personnel to do it.

Now I want to lay before you the reasons why we must reorient our public and private decision-making processes around some kind of a futuristic perspective, and the reason can be summarized very succinctly:

THE "UNINTENDED CONSEQUENCE" OF MAN'S MANIPULATION OF HIS ENVIRONMENT HAS BROUGHT THE WORLD TO THE BRINK OF TOTAL DISASTER. UNLESS DRASTIC ACTION IS TAKEN IMMEDIATELY, THE PROBABILITY IS VERY GREAT THAT ALL LIFE WILL CEASE ON THIS PLANE; THAT YOU NOW HEARING THESE WORDS, AND ALL YOUR FRIENDS AND ENEMIES--INDEED, ALL BEINGS, HUMAN AND NON-HUMAN--WILL BE MURDERED BY AN "UNFORTUNATE" COMBINATION OF MAN'S UNREGULATED TECHNOLOGICAL ABILITIES AND HIS OBSOLETE SOCIAL VALUES AND INSTITUTIONS.

Some people who know and believe this statement think that it is already too late for man to do anything about his impending demise. There are simply too many ways the world might immediately come to an end, and whether alone or in combination, the probability is greater that they will occur, many people feel, than that they will not occur. What are the ways the world will end?

1) We may squeeze ourselves to death. The population of the world at the dawn of human life was very small indeed, and it was not until the advent of "civilization," that is, the establishment of cities (which was itself made possible by man's very gradual control over his food supply) that population increased drastically. But even

then, life remained short and precarious, and the total population of the world in essence levelled off, or, more accurately, very slowly and imperceptibly drifted upward, dipping down during the plagues in the Middle Ages, until about 1650 and the advent of the Industrial Revolution, when population began to rise. And then things really happened. Listen to this. The population of the world in about 1830 (only 140 years ago) for the first time reached roughly one billion people. By 1930 (within 100 years, and only 40 years ago), it had doubled to two billion people. It then jumped to three billion in only thirty years (by 1960), and it will add another billion between 1975 and 1980.

But things are rapidly getting utterly out of hand--there will be over seven billion people by the end of this century! That is, the population is going to double again from its present size in only thirty years! For every "thing" we have at present--and who thinks we have enough--there will have to be another "thing" in only thirty years. But wait. In only 60 more years from now, the population will double again: by the year 2030, to 16 billion, and again by the year 2060 to 29 billion and so on.

And so on! Are you kidding? To increase from 3.5 billion now to 29 billion people in 90 years! That's absurd. And indeed it is. Many scientists are now arguing about the precise date of "Doomsday"--the day we literally squeeze ourselves to death--and it's not a hundred years from now. It's within the lifetimes of many people alive today; one date: "Friday, November 13, 2026."

But surely something will happen to prevent Doomsday. Yes, indeed, something probably will. Let me continue down the list of the ways the world may come to an end.

2) Worldwide famine is imminent. The population is already too great for the food supply, no matter what new developments in agricultural technology occur, many people feel. The United States now is living off its agricultural surpluses of the past. It can't produce enough to live on now. I suppose it's nothing new that one half of the world is starving to death, but it might be some cause for concern if I point out that it will be new if all the world starves to death, or dies in the struggle for an insufficient food supply.

In spite of the very important Green Revolution, population increases seem about to wipe out the advantage gained through new food-producing technologies, and world-wide famine is predicted by 1975--some (such as myself) would add, "if we don't do something about it." Others would say, "no matter what we do." Which leads to the third way the world may end.

3) Man may have already poisoned himself beyond redemption. As you all know, the level of DDT in the human body alone is so great that mother's milk has been declared unfit for human consumption, and the amount of slowly-decaying DDT (and detergents and other chemicals) moving down the food chain to the phytoplankton has been estimated by Stanford University biologist, Paul Ehrlich, as leading to the the death of the oceans, and hence the extinction of all life, as he says, "late in the summer of 1979.:"

(By the way, I hope you won't be put off by my giving specific dates like that. They are simply mathematical projections of the exponential lines of development, and I use them to get you to see that these problems are very much within our own political time, and that our own lives, politically and personally, will be affected if these developments are unchecked).

4) We may shortly smother ourselves to death in our own wastes. The level of man-produced carbon monoxide, carbon dioxide, nitrogens, and lead in our atmosphere, for only one of many examples, is so great that a reasonably lengthy air inversion over any major city (which inversion is highly probable) would result in the deaths of most organisms--including man--in the area, and if local inversions do

not occur as warnings before the total global toxic level in the atmosphere exceeds tolerable limits, all life may be suffocated. The current serious prediction is that within ten to fifteen years, all people will be wearing gas masks, and most plants and animals will be dead.

But we may also drown ourselves in our own human organic and inorganic wastes, especially as population increases so drastically. Where are we going to put all the manure and paper cups and beer bottles, and the rest, when there are 7 billion, or 16 billion, or 29 billion of us around?

In addition, the problem is compounded by considering how to dispose of industrial wastes, and matters become perplexing indeed when we consider the waste disposal dilemmas posed by our newer industrial technologies--for example, the problem of disposing of the waste of nuclear fission plants, or the wastes of biological warfare testing.

5) Of course, we may simply boil ourselves well done. A further consequence of nuclear fission plants which utilize water is that of thermal pollution. The temperature of water coming out of the plant is greater than that going in, so that the "natural" organisms in the water are killed. Thermal pollution, as much as DDT and detergents, is responsible for the "death" of our lakes and rivers now.

6) But why worry about that anyway? We may blast our bag ourselves out of existence before then. In the pursuit of the incredible stupidity called "national defense," any nation or nut among us may purposely or (more likely, and also of sufficiently high probability) accidentally commence nuclear or (also, more probably) bacteriological warfare, which may end all life.

7) We may revolt ourselves to oblivion, to the Stone Age, or to 1984. Various marginal persons (blacks, students, the poor, lower middle-class whites, and others) in our society, sufficiently turned on by our technologies to understand that something must be done, yet also sufficiently creatures of our culture to imagine that it can best be done through violence, direct confrontation, and self-righteousness, counsel increasingly fragmented brands of violent action, which simply are met violently in return. Other persons, knowing essentially nothing, but keenly feeling the anguish of their powerlessness, engage in "senseless" acts of expressive violence--and too receive more violence from those who, "legitimately" possessing power, would prefer to ignore the grievances of the dispossessed, but if that is now possible, choose simply and swiftly to repress them, which actions will culminate ultimately in the destruction of all--activist, apathetic, and establishment alike.

But put the problem of the "marginal" person to one side, if you will (we've certainly done that before!). What do you suppose will be the response of the good, law-abiding middle class man as he watches his children starve to death, or smother to death, or die of thirst? Will he hold his public officials blameless? Will he say, "Oh, it's really my fault. In a democracy, politicians only act on what the people demand, and since I didn't demand real solutions, it's no surprise that the politicians didn't act." Do you really believe that everyone will be forgiving as they die?

Truly, it is more likely that men, in their rage, will destroy their world, than that they will let nature do it for them.

So, the list of the ways the world may soon end is very long, and the probabilities of any one or combination of them occurring is so great that many persons feel the future is utterly beyond our control. The best we can do is die with a brave smile on our lips.

Other people, however, feel that we still possess the time and the knowledge to prevent any and all of these calamities. Nonetheless, they are a profoundly pessimistic as the first group. The reason for this is that though they believe we can prevent disaster, we are not likely to do so. Politicians and businessmen will not act, ultimately because the population does not believe the predictions, and thus will not

demand or support the drastic changes that are needed.

"Common sense" suggests that since the world hasn't ended yet--and many false prophets have predicted its demise before--it is not going to end now. Therefore, anything we do to prevent disaster will itself so profoundly disrupt existing patterns of thought and behavior that most men will not tolerate it. And so nothing will be done.

That is, the previous recital of the "ways the world will end" is nothing new, some people argue: Many men among us have been harping on them for years. Wasn't there Malthus, and haven't we survived? People earlier expressed fears about DDT, but how could we have kept as many people alive for as long a time as we have if we hadn't used DDT as pest control? How long must one listen to cries about smog and air pollution? London has had it for centuries, Los Angeles for generations, yet London and Los Angeles continue to grow and serve as great centers of our civilization. So why worry? As for nuclear or biological warfare, we haven't had either yet, and, anyway, though billions of people may be destroyed, I'll probably survive. Moreover, as every year passes with no nuclear and biological war, the likelihood of such a war seems to lessen--the pacifist sob-sisters have been weeping for years, and we're all right. An if those black (or young, or lazy long-haired) punks want to fight--then let them come on! We outnumber them, and we'll beat the hell out of them. That's exactly what they need!

Now, I am of the third opinion. First, I agree that something must be done. Secondly, I recognize that though resistance against change is massive (and sometime conscious and sophisticated, though more often unconscious and naive), apparently we have manipulated people so successfully in the past that now, somehow, they are content to face impending doom without any apparent concern or action. Thus, through the operation of many of the same methods that have produced the calm, we can, I believe, change men's minds and behavior. And thirdly, I believe that I have a general plan of attack, articulated through a reasonable theory, which, though perhaps to some person's minds, wildly absurd, utterly impractical, or dangerously subversive, seems to me to be at least one of a class of actions that must be undertaken: nothing less will do than a complete modification of man and his environment. Whether or not the specific details I suggest are actually followed is far less important than that it be recognized that all of our past beliefs and practices must be radically tested, and most of them completely supplanted. We cannot start with any assumption except this: we got ourselves into this mess, and we must and can get ourselves out of it.

Yet even if we act to prevent ecological disasters--and I am convinced we can and will act to prevent it--two new technologies are rapidly rendering obsolete almost all of our current institutions and values, and much of the conventional wisdom of the past.

The first technology is at base not new; it has been with us since the real meanings of the industrial revolution became apparent. I refer of course to advances in automation and cybernation which are eroding our time-honored notions about the priority of production problems over those of distribution of goods, and the relative value of work vs. leisure, discipline vs. freedom, responsibility vs. non-responsibility, and, in sum, those values and institutions of our present society which make the worth of a human being depend upon the social significance of that person's labor.

We are moving very rapidly towards a situation where it will be a privilege to work, not an obligation; where only a very small proportion of the population will be engaged in labor. How rapidly we get to that state, and with what upheaval, depends largely on what we do, or don't do now. Factories have already discovered that by automating, they are not only relieving themselves of laborers, but also of

purchasers of their products as well. Yet, our obsolete economic structures, and their supporting value systems, assume that goods are scarce, and the only labor available is human labor. Thus goods can be distributed on the basis of the social value of human labor. But what happens when goods are produced by machines alone, and there is no one "employed?" How are goods distributed then?

In addition, if human value (and supporting institutions) are based on the assumption that since human work is necessary for survival, all institutions must be geared to forcing people to work and to derive ultimate satisfaction from their work, what is going to happen when mechanical labor replaces human labor? What are we going to do then?

But problems attendant to the replacement of manual labor by machines are the "easy" part of the cybernetic revolution. The "hard" part is that which faces us when we come to realize that all other functions which perform now can, and probably will, be taken over by machines.

The older generations of computers, for example, were correctly characterized as being "very fast moron." "Garbage in, garbage out" is true of the older computers, signifying that such a computer could do only what you told it to do, and if you made a programming error, or asked it a ridiculous question, then you would get a ridiculous answer. The advantage a computer had over man was simply that it could handle a larger mass of data more rapidly than man. But it couldn't think or create. Only man could do that.

Not any more. The next generation of computers can think, and create, and repair, and reproduce themselves. They can, in fact, improve upon themselves. Anything you or any person can do, a computer can do better, and faster, and with more patience.

If there be any who think their job is such that no machine can do it--or should do it--then he had better wither start readjusting himself and this world, or else start pulling the plug, because the next generation of computers might be able to put the plug back in, and slap your hand as well.

But I'm still talking about easy problems. And assuming we prevent ecological disaster, and learn to live with machines, we are already past the speculation and theorizing stage and into the development stage in an arena that man has only dreamed about before: I said earlier that the physical sciences pretty much had matter under control (though many scientists will choose modestly to point out their deficiencies). Well, the biological sciences are on the way towards doing the same thing for life: The "really big" revolution of the present is nothing I've mentioned before; it is that life scientists have unlocked many of the so-called "secrets of life," and are everyday unlocking more.

Discoveries concerning the makeup and actions of chromosomes and genes as the determiners and regulators on the individual lives of all organisms, coupled with the growing ability of scientists to intervene in and direct their make-up and action, means that man possesses the power to control life as he never has before.

Strides are being made in reversing the aging process of organisms, so that individual life spans may lengthen so enormously that, in effect, immortality can be achieved. Now couple that potentiality with the population and food problem I've mentioned before.

Just as now doctors can help a couple conceive a child of the sex they desire, or, through contraception and abortion, sever the connection between the sexual act and reproduction, so it is highly likely that within the lifetimes of most persons living today, we will be faced with problems relative to having human reproduction be an artificial operation, carried on by scientists in laboratories, acting to implement politically-determined decisions about the make-up of the population.

That is to say, not only will we be able to determine the ratio of men to women in the population, but also all of the physiological and psychological characteristics of its members.

It may be that human reproduction will be socially determined, and scientifically performed, and (perhaps) the sex act be only for fun or interpersonal communion.

However, it is equally possible that there will be no sex act at all.

Couple the power and implications of automation and cybernation with those of genetic engineering, and you come up against a new possibility and perplexity--the destruction of the distinction between life and non-life; between the organic and the inorganic.

Man can create a cyborg--a cybernetic organism--as much alive as it is machine; a machine-augmented being; an organic computer; a self-loading and unloading, oil-bearing whale; a jet-assisted, cargo-carrying bird; a man with eyes in the back of his head and his brain connected to a computer; a man who, genetically, can not be violent; a population one-half or one-third the size of present persons as a solution to the over-population problem; men with modified lungs which can breathe in the wastes of the internal combustion engine, and breathe out oxygen--one organ's waste is another's food.

Please don't misunderstand me at this point. I'm not necessarily advocating any of these things here. I am just illustrating some of the aspects of the biological revolution that will be upon us very shortly, and that we are not morally or institutionally equipped to handle these problems very well yet.

Do you see what I am getting at? For the first time, directly and purposely, man will be able to determine his own nature. It no longer will be fixed, given.

Between now and then, we are faced with the necessity of developing values and institutions to cope with these problems and their precursors--the use of electronic and chemical means of enhancing learning, or altering behavior.

Can you see why I say that the biological revolution is the greatest challenge we face?--if we manage to live so long? Can you see why I insist so urgently that we come to grips with these problems? Can you see why I contend that radical change in all existing values and institutions is itself not radical? The real radical, who is willing to let this world rip itself apart, is the one who tells you everything is OK, that nothing's new; that the old tried and true ways of the past are sufficient for the troubles of the present and the future; that all we need to do is really believe in and apply the old moralities.

Does it really take a conservative like myself to convince you that the only way to even stay in one place is to run like hell? And that to preserve the quality of life is going to require the greatest concentrated act of courage and intelligence the world has ever seen?

I think we can do it. But how?

First, we've got to be convinced of the reality and urgency of our problem. I hope to God I've done that for you by now.

Secondly, we've got to take a systemic approach to our problems, and not an analytic approach. What I mean by that distinction can be explained this way. The style of modern decision-making--say since the creation of the British Parliament, but at least since the establishment of the United States Congress and state legislatures--has been to seek solutions only to those problems that have been brought before the decision-makers through the operation of certain political (and frequently, economic) pressures. Then, optimal solutions have seldom been sought. Instead, most legislators generally tried simply to do whatever was necessary to quiet the protest. I call this the "squeaky wheel" approach, by which whatever grease was conveniently available was slapped on whatever legitimate wheel squeaked the

loudest.

I won't go into the whole story of how public decision-making came to have this general characteristic, though I think you might find it an interesting story, if you're not already familiar with it, but public decision-making has not always been this way. Parliaments and legislatures--indeed, the very notion of law-making rather than law-discovering is relatively new (only a couple of hundred years old) and reflects the needs of a society to develop a satisfactory rule-making process when its population has grown well beyond the face-to-face size, and when the society has discovered that it is being faced with many problems that can not be settled on the basis of precedence alone when, in short, "reason" has to be applied.

Unfortunately, our current piecemeal approach to legislation, which probably worked pretty well two hundred years ago, has tended to contribute in part to our being on the brink of ecological and environmental disaster, because we legislate to solve specific problems without taking adequate consideration of the interlocking aspects of all life. So really, our solutions tend eventually to make matters worse.

In our natural environment alone, this point is especially clear, it seems to me: the "ecological" viewpoint is a systems viewpoint--as, I might add, is the viewpoint of the electronic engineer--"ecology" means the study of the interacting, and mutually interdependent, units of nature. We speak of the "balance of nature," and an "ecosystem."

Well, unfortunately, man has so interfered with nature through science and technology, that I'm afraid we don't have an ecosystem anymore, we have an "ecomess;" a system so out of equilibrium that it is beyond recapture. That is why I maintain that we can't "go back" to some earlier state of nature: we must use our scientific knowledge to establish a new balance, which may in fact be quite different from the old.

Now, I believe we should restructure our public decision-making processes around some kind of systems approach, and that we should further incorporate the following considerations as well:

First, we must take a futuristic perspective. By that I mean that in order to utilize a systems approach properly, we must be able to state clearly what we want the outcome to be. We must be able to describe the end product in some detail.

We really can't do this very well if we only look at the present problems. They are so vast and overwhelming and interlarded with multiple vested interests. The solution? Move out in time twenty or thirty years, and design in detail the type of world you want it to be. Think boldly and grandly (this will really be the hardest part). Then, when you are clear on your systems goals (though they will of course be kept flexible), you can move back to the present, and legislate more competently.

Secondly, we need to legislate experimentally and scientifically. Our present political system is both a product of, and a response to, mass industrializing society, like most every other dominant institution in our society today. We can see the importance of this fact by reflecting on what it means in our goods-producing sector. Before industrialization, goods were mostly custom-made: your shoes, your shirt, your house, your bow and arrow were either made by you or for you. Industrialization changed all that. Now goods are made "on the average"--large, medium, or small--so that nothing really fits anybody. They are made for some mythical average person.

So also were our morals. In tribal societies, where everybody knew everybody else, you had a precise and individually-tailored code of behavior for every person in your tribe; not a single conduct for all, but a rule for each person. In 19th and 20th Century mass society, there are too many people for custom-made rules, so we developed an abstract, though still absolute, ethical code.

Finally, so also with rule-making, rule-administering, and conflict-

adjudicating. In the really old days, tribal laws, and their administration, and tribal justice were usually specific for the individual involved. Laws were made for individuals, and applies differentially, depending on who you were.

By the late 18th and 19th Centuries, we became a "government of laws and not of men." We developed a professional, objective bureaucracy which went by the rule books, and not, supposedly, on the basis of who you were and who you knew. Similarly with the courts, who applied the broad legislative and constitutional principles to individual cases.

Well, modern technology is making it possible for us to personalize goods, and morals, and laws, as well as administrative and judicial decisions, once again. That is the essential difference between the new, cybernated technology and the old, industrial technology: cybernated technology, such as the computer, makes individuality possible in a densely-populated society.

Thus, I conclude from this:

1) We must use technology to help solve our problems, and this includes our thinking seriously about how we can use existing, or help develop new, technologies to solve the crisis in legitimacy that the conflict between 18th and 19th Century-based political institutions and 20th and 21st Century-based expectations is provoking.

2) And secondly, we should take a more experimental approach to our legislation. This means, among other things that:

a) We should regulate only those actions that have clearly dysfunctional social consequences--at this time, especially those acts which genuinely contribute to environmental pollution--and abolish those laws which regulating private thought and behavior which are carryovers from our pre-industrial and industrializing periods. Just because we don't like something is no reason to outlaw it in a multiplistic society, though it might have been in a tribal or industrializing society.

b) We should reward non-violent social deviants and non-conformists. The need for mindless conformity to a single, poorly-fitting, mass-based code of conduct is over. What society needs now, and needs urgently, is to encourage people to try to do things differently, to experiment with new, non-dominant life-styles, for example. Instead of harassing people who don't conform, as long as their deviance in non-violent, we should encourage, applaud, and reward them for their bravery. I seriously propose a state award for persons who are deemed to be most different every year, and that we cease rewarding conformity and conventionality.

c) Because we have or can develop the technological capability, we should regulate as much as possible on an individual, personalized basis. Consider laws which use the level of alcohol in a person's blood to determine his drunkenness. On face appearance, this is a very scientific law, but generally (I have no idea that this is actually the case in Hawaii), the amount of alcohol in a person's blood that makes him legally drunk is determined by using the average of a highly-biased sample of persons in some other part of the world. Thus, you are subject to arrest, loss of license, liberty, and treasure, not to mention public disgrace, not on the basis of whether you were in fact drunk in terms of your body, but on the basis of some impersonal average. Once again, the obsolete notions of mass society, ignoring the technological potentialities of a cybernetic society. The point here is that the amount of alcohol that makes you drunk is as unique to you as your finger prints, though even within your body, that point fluctuates in dependence on other factors--how tired you are, how healthy you are, what and when you have eaten, and many, many other things--all of which are personal, and susceptible of scientific determination.

Now I'm not arguing about the drunken driving laws. That's just an example. What I'm trying to ask is, why penalize people--why literally ruin their lives--on

such essentially arbitrary, impersonal, mass-produced bases? It's a hard job; but it is much more humane, and certainly possible, to legislate personally, and to legislate less.

Finally, I press upon this legislature a message of urgent hope. This state is fortunate to have already upon its payrolls, at the University of Hawaii, some of the persons best informed about the scope and nature of Hawaii's ecological and environmental problems, and also who are very well able and willing to offer effective and imaginative solutions.

I hope you will call upon these people immediately to work with you to create a New Hawaii, both for its own sake, and as a model and example for a better world.

I thank you.