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## PROSPECTS FOR SOCIAL DISCONTINUITY

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I am grateful for the opportunity to address this distinguished audience, because I think that what this profession has achieved, collectively, is remarkable. You have bridged a past and a future with your service to society and your service to mathematics. Don't worry - I'm not going to say that all your work has been for nothing because society is about to go down the tube in 1980.

The reason I'm here is based on work that the Joint Economic Committee asked me to do about two years ago, regarding the prospect for a social-political discontinuity. The word "discontinuity" bothered me initially; in fact, they wanted me to analyze (with a fairly large staff) the prospect for disaster. Just as you would consider a disaster to be a major deviation from your actuarial tables, so the economists on the Joint Economic Committee were concerned that their projections for the development of the global economy and its impact on the American economy might be far off. I suggested that "discontinuity" was a better word, because "disaster" is a pre-judgement of a situation, whereas "discontinuity" is neither good nor bad. It simply says that a change is beyond a reasonable or projected degree.

I began to explore this with colleagues from many different disciplines, including physicists, economists and political scientists. I even brought an astrologer to Capitol Hill - you can imagine the raised eyebrows that evoked! Science fiction writers made an important contribution, because they dared to look into the future without fear of being ridiculed - perhaps because they had been ridiculed so much they'd grown accustomed to it. I found these people, along with people from our "standard" professions, to be quite innovative.

Over the course of three or four meetings, there began to emerge a concensus about the future that was very disturbing. Perhaps the most disturbing finding was a sense of profound alienation of people, in both America and Europe, not only from their most sacred institutions but also from one another. We found a profound sense of distrust - in the case of politics, a feeling of disdain for, or a loss of confidence in, authority and government. We found a feeling of pessimism about economic institutions, a decline in the unity of the family, and a drop-off in church attendance.

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All of these institutions that are so ancient and yet so modern seem to be, if not failing, at least not fulfilling some of the expectations of people.

As we looked at these problems institutionally, we wondered if this central theme of alienation was valid. As you know, perhaps better than other professions - with the possible exception of the military, who are also engaged in using premiums to buy insurance - there are no facts about the future. You're constantly guessing, then hoping that your projection from the past won't be too far off. I think, in the case of this industry, your guessing has been remarkably accurate.

I think the fear of innovation, or putting it more fundamentally, fear itself lies at the base of this sense of alienation that we were discovering in its many manifestations. When I speak of fear, I'm also speaking of a loss of vision. I'm reminded of a story ascribed to Bob McNamara, who, when he was Secretary of Defense, went to President Johnson and said, "You are pursuing a highly costly, ineffective, no-win policy in Viet Nam. But take heart - we can change that to a highly cost-effective no-win policy in Viet Nam." The president said, "My God, man, how about a victory?" to which McNamara replied, "I'm sorry, that's not systems analysis. We deal in adjectives, not nouns". The noun was "containment". Johnson was trapped in a past from which he had no options; he couldn't maneuver.

Obviously, in the international sphere, containment is no longer a valid vision, although many people still try to use it for a vision because there's no adequate substitute. This is what so many Asian and European diplomats have told me, waiting for the new American vision.

Peter Hall has recently published a book called <u>Europe 2000</u>, which is a distillation of some 15 years of research by 200 scholars on the future of Europe. I was struck by the fact that the central theme of this book is alienation. These scholars, traveling around Europe interviewing people, found a pervasive sense of fear and uncertainty from which there seemed to be no easy escape. So many forces and energies were not as they should be, that the old ways simply didn't seem to be promising adequate solutions.

I dare say that, in this audience, if we wanted to accent those negative ideas, we would quickly find plenty of evidence to support that theme of alienation. But we also felt, in my committee, that this is just a matter of choice. It does not have to be that way - we choose fear, for whatever reason. It is not something that objectively confronts us.

I think that in this profession, and certainly in the military profession, we would like to make risk as objective a phenomenon as possible, because we then feel more confident in confronting it. Nevertheless, we're always balancing confidence and risk, or confidence and fear. We hope that insurance will take care of that element of risk beyond our confidence, or beyond our level of tolerance, when we can no longer handle the additional uncertainty and we need some kind of crutch to lean on.

This is not a morning dedicated to either supporting or castigating Bob McNamara, but some weeks ago, when I was looking carefully at the Strategic Arms Limitation Treaty, someone asked why we need a certain level of strategic weapons for a second strike against the Soviet Union. Why a particular figure, such as 1,000 Minuteman missiles? Well, the original premise came from an arbitrary decision that, in order to deter the Soviets from a first strike, we must prove that in a second strike we could kill 20% of their population and destroy 65% of their industry. Now, why is it that the Soviets will buy this argument, but only at 20% and 65%? Why not 5% and 15%? These are the results of straight speculation about Soviet psychology (and perhaps our own), and yet out of such estimates emerge a lot of money, a lot of weapons, and a whole context of fear; in other words, a balance between confidence and risk.

Somehow all of these calculations are a reflection of a concept of reality, specifically of security, which is taken to be physical. So when you are dealing with the risk side, you deal mathematically and with a physical concept of security, although each of us knows that there is another dimension to security - the confidence part. We can say it is spiritual, but we cannot calculate it because we don't quite know how to put numbers on that sense of confidence.

What has been happening in the last ten years in our society, related to this whole question of discontinuity, is an increasing sense among some people that they will not put the balance of their faith in physical security but that, instead, they will shift substantially to the spiritual component. They have said, in effect, that security is a state of mind, not a physical fact. The military can never totally guarantee one's security. Certainly the insurance industry has never promised a 100% guarantee, especially against unreasonable risk, however that may be defined.

In a 1976 survey of the American people(presumably an inadequate sampling), Gallup found that 15% of them were engaged in some type of mystical discipline, whether it was as abstruse as yoga or as common as jogging. (For those of you who jog for a reward other than shin splints, you know that there  $\underline{is}$  something else.) A research institute in California has sponsored studies on such things as inner tennis and inner golf. This movement of a search for an inner path has generated some research in our laboratories with the quite startling finding that perhaps 40 million people just in this country are involved in such things.

My research and interviews have indicated that the Soviet Union is equally involved in a very frightening transformational process, at both the personal and the societal level. For example, the Soviet Olympic team trains many of its people in imaging, at an institute for yoga.

I would like to talk a little bit about some of the predictions for discontinuity that emerged from our work. They are very pessimistic predictions. These are unreasonable risks, and I can't imagine the insurance industry even contemplating a premium, much less a pay-out, for their happening. At the extreme, of course, is a possible shift of the north and south poles around the year 2000. A very serious survey of this whole subject is about to be published by John White. I would say he gives it a fairly good change of happening. At a less devastating level of threat, you have the possibility of a nuclear war, which is of course a tea party compared to a pole shift.

At a lesser level you have, out of the process of transformation which I've been discussing briefly, the sense of a coming conflict between two belief systems - namely the old paradigm, in which we all live, the belief that security is physical and that we must continue in an adversarial and highly competitive mode; and another paradigm, that we are not only joined institutionally but, in a way that can be proven in laboratories, spiritually. Most people think that such joining is merely rhetorical - that we are not really joined in any way except by shaking hands and saying "hello". But our laboratory experiments at the Princeton and Stanford Research Institutes suggest that this other kind of joining is a palpable reality; that what you call intuition or insight or a hunch is not just the luck of the draw, but that you briefly opened the door and had some insights that are always there, waiting to be tapped.

Obviously this latter system is very threatening to the former. In a book called <u>Cycles Of War</u> by a young man named McMaster, a very thoughtful cyclical analyst who specializes in commodity cycles, there is a prediction that this country will be in a civil war by 1984. Out of that civil war will emerge a third world war, then a military dictatorship for this country because of our yearning, not for liberty, but for equality.

Well, here again you can pay your money and take your choice. Do you choose fear or do you choose another way? McMaster would say that we really don't have much choice; that we have very little time left.

It was because of my interest and my sense about the near-term future, from my own studies and discussions with hundreds of people in many different fields, that I decided to leave the Library of Congress for a year in order to explore this much more carefully with leaders throughout society, particularly with presidential candidates. Several have asked me to talk with them about vision, innovation, and turning around the pervasive sense of fear which is fostered by the way we define and attempt to solve our problems. It's easy to say that fear is fostered by government spending or by someone like the Russians, but I have come to realize that we make our own choices on how we perceive these problems and on how we decide to solve them.

Marilyn Ferguson has written a book called <u>The Aquarian Conspiracy</u> that will be published in January. It deals with the entire concept of a transformation that she argues is now appearing in a subtle way. (It's not so subtle if you have 40 million people engaged in it.) These people have not yet brought their networks out into the political arena, but she senses, as I do, that they are about to emerge. These are not just young people or California hippies. I would say that at least 10% of us in this room are "Aquarian Conspirators", in that we're saying that there is a better way to solve all of these problems, both personal and societal.

In her book, Marilyn talks first about experiments in the nature of reality, primarily in our physical laboratories. If you have not looked into your physics in the last 20 or 30 years, as I had not, you will be surprised to learn that physicists have gone beyond Einstein and are now saying that there is no basic building block to the universe. In the last 10 years, over 400 particles have been discovered that are smaller than a proton or a neutron. In high energy quantumphysics, today's physicists are using

language to describe reality that is almost identical to the language used by Eastern mystics 2000 years ago. The mystics acquired their knowledge, perhaps, simply by knowing, by going within; the physicists needed to prove it with high energy particle physics.

Brain research at Stanford Research Institute has suggested that we create physical reality by a holographic process, almost a photographic process. This can be very frightening and challenging if you take it too seriously, because you wonder if someone is really there. In her book, Marilyn also talks about holistic health and holistic education.

Buckminster Fuller was once asked, "You associate with geniuses, and you're a genius. How do you account for that?" He said, "We're not geniuses; we were just less damaged by the educational system than most." Marilyn's chapter on what is happening in the educational system is another insight into the process of transformation.

The political system is changing very rapidly. We find that there is a kind of paralysis at the county, state and national level, not because of a lack of information, but because of too much information. We have reached a point where we have so much data that you can support almost any perspective in any argument. Take your choice — if you want to support an argument for fear, you buy weapons, but if you want to support an argument for confidence, you take an approach of joining rather than separation.

Sensing some of the enormous changes that may occur very suddenly, and having talked with many people about them, I realize that there are three kinds of futurists. One kind says "Yes, big changes are coming, but they'll be spread over the next 100 years and will be on the margin". This is where we, as planners, normally expect changes to occur; this is the process we're familiar with. Then there's the futurist who says "Enormous changes are coming, but we can digest them because they won't come too quickly". Finally there's the futurist who says "Sorry, big changes are coming, and there will be a discontinuity which will happen suddenly, because of a critical mass of a few people. We don't know how many are enough - some say 2%, some say 10%".

Prigogine, the Belgian biochemist, won a Nobel Prize in 1977 for his mathematical formula to explain discontinuity in a biological system. A change occurred when the system could no longer digest the energy transfer process going on within it. But instead of collapsing, it changed into a completely different system. In evolution a bird does not acquire half a wing before it decides to fly. Somehow the process of biology gives it a full set of wings at the right time. Prigogine's results are analogous to my message — I think that we are at a point in our history where 1980 could very easily be the watershed election year. The period from 1980 to 1984 could be a profound watershed, in which enormous changes could occur in our society of the kind that Marilyn Ferguson has discussed in her book.

We're talking, in a way, about responsibility. As we try to secure a sense of confidence for people, we find that in giving away their sense of risk to an institution such as government, they perhaps give away a sense of responsibility. We know that a lot of that has happened, to a point where

people feel that they can do nothing; they're simply part of the system.

So I have decided to talk with leaders at community, state and national levels about ways to give people permission to retrieve responsibility for their own lives, without doing so in a destructive way. In effect, to do so not by alienation or competitively but by joining. So we are fostering a concept called Novus (from "novus ordo seclorum" on the back of a dollar bill) as a new order of the ages, a vision of the founding fathers, a way of making decisions. In effect, we are saying to as many people as we can find, "Innovate. Don't be afraid of making mistakes." You know, that was always my problem, and still is. In government, you're told by your boss "I want you to innovate, but don't make any mistakes". They don't go together. You have to let people make some mistakes.

I have taken this move, even though I'm not sure what the Library will say when I get back after a year. As to you, it seems to me that, as it has in the past, your industry could foster research to bridge two paradigms, two eras. The cost of the bridge of incentive, of catalytic investment, is tiny. For example, you can sponsor research into better ways of educating youth, such as the new approach to teaching a language which takes only one—tenth of the time that once was required. You can foster innovation and confidence rather than fear, because they are opposite sides of the same coin. You can foster responsibility and work to eliminate this sense of alienation; perhaps understand it better, and then fight it.

I end on a note from Prigogine, who said that the way to cope with the future is to create it.