

760
LONG-RANGE ECONOMIC GROWTH

HEARINGS
BEFORE THE
JOINT ECONOMIC COMMITTEE
CONGRESS OF THE UNITED STATES
NINETY-FOURTH CONGRESS
FIRST SESSION

—————
OCTOBER 23 AND 24, 1975
—————

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LONG-RANGE ECONOMIC GROWTH

THURSDAY, OCTOBER 23, 1975

CONGRESS OF THE UNITED STATES,
JOINT ECONOMIC COMMITTEE,
Washington, D.C.

The committee met, pursuant to notice, at 10 a.m., in room 1202, Dirksen Senate Office Building, Hon. Hubert H. Humphrey (chairman of the committee) presiding.

Present: Senators Humphrey, Kennedy, Culver, and Javits; and Representative Long.

Also present: Jerry J. Jasinowski, William R. Buechner, William A. Cox, and Robert D. Hamrin, professional staff members; Michael J. Runde, administrative assistant; George D. Krumbhaar, Jr., minority counsel; and M. Catherine Miller, minority economist.

OPENING STATEMENT OF REPRESENTATIVE LONG

Representative LONG [presiding]. The meeting will come to order.

This is the kickoff hearings for the study series which is examining the issue of future U.S. economic growth. This study series, which is entitled "U.S. Economic Growth, 1975-85: Prospects, Problems, and Patterns," is a major committee effort to analyze and evaluate the facts and arguments of many leading thinkers around the country concerning our country's future economic growth.

Over 50 authors have agreed to do papers for us on 30 issues related to future economic growth rates and patterns. Most of the issues will be addressed from two quite different perspectives. The first can be identified as, I guess, the more traditional; that is, it basically accepts the conventional wisdom related to economic growth and uses standard techniques of analysis. This, of course, has proved to be useful for many years and I expect that many analytical and empirical studies which will be of great use to the committee will result from that study series.

On the other hand, I think all of us recognize that these economists operating in this mode will not capture all the insights needed to meet the new challenges facing our economy. As much as we have learned from them, the Keynesian economists do not have all the answers nor do they have a monopoly on knowing what all the key forces are operating in the economy today.

Thus, this study series will break from past JEC tradition by having a substantial number of noneconomists contributing to it. Physicists, political scientists, technologists, biologists, futurists—we have them all. All of these 14 noneconomists have done a great deal of thinking on how the forces operating in their particular discipline interact with the economy and shape their particular discipline's growth patterns.

These "challengers of conventional economic growth wisdom" are joined in the study series by a still rare breed, but one I think is a growing breed: Economists who question conventional patterns of growth, the inevitability of growth, and even the desirability of future economic growth. For the most part, these economists have backed off always to see how the economy operates within the broader nature sphere which enables them to question the standard economic assumptions and policy prescriptions. This, by the way, is not really a new development, but economics as it was back in its earlier days.

Today, we have three such economists with us. All three have long been identified as economists who have not gone along with the standard assumptions and prescriptions. The skepticism about "growth as usual" is not that rare, and in fact has mushroomed since the publication of "Limits to Growth" 3 years ago. The three gentlemen before us today, however, are not "bandwagon hoppers," for, as I say, they have been at this for a number of years, nor do they engage in any form of superficial doomsday predictions like what we have been beginning to hear more of, the "scare technique." They have been serious students of economic growth for many years and their research and writing has been reasoned and, equally important, it has been from a pragmatic viewpoint.

Mr. Schumacher is an extremely well-known economist in his homeland, England, and is becoming increasingly recognized in this country through his very popular book, "Small Is Beautiful." This phrase, as well as "economic as if people mattered" both intrigue me and I am anxious to find out how they can apply to our large-scale, impersonal economy.

Professor Mishan is also an English economist. He is a highly regarded expert in welfare economics who has written numerous articles and books over the past decade on the costs of economic growth.

Prof. Herman Daly is the leading economist of the steady-state economics school. In recent articles, he has carefully developed the "what, why, and how" of a U.S. steady-state economics system.

I feel I should say that theirs is still a "voice crying in the wilderness." The vast majority of their professional colleagues do not support the thrust of their arguments. Nevertheless, I and this committee feel that these views very badly need to be aired and seriously considered by policymakers, as the subject—future U.S. economic growth—is certainly too important to leave any stone unturned, and any new approach that might be given consideration needs to be looked into.

I look forward to turning over this economic stone whose underside has not seen very much daylight in Washington.

Senator KENNEDY. If the Congressman would yield.

Representative LONG. Sure, Senator Kennedy.

OPENING STATEMENT OF SENATOR KENNEDY

Senator KENNEDY. I, too, as a member of the committee, want to extend my very warm welcome to this panel this morning. I commend the chairman for having these hearings. I think the recognition that as an institution too often we kind of lurch from crisis to crisis and

that is something that is becoming increasingly appreciated by the Members of the Senate of the United States.

I think the one who has really provided significant leadership in this whole area, both in terms of awakening the Senate to this issue and in terms of being enormously active in the House of Representatives is my distinguished colleague, the Senator from Iowa, Mr. Culver, who is here today and who put forward this idea of a commission to try and just sort of review some of the functions of the Senate. It is called the Culver Commission.

We are attempting to take some look at our own institution. And while we are looking at our own institution, as adequate or inadequate as that might be, we will eventually have to wait and see how effective we really are in doing that with all the different problems of jurisdiction and the rest of the issues. But, if we believe, as this committee does, if we believe that the economy is the No. 1 issue—and I think all of us would agree to that—then I think it is entirely appropriate we start giving some forward look to the whole issue of growth and what it means and what the costs are going to be.

I would like to think that this hearing is providing not only for the Congress but also for the country a look into the future and it will begin to stimulate some hard thinking in the Congress on this particular issue. I think we need it. I think we are certainly fortunate to have these three people here who have devoted as much time to this particular issue as they have. I just want to note personally and as a member of the committee an expression of the warmest words of welcome. I think we need to heed your words of counsel and your words of caution, as well as what you think the real possibilities are.

So, I want to join in extending a welcome to you, I thank you all for coming. I look forward to your testimony.

Representative LONG. Before we begin, I would like to extend my welcome to the distinguished Senator from Iowa, Mr. Culver, a former colleague from the House of Representatives. He has done, as Senator Kennedy said, a great deal of work in this field and is well recognized as a man who has given a lot of creative thought to it.

I had a recent opportunity to sit in on a portion of a proceeding that he and a number of other outstanding people in this field conducted in the House of Representatives. And after that I read a substantial amount of the testimony presented to that Commission. It certainly stimulated some thought. I think the times require some stimulating thought and stimulating and resourceful answers.

Senator Culver, we are very happy to have you here. If you would like to say anything, we would be happy to hear from you.

If not, then we will go ahead. But before doing so, I have an opening statement submitted for the record by Senator Taft. If there is no objection, I will place the opening statement in the record at this point.

[The opening statement follows:]

OPENING STATEMENT OF SENATOR TAFT

I hope that this Committee is not going to propose that we give up on increasing our national income just yet. Growth must still have a place in our plans. Economies of scale are still very much needed—and appreciated.

While I recognize the social need to tailor production methods to the resources available, and while I commend Dr. Schumacher for his insight into this problem, nonetheless I believe we must also be willing to look at the problem of maximizing total world output.

It is grossly unfair, when we have so many poor people in our country, to be talking about an end to growth. What we have now, even if it were distributed much more equally over the population, would hardly meet everyone's desires for a decent standard of living. Even if we took away all the income above \$30,000 per family, and gave it all to our poor, we would still be unable to bring millions of families' income above the level of the lower middle class. And, if we tried to help the poor of other nations, without growth, we would get nowhere. What the world needs is a few dozen decades of growth, and more growth.

Now, if the poor, and the middle class, came to the Congress, and said, "We are content. We are prepared to sacrifice our material advancement for aesthetic and philosophical benefits," then we might in good conscience say "amen". However, for the prosperous elite here in Washington to decree that—"stagnation is beautiful" or—"Rousseau was right" or—"Thoughtfully thoroughly Thoreau"—is certainly silly, if not sinful. Seriously—with our science and technology, we can lead the good life, *all of us*, without destroying the planet. It will take a little care and patience, but we *can* do it. Let's have a little more positive thinking, and positive action, and a little less gloom and doom.

What we need, I think, is for more research into how to live at peace with our planet. We need to learn recycling. Indeed, there have been enormous advances in the re-use of metal and paper, and the generation of power from trash. There will be more breakthroughs.

When we master fusion, and learn to harness solar power, *and we will*, there will be fuel for as long as we need to worry about. The hydrogen in the oceans will power our fusion plants for millions of years. And the sun will last 4 billion years. When it finally dies, we will either have moved to another star, or die with it. In either case, fuel will be the least of our problems.

At the risk of being called shortsighted, let me pull back a little from my 4 billion year time horizon. Let us consider the problem of resources. Recycling is the answer for the metals. After all, they need never be lost. In fact, unless we count those few atoms transmuted in linear accelerators, a metal is a metal is a metal. All we need is a recovery method.

Our other needs will be met by organic chemistry, with vegetable matter being transformed into hydrocarbons, plastics, and even artificial foodstuffs.

While it is true that things will get out of hand if we have 300 billion people by the year 3000, nonetheless I am not pessimistic about our long-term chances of forever supporting 30 billion people more or less luxuriously. That is, of course, until the sun goes out.

Representative LONG. Mr. Mishan, please proceed.

STATEMENT OF E. J. MISHAN, PROFESSOR OF ECONOMICS, LONDON SCHOOL OF ECONOMICS

Mr. MISHAN. Mr. Chairman and members of the committee, first of all let me thank you for your kind remarks in welcoming me here. May I say I regard it a privilege to be able to give testimony before so august a political body.

I am particularly impressed by a courtesy that affords me an opportunity to convey to you, however briefly and imperfectly, my considered misgivings about the validity of what, until comparatively recently, was one of the unchallenged maxims of economic policy in modern industrial states; namely, that a policy of sustained economic growth offers the surest hope for the betterment of the human condition.

A willingness at this high level of government to invite serious criticism of so enduring and potent an economic orthodoxy is, I believe, without parallel in modern history. There has certainly been no prece-

dent in my own country. I feel obliged therefore to pay tribute to the flexibility and openmindedness of the American political system that makes possible so extraordinary an occasion.

You will perhaps concede that it is indeed extraordinary since, if I were right, and the transition of a new "steady state" society were deemed imperative, a revolution in thought and feeling would be necessary far exceeding that experienced in Western Europe between the 14th and 16th century. I am, of course, not so naive as to think I might persuade you at these hearings of the necessity of such a radical revolution within the next few decades. But I can reasonably hope to encourage in the minds of those of you who are already inclined to skepticism about the sovereign virtues claimed for economic growth some further misgivings about its ultimate beneficence.

It would be idle to pretend that the political and social implications of the transition to a more viable, steady-state, economy would be anything less than staggering. Opposition to any current endeavor to realize it may be anticipated not only from commercial interests but also from the intellectual and scientific community. For such an economy cannot be made viable without thoroughgoing controls not only on the depletion rates of many natural resources but also on the application of new technologies and on the direction of scientific research itself: Inevitably so if my conclusions are correct, and the ongoing process of innovation and discovery carries with it an incalculable disputive potential.

It seems to me, then, that our 200 years' pilgrimage along the growth path is growing to a close—with neither Mecca nor Medina in sight. The only choice that faces humanity today is whether to recognize the signs and portents in time and attempt a transition to a more viable society or whether instead to ignore them; to nail our colors to the scientific mast and to go down bravely.

I cannot hope to vindicate so sweeping an assertion in the next few minutes that remain to me. I shall therefore forgo my wonted expressions of cynicism about the sheer physical impossibility of sustaining current rates of economic growth into the indefinite future. I will restrict myself to brief reflections about some of the adverse effects of contemporary economic growth in the wealthier countries upon what is elusively referred to as the quality of life.

Let me be plain about it. My observations do not derive from painstaking statistical studies but, in the main, from casual observation and unbounded conjecture, for which I never apologize. One of the less fortunate consequences of economic growth, or rather the scientific momentum that impels it forward, is the altogether unwarranted deference we pay to quantitative analysis and research.

Apparently we are not entitled to act on the obvious surmise that an increase in the severity of punishment will, other things equal, act to deter criminal behavior. Only now that a number of econometric studies have confirmed the fact, are we to permit ourselves to believe it. Again, the effect on the minds and the morals of American children who witness, on average, about 11,000 murders of varying degrees of violence and gruesomeness on television by the age of 14, this effect is to be held an unsettled question upon which no rational person may pronounce with confidence until the rare fruits of prolonged research,

embodied in the 1969 Report of the National Commission on the Causes and Prevention of Crime, reveal to our astonishment that "it is reasonable to conclude that a constant diet of violent behavior on television has an adverse effect on human character and attitudes."

Western society today is one in which the moral code is in disarray, and one in which men have lost confidence in their native powers of reason. Such a society is unstable. Inasmuch as men are reluctant to speak out on important issues without the imprimatur of science, it is also in jeopardy. This is particularly so of a society that is in a state of perpetual technical change. For this condition leads not only to far-reaching social change but also, in time, to a general presumption in favor of change; one that, in effect, places the burden of proof on those who would oppose or delay the change in question.

In other words, the traditional conservative doctrine associated with Edmund Burke—that no alteration in those arrangements of society that have stood the test of time and experience be introduced save, perhaps, in emergencies or when backed by powerful argument and irresistible evidence—is one that has de facto been rejected by today's affluent consumer society which, having cultivated an insatiable appetite for goods and opportunities, a prerequisite of the growth economy, has perforce to accommodate itself also to continuing changes in lifestyle and institutions which, irrespective of merit, are the unavoidable byproducts of our declared endeavor to maintain the impetus of industry and technology.

The jeopardy of which I speak arises from two considerations. First, in consequence of the sheer pace of technological innovation, there is an increasing likelihood that evidence about the range of side effects of any one or several innovations will come to light too late to avert misfortune and possibly disaster. Examples abound, from heroin—introduced to the medical profession as a nonaddictive sedative derived from morphine by the Bayer industry in Germany at the turn of the century—to the more recent introduction of Thalidomide, from the pervasive ecological and genetic effects of DDT and a host of other chemical pesticides and fertilizers to the current concern over the last few years with the effects of supersonic flights, nuclear explosions, and aerosols on the Earth's protective ozone mantle. Needless to say, it is "business as usual" until evidence of significant ozone dissipation is beyond reasonable doubt—by which time it is just as likely that it will be too late.

Second, there is no immediate and possibly no ultimate prospect of establishing scientific evidence of the many consequences bearing on the cohesion and felicity of society that flow from the range of new processes and products of a modern growth economy. Yet if I am only partly right in my conjecture about their untoward nature, it is still a matter for grave concern.

Sometimes a single innovation, say the automobile, does a great deal more than its inventors ever claimed for it. Among other things, it creates clamor, dust, fume, congestion and visual distraction in all built-up areas: It helps to make all the great cities of the world more alike in the ensuing frenzy and frustration. It enables Americans to kill each other off at the rate of some 50,000 a year. And it has played a predominant part in transforming America from a nation of settled communities to a nation of transients.

In other cases, a number of innovations combine to generate effects not only on the environment but also on our personal freedom, our character, and our capacity for enjoyment. Again, the attitudes and habit of mind that are necessary for sustained economic growth.

Often extolled as virtues, include a recurring dissatisfaction with what we are and what we have, and unending search for novelty, a worship of efficiency and a concomitant attempt to reduce every facet of life, no matter how intimate, to the mastery of a technique. Yet not much imagination is needed to perceive that such a psychology, and the sort of society it breeds, can be subversive of human fulfillment.

Finally it seems to me entirely plausible that the rationalism and agnosticism that is the offspring of the scientific and industrial revolution, and the consequent loss of faith in the great myths by which in earlier times men sought to understand and order their lives, are prime factors in any explanation of that persisting current of desolation and despair that today afflicts so many people.

Let me now illustrate parts of my broad thesis by reference to single innovations and, later, by reference to undesirable trends that arise from a number of innovations.

I have already made some uncomplimentary remarks about our beloved monster, the private automobile. Let me append to them some brief observation about other familiar inventions.

The airliner, in addition to plunging us into an era of shrieking skies from which it is virtually impossible to escape—short of living in isolation—has been responsible for a tourist explosion that has irrevocably destroyed all the once-famed beauty spots of the Mediterranean coast, and the natural beauty of inland resorts and lake districts the world over. The chief loss will fall on future generations who are on the way to inherit a world of much diminished beauty and natural grandeur.

Turning to the mass media, since they dispose daily of torrents of words and images, the resources of a thousand Shakespeares could not hope to meet their insatiable demands. The repeated attempts to compel attention on matters large and small issue in near verbal pandemonium. Words are misused, abused, overused, broken up, and incongruously combined. And the sheer volume and interminable repetition themselves are destructive of the beauty of language. Words of delicate sentiment lose their fragrance. Phrases once rare or solemn, poignant or poetic, to be uncovered only on special occasions, get dragged about in the dust of sales campaigns, rolled in with crude imperatives, until they become stale, misshapen, and shorn of the joys of evocation. Even obscene utterances, once reserved for singular circumstances, have become so common as to lose their power to shock or amuse us. Indeed, their very popularity today is not to be treated lightly since, for every "in word," for every hackneyed term or adopted cliché, a score of fine distinctions are discarded, and the rich resources of language fall into desuetude.

Special mention should be made of television. Acclaimed as having a limitless potential for education, it has also been shown to have limitless potential for holding people inert for hours. Worse, it exposes innocent folk to repeated dosages of expert opinion and panel discussion which have the unhappy result of enabling them to see so many

sides to a problem as to leave them in a state of utter stupefaction, ready to believe anything and prone to forget everything.

A few comments now on postwar trends. From the 18th century onward the enlightened view had it that the growth of education and material standards would act strongly to diminish crime. Since World War II, "real" incomes in the industrialized countries have more than doubled, higher education has more than doubled, and crime, especially crimes of violence, has more than doubled. The fast getaway car, radio communication, hourly plane departures to foreign lands—to mention those wonders of civilization that come immediately to mind—happen also to lend themselves admirably to criminals and fanatics engaged in robbery, kidnapping, and murder. And the vast anonymous metropolis of today affords concealment and prey for all manner of gangsters and thugs. But what of the character of the young among whom crimes of violence are rising fastest? For the most part it has been molded by years of exposure to television and other media of entertainment that have built their appeal on the raw excitements of physical violence and sex, and by the philosophy of the affluent throw-away society that calls for instant enjoyments and "doing one's thing" heedless of the convenience of others.

An explanation of the secular expansion of bureaucracy and the decline of personal freedoms in terms of the proliferation of new pollutants, disamenities, and technological hazards, is omitted in order to save time. But I shall be glad to send a copy of the MS to any member of the committee requesting it. I cannot however resist quoting a statement from the Bulletin of Atomic Scientists (May 1972) by Nobel Prize-winning physicist, Hannes Alfvén, bearing on the extent of the controls that may be needed if the nuclear program for peacetime energy is to proceed as planned. "Fission energy is safe only if a number of critical devices work as they should, if a number of people in key positions follow all their instructions, if there is no sabotage, no hijacking of the transports, if no reactor fuel processing plant or reprocessing plant or repository anywhere in the world is situated in a region of riots or guerrilla activity, and no revolution or war—even a "conventional" one—takes place in these regions. The enormous quantities of extremely dangerous material must not get into the hands of ignorant people or desperados. No Acts of God can be permitted." To be more explicit, the sort of vigilance required by the nuclear energy programs that are currently contemplated are likely to entail an unprecedented extension of internal and international security systems.

I turn, finally, to an incipient but nonetheless quite distinct trend. I speak of the new and disturbing fashion to seek to arrange one's thoughts and select one's maxims in order unashamedly to evade obligations based on trust and affection. Among many of the young it takes the form of a desire to travel "light," unhampered by emotional ties; a resolve to maximize pleasurable experiences, and to shun the risks of sorrow and pain that arise from love and commitment.¹

No great sophistication is needed to perceive that such a plan, "successfully" pursued, must lead unerringly to loneliness and to

¹An account of this new attitude to life based on studies of undergraduates is to be found in H. Hendin's "The Age of Sensation" Norton, 1975.

despair. I shall not surprise you if I state my belief that the attention to the direction and details of technological growth provides the key to its understanding.

The main thrust of consumer innovation over the recent past and over the foreseeable future appears to be directed toward labor-saving devices. Each year sees us that much closer to the brave new push-button world designed to satisfy our commercially inspired whims at the expense, it seems, of our deeper emotional needs. It is surely pertinent to ask: Can ease be enjoyed without prior hardship? Can fulfillment be experienced without prior hardship and frustration? Is it possible to find the solace of human love without courting the fullness of human sorrow? In seeking the devices of instant gratification purveyed by modern commerce, and made fashionable by the collapse of standards of taste and propriety, men take the risks of cutting themselves off from the medley of experiences needed to savor fulfillment.

Even the more justifiable labor-saving innovations pose a threat to our humanity. For inevitably they tend to reduce the dependence of people on other people, and to transfer it to the machine. Within any community, personal contacts decline with the spread of new and more efficient gadgetry. They have already declined with the spread of supermarkets and cafeterias, and with the spread of television sets, transistors, and the automobile. And they must continue to decline with the trend toward increased automation in factories and computerization in offices and homes; with the trend toward patient-monitoring machines and computer diagnosis in hospitals; with the trend toward closed-circuit television instruction, teaching machines, and automated libraries.

If we agree that, in the nature of things, the bonds of trust and friendship can grow only slowly, and that long association and familiarity with personages and places are a potent source of gratification to man, what can we reasonably hope for in this respect from a world in the throes of perpetual transition, where the trend toward increasing mobility entails moving from one job to another, one city to another, one home to another, and taking jet tours to see 10 countries in 7 days exhilarated by the hope of collecting two score of instant friendships along the way.

Such reflections make it difficult to avoid the conclusion that our compulsive search for efficiency, directed largely toward innovations that save time and effort, will continue to produce for us yet more elegant and potent instruments for our mutual estrangement. The unavoidable consequence is a weakening of the direct flow of sympathy and affectionate communication between people and, accordingly, a thinness of our emotional life.

In sum, the question of whether we can continue to expand GNP, and if so at what rate, without great peril, may be only of secondary significance. Of more critical import is the prior question, whether there is any further advantage to society in pursuing this aim. I put it to the committee that the emerging debate on the quality of life should take precedence over any debate on the prospects for further economic growth. The time has come to be less preoccupied with the speed of advance and more preoccupied with the destination toward which we are moving.

In order to engage effectively in the former debate, we must be ready to abandon venerable propositions about economic progress that should long ago have been retired, and to adopt a far more critical view than hitherto of the technological revolution that is bearing us onward. We must learn to pay closer attention to new processes and devices it produces, and to their effects not only on the ambient environment but on the habits and values and character of people, and thus on the cohesion and stability of society and the tranquility and satisfaction of its members.

Thank you.

Representative LONG. Thank you very much, Mr. Mishan. If it is acceptable to the committee, we will follow the usual procedure of allowing all three of the witnesses to present their testimony and then do it in an open forum, seminar type of discussion, and perhaps we can gain more from it that way, both from the standpoint of our information and our questioning, as well as what maybe you are able to contribute to us in that regard with respect to answers to our questions.

Mr. Daly, I call on you next. In addition, I want to extend to you the feeling of the entire committee with respect to our gratitude in having you here. My own personal feelings with respect to that, and also on behalf of Senator Humphrey, because both of us have the honor of having received degrees from the institution which you are currently associated with, leads me to extend our personal feelings to your being here.

Mr. Daly is a professor at Louisiana State University, holding a doctorate from Vanderbilt. During 1967 and 1968, he was a full professor and a visiting professor at the University of Ceara in Brazil. It was during this time his interest in economic development led him to the question of population growth and consequently with the ecological concerns in regard to economic growth. He has since published a number of articles and professional journals on these and matters related thereto.

Also, he is editing a book entitled "Toward a Steady-State Economy," which is a collection of essays and studies on the theme that economic growth for growth's sake is a destructive and, in some instances, an unsustainable approach to the entire problem.

Both on behalf of the committee and on behalf of Senator Humphrey and myself, I want to extend our warmest welcome to you.

STATEMENT OF HERMAN E. DALY, PROFESSOR OF ECONOMICS, LOUISIANA STATE UNIVERSITY

Mr. DALY. Thank you very much for your personal welcome and for the opportunity to speak to the committee.

Since I have submitted a prepared statement, I think that in the 10 minutes that are allowed to me this morning, I will not try to read that particular statement, but attempt to respond to specific questions raised in the letter of invitation, since I think these are very good and pertinent questions. So I will just say a word about each one.

The first question I was asked in the letter is: "Why can the conventional wisdom of economics not be relied upon?" I think in replying to that, I will borrow some words from John Maynard Keynes, who

said: "The part played by orthodox economists, whose commonsense has been insufficient to check their faulty logic, has been disastrous to the latest act."

I believe this is as true as when he wrote it in 1936.

As a recent example, I will take the following statement from the ex-Chairman of the President's Council of Economic Advisers, writing the Wall Street Journal recently, who said: The action most urgently needed in the world economy is for the strong economies to be willing to accept higher levels of living. Their reluctance to do so seems to be of Calvinistic proportions.

I submit that flies in the face of commonsense, and that the most urgently needed action is not to make the rich richer. Anybody of thinking that gives rise to that kind of pronouncement should inspire skepticism and give rise to doubt.

Also, in reply to this question, I have as an appendix to my prepared statement a statement entitled "Toward a Human Economy." That statement has been signed by over 125 prominent economists and I think that it is a fine statement of basically what is wrong with current orthodox economics. I attached it because it is receiving support, the support of a substantial minority of economists and it represents more than just my personal view.

Perhaps the major error of conventional economics, as has been pointed out by many, is that it treats the consumption of geological capital as if it were current income. We have expanded our population and our per capita consumption to the point where it requires depletion of geological capital and destruction of ecological support systems at a rate which is unsustainable. We have, in fact, tended to glorify growth rather than to seek stability. That, I believe, is basically why orthodox economics cannot be relied upon.

I do not mean to suggest that all orthodox economics is wrong; far from that. I just mean that over the last 30 years there has been an ideological commitment to growth which has obscured and biased scientific economic thinking.

The second question which I was asked is: "What is the nature of the limits to growth? Are they mainly physical or social and cultural?"

I believe that both sets of limits are very important and are, in fact, interdependent. For example, let us take the physical limits on conventional energy sources. They have led us to seek nonconventional sources, and, in particular, we have turned to fission power as presumably our best hope. If we continue in the development of fission power, Mr. Chairman, I believe the most important limits will not be physical limits, like heat constraints and availability of uranium and so on; but in fact, will be social limits, that is, do we really want to live in the kind of society that would be required to accommodate so dangerous a technology as fission power? I suggest it would lead to many measures approximating a police state and that this would be the effective limit to the development of fission power.

At some point, I believe that declining marginal benefits of physical growth fall below the rising marginal costs. Our social accounts are simply unable to identify that point and no one can say for certain that we have not already passed it. I think we must institutionalize an economic limit to growth that will stop us from not only crashing into

ruinous physical or social limits, but will also keep us from growing beyond the point at which marginal costs begin to exceed marginal benefits of growth.

The third question I was asked is: What precisely is a steady-state economy?

A steady-state economy is one in which population and the stock of physical capital—that is, the inventory of all artifacts, both consumer and producer goods—are each held constant at some desirable and sufficient level. Population is maintained by a low birth rate equal to a low death rate, so that longevity or life expectancy of the population is high. Likewise the stock or population of material artifacts is maintained by a low production rate, equal to a low physical depreciation rate, so that the durability of the stock of useful capital equipment is also high.

This flow of materials and energy from the mine to the garbage dump, from depletion to pollution, by which the stocks are maintained, can be called the throughput. The throughput maintains these stocks and is viewed as a cost; that is, the cost of maintaining and replacing the stock of useful artifacts.

This flow should be minimized rather than maximized inasmuch as it is a cost. A large part of our gross national product is, in fact, throughput, or maintenance costs; and therefore a policy of maximizing the GNP skirts dangerously close to maximizing costs.

Perhaps as important as defining what a steady-state economy is, is the issue of what it is not. It is not a static economy. There is continual renewal. There is qualitative change. There is technological progress, although the direction of technical progress will likely be rather different and moving more toward energy and materials savings, toward a form of intermediate technology. And there is certainly no limit on the increase in knowledge and certainly no limit on improved fairness of income distribution.

In fact, a greater emphasis on equity of income distribution is probably a precondition to achieving a physically stable economy.

The fourth question, which was addressed to me is: Is the idea of a steady-state economy simply a hypothetical-theoretical concept, or is it for real? If so, what are the policy limitations of it?

I conceive of it as a model, as a longrun prescriptive model, as a strategy for making the transition from a growth-oriented, adolescent, cowboy type of economy to a stable, mature, spaceman economy. It is a strategy for increasing the life expectancy of our civilization. It is a strategy to fit the human economy into the larger economy of nature in an organic way and become more symbiotic and less parasitic with respect to the rest of the biosphere.

As to specific policies, I have outlined in a tentative and suggestive way three institutions: One for controlling the stock of artifacts by limiting the throughput, by limiting depletion; another for controlling population; another for setting limits to the inequality of the distribution of income. These are discussed in the prepared statement.

The basic idea is to erect boundaries within which the market can function freely. The boundaries keep the market from excesses of inequality in distribution of income and wealth; and from excessive depletion and pollution of the physical world; and also lead us toward greater dependence on renewable resources, like solar energy.

I think that the policies suggested are fundamentally conservative in that they rely on private property and the market system; but they are rather radical compared to current practices. They could be applied with any degree of gradualism desired.

The fifth question that was addressed is: Would not any movement toward a steady-state economy wreak havoc on our economy, causing unemployment and radically altering trade patterns?

I think here we have to make a distinction. A state of nongrowth can occur either as the failure of an economy which is designed to grow; or as the success of an economy which is designed for stability. The two situations are extremely different. Of course, if we did not change any of our economic institutions, then nongrowth would certainly wreak havoc on our economy. Also, sooner or later, we will hit limits to growth and will not be able to grow. And when a growth-oriented system can no longer grow, then we can be sure that there will be havoc. That is precisely why I think we must change the design of our economic institutions away from a growth-oriented system toward a steady-state orientation to avoid the kinds of problems that a growing system would generate if it could no longer grow.

There will be some sacrifices in moving to a steady-state economy. There will also be enormous benefits. I see no reason why the sacrifices should take the form of unemployment. I think the benefits in the long term will vastly outweigh the sacrifices.

I think with that, I will stop.

[The prepared statement of Mr. Daly follows:]

PREPARED STATEMENT OF HERMAN E. DALY¹

ON LIMITING ECONOMIC GROWTH

In 1936 John Maynard Keynes remarked that "The part played by orthodox economists, whose commonsense has been insufficient to check their faulty logic, has been disastrous to the latest act." The same words ring true in 1975. It is easy to be trapped by the excessive rigidity of our own values and goals. The South Indian Monkey Trap, for example, works solely on the basis of rigid goals. A hollowed-out coconut is filled with rice and fastened by a chain to a stake in the ground. There is a hole in the coconut just large enough to allow the monkey to insert his extended hand, but not large enough to permit withdrawal of his clinched fist full of rice. The monkey is trapped by nothing more than his refusal to let go of the rice, to reorder his goals and to realize that in the given circumstances his freedom is more important than the fistfull of rice. We seem to be trapped in a growth-dominated economic system that is causing growing depletion, pollution, and disamenity, as well as increasing the probability of ecological catastrophe. We must open our collective fist and let go of the doctrine of perpetual growth, or else we will be caught by the consequences.

Economists have produced a large literature on how to increase growth, but, like the Sorcerer's Apprentice, have not considered the need at some point to stop the process. Yet it is evident by a short chain of reasoning from the laws of diminishing returns and diminishing marginal utility that growth in physical commodities and in population will eventually begin to cost us more than either are worth. But the ideology of growth as a substitute for sharing, coupled with the cardinal idolatry of the present age, the belief that science and technology are omnipotent, have distracted or intimated economists from considering the problems of transition to a mature, steady-state economy.

In view of the popular belief in the omnipotence of science and technology it is ironic to recall that the most basic laws of science are statements of im-

¹ Professor of economics, Louisiana State University, Baton Rouge, La.

possibility: it is impossible to create or destroy matter-energy; it is impossible to have perpetual motion or to recycle energy; it is impossible for an organism to live in a medium consisting of its own waste products; it is impossible to measure anything without in some way altering the thing being measured; etc. The relevant challenge is not to torture our economy by attempting the impossible task of perpetual growth, but rather to learn how to maintain the highest level of living that can be universally shared and ecologically sustained over the long run.²

Economics, like other sciences, should identify some impossibility theorems, and a good one to begin with is the following: A U.S.-style high mass consumption economy for a world of four billion people is impossible to achieve, and even if by some miracle it were achieved, it would be impossible to sustain. Yet the generalization of the U.S. pattern is the explicit goal of most aid and development programs. Former chairman of the Council of Economic Advisers, Dr. Paul W. McCracken, has recently stated that, "The action most urgently needed in the world economy is for the strong economies to be willing to accept higher levels of living. Their reluctance to do so seems to be of Calvinistic proportions".³ Evidently it does not matter that the 6 percent of the world's population residing in the U.S. already require over 30 percent of the world's annual production of non-renewable resources to sustain their current level of living. The duty of the rich is to consume more, not less! How could such a respected economic adviser make such an apparently absurd statement? Or, more instructively, what premises must be accepted in order for McCracken's statement to be reasonable? If resources were unlimited in supply and the only limiting factor in economic growth were aggregate demand, and if the distribution of income were unimportant or did not matter as long as the absolute incomes of all were increasing, and if we look only at the short run—given these assumptions the statement makes sense. It remains a problem to explain the alleged Calvinistic reluctance of the rich to consume more, although McCracken does not hesitate to urge this sacrifice upon the wealthy, for the sake of providing markets for the poor. But these assumptions are grossly unrealistic. We simply must recognize that resources supplies are in fact increasingly limited, that distribution is at least as important as absolute level, that we cannot ignore the long run, and that for the rich, enough should be permitted to suffice. The rich should not be urged to sacrifice their leisure to meaningless consumption. It is better for them to consume less, freeing resources for the poor, who can create their own markets by selling necessities to each other, rather than selling more extravagant luxuries to the rich.

The first order of business for any community is to free itself from the haggard and self-serving compulsions of growthmania—to help our economic advisers get their hands out of the monkey trap—and to realize that in the long sweep of history stability and small scale are the norm, and that the present large scale growing industrial economy is a temporary aberration.

Assuming that a community has taken this first emancipatory step, there remains the difficult question of deciding what specific policies should be taken to achieve stability. That depends critically on the scale of the community—municipal, state, national, or global? At the global level all growth is from natural increase and new production. There is no problem of interplanetary migration of people or transfer of products. At the local level, however, growth is often mainly the result of migration and transfer rather than natural increase. Thus what is seen locally as a growth problem may appear from a global perspective as a distribution problem, and policies will differ accordingly. Nationally there are already laws governing migration and international trade. To institute similar controls at state or local levels may be desirable in the interest of long run decentralization, but for at least a long transitional period would require too large a surrender of national sovereignty to be feasible. At no level of government do we have any limits on natural population increase, or on growth in commodity production, and it appears that only the nation-state has the authority to impose these necessary constraints. A world authority does not exist.

In addition to these pragmatic reasons for emphasizing national over state or local policies, there are also two general principles that point to the same conclusion. First, local policies could have self-cancelling effects, since the solu-

² See the statement "Toward a Human Economics" signed by over a hundred prominent economists (attached as an appendix to this testimony).

³ Wall Street Journal, Sept. 17, 1975, p. 16, "A Way Out of the World's Slump".

tion to one community's growth problem may be to shift the problem to another community (e.g., freezing out the poor, or keeping the new power plant out, but close enough to be able to buy the electricity). Second, as a general principle of system design it is good to allow the maximum in freedom and variability at the micro or individual level that is consistent with general stability of the system at the macro or aggregate level. If aggregate growth is controlled at the national level, then the growth problems of local communities will result entirely from distribution and will be less severe. If one community still grows too much, unhappy residents will always be able to find a declining community to move to, and vice versa. Micro freedom makes macro control less onerous, while macro control makes micro restrictions less necessary.

Even with national control, however, there would still be room for local efforts employing such tried and true mechanisms as zoning ordinances, sales and severance taxes to limit energy use, pollution emission standards, as well as citizen opposition to nuclear power plants and other salient manifestations of particularly irresponsible growth. Such evident local costs of growth have a greater pedagogical value in liberating the public from growthmania than do abstract global phenomena such as the greenhouse effect or ozone depletion. Arguments for "not doing it here" often lead to the recognition of reasons for "not doing it at all."

To control growth at the national level requires an institutional model for achieving a "steady-state economy"—that is, an economy characterized by a constant population and a constant stock of physical artifacts, each maintained by low rates of throughput. Low throughput for the population means low birth rates equal to low death rates, so that average life expectancy is high. For the constant stock of artifacts low throughput means low production rates equal to low physical depreciation rates so that artifacts are on the average long-lived or durable. The throughput is the cost of maintaining the stock in the face of wear and tear, rust, depreciation, decay, accident, and all the other ravages of time and entropy. The throughput flow begins with depletion of low-entropy (concentrated, structured) resources, and ends with pollution resulting from high-entropy (dispersed, unstructured) wastes. The throughput is the physical entropic flow of matter-energy by which all structure, order, and life is maintained. Since both the sources and the sinks of this throughput flow are limited, it must be treated as a cost, and must be minimized for any chosen, sufficient level of stocks. Since throughput is a large part of GNP, and since we strive to maximize GNP, our present behavior is much closer to maximizing throughput than to minimizing it.

In an effort to stimulate discussion on policies for attaining a steady-state I have suggested three institutions which seem to me to provide the necessary control with the minimum sacrifice of individual freedom.⁴ First we need a distributist institution which would limit the range of inequality to some functionally justifiable degree. This could be accomplished by setting minimum income and maximum income and wealth limits for individuals and families, and a maximum size for corporations.

Second, aggregate depletion of each of the basic minerals would be limited by depletion quotas, to be auctioned, in conveniently divisible units by the government. The resource market would become two-tiered. First the government, as a monopolist, auctions the limited quota rights to many buyers. Resource buyers having purchased their quota rights then confront many resource sellers in a competitive resource market. The competitive price in the resource market will tend to equal the average cost of the marginal producer. More efficient producers will earn differential rents, but the pure scarcity rent resulting from the quotas will have been captured in the depletion quota auction market by the government monopoly. The total price of the resource (quota price plus price to owner) will be raised as a result of the quotas. All products using these resources become more expensive. Higher resource prices will force more efficient and frugal use of resources by both producers and consumers. But the windfall rent arising from higher resource prices is captured by the government and becomes public income—a partial realization of Henry George's single tax on rent. It would not be a "single tax", but it would permit the elimination of some other taxes whose effects cause greater resource distortions. Allocative

⁴ See H. E. Daly, ed., *Toward a Steady-State Economy*, W. H. Freeman Co., San Francisco, 1973, esp. the seventh essay.

efficiency is improved to the extent that a rent tax, or in this case its equivalent in the form of auctioned quotas, replaces, say an income or a sales tax. But the major advantage is that higher resource prices result in increased efficiency, while the quotas directly limit depletion thus increasing conservation, and indirectly limit pollution. Pollution is limited in two ways, first because it is simply the other end of the throughput from depletion, so that limiting the input to the pipeline naturally limits the output. Second, higher prices will induce more recycling, thus further limiting materials pollution. The revenue from the depletion quota auction can be used to help finance the minimum income part of the distributist institution, thus offsetting the regressive effect on income distribution of the higher resource prices. Higher prices on basic resources are absolutely necessary and any plan that refuses to face up to this is worthless. Back in 1925 Kansas economist John Ise made the point in these words:

"Preposterous as it may seem at first blush, it is probably true that, even if all the timber in the United States, or all the oil or gas or anthracite, were owned by an absolute monopoly, entirely free of public control, prices to consumers would be fixed lower than the longrun interests of the public would justify. Pragmatically this means that all efforts on the part of the government to keep down the prices of lumber, oil, gas, or anthracite are contrary to the public interest; that the government should be trying to keep prices up rather than down."

John Ise also went on to suggest a general principle of resource pricing: that non-renewable resources be priced at the cost of the nearest renewable substitute. Thus virgin timber should cost at least as much per board foot as replanted timber; petroleum should be priced at its Btu equivalent of sugar or wood alcohol, assuming that is the closest renewable alternative. If no renewable substitutes exist, then the price merely reflects the purely ethical judgment of how fast the resources should be used up—i. e. how important are future wants relative to present wants. Renewable resources are assumed to be exploited on a sustained yield basis and priced accordingly. These principles could be used in setting the aggregate quota amounts to be auctioned. For renewables the quota should be set at an amount equivalent to some reasonable calculation of maximum sustainable yield. For nonrenewables with renewable substitutes the quota should be set so that the resulting price of the non-renewable resource is at least as high as the price of its renewable substitute. For non-renewables with no close renewable substitute the quota reflects a purely ethical judgment concerning the relative importance of present versus future wants. Ise suggested as a rule of thumb that the wants of the next generation should be rated at least half as important as those of the present. This implies a quota schedule which would result in a doubling of the price every generation.

In addition to Ise's rules, which deal only with depletion costs, one must be sure that the quotas are low enough to prevent excessive pollution and ecological disruption. Pragmatically quotas would probably be set near existing extraction levels initially. The first task would be to stabilize, to get off the growth path. Later we could try to reduce quotas to a more sustainable level, if present flows proved too high. Resources in abundant supply and whose use is not environmentally disruptive would have generous quotas and hence relatively low prices.

Depletion quotas would capture the increasing scarcity rents, but would not require expropriation of resource owners. Quotas are clearly against the short-run interests of resource owners, but not unjustly so, since rent is by definition unearned income resulting from a price in excess of the minimum supply price.

The remaining institution in our model must provide a mechanism of population control. A stationary population can be achieved by various means that are consistent with the first two institutions. My own favorite is the transferrable birth license scheme, first proposed by Kenneth Boulding. But, important as it is, for this occasion I will treat population control as a separate issue and not try to argue for a specific plan, since the depletion quota and distributist institutions could function with a wide range of population control programs, and in no way require the transferrable license scheme.⁶

Two distinct questions must be asked about these proposed institutions for achieving a steady state. First, would they work if people accepted the goal of a steady state, and, say, voted these institutions into effect? Second, would

⁵ American Economic Review, June 1925, p. 284.

⁶ For defense of transferrable licenses, see H. Daly, op. cit.

people ever accept either the steady state idea, or these particular institutions? I have tried to show that the answer to the first question is probably "yes". Let the critic find the flaw—better yet let him suggest an improvement. The answer to the second question is clearly "no" in the short run. But several considerations make acceptance less implausible in the not-too-long run.

The minimum income side of the distributist institution already has some political support, but the maximum limits will at first be thought un-American. Yet there is surely some figure beyond which any additions to personal income represent greed rather than need, or even merit. Most people are not so stupid as to believe that an income in excess of say \$100,000 per year has any real functional justification. This is especially so when the high-paid jobs are also usually the most interesting and pleasant. Maximum limits on personal and corporate wealth, would also reduce the inflationary pressures exerted by large accumulations of surplus funds seeking ever new ways to grow exponentially, and would rescue our economic and political system from the excessive power of oligopolistic corporations. The exact limits are subject to calculation and compromise, but probably a minimum income of \$7,000 and a maximum of \$70,000 would be reasonable. One can be pragmatic and begin with much wider limits, gradually narrowing the range. An added benefit of the minimum income is that it would greatly simplify the welfare system. Also it would become possible to put responsible social limits on the exercise of monopoly power by labor unions, since the countervailing monopoly power of corporations will have been limited.

The depletion-quota auction is more radical than the economists' favorite recommendation of pollution taxes, in the literal sense of going to the root of the problem. Depletion quotas place quantitative limits on the input end of the depletion-pollution pipeline, while pollution taxes place price limits on the output end. The input or depletion end offers greater control leverage for the simple reason that there are fewer mines, wells, and ports of entry than there are smokestacks, drainpipes, and garbage cans, not to mention such diverse sources of pollution as auto exhausts and fertilizers runoff into rivers and lakes. The input end is clearly the best point at which to control the throughput flow. But why quotas? Why not severance taxes? Many of the benefits of quotas could in fact also be attained by means of severance taxes. But taxes limit quantities in an elastic and indefinite way. There are always possibilities for arranging financing to purchase just as much as before, even at the higher price. Say's Law tells us that in the aggregate the economy always has sufficient income to purchase whatever it produces regardless of price. For example, the government could tax resource extraction and then spend the receipts of the tax to directly or indirectly buy the same resources that it was taxing. Furthermore it is quantity, not price, that impinges on the ecosystem. Therefore it is safer to control quantity directly and let errors and shifts in demand work themselves out in price fluctuations rather than quantity fluctuations.

Technological optimists assure us that resource scarcity will be offset by resource-saving technical progress induced by rising resource prices. This plan simply asks them to live up to that faith. If resources really are so important or easily substituted for, then how could one object to quotas that stabilized resource usage? Technology would still be free to perform its miracles, and the price incentives for doing so would have been strengthened. At the same time we would be hedging our bet on technology by slowing down the rate of depletion and pollution.

In spite of their somewhat radical implications, these proposals are based on impeccably respectable conservative premises: private property and the free market. If private property is good, then everyone should share in it; and, making allowances for a range of legitimate inequality, no one should be allowed to hog too much of it, lest it become the instrument of exploitation rather than the barrier to exploitation that was its classical justification. Even orthodox economic theory has long recognized that the market fails to deal adequately with depletion, pollution, and distribution. These proposals supplement the market at its weak points, allowing it to allocate resources within imposed ethical and ecological limits.

To show how a proposal could work if accepted is to take at least a small step toward making it acceptable. The remaining steps may well be forced by the soaring ecological and moral costs of economic growth. Also, hopefully, someone

may come up with a much better set of proposals than these. The model I have outlined requires sharing, population control, and stabilization of average per capita resource consumption. These are basically moral demands from which we can never escape no matter how much the government and the foundations pour into the quest for clever technical fixes. As stated at the beginning, the big problem and the first priority is to get our values straight and break our idolatrous national worship of economic growth.

APPENDIX

TOWARD A HUMAN ECONOMICS

The evolution of our global household earth is approaching a crisis on whose resolution man's very survival may depend, a crisis whose dimensions are indicated by current rates of population expansion, runaway industrial growth, and environmental pollution, with their attendant threats of famine, war and biological collapse.

This evolution, however, has not been determined solely by inexorable laws of nature, but by the human will operating within nature. Man has shaped his destiny through a history of decisions for which he is responsible; he can change the course of that destiny by new conscious decisions, by a new exertion of will. To begin with, he requires a new vision.

Basic to our function as economists is the description and analysis of economic processes as we observe them in operation. Increasingly over the last two hundred years, the economists have been called upon, and have undertaken, not merely to analyze, theorize, describe and measure the economic scene, but also to advise, to plan, and to take an active part in the conduct of affairs. The power of the economists, and therewith their responsibility, has become very great indeed.

In the past, production has been regarded as a benefit. But production also entails costs that have only recently become apparent. Production necessarily drains our finite stock of raw materials and energy, while it floods the equally finite capacity of our ecosystem with the wastes of its processes. The economist's traditional measure of national and social health has been growth. But continued industrial growth in areas already highly industrialized is a short-term value only; present production continues to grow at the expense of future production, and at the expense of the delicate and evermore threatened environment.

The reality that our system is finite and that no expenditure of energy is free, confronts us with a moral decision at every point in the economic process, in planning and development and production. What do we need to make? What are the real, long-term costs of production, and who is required to pay them? What is truly in the interests of man, not in the present only, but as a continuing species? Even the clear formulation from the economist's perspective of the choices before us is an ethical task, not a purely analytical one, and economists ought to accept these ethical implications of their work.

We call upon our fellow economists to embrace their role in the management of our earth home, and to join the efforts of other scientists and planners, indeed of other men and women in all areas of thought and endeavor, to ensure the survival of man. The science of economics, like other fields of inquiry in search of precision and objectivity, has tended in the last century increasingly to isolate its domain from others. But the time when economists could fruitfully work in isolation is gone.

We must have a new economics whose purpose is the husbanding of resources and the achievement of rational control over the development and application of technology to serve real human needs rather than expanding profits, warfare, or national prestige. We must have an economics of survival, still more, of hope—theory and vision of a global economy based on justice, which would make possible the equitable distribution of the earth's wealth among its people, present and future.

It is clear that we can no longer usefully consider apparently separate national economies apart from their relations to the larger global system. But economists can do more than measure and describe the complex interrelations among economic entities; we can work actively for a new order of priorities that transcends the narrow interests of national sovereignty and serves instead the interests of the world community. We must replace the ideal of growth, which has served as

a substitute for equitable distribution of wealth, with a more humane vision in which production and consumption are subordinated to the goals of survival and justice.

Currently, a minority of the earth's people enjoy an inordinate share of resources and industrial capacity. These industrial economies, capitalists and socialist alike, must find ways to cooperate with developing economies to correct the imbalance, without pursuing ideological or imperialist competition, and without exploiting the people they propose to aid. In order to achieve equitable distribution of wealth throughout the world, the people of the industrialized countries must relinquish what now seems an unbounded right to consume whatever resources are available to them, and we as economists must play a role in the reshaping of human values toward this end. The accidents of history and geography must no longer serve as rationale for injustice.

The task for economists is therefore an extremely novel and difficult one. Many people now look at the available data—the trends of population growth, pollution, resource depletion, and social upheaval—and lose hope. We have already passed the point of no return toward our rendezvous with disaster, they say gloomily; nothing can be done. But despair is a position we must reject. The moral imperative is for us to create a new vision, to make a road to survival through a treacherous country where there are no roads. At the present moment, man possesses the wealth and the technology not only to save himself for a very long future, but to make for himself and for all his children a world in which it is possible to live with dignity and hope and comfort; but he must decide to do it. We call on economists to join in framing the new vision that will enable man to use his wealth in his own interests, disagreeing, perhaps, on details of method and policy, but agreeing emphatically on the goals of survival and justice.

Chairman HUMPHREY [presiding]. Professor Daly, I regret that I wasn't here for the beginning of your statement. I understand you are from LSU.

Mr. DALY. Yes, sir.

Chairman HUMPHREY. I know that makes Congressman Long feel good and it makes me feel good. I am very happy we had you here for your testimony. I was detained on the subject of national growth policy, only it was related to the issue of the wilderness area, of the recreational area, and also the growth in mining in northern Minnesota. I might say to my colleagues that that subject makes busing look like a tame issue, because once you get people involved in that one, why you really have the economic interests and the environmental interests at each other's throats.

Senator KENNEDY. Could you tell us how you handled that one?

Chairman HUMPHREY. I am happy to tell you that I indicated that it was time for me to go to the Joint Economic Committee. The fury will continue for months to come.

Our next witness is Mr. Schumacher, who is the director of the Intermediate Technology Development Group in England. In my opening statement, which was read by Congressman Long, I hope he made some appropriate reference to your good work. We would be very honored to hear from you now, Mr. Schumacher.

STATEMENT OF E. F. SCHUMACHER, ECONOMIST AND DIRECTOR, INTERMEDIATE TECHNOLOGY DEVELOPMENT GROUP

Mr. SCHUMACHER. Thank you very much, gentlemen. I should like to associate myself with the words that have been uttered by the two previous speakers. I apologize that it has not been possible for me to put in a prepared statement. Your very kind invitation only reached

me after I was already on tour and it simply was not possible to produce one.

I should like to address myself to the four questions that have been put in the letter of invitation. The first question refers to the subtitle of my little book "Economics as if People Mattered," and asks what does this imply in the way of changes needed in the economic analysis system and how does this apply to the United States?

I should say it does imply very far-reaching changes in economic analysis. A simple inspection of the facts shows that present trends cannot solve problems of human degradation, of social breakdowns, of crime, of frustration, et cetera, et cetera. I suggest we must move away from the purely quantitative analysis to a qualitative approach, which is difficult to define, but not so difficult to practice. People matter when they have responsibility and freedom and this is possible only in relatively small units in a society which I would call a translucent society. If people feel that tax revenue invariably goes to some far-away and huge government and then is disbursed from that government down again, this is not a translucent society, they do not see any connection between income and expenditure any more. It is a very dangerous state to get into.

Now this is only one aspect. The next aspect was touched upon by the second question, which asked: What is meant by the concept of appropriately scaled technology? The question continues: To what extent has this been implemented around the world? Hasn't its primary purpose been for aiding developing countries? Is it useful to consider this for the United States?

Well, the idea that there is a proper scale to things that everything must be of the right size, this idea has been the knowledge of mankind since the beginning. It is only this civilization that has abandoned this idea. Therefore, I am most happy that now, at long last, at least this question is being asked; namely, what is an appropriately scaled technology? And this question is being asked now both in the developing and in the developed countries.

Inappropriately scaled technology—I mean: If it is too big—produces unlivable living patterns. This big, gigantic technology produces a polarization of the settlement patterns: It creates huge conurbations here and a vast emptiness there. I think in your great country I have heard people talk about overpopulated cities and underpopulated rural areas. It is the same in India. You have vast unoccupied areas and vast overpopulation in Bombay, Calcutta, and other cities. It is the same in the United Kingdom. You have great emptiness in half the country, and vast congestion in the Southeast. It is the same in France, where the French planners are talking about France being "Paris surrounded by a desert."

Now, the planners have been worried about this for a long time, but it does not seem to be generally understood that this is the inevitable result of big technology; or technology becoming too big, too complex, too capital costly and too violent. And the force of that technology is stronger than the worries of the planners. If this big technology, if this mass production technology set up new production units, they will inevitably be set up in areas where the markets are biggest. So the new jobs are created where the most people are congregated already, and

hence this fantastic phenomenon for instance, in this country, according to statistics I have seen about 92 percent of the population lives in conurbations which, between them, cover only 2 percent of the surface area of the country. On the one hand you have vast congestion, and pollution, et cetera; on the other hand, you have a great emptiness and a dying away of the population in the rural areas.

So, we have to look for the appropriately scaled technology which the automatism of the present system does not produce. We have to take initiatives in this direction.

The third question says: Is there any evidence that the United States has reached a technological plateau which implies a definite slowing down of economic growth? It adds the question: Is the forecasting of future technological change virtually impossible, by definition?

Very likely a plateau has been reached, but not a technological plateau—as if the development of technology was not due to the actions of man but to a law of nature. I might put it this way: Technology has been made by man; but then technology starts forming men. If there is a slowing down of so-called growth, or perhaps negative growth, it will be for reasons already mentioned by my two colleagues here. I think it will be primarily because of social and political revolt. It may be also because of environmental breakdown, but it will not be because of a technological plateau having been reached. Technological growth may well continue, but it will make all problems bigger. It will make them insoluble because the technological development has taken the wrong turn.

Now, this again, is difficult to define, but it is easy to recognize in practice. If I may be lighthearted about it, Mr. Chairman, my name is Schumacher. And the shoemaker has to not only know about how to make good shoes, but he has to know a lot about feet, because, at the end of the day, the shoe has to fit the foot. We have forgotten this. We say here is the best technological solution, but it only fits into the biggest conurbations. Therefore, we have these unhealthy settlement patterns, and many other things which the rich countries as well as the poor reflect.

This whole problem, I think, becomes clear, or became clear to me first in the Third World, but now everyday I am learning more that the problems structure is identical in the rich countries as well.

The last question is: Do you feel that the United States economy may follow a path similar to that of Britain's economy over the last two decades? Will the U.S. economy decline for similar reasons, or can we learn from the British experience? What policy steps need to be taken to avert serious longrun secular stagnation in the United States?

From what I have said already, it will be appreciated that it is difficult for me to accept the underlying presuppositions of this question. But, I will answer it straight from the shoulder; namely, will the U.S. economy follow the British path? You ask: Can we learn from the British experience?

Well, Mr. Chairman, I think you can. I know I am going to say something strange, but Britain is now meeting and grappling with problems that have not yet reached the United States or Germany or Japan. We can learn from the Britain that the time is gone when people were prepared to work in a mindless repetitive way, in the

way which modern technology imposes upon them. The question is mitigated and cushioned in a country like Germany because there are millions of foreign workers, that is, migrant workers. They are still prepared to take it; I can take you to many places where you will find on an assembly line not one single German. In Britain, we do not have this cushion, so we have to meet the problems of this secular change—a change just as big as the movement away from farms into industrialization. This is coming to your country as well and it is very much worth while studying it. It, of course, doesn't make production easier: It makes it more difficult. But these are the problems all industrial countries shall have to meet in the future.

We are in the middle of a revolt against technologies, modes of productions, and modes of organization which dehumanize. We must get through this phase, not by pretending we could abolish overwork through automation, because that will never work; but by giving our best knowledge to the task of the humanization of the work process. This is just one example of the qualitative approach that must now supersede the purely quantitative approach that has ruled us over the last 50 years.

I should say, therefore, that all industrial societies should try and learn from the British experience. If you do not put your best brain-power into the work of humanizing the production process and structuring society into relatively small and translucent units, you will find that your society will be paralyzed by human revolt. I think it is possible, with the "new economics," to avoid this revolt by anticipating the situation. To put it another way, I think we have to get down to a reconsideration of technology before industrial paralysis overtakes us.

To put it even more briefly, I think we have to make a viable future already visible at present.

Thank you very much.

Senator JAVITS. Mr. Chairman, I may be unable to stay. I have a bill on the floor of the Senate. I would like to express, if I may, my appreciation to the witnesses. I ask unanimous consent, and the consent of the witnesses, that we may ask any questions of them in writing and have our questions and answers incorporated in the record.

Chairman HUMPHREY. Indeed. I should say so.

Senator JAVITS. I must leave because I have bill on the floor.

Chairman HUMPHREY. Oh, yes; I am interested in that bill. Go down and take care of my interests for me, won't you? Don't pass it until I get there.

Senator JAVITS. No; I won't.

Chairman HUMPHREY. Well, we will proceed with the questioning.

I understand, Mr. Daly, you have to leave a little early. Is that correct?

Mr. DALY. Yes, sir.

Chairman HUMPHREY. So maybe the members of the committee would first concentrate their questions and direct them to Mr. Daly.

One general question, Mr. Daly, is that throughout your writings you have said that moral and social limits are likely to be even more stringent than physical ones when you speak of growth and development. Would you just take a little time now to elaborate on that evaluation?

Mr. DALY. Yes; I will.

Chairman HUMPHREY. And speak as loud as you can.

Mr. DALY. The limits to growth study that came out in 1972 emphasized mainly physical limits. I think these are fundamentally important, but the point I wanted to make was that I believe that we have attempted to evade many social and moral issues by growth; in other words, we have attempted to avoid the question of the equitable distribution of income. We have tended to argue that you can just grow more, so we don't need to worry so much about the distribution of income. We have avoided the issue of population growth by saying that if we can just increase economic production more and more, we can take care of everyone and so on.

So, I think there has been a tendency to try to substitute physical growth for moral growth and that, therefore, the limits we run into are very often our inability to deal with moral problems. I think a most salient example of this is our current push toward nuclear power, toward fission power, toward the breeder reactor program. I think that what we will run into there are the social and moral limits of dealing with an unforgiving technology; dealing with one which requires essentially perfection, which is not a human attribute, but it still requires perfection to make it fit into our economy. I think it will require a warping of our social institutions and some of our civil liberties in ways that I think are highly unacceptable. That is what I meant by "moral limits."

Chairman HUMPHREY. It was interesting that this morning in my meeting with some of my constituents, and the Congressman from the Eighth Congressional District, we got right into the problems that are being discussed here, but it was on a more parochial basis; namely, the differences of view that people have about development and the protection of the environment. I found, for example, that in one instance—and I will just give you my experience without drawing any judgment—the strongest environmentalist is a gentleman that has already made it, who is wealthy, and has a very fine, palatial residence. He is a very strong environmentalist. The people that were up there talking about these issues said: "Well, listen, buddy, we don't have that home. We can't even make the payments on the one we have. We want to cut timber. We want to look for mines. We want to mine. We want jobs."

So, you see, there is almost an economic and class struggle going on between some people that have already arrived at a point in life where they can think quietly and calmly about such things as the ecology and environmental problems, while somebody else is out there scurrying around trying to find out where they can get the next \$189 a month they need to make their house payments. So they take a very strong position on it. That is my first point. I just want to toss that out to you. That is one of the problems we meet. I am not drawing a value judgment on this. I believe there is a balance. I believe we can arrive at a balance between the two positions.

Then the next point concerns when you speculate about the limits of growth—well, you teach at Louisiana. And when you fly across this country or drive across this country, particularly if you get off the interstate highway system, just look around. You will see just un-

limited amounts of resources and space and areas for people to live. I happen to be one who believes we ought to be helping the city of New York out of its fiscal dilemma, but I was home a few days ago explaining this to a rather good-sized forum where we have questions and answers, and I pointed out the density of the population and the problems. Well, they said "Why don't they move?" They say, "We've got a lot of room out here. If they are all these good people you say they are, why don't they come out here? We've got counties out here underpopulated. We've got huge, vast areas. We've got beautiful lakes, beautiful trees, good land, clean water and fresh water. Why do they want to stay up there? This is a good place to invest here. We have railroads, and roads and the Mississippi River. We even have barge traffic. We also have radio and television just like them and electricity. We've got everything else. Why do they all want to stay there?"

I think these are the kinds of practical questions you hear all the time. This is not just in my State as such, but this is true wherever you go. People are constantly asking this question, yet the simple fact is that no matter what part of the world you go to, people are moving into the cities. They know they are moving into disaster and they obviously must know it, because people keep telling them about it. I mean, people like yourselves keep saying: "Look, there is just too much overpopulation. Look, the technology is pouring more problems on us than it is solving."

And you can go to almost any major city—well, it was mentioned here just a moment ago about Paris and the desert and unpopulated areas around the city of Paris. Well, this is true all over the country and all over the world. Now, why is it that people act that way? The thing I am getting at is I think we spend all our time talking about technology and science and what the Government is doing, but we never analyze why people act the way they do. Why do people act the way they do? What is this magnet that attracts them into the pits of misery in the city?

I know that when you read about some of these areas, you hear about the ugliness of the cities and I personally think that cities have much more to offer that is good than they have that is negative. But the story that generally comes out about the cities and it goes out to the public day after day—well, for example, about New York City. The story is New York is a bad place to live. You do not hear that New York has some of the finest cultural institutions in the world and the greatest universities and magnificent music and beautiful boulevards, but the negative things. There are magnificent things in the city of Chicago. We held a hearing out there this week. Chicago, you know, is looked upon by many people, particularly back in this part of the world, as sort of a cow town, yet Chicago is a magnificent city in many ways. But, what you generally hear about is its poverty, its race problems, and its crime. That is what you generally hear about New York, too.

And if the media is an educational media, wouldn't you think that people would catch on pretty quick? But why do people act the way they do? I guess that is what I am really getting at: Why do people act the way they do? If they want to have clean air, there is a lot around to breathe in the country, so why don't they go where it is? If

they want to have clean water, there is a lot of it around in the country, so why do they have to drink out of sewers and so on? If they want to have living space, there is a lot of space out there. Some of us are from the Midwest and, you know, it covers a long distance. If you want to talk to somebody, you have to talk across the block. You just don't go around whispering. We don't live in elevators, either. We want our individual homes. We don't really want apartments. So this is a way of life. Now, I am not saying it is the best. I am not drawing a value judgment. Even in my own part of the country, which is the Midwest, people like to gravitate into the cities. Why do they act that way?

Maybe I am talking to the wrong man, but I don't think this has to do with science and technology at all. I think it has to do with the way people are. Do you want to take a potshot at that?

Mr. DALY. Yes, sir, I will. Your first point I can speak to easier than the second. The second was a lot more difficult.

The question of equity and the poor and what about the environmental movement and the limited growth movement being an upper class phenomenon of people who have already made it, well, I think there is an extremely important question here. We simply have to say that when you limit growth, that throws an enormous burden on the moral responsibility to distribute income equitably. We have been sweeping the moral question of income distribution under the rug of aggregate growth; that is, that we will just grow more and more and that will take care of it. It hasn't worked and it doesn't show signs that it is going to work. Now, this is a way of calling that bluff; this is a way of saying we are not going to do that anymore; this is a way of saying we've got to face up directly to the question of justice in income distribution. And I think that is a precondition for achieving physical stability, Mr. Chairman, to attack directly the problem of equity in distribution on its own moral grounds and not try to substitute technical and economic growth for it. That is precisely why the environmental issue and limiting growth is not a motherhood issue, but is one that has some fairly difficult political implications.

So, I share your concern in this matter. I want to emphasize that the precondition for physical stability is equity in distribution of income and wealth.

Chairman HUMPHREY. May I quickly say I think that is the explanation that is not often made to these questions, but I agree with what you are saying. But, if that is the tough political decision, then the easier way out is just to say let's build a bigger pie. But the trouble is, some people have bigger appetites and eat more and more of the pie all the time.

So, what you are saying is we will hold the pie in some balance and try to see if we can divide it up so there is a more equitable distribution.

Mr. DALY. Exactly.

Chairman HUMPHREY. That is not only biting the bullet, that is swallowing the bomb. Go right ahead.

Mr. DALY. I think if you don't swallow that bomb at this time, then later on we will be blown up by the same bomb in a different way.

On the question of the vast lands out there and why people move to New York and so on, I think we have set up a number of incentives

that artificially draw people into the large cities. I think if we were to move in the way suggested by Mr. Schumacher toward smaller scaled technologies, then rural people could get along a whole lot better and you could spread them out over the country. They wouldn't have to be drawn together in the cities in order to fit the technical imperatives of large scale.

And I think to the extent that we offer artificial inducements to bring people into the cities and to keep them there, then I think we are opposing the kind of natural force that would at some point induce them to move out. Those forces may be painful and I don't suggest that they should be allowed to work without amelioration.

On that problem, I rather think probably Professor Schumacher may have more to say than I would.

Chairman HUMPHREY. My time is up. Senator Kennedy.

Senator KENNEDY. Let me ask the panel some questions that any of us might be asked if we expressed some of the views that you have mentioned here this morning. I suppose there would be those that would say haven't there been these expressions of caution and concern over the history of this country? They would ask how we really know in 1976 that we have sort of reached the final plateau where we have to follow the kind of concerns which you have expressed here?

I mean, haven't there been probably thoughtful individuals that talked about the limits of growth over the mid-1800's or the early 1900's and now again in 1976? What can you tell us about why this is the key time and why the past wasn't the key time and why maybe the key time won't be in another 100 or 150 years? Why are your assumptions correct today and they were not correct 100 years ago or would not be correct 100 years from now? What are the urgent facts that distinguish this now, rather than at other times?

Mr. SCHUMACHER. Let me just perhaps illustrate this by one tiny little statistic. People take the most abnormal things as normal. One of the things that concerns many people is oil supply. All right, the world's consumption 50 years ago was what? It was about 5 percent of what it is now. Where did this oil come from? About 70 percent of the oil came from the United States. Where was the oil consumed? Two-thirds of all the oil was consumed in the United States.

So, the rest of the world had one-third of 1 percent of what is today the total. In fact, the total oceangoing traffic in oil was less than the current spillage into the ocean. That is to say, an entirely different quantitative dimension has been reached.

People say the situation has been changed by having found oil in Alaska. It can be demonstrated and was demonstrated at the end of the 1960's that if we carried on as we are accustomed, taking the world as a whole, and if by 1990 we wanted to have 20 years' oil reserve in front of us, again taking the world as a whole, we would have to find two new Alaska oil reserves every year. One does not have to be very clever about these things to know this won't happen.

Senator KENNEDY. Well, this is the point, Mr. Schumacher. Now we read in the foreign policy magazines a week or 3 weeks ago that the expectations in terms of oil in China are beyond possible belief. We read the various Petroleum Institute assessments that says every year we are finding much more than we had forecast and it has doubled or

tripled in terms of the estimates of the past. Now, they are talking about the drilling off the Bay of Bengal and they are saying we haven't even begun to look into the resources of oil.

I mean, sure, it is a quantitative jump, but why is it so much more now than it was before? I don't think there is anybody that questions that sometime you are going to have to follow the kinds of guidelines that you say, but the point I am trying to reach is why is it now? What can you say about this factor of getting into all of these other kinds of potential alternative sources of energy? We are really being quite creative about those possibilities and maybe some of the new developments in terms of solar energy are going to be using the technology in a way that is going to save us from the evils of the use of oil and all of the other kinds of pollutions often mentioned.

But, the point I am trying to get at is how can we, first of all, believe that this is really the time for this kind of a cautious estimate of the amount of reserves left? Second, we hear before this committee all of the time about the difficulties of economists being able to predict when we are going to have the next recession, so how are we going to be able to predict with any degree of accuracy what any of the economic implications are going to be if we follow some of the cautious notes that are expressed here?

Perhaps you might comment, Mr. Daly.

Mr. DALY. I think one thing we ought to keep in mind is that a long history of exponential growth does not imply a long future for exponential growth. In fact, it is the other way around. We are talking about continuing a growth pattern which probably cannot be sustained for long. And as you know, just arithmetically, exponential growth leads to an explosive situation.

It is really not a question of how many extra Alaska oil fields we can find. If we are still trying to maintain the 5 percent per annum rate of increase in energy, no amount of discovery could keep that going for very long.

Another way of putting it would be if we really do have so much oil available, then why are we spending so much of the public's money on fission power and breeder reactors, and why are we taking such enormous risks by using this technology? It would seem we could forego that, if there really were such abundant sources of conventional fuel. I think that if we had started limiting our growth back when other people issued some warnings, we would be in a much better position now.

Also, I think one can be a little bit pragmatic about these things. We don't have to freeze everything at a certain position forever. We can discover, perhaps, later on that we were wrong and that we do have more possibilities for growth than we thought and that there are good reasons to grow. Perhaps solar energy will become feasible on a large scale. It is always possible then to resume growth at some later date, after the technologies have been demonstrated, rather than to grow before the fact and just have faith that technology will bail us out after we have already created the problems. These would be my attitudes on that.

Senator KENNEDY. Yes, sir Mr. Mishan.

Mr. MISHAN. Usually, I confine myself to the other spillover effects of economic growth; namely, those of the satisfaction and the psychol-

ogy of the people. I usually keep off these physical possibilities of growth. But, I do just want to make one or two very general comments because I appreciate Senator Kennedy's point.

He is saying, you read in the paper there are vast new discoveries here and there and we haven't reached the end by any means. Now, I am not going to pronounce quantitatively on this. This is the kind of debate that has taken place from time to time and may continue from time to time. But I would say, as just one broad consideration, I think we all accept the fact the Earth is finite. The question is how quickly are we reaching the limits? If we are concerned with say the natural beauty of the forest lands and the greenlands and keeping them intact, well, you can go back to the Age of Chancer, during the 14th century and you will still find large numbers of people saying that the forest lands are disappearing. If you move on to the Elizabethan Age you will find the same kind of apprehensions. You will find the same thing in the Victorian Age, and you will find them again today—from which no one should infer these resources are not disappearing. In fact, in the last 20 years, the tourist explosion has perhaps irrevocably destroyed all the main beauty spots along the Mediterrean coast and the natural beauty of many inland resorts and lake resorts.

So, this is one of the facts that doesn't have to be disputed. But, coming back to the more general question, I think we have to have some idea of the magnitude. Perhaps we can bring this point home by some simple arithmetic.

Suppose we take 3 percent per capita growth as an average, which is not unreasonable by postwar standards. If you project that to merely 150 years from now, and if that continued on the average, the then per capita income would be 100 times as large as today. Project that another 150 years, and it would be 10,000 times as large. This means that if you take the average family income for four people in America today as being roughly \$15,000, then in 300 years or so this should be \$150 million. You can project that a little further, let us say, to well under 500 years, and it turns out to be 1 million times as great for each person. Before the end of the millennium, each person in America should be making more than the aggregate GNP in the United States. It is hair raising.

This may seem to some people not impossible, because we cannot foresee what kind of gadgetry or devices we shall have in the future, and we may be spending a lot of our money on space ships, et cetera. But if you also consider that when GNP grows, the waste materials grow perhaps not proportionately, but by some fraction, then we reach a situation in, say, 300 years when the amount of waste to be disposed of would be about 10,000 times as much as it is today. Maybe it will be even a little less. You could reduce that by quite a bit, because even with 10 times as much, Senator, this would be much too difficult to deal with. These waste materials take the form of pollutants, and many could have irrevocable side effects of which today we know nothing.

Senator KENNEDY. I just have one more question. I don't know whether you agree with this premise, but in general, considering it in a general way, it appears that within the socialistic and communistic countries that they appear to be moving in terms of their economic structure toward a more flexible economy. We see different evidences

of it, certainly in Eastern Europe and within the Soviet Union. And there are those that are concerned within the United States the ever-increasing role of the Federal Government has provided a lessening of sort of the traditional kind of competitive forces of our society. Some have drawn the observation that actually in terms of economic structures, even within the socialistic and communistic and democratic economic orders, well, that they appear to be coming somewhat more closely together.

I am just interested in whether any of you feel that this is a phenomenon or whether you think that either the democratic economic systems are becoming more closely to the socialistic systems, or whether you have any observations that you could add, just in terms of looking down the road in terms of both systems moving together. Can you make any observations about that at all?

MR. DALY. Just a couple of observations and then I have to excuse myself.

Senator KENNEDY. Yes.

MR. DALY. I think that both communistic and capitalistic economies have the same kinds of visible constraints. As these constraints become more effective in the economies, they will have to deal with them. Probably the measures adopted to deal with them may exert a greater influence on conversion, although I am not at all sure of that. My own thinking is that we should rely, to the maximum extent possible, on private property and the free market in our economic system, but there are well-known defects to both private property and the free market and these need to be corrected. I think the specific places in which to correct them are to exercise social control over the rate of depletion of basic nonrenewable resources, social control over the distribution of income and wealth in which the market forces are allowed to work, and some social controls over population growth.

Senator KENNEDY. Thank you.

Chairman HUMPHREY. Mr. Daly, we thank you very much. We know that this has been a sacrifice on your part to come. Good luck and have a good journey.

Congressman Long.

Representative LONG. Thank you very much, Mr. Chairman.

Gentlemen, if I may, I would like—and I know you have given a great deal of thought to the economic aspects of this—I would like to pursue and gain the benefit of your thinking with respect to the psychological and perhaps sociological implications in a free society upon, one, the society in general, and two, the individuals as individuals, as the result of the pursuance of this particular type of economics.

Mr. Schumacher, do you have any views on this?

MR. SCHUMACHER. As I said in my opening remarks—not very successfully, I am afraid—what is always totally underestimated is the formative power of the production process. The question is raised, Why do all of these people go to the cities? It has nothing to do with desire. They cannot find jobs anywhere else. Of course, man needs the cities, but if the technology is such that most businesses settle around the biggest cities, then the smaller cities will die. The country empties out its population because of the need for jobs, not because people

want to live in Chicago or New York, but because they can't find a job in the country.

If we do not change our technological approach, which can only be done experimentally, these movements will go on. They are going on in the communist world just the same as in the capitalist world, and they are going on in the poor countries just as much as in the rich. They all follow the same technological trends.

Representative LONG. But, Mr. Schumacher, I want to say this. I always had the view, from my college days when I had an undergraduate degree in sociology, that sociologists have really not done an adequate job with respect to the sociological implications of the technological developments. I don't think this has kept progress. You see books now, like "Future Shock" and books like this that are indications of the psychological and sociological aspects of this type of movement. To some extent, they resort to, I guess, literary license; yes, I guess literary license is a good way of explaining it, and I don't mean that in any derogatory sense.

A man was quoted—and I don't want you to hold me to the statistics—in "Future Shock" and his name was William Fielding Auburn, who was one of the top men in the department of sociology at the University of Chicago many years ago. He was down in the school where Mr. Daly is now teaching, and Senator Humphrey and I went to that school. I must say, Senator Humphrey was there a year or two before I was.

Chairman HUMPHREY. Just about 6 months.

Representative LONG. Well, he taught a course at that time. I don't remember the official title of it or the number of the course, but it was basically on the future. We would go in and sit down—and this was before the day of the jets—and he would say, let's assume, and this would be our course for the day, he would say let's assume it is 1985 and that you can drive from here to New Orleans on a four-lane highway, we were about 85 miles away, and that would take 1½ hours. He would say then you can go on an hourly basis and take a plane and be in New York. He would ask what are the psychological and sociological implications upon society of that?

And I have found sociology has really not pursued this, nor has psychology, in my opinion, pursued this in the academic sense that it needs to be pursued during this period of time.

What is your view on that? Are we, in those types of academic institutions and those types of academic studies making the progress that we should? If not, what can we do about learning a little more about that?

Mr. SCHUMACHER. I don't know, sir. I haven't got time to read all of those studies, because I am involved in practical work. We know the answers. We know that we simply have been following quantitative concepts like growth in the past and that if we follow them in the future, that this will exacerbate all the present trends toward these vast conglomerations. Instead of being concerned with goods, we have to be concerned with people, with the pattern of living of people, but we have to make it possible for the small towns all over the country to be resuscitated, to become centers of culture. Otherwise, the problems of the vast cities are totally insoluble.

Now, the sociologists have been pointing this out and the psychologists have been pointing it out. It isn't necessary to read their books, however. You can just look out the window and you can see it. They tell us the work processes must be humanized. They tell us all sorts of things. But society as a whole, both business, and I am afraid politics and the Government, have been seized by a sort of immobilism that insists the future must be the same as the past, only more so.

So, we are not attending to these specific problems. I am also saying: Let's have some experiment on the whole question of ownership. I mention in my book a firm that has a different kind of ownership, and all the world talks about it. Just one firm, among hundreds of thousands of firms, that is experimenting: It is strange.

Representative LONG. That is the point I was making. While you state the sociologists and psychologists have done some work in this field and all you have to do is look out the window and see it for yourself, but I don't think there has been any near the work that has been done in that particular aspect of this problem as should have been done, or even as much as has been done in the field of economics and, of course, we are headed in a different direction in economics. And you are in a brave new world for even suggesting this, at least in the minds of those who have not followed this over the years.

Really, there has been no academic following of this, to my experience.

Mr. SCHUMACHER. Well, I think in the world as a whole, a lot has been written. I could easily assemble large libraries of books which point all of this out.

Representative LONG. Let me rephrase my question. It has certainly not received public attention that it deserves.

Mr. SCHUMACHER. Well, the word hasn't become flesh. Indeed, as far as that is concerned, very little has been done.

Representative LONG. That is right.

Mr. SCHUMACHER. I mean, just taking one example, the humanization of work. One Swedish firm, a motorcar producer, had come to grief because assembly line work is no longer tolerated by the workers. They had to do something new. Now, they have done something new. The whole world, the whole motor industry of the world, had to go to Sweden to take a look at it, because it is so unique, but why? Why is that? If this society wants to save itself, it has to experiment, and the word has to become flesh.

I would not go along with people who say we need a lot more academic research on this. I think that is an escape hatch, because action is extremely difficult and research is relatively speaking easy.

Representative LONG. Thank you very kindly.

Chairman HUMPHREY. Mr. Schumacher, I guess what you are really saying is that most great decisions that involve fundamental changes are not made by the majority at all; they are made by the example of the minority.

Mr. SCHUMACHER. That is right.

Chairman HUMPHREY. The majority merely confirms decisions or changes decisions that have already been made, or at least initiated by a minority. I think this is true, whether it be political or social or economic.

When you mentioned the automobile industry, that is the Volvo Co. that you are mentioning, I believe. Well, they are innovators. And whether anybody ultimately follows them will depend a great deal on the unrest in the rest of the plants. I am a political man and I have spent a lot of time at college, both as a student and as a teacher. I have sometimes wondered whether it was all worth it, because almost everything people do is out of necessity. I have a political axiom that is my own, and that is called "empty stomachs, full heads; full stomachs, empty heads." As long as you are getting along all right and your wants are satisfied, you don't do anything to change things. You continue to take political Excedrins to ease the pain and keep up with the same lifestyle. It is only when it comes to a grinding, screeching halt that things really happen. This has been true with most of the great decisions that have taken place politically and economically. I wish it were not true, and I don't exactly advocate it, but it seems to be somewhat true.

For example, as of late, people have been moving out of some of our cities. Why have they been moving out? For social reasons and for economic reasons, but I think there is another reason that they have been moving out, and that is industry has found that they can take the technology which seemed to be related primarily to the urban centers and move it into a much less populated, more open area and get lower production costs and a better product and less tension and many benefits. I remember when I served as mayor of the city of Minneapolis in 1945 through 1949, the population was 550,000. We were the 14th largest city. I was awfully proud of our being the 14th largest city. Now our city is about 450,000. It has about 100,000 less people. It is a very good city. They have improved the quality of life and there is no doubt about that. But the areas of our State that are growing are the rural areas. They happen to be counties or areas within, let us say, 50 or 75 miles of the metropolitan center, because the metropolitan center offers a variety of services: Financial, cultural, medical, and educational. All of these services attract people.

So, what I guess I am trying to get at is, isn't it possible that the technology, which has been mentioned here as lending itself toward the problems of urbanization, can also be technologies that can be exported, in a sense. It can be moved out of the cities. It doesn't have to be just put where the old railroad tracks were. You can build new railroad tracks. You can find new ways of transportation. Don't you think that is possible? I mean, your thesis, in a sense, is, as I gathered, that one of the reasons for the cities that can no longer be seen through, so to speak, or that don't seem real or controllable is because of technology, and you asked for a translucent community, so to speak, which is a nice way of being able to say that you can see what is going on. And I think that is right. I think people like that. I think they really do. I think the people are a little bit more comfortable and more secure. You know security is a basic motivating force in human psychological makeup.

But, is it not possible, with the advantages we have now in transportation and communication, particularly in communications, and that is all forms of communications, to get the translucent community?

Mr. SCHUMACHER. Well—

Chairman HUMPHREY. Isn't it possible to break down the big masses?
 Mr. SCHUMACHER. That is right. The panel here talk of emerging economics. And, of course, it is emerging not only in the words of a few of us, but also in reality. The fact that the people are trying to move out of the city, is part of this emerging economics. I have a feeling that the growth debate being conducted in purely quantitative terms is diverting attention from this sound new real growth, qualitative growth; namely, of the translucent society, toward smaller units and the humanization of work. These are the things that matter. If we would suspend GNP statistics for the next 10 years, I think we would be taking into account the qualitative factors which are the very factors you, sir, have been talking about.

Chairman HUMPHREY. GNP is a very deceptive phrase because you could have your GNP all in scotch and soda. You know, GNP doesn't tell you anything. All it tells you is the volume of goods and services, I mean the aggregate total. It does not give you a picture of what is really happening until you break it down and then we begin to find out whether or not we have been making changes in life style or in living patterns that are desirable. And, of course, there is always the question of what you think is desirable. We don't have a philosopher-king in our society. The platonic community is not here. People have different ideas about what is a good society.

You know I have had people say to me: "Do you really enjoy living out in a little community like you do, Mr. Humphrey, out in Waverly, Minn., 40 miles west of Minneapolis, on a little lake out there? Do you really enjoy that? Wouldn't you really like to live down in the Kenwood district?"

What they are really saying is that you are nuts. They mean: "I live downtown and you want to live out there."

Of course, I tell them I like to live both places, but sometimes it is not possible. It is very difficult to get an agreement on what is a good life.

Mr. SCHUMACHER. Yes. Is it necessary to get an agreement? It is necessary to create new possibilities of living, which present developments do not provide.

What we have become so conscious of, as Professor Daly put it in economic jargon, is that the marginal advantages of this kind of growth are smaller than the marginal costs. The quality of life is deteriorating. If people say that this is a middle-class luxury, well, I can only say that I am not a sufferer, so why should I be interested in it? It is these people, these little people, that are the sufferers. They live worse than any other communities I know of, except the starving Indians. There is more real poverty in the rich society of the United States than there is in the whole of Europe. The growth mentality doesn't solve these real issues.

Chairman HUMPHREY. I couldn't agree with you more. I think this is a point that needs to be made. That is why I said that we look at our GNP and we look at our so-called average per capita income and we look at all of these aggregate figures and we don't break it down into seeing the areas of our society that are really cut off from what modern science, technology, social institutions and political institutions can give them. What you see happening sometimes, and it bothers me very much—we don't want to take too much more of your time—is that we

see a beautiful steel structure, a magnificent office building in a great city. This building is a work of art, but within the shadow of that building will be filth and degradation that is beyond human description.

Some of us have tried to arouse the consciousness of the American people to that contrast, to that shameful contrast. This is what you see, for example, when you go to a great city like Rio de Janeiro. It is a magnificent city in many ways, but almost within arm's length you see abject poverty. So the question, and this is what both Mr. Daly and Mr. Mishan were saying a little earlier, is that it isn't so much the economics we are talking about as it is the value decisions we are ready to make, the social and political decisions we are being called upon to make. And those are the ones that leave you without some of the answers that you want.

Mr. SCHUMACHER. Could I make one comment here? The consciousness about these great disparities has been aroused in most of our countries and has led to enormous welfare expenditures. What we are discovering is when this welfare expenditure is made by the enormous bureaucracies, it doesn't do the job. It invariably corrupts people, rather than helping them.

It is very difficult to help people. I found this throughout the third world. Wealth doesn't do it. It is a much more subtle process.

The little contribution I would like to make to this is to ask you to watch the technology. We could create a technology for self-help for the little people and, if we could do that, then already the situation would be transformed and you could save on welfare far more than the little expenditures you would need for the creation of this technology. We have learned that in the third world.

Chairman HUMPHREY. I don't want to just burden you with all of these questions. I will ask the other gentleman of the panel to respond, too.

But, I have visited the Federal Republic of Germany recently. I have traveled a great deal in Western Europe, as most of us here in the Congress have, and I have tried to do it as a student to learn. I am impressed with the fact that poverty, such as we see in certain parts of our country is really not known in much of Western Europe. Why is that?

Mr. Mishan, you, too, can respond.

But, I kept asking myself why. Why did we let this happen? Why did it get started? Why is it corrected in Western Europe?

Mr. MISHAN. I think the debate is wandering to a direction which is rather far from the kind of thoughts I am entertaining and I think to some extent it is a question that Mr. Schumacher is more able to answer. You see some of these questions you are raising also have certain presuppositions such as that if you raise material welfare or if you distribute things better, that that in itself constitutes an improvement, whereas the kind of thoughts I have are much more concerned with the shape technology is taking.

You see, suppose I were to try to answer this question of politics in the United States? My first reaction—and it may not be a good one—would be to say that this inability to overcome poverty is part of the political constraints of the system; that is to say, people just don't want to pay more taxes. You already have a relatively high level of

taxes and large Federal expenditures and people don't want to pay more. The question comes up, how did these political constraints arise? My answer to that is to say that it is part of the ethos of economic growth. People just believe they need more. They may have three cars, a refrigerator, two televisions, a yacht, a place near a lake in Minneapolis, as you say, but they still don't think they have enough. The whole system teaches them that they don't have enough.

Chairman HUMPHREY. Well, they are taught that.

Mr. MISHAN. Exactly.

Chairman HUMPHREY. That is what is on the TV every day. That is a more important picture that is given to them in 1 second than all the professors put together in 1 year—I hate to tell you that—or all the politicians for that matter. That one jolt that comes over that color TV is worth all the words in the world.

What is it Confucius said? He said, "One picture is worth 10,000 words." And one picture on that television is maybe worth 1 million words. You know they are on their vip, zip, zip, all the time, telling you what you must do and what you must wear. I mean, we must be the dirtiest people in the world, because of the amount of deodorants that are advertised. I would hope somebody would at least run a counter program showing we could shower or bathe. But the deodorant industry has educated the American people to this.

Mr. SCHUMACHER. Mr. Chairman could I venture to try to answer your question. I think the thing that has gone wrong, moving away from technology, is quite basically the structure. Now Western Europe, throughout its history, is structured into relatively small territories, so the movement can't be so great as here. Society there is much more translucent and is more relatively unified than in the United States. Western Germany, in particular, as the result of the Allied actions after the war, is extremely well structured. It has all these towns, of these capital cities, and no one thinks he is missing life because he lives in Munich and not in Bonn. So, it is not like, let us say, Britain, where there is one big town, London, and the people out in the provinces all want to come to the Southeast. Her sound "structure" has made it possible to abolish the extremes of poverty in Germany.

So, I am brought back to the factor of size. I think small is beautiful. If we can give our societies a small-unit structure, which would be of course interconnected, if we can give them a cellular structure, then people will have responsibility and pride and feel at home. They would know the connection between income and expenditure, which they forget when vast amounts of money go up to Washington and quite different amounts come back down. They now ask for more and more money because they don't care where it comes from.

Chairman HUMPHREY. Well, it has been a topic that has engaged interest for years. Everybody has to have a conceptual pattern around which you try to relate ideas. I have believed for a long time in what you are saying; namely, the so-called translucent community. I believe in it not only because it is smaller, but because it is more manageable.

The lack of the sense of community is one of the curiosities of the modern world. You see this in the huge metropolitan areas where people do not really feel there are neighborhoods and that they really belong. Now, maybe my ideas are old-fashioned. This is what people

say to me, you know, they say, "You are living in a bygone age." But, I have always envisioned that what would be the good society is a series relatively self-sustaining neighborhoods and communities that utilize the core city, the central city as a basic superstructure to satisfy some of their needs, over and beyond what they can provide in their own communities, in their self-reliant communities. It would be a wheel with the spokes heading out to the neighborhoods and communities and smaller groupings.

I have witnessed, for example, efforts in this country—and I think you would be interested in this—for today we are identifying parts of the city as a neighborhood by name. This has had an amazing psychological effect. When I served as mayor of my city, I divided my city into 13 what we called community councils over and above the city council, over and above any formal structure. People began to identify what that mechanism. The government was there, to be sure, but the cohesive force for that community was around their own type of community concept. And if you go to a city of half a million people, you will go to an area that is called the Camden neighborhood, for instance, so people feel like they belong there.

So, this problem is not just due to technology. This is the thing that has bothered me about the American pattern of life for years, which I think has been brought about in a large degree because of the automobile. I think we are the worst segregationists in the world. We segregate old people, young people, and all kinds of people. You put the kids on a college campus and they develop a life style there, and you put the old people in senior housing, and you have bedroom communities for the bank tellers and clerks, and then you have the workers' district over here. The only thing we have tried to desegregate is the races.

To me, if I had my way of building a university, for instance, I would never permit student dormitories. I think that is a crazy and soft life. The students should be intermingled with the community, the college, and the university, and there ought to be living in the same building a person that is the custodian and maybe the grocer down the street, or somebody else. You ought to bring them all in together so that they start to live with the society that they are going to live with once they get out of there nice little country clubs. And campuses are really country clubs. University campuses today are really essentially country clubs, with an educational center.

Mr. SCHUMACHER. Mr. Chairman, if you forgive me, I now must excuse myself.

Chairman HUMPHREY. I am going to excuse you all in a minute. This subject is unlimited, but we do have time constraints.

Mr. MISHAN. I was just thinking, you, Senator, should have appeared here instead of me, because you have been giving many of the important points I had wished to make.

You are talking about the difficulties of forming communities and the excessive mobility of people and the extent to which they are influenced by television. Now, all of these are forms of technology which have come about. I am suggesting to you that it is the forms of technology themselves that make a real community difficult, if not impossible, because they lend themselves to creating a technologically independent people; that is to say, no one depends directly on anyone

else. Each person is isolated. He has the wherewithal to keep to himself. He has his own television and he has his own car, and he has his own washing machine, and he has his own refrigerator and everything that enables him to live in isolation. He becomes a completely self-contained unit. There is enormous temptation to make use of that gadgetry and to that extent the community becomes artificial. You've got to keep pumping it with the idea of a community to make it go. But, it doesn't go by itself, because each person has no real need for other people and—

Chairman HUMPHREY. I understand that. I think the central question I would pose is whether mankind, human beings really are capable of that kind of self-isolation? And I don't think so. I never forgot what St. Augustine said, speaking about the wonders of God's creation. that the most wonderful of all is man himself, and yet the most difficult and complex. Well, I don't believe that. I think we are a gregarious species. And all this business of getting your own washing machine and your own television and your own medical kit and living off by yourself, well, I think that makes you nuttier than a fruitcake, when all is said and done.

I think people have to interact, have to have an interaction. I don't say all people must, but there must be some sense of community, with, of course, the kind of privacy that individuals like in that community.

Let me just end off by saying one of the things that I think bothers many of us as Members of Congress is that we are not only beyond possibly our depth in figuring out what ought to be done; but when we speak of the subject of growth, we tend to relate it to the United States. Really, this is a world community that we are living in today. Really, the economic growth in that world community outside of the industrial areas is modest and very limited. The population growth is huge, however. And I think, again, we have compartmentalized much of the thinking. Here we are now beginning to think of what kind of constraints can you put on economic growth or what kind of better distribution can you have of the goods and services of the industrialized nations, because we have really come to grips basically in the industrialized countries, although not fully but closer every year, to what we call population control. But you know out in the vast areas of the world and out in the less-developed areas of the world, the growth is overwhelming; I mean the population growth is overwhelming. And while our Government was very upset with some of the comments at the Bucharest Council at Romania—and when I say "our Government" I mean our representatives—I think there were certain things said that made some sense. There were certain things said even by the most radical elements that made sense when they said it is one thing to tell us to have less population, but what we need more than anything else is economic development that will permit us to have less population. I think this is one thing that we are unwilling to face up to yet as a country.

Well, I am not going to keep you any longer, Mr. Mishan. I thank you very much.

The committee stands recessed.

[Whereupon, at 11:45 a.m., the committee recessed, to reconvene at 10 a.m., Friday, October 24, 1975.]

LONG-RANGE ECONOMIC GROWTH

FRIDAY, OCTOBER 24, 1975.

CONGRESS OF THE UNITED STATES,
JOINT ECONOMIC COMMITTEE,
Washington, D.C.

The committee met, pursuant to recess, at 10 a.m., in room 1202, Dirksen Senate Office Building, Hon. Hubert H. Humphrey (chairman of the committee) presiding.

Present: Senator Humphrey.

Also present: Jerry J. Jasinowski and Robert D. Hamrin, professional staff members; Michael J. Runde, administrative assistant; M. Catherine Miller, minority economist; and James Thornton, staff aide to Senator Humphrey.

Chairman HUMPHREY. Well, gentlemen, we will start our hearing. It will be much more informal than under other circumstances. I believe that therefore it might be even more interesting.

After yesterday's hearing, I said to Mr. Hamrin, who is a staff member working with us on the subject of growth policy: "Let's get away from having it look as if we had the accused out in front and the judges sitting up here on the high levels. Let's get down to where we can have a little dialog." And that is what the purpose is today for this structural formation that we have with the tables.

Gentlemen, I do apologize to you for the fact that some of my colleagues that wanted to be here will not be here due to the unexpected Senate and House recess. They went out a day early. It is very likely that I may be here in the sole capacity of chairman of this committee.

However, I believe you met last evening with some of our colleagues. I deeply regret I wasn't there. I was off doing some politicking someplace and I therefore missed the chance to have an opportunity to have a good, informal discussion. I know it was rewarding to those who were present.

I have a very brief opening statement, and then we shall proceed.

OPENING STATEMENT OF CHAIRMAN HUMPHREY

I welcome you, of course. More importantly, I thank you on behalf of the committee for coming here today. You, gentlemen, represent three very distinguished business leaders. You can, I am sure, help us a good deal in a prolonged study we are making of the future of U.S. economic growth.

I might say, or possibly you were told last evening, that we have commissioned certain studies to be made, as well as having public

testimony and public hearings. We think this is an area where we need to have some attention given. This is a topic of paramount importance, but it is also one of the subjects that lends itself to wide-ranging diversity of viewpoints, which, by the way, is what makes it interesting. Because of these facts, the Joint Economic Committee is conducting a major study series, to which I alluded, to examine and evaluate the various arguments to determine which are the best founded and the most critical of the proposals and suggestions that are offered to us.

Much of the "limits to growth debate"—and there is a growing debate on this subject—was started by and was carried on by people in the academic community. This is well and good. We had a fine panel of economists from the academic community with us yesterday.

However, I and the committee are very anxious to hear the viewpoints of those who are really out on the economic, business, and financial firing line and find out the ideas that you have and how they apply to the market.

So, let's face it, economists may provide useful studies of economic growth from a theoretical point of view, but it is business which generates it and which also feels its impact in one way or another.

The three of you with us here today, as corporate leaders, have done much serious thinking on future economic growth and how business must act, and in many cases, change its past actions to cope with future problems and constraints.

One of the witnesses today, Mr. George Mitchell, was the founding force behind this week's Limits to Growth Conference held in Houston, which I understand had a substantial number of businesses represented. I hope we will be able to get some of the papers that were presented there. I gather there must have been a transcript taken of some of the discussions.

Mr. MITCHELL. Yes, we will send that to this committee as soon as the aggregate of all the findings is completed.

Chairman HUMPHREY. Fine. Did you have a staff consultant, a specialist to work with you?

Mr. MITCHELL. Yes, John Naisbitt and Dennis Meadows coordinated the project. We had a tremendous array of resources. And we will have those proceedings and papers. It will also be published by Meadows, but we will have the papers earlier than that and we might send those up to the staff as quickly as we can, at least those papers regarding the new concepts and new ideas.

Chairman HUMPHREY. Would it be possible for your staff people to spend an afternoon with some of our people here and kind of discuss these things and put them into focus through these personal discussions?

Mr. MITCHELL. Yes, I will see to it.

Chairman HUMPHREY. We will try to get that done and we will be glad to cooperate with you in whatever arrangements are necessary.

I want to personally congratulate you, Mr. Mitchell. I wish I could have been there. I know it would have been a fascinating experience.

This was a marvelous initiative in establishing this—was it an international forum, as I understand?

Mr. MITCHELL. Yes, I will have a few comments about that.

Chairman HUMPHREY. Mr. Lundborg and Mr. Busby have both written and spoken extensively on the topic of economic growth before many audiences and particularly before their business colleagues. You are going to be able to offer us, I am sure, some very fine documentation on it.

Mr. Lundborg is the former chairman of the board of the Bank of America, which is one of our great financial institutions. Mr. Busby is president and chief executive officer of Pennsylvania Power & Light Co. And I can't think of any one segment of our economy that has more pressures upon it regarding the subject of economic growth or the limits to economic growth, than the utility industry.

So, with all of that, I consider myself a very fortunate and lucky Member of the Congress to be in your presence and to hear what you have to say. One of the things I find about being a Senator is that it is like going to school all the time. And if you are sufficiently patient and tolerant with us, we will learn something once in a while.

With that, I understand that there was some discussion that you might paraphrase your papers. But all of the prepared text will be included as if read, or as if presented. So, we will start off, then, with you, Mr. Lundborg. You take whatever time you want. I've got the time and I want to learn.

STATEMENT OF LOUIS B. LUNDBORG, FORMER CHAIRMAN OF THE BOARD, BANK OF AMERICA

Mr. LUNDBORG. I will try to make this brief. I might start by saying, Senator, I think great progress has been made by your moving down to our level this morning. I think part of our objectives here will be to close this gap still further. I hope, as a result of everything that you are doing here, the gap between your table and our table will be narrowed down to nothing, so we will be sitting around the same table. And I mean that more than just facetiously. I think it is in the spirit of everything we are talking about here. If we are going to handle the problems involved in this whole question of future economic growth, it simply cannot be done except with the people you represent and the people we represent working together much more than just symbolically, or ceremoniously, but very closely in action.

Now, the things I had intended to talk about in my prepared statement I hope to talk about as we go along this morning, and they largely revolve around four basic points. Four things, four issues, four elements, I think, have to be recognized in any approach to the whole question of future economic growth:

First, that our present exponential rate of industrial growth, based on nonrenewable natural resources, simply cannot be sustained.

Second, that that fact should not lead to panicky, half-cocked courses of action—nor to bland indifference; because we have the blessing of time, if we start immediately to use it wisely.

Third, that we have a paradox in our need for capital. I know in your agenda that you sent to all of us, the question of capital was very prominent in that, and there is a paradox there. That is, while there must be a great shifting away from resource consuming and other capital intensive pursuits to resource conserving and other

labor-intensive activities, that transition, in itself, is going to require a great infusion of capital.

Fourth, while government has a profound responsibility in this entire transition, it is as much a responsibility to stop doing some wrong things as it is to start doing some right things.

Now, just to look very quickly and briefly at each of those:

First, the matter of the necessity for limits to our rate of industrial growth: With that I find myself in a rather anomalous position a little like Sam Goldwyn and George Bernard Shaw, when Sam Goldwyn was trying to get Shaw to edit and rewrite the works of Maurice Maeterlinck: They negotiated and negotiated for weeks. They finally came to a stalemate. Shaw sent a message to Goldwyn and said: "I am sorry we can't work it out. The trouble is you are interested only in art and I am interested only in money." I am in that kind of a position. As a businessman, as a banker, here I am talking about the inevitable necessity for some limits on our present exponential rate of growth, which may seem a little bit paradoxical.

But, the fact of the matter is that many of the nonrenewable raw materials that are most critical to modern, sophisticated industry, are disappearing throughout the entire world, and they ultimately—and when I say "ultimately" I mean within a visible amount of time, will be exhausted.

But—and this is my point, too—I think there is nothing in this situation that justifies going off half-cocked or having apoplexy over it, because we do have that blessing of time, if we will use it. The problem is it is not our present rate of resource consumption that is the threat; it is the geometric rate of increases in that rate. We don't have to come grinding to any paralyzing halt. In fact, it is precisely to avoid ever grinding to a halt that I have been urging a look at a more orderly transition.

Now, skipping over some things we may come back to, next is the question of capital. You raised that question, and I have mentioned it as my third point. I think I should elaborate on that. A great deal of the current discussions of the need for capital—and it is a very lively topic—seems to be aimed at revitalizing and stimulating our economy on a business-as-usual kind of basis. And lest anyone think there is any less need for capital as we phase in a more limited growth, I think I should stress that for the foreseeable future there might be even more need for capital.

Let me take just two very simple and very obvious examples.

If we are going to preserve fossil fuels, as we are all now trying to do, attention is turning, as it should, to the self-generating sources of energy; namely, the Sun, the wind, and the tides. To harness any one of those, like solar energy, for example, would require massive initial investments of capital. Even now, in the things that are being done, such as shifting from one of the fossil fuels, petroleum sources of fuel, to coal or the other things related to coal, requires tremendous infusions of capital.

If we were to adopt Mr. Schumacher's thesis that "Small Is Beautiful" and move into smaller models of automobiles, for example, the retooling is already calling for great infusions of capital; not only will that continue, but it will find its counterpart in many other industries as well.

In one of the questions you posed to our panel, you asked if the falling rate of return on invested capital is a greater threat to future capital than a shortage of funds. Actually, both factors are very sensitive to the same set of government policies, both fiscal and monetary policies.

First, on the availability of funds: Our tax system, more than any other in the world, has had a built-in bias to encourage consumption and discourage production. That is, incidentally, a sure-fire formula for inflation, but that is not our subject today. But is a fact our tax system does discourage production by inhibiting capital formation.

Almost worse, though, is the second effect of our fiscal and monetary policy. That is that even such funds as might be available for investment do not get invested in industrial production as they might be simply because confidence has been so shaken by the uncertainties of our yo-yo, boom-and-burst economy. And that uncertainty in its turn has resulted from the oftentimes, I think, uneven and irresponsible use of fiscal and monetary policy. Neither consumers nor businessmen have wanted to take risks in that climate.

Traditionally, you know, rate of return took care of the uncertainties: Different degrees of risk commanded different rates of return. But now it is not a quantitative but a qualitative difference, breeding much greater uncertainty.

I think if we want to bring capital out of hiding and into investment, we do need to create a stable economic and business environment. We have not had that in the recent considerable number of years.

But, there are a great many more problems we will bring out as we go along. There are some number of things as to what to do and how to do it. I think I might pause here now, and let you go onto the other members of the panel. I will come back to some of the other points I made in my prepared statement.

Thank you.

Chairman HUMPHREY. Very good. We looked over your prepared statement and there are some matters that you obviously had to skip here and we will come back to them, because I was just intrigued by so many things you had to say.

[The prepared statement of Mr. Lundborg follows:]

PREPARED STATEMENT OF LOUIS B. LUNDBORG

My name is Louis B. Lundborg. I am a director and former Chairman of the Board of BankAmerica Corporation and of Bank of America NT & SA. I am pleased to respond to your invitation to testify here today and thus be part of your major inquiry into the future of U.S. economic growth.

My remarks to you will be based on four major points, four basic elements that I feel must be recognized in any approach to future economic growth:

First, that our present exponential rate of industrial growth, based on non-renewable natural resources, cannot be sustained.

Second, that that fact should not lead to panicky, half-cocked courses of action, nor to bland indifference; because we have the blessing of time, if we start immediately to use it wisely.

Third, that we have a paradox in our need for capital. While there must be a great shifting away from resource-consuming and other capital-intensive pursuits to resource-conserving and other labor, intensive activities, the transition itself will require great infusions of capital.

Fourth, that while government has a profound responsibility in this entire transition, it is as much a responsibility to stop doing some wrong things as it is to start doing some right things.

Let us look at each of these briefly :

First, the necessity for limits to our rate of industrial growth : many of the non-renewable raw materials that are most critical to modern, sophisticated industry are disappearing throughout the entire world, and will ultimately (within visible time) be exhausted.

We have been on a binge, a spree, that has been as reckless as a three-day drunk. We have been intoxicated by the game of production, and of consumption. In the process, we are not just borrowing from the future : we are stealing from it, because we are not going to be able to pay it back.

The present energy crisis is only an index, a gauge, of our excessive use of all kinds of irreplaceable resources. It is our D.E.W. Line, our Distant Early Warning of what lies ahead.

But, Point Two, there is nothing in this situation that justifies going off half-cocked or having apoplexy. It should not lead to panicky courses of action ; but neither should it lead us to say "oh, we have always found a solution before and we will this time." We do have the blessing of time, but only if we start immediately to do the rational things that a calm, honest appraisal of our situation dictates.

It is not our present rate of resource-consumption that is the threat, it is the geometric increases in that rate. We do not have to come grinding to a paralyzing halt ; in fact, it is precisely to avoid ever grinding to a halt that I have been urging that we look to an orderly transition.

Moving in the direction of limited growth will not be easy. The gravity of the problem is not only not broadly understood, but is brushed off lightly by many of the persons and groups whose active help will be needed if the transition is to be successful. Moreover, some of the proposals that have been advanced contain ingredients that would alienate many elements of society whose understanding and support would be required if solutions are to be found—so alienate them as to make them feel that, disastrous as our present course may be, the alternative is worse.

Because the alternative does not have to be worse—may indeed be better in many respects ; because it can be better only if it can be phased in as an orderly transition, not suddenly confronted as a cataclysm ; and because orderly transition calls for vast amounts of participation and inputs from an almost infinite number of directions—for all these reasons, it is imperative that the problem not be swept under the rug. We must face up to it now. We must try to understand all its ingredients, all the choices and all the trade-off now. We must begin some of the corrective measures now, and start the planning of others now. Day before yesterday would have been better ; but at least we must not waste any more time in getting started.

One of the elements of the transition is the need for capital. I mentioned it as my third major point, and I should elaborate on that both now and under my fourth point.

Much of the current discussions of need for capital, and the difficulties of assembling it, seem to be aimed at revitalizing and stimulating our economy on a business-as-usual basis. Lest anyone think there would be less need for capital as we phase into more limited growth, let me assure you that for the foreseeable future there might be even more need for capital.

Two very simple examples will illustrate the point, but there are countless others : to conserve fossil fuels, attention is turning as it should to the self-generating sources of energy, the sun, wind and tides. To harness any one of these, solar energy for example, would require massive initial investments of capital.

As we adopt Dr. Schumacher's thesis that "Small Is Beautiful" and move into smaller models of automobiles, for example, the re-tooling is already calling for great infusions of capital ; not only will that continue, but it will find its counterpart in many other industries as well.

When I mentioned as my fourth point that government had a solemn responsibility, both to do some needed affirmative things and to cease and desist in some counter-productive practices, I was by no means implying that business and the private sector had no responsibility. The interaction between the two sectors is the real heart of the problem and I want to spend most of my remaining time

on that. But since your Committee's first responsibility is toward government policy, let me first address myself to a purely governmental influence that is now having and will continue to have a corrosive impact on our economic and ultimately our social health. It has to do with capital.

The questions you posed to your panel of witnesses asked if the falling rate of return on invested capital is a greater threat to future capital spending than a shortage of funds. Actually both factors are sensitive to the same set of government policies, fiscal and monetary policy.

First on the availability of funds: our tax system, more than any other in the world, has had a built-in bias to encourage consumption and discourage production (a sure-fire formula for inflation, incidentally, but that is not our subject today). Our tax system discourages production by inhibiting capital formation.

Almost worse, though, is the second effect of our fiscal and monetary policy. Even such funds as might be available for investment do not get invested in industrial production as they might be because confidence has been so shaken by the uncertainties of our yo-yo, boom-and-bust economy. The uncertainty in turn has resulted from the uneven and often irresponsible use of fiscal and monetary policy. Neither consumers nor businessmen have wanted to take risks in that climate.

Traditionally, rate of return took care of the uncertainties: different degrees of risk commanded different rates of return. But now it is not a quantitative but a qualitative difference, breeding much greater uncertainty.

Capital is not capital until it is invested and put to work; until then it may be only something hoarded, whether in a bank, under a mattress or in an old sock. And investment is based on confidence, faith in the integrity of the system, as well as of the enterprise.

If we want to bring capital out of hiding and into investment, we need to create a stable economic and business environment. That in turn calls for a climate of government and business cooperation, where neither is captive of the other, but neither is hostile to the other. If I may use an analogy, it is the kind of climate that typically exists between a prudent business and a prudent large customer, in which each recognizes a certain mutuality of interest but also recognizes the self-interest of the other party, so that each makes sure to keep his own powder dry.

That kind of relationship is possible, because it actually exists in some of the major industrial countries of the world. But it has not been much in evidence in this country in the past generation or two, and I think both parties need to take some responsibility for improving it.

Business and government have been equally responsible for some misguided efforts in the past which were bad enough even when they happened, but should not be tolerated in the period ahead. Of all the things that can and must be done to conserve scarce natural resources, elimination of waste is one of the first and most urgent; yet both business and government have been involved (sometimes separately, sometimes as partners, but always with a government program giving impetus to a private for-profit venture) in one of the most wasteful developments of our time: the tearing down of useful houses and buildings, replacing them with new ones, instead of renovating the old. The so-called Urban Renewal projects have been a terrible misnomer because they don't renew anything; they destroy what might have been renewed—theoretically to create more modern, more functional living space but actually resulting, in many cases, in substituting an institutional type of slum for a single-family type of slum.

The same kind of waste resulted from another government policy, when our tax structure made it profitable for developers to tear down economically useful (and beautiful) old office buildings and hotels to put up the monotonous glass-boxes that now line the major streets of our big cities.

Faced as we are now with shortages of all kinds, it is sickening to think of what has been wasted in these destructive so-called renewals.

The only activity that is more destructive of scarce materials, and totally uneconomic, is the production of armaments; and while it is outside the direct purview of this committee as such, I would commend to you individually that you use your influence toward making it possible for the productive capacity of this country to be turned from military to more socially and economically constructive end uses.

Because the key word in your inquiry is "growth", we need to take a calm and solemn look at the whole growth issue. We have all been so caught up in "growthmania" that we tend to lose our perspective.

The investment fraternity, by equating "performance" with growth, has put managements under pressure to perform by growth gymnastics that are not always healthy. Wise managers have looked into that pit and have backed away from it.

But don't make the mistake of thinking that growthmanship has been entirely the doing of the "Upper Classes." There has been growthmania at the bottom of the economic ladder, as well as at the top, because economic growth has been one of the factors that have helped people to climb from the bottom toward the top, what we now call upward mobility.

I have nowhere seen a study or any serious attempt to quantify how much aggregate growth, how much total growth as distinguished from selective growth in selected areas, would be needed for such social purposes as:

(1) To provide jobs for such increased population as we still can expect to have before we stabilize at ZPG.

(2) To provide upward mobility in our society.

(3) To finance new and expanding social needs such as health, pollution control, transit and the like.

I would commend to you an immediate start on an effort to quantify these factors.

Meanwhile, I would urge that immediate action be taken to remove all incentives to population growth both here and abroad. Our laws are loaded with tax incentives and welfare premiums for child-bearing and family size. Whatever purpose those might once have served, they now are archaic and anti-social.

But the population problem with its impact on world resources is not an American but a global concern. We need to support world programs to make the leaders and peoples of developing countries realize that curtailing population growth is not a threat to them; that numbers are no longer a guarantee of national strength but may be a source of weakness.

We need to start identifying labor-intensive activities into which employment can be usefully channeled, here and worldwide. I have already mentioned a conspicuous example, the renewal of housing, but there are many other equally obvious ones. Reforestation, soil conservation and restoration, recycling of materials, repair and renovation of machinery are suggestive of the possibilities; but there are endless others in the service sector if we focus on them.

You have asked whether business will adjust naturally to the new constraints and demands, or whether government action will be necessary to influence investment and growth in direct ways. While some kinds of government action will be needed, the first and most urgent are not of the kind implied by the question. The first needs are of the kinds I already have mentioned, the removal of counter-productive, counter-incentive laws and practices; and above all, the restoration of fiscal and monetary stability. After that, there may be other affirmative actions for government to take. But before you can project those accurately, there is a need to define and spell out the policy that should guide all other actions; and to map out the direction that has to be taken. Hammering out such a policy, if it is done right, will involve weeks of debate, which will not be wasted; because the debate is part of the very process of public awakening that has to be included in the new directions.

I am indebted to my friend Tom Clausen for reviving in a recent speech two quotations that should be engraved deeply into every discussion of our current topic. One is from George Bernard Shaw, who wrote: "For every complex problem, there's a simple solution—inevitably wrong." Companion to that is something Daniel Patrick Moynihan offered a few years ago: "The essence of tyranny is the denial of complexity."

Certainly we have here a complex problem for which there is no simple solution.

Because yours is the respected committee that it is; because you have such an outstanding staff; because you are looked to, not for transactional expediency or partisanship, but for bi-partisan objectivity, I would hope that you would inquire into this problem in that spirit; and when you have your findings assembled, that you would, in the current vernacular, "tell it like it is."

Winston Churchill is often credited with saving the free world by keeping up the morale of the English people in World War II. But what was the greatest single thing that Churchill did? When he told the British people that they could win the war, he also told them that it would take blood, sweat and tears. He didn't say "we're going to win", but "we can if we'll pay the price."

One obligation of leadership, as distinguished from demagoguery, is to tell people what is realistically do-able, and always to tell them the price they must pay.

Chairman HUMPHREY. Mr. Mitchell, do you want to proceed with your presentation to us?

STATEMENT OF GEORGE P. MITCHELL, CHAIRMAN AND PRESIDENT, MITCHELL ENERGY & DEVELOPMENT CORP., HOUSTON, TEX.

Mr. MITCHELL. Thank you, Senator. Perhaps I should mention my background and how it relates to what we are talking about.

I am a geological engineer, and I have been in the energy field for some 27 years now, having drilled 3,000 wells, of which 600 were wildcats. So I do have an expertise in the field of exploration for energy. I am also involved in constructing a HUD financed project, a new town for 150,000 people near Houston. It is the largest project HUD has. So I do have some expertise, particularly concerning urbanization problems, from working on that project for the last 11 years. And I think that urbanization problems are very serious.

Regarding the energy crisis, over the next 20 years we will have to come to grips with that, and Congress will solve it. But the polarization of our cities and the destruction of our major cities concern me more, and I think it will be 60 years before we can do anything significant to combat that. Hopefully, the project we have been working on for some 11 years is a partial solution to this and something for us to look at.

Since the limits to growth meeting we held so recently, I thought I would touch on some of the highlights of that, Senator, because you may want to ask some questions on that. Really, alternatives to growth were emphasized because the consensus that came out is that possibly there are alternatives—that, if we can turn to them quickly enough, we can do something about the situation. We are fortunate that 2 years ago the University of Houston, the Club of Rome, and Dennis Meadows agreed to cooperate with me in putting on this meeting. We had 500 participants, of which a large number came from business, which is very important from my viewpoint. A great number of them came out of the research realm. And the political realm was well attended. We had three Senators there. We had Senator Culver, Senator Javits, and Senator Gravel.

We had asked you to visit that day and appreciate your comments in trying to come and regretted your not being able to. We had a great many from the academic world there. The debate raged for 2½ days. That was really interesting. We had a debate, for instance, between Meadows and Herman Kahn. The conference was worth while for that debate alone, because they are at diametrically opposite poles, and what went on was very fascinating.

We have agreed now with the university and the Club of Rome that we will hold this every 2 years for 10 years. My belief is that we must debate and understand the basic issues. That will take us some time, but we must bring in all the new work that we can find. In fact, I offered \$20,000 in prizes for the four top papers that have new ideas presented at the conference just ended, and at the 1977 conference it will be \$50,000 for the top papers. We hope this will excite many new concepts that we can review and maybe help develop an understanding of what we can do about growth, not only worldwide, but certainly for this country, too.

The second objective over the next 10 years is to have some consensus of things needed for correction; have some consensus amongst us. We want the debate to go on between the groups we are trying to put together. Hopefully, there will be many other such meetings.

Incidentally, we had 100 of the news media down there. It is very important to get them there and get the message out as to what is going on. I am sorry to say this, despite the fact we had a good attendance—but still the attendance of people from the business world was relatively small and the awareness is very small of the problems we were discussing there. And we must increase the awareness.

My third objective is that the political and managerial execution of whatever we come up with, within this kind of new economics and new growth situations, must be worldwide. The political and managerial execution must be worked in the realm of the political and managerial skills of big business of industrialized nations, both East and West, and we must come together to see how we can resolve these problems and do something quickly about them. And we can do something quickly, if we analyze the problems properly, before things come to such a serious state that very serious catastrophes result.

As I said, we have agreed to do this for 10 years, every 2 years. We want to work in the meantime, discussing how we get better input, how we really can have better disclosures, and how we can get fresh ideas and concepts coming out. This is the concept we have had, and the universities have worked very strongly and very closely with me and with Meadows.

It was interesting that Senator Javits brought out that long-range planning bill you are discussing. I found it intriguing. I had a chance to analyze it over the last 2 or 3 days and listen to it. I really think it is very important.

A lot of my contemporaries said long-range planning should not be done by the Government, but I think there is a way. I think we need a road map. You have said this, too, and I think we do need a road map, but we also have to have a road map that is as independent of any political agency as we can possibly have it. We need something much on the order of the Federal Reserve. But that road map, ever 2 years, would be very important to Congress and to the Executive to understand what they think to be a necessity and a 5- and 20-year planning basis, whereas the political and economic life of this country is 2 to 6 years. You see, we fragment out planning. And I think we must have a road map on a longer range.

Chairman HUMPHREY. Mr. Mitchell, you are familiar with the Canadian Commission?

Mr. MITCHELL. Yes; John Thomas was there, too, and he said that was a failure and he gave some reasons why. And I think we can learn by seeing what France and Canada have done and we can learn from history. I think hopefully we can do better here, although everything is different, in every area.

There is no question, Senator, but that we do need a road map. How we devise one without destroying the incentives of individuals, institutions, and corporations on the freedom of action to execute that road map and yet have that road map prepared by all the input from the political and private sector and State sector and the local sector to be able to do it, well, I don't know.

I will talk about energy a minute just to say had we done this, we wouldn't be where we are today. So I believe that such a bill is important. How we finally structure it is going to take a lot of debate to see what we come up with.

Chairman HUMPHREY. You understand, and I am sure Senator Javits told you, that when we put this bill in, we knew that we were going to provoke a good deal of controversy. We understood that. That was our purpose. I mean, you have to get something out on which you can focus the different points of view. We have no private parentage. We are not insisting that the child that is born here look like either one of us. We are just looking at it on the basis of can we provoke some intelligent and responsible analysis and then possibly, out of all of this, come forth with a product that is workable?

Mr. MITCHELL. I agree with you. I think you have provoked comments and you are leading ahead on this. And I think that the business community will eventually, if you can get them aware of what is going on—and we are working at that—I think they can help support you on how the road map does come out, and yet not destroy the freedom of action. I will have to say this: My experience with the bureaucracy, with civil service, has been a disaster; and that was with three different departments. And I just think that unless you let the private sector of businesses and institutions and corporations really work with a general road map, we will have a problem. I think we must plan 5 to 20 years out, because most of our objectives are short term, politically and economically. And I think we have to figure out some new economics to do this.

Let me go back to energy, as an example. The Paley report some years ago, with the energy problems clearly defined——

Chairman HUMPHREY. The Paley report?

Mr. MITCHELL. Yes. Had we had such a report on long-range planning reviewed every 2 years and discussed and discussed, I don't think we would have been in the dilemma we are in today. We would have had some action and consensus of people and the Congress and the administration, probably 10 years ago, that something had to be done before it happened.

Now, these are the types of things for which I think a road map would be very important. Energy is a very good example of what we didn't do in long-range planning and where we should have been more involved in it.

One thing did come out clearly from the 500 participants in the "Limits to Growth" conference is that organic growth is possible. The limits, which is one thing that was said, are really not there yet, but we'd better be careful. A solution is possible in this Nation. The Government doesn't have to crush our economic system and we must be careful to leave as much as possible the freedom of action. How do we reach a consensus on planning for 5 to 20 years, when you consider that political and economic growth is usually planned for 2 to 5 years or 10 years at the most?

That is an important question and also the question of how to get the maximum cooperation between individual institutions. And I think we can do much better than what we are doing now.

These are the main thrusts of what I would like to say, and then answer any questions you may have.

Chairman HUMPHREY. Fine. Your prepared statement addresses itself to a number of topics like capital needs, service economy, market saturation, rate of return, business and government relations. We will come back to those topics as well.

[The prepared statement of Mr. Mitchell follows:]

PREPARED STATEMENT OF GEORGE P. MITCHELL

The velocity of change in a rapidly changing world require that we seek out directions and concepts that will be valid for 10 years and longer. Our economic system has served us well but there is a need for broader planning—without stifling individual effort and freedom. Our economic progress is now being seriously hampered by a bureaucratic maze and by regulations and proposed regulations.

CAPITAL NEEDS

Our economy is highly capital dependent and must remain so if we are to increase productivity while maintaining reasonably well our goal of full employment, which is required from social, humanitarian and psychological standpoints. It is widely believed that, as technology advances, the work week will be reduced and the number of jobs will be increased. However, because of world-wide economic competition, it will require many years to achieve such a state.

SERVICE ECONOMY

The service sector of our economy is evolving rapidly and has already reached the point of exporting such service concepts as fast foods, motels, etc. But service activities must evolve efficiently and can employ only the numbers required to satisfy needs.

MARKET SATURATION

Many markets will be saturated as the rate of population growth nears zero in the future. In addition, many markets will rapidly become obsolete.

If longterm energy supplies prove to be inadequate and total population continues to increase, however, the aspirations of the poor can never be fulfilled. Our nation is fortunate in having large energy resources and reasonable energy growth can continue with a commensurate reduction in dependence on foreign imports. Conservation of all our resources must, of course, be an important national concern in rebuilding and recycling resources, will require increasing emphasis in the next ten years, furnishing a great deal of additional employment in these fields.

RATE OF RETURN

The falling rate of return on investment and the capital shortage are jeopardizing the well-being of our economic system. Counterproductive regulations and laws have greatly hampered many companies in their effort to achieve a satisfactory rate of return. Our economic system is, in many instances losing its competitiveness with other systems world-wide. We must devise not only better methods but an improved climate for stimulating our economy and motivating its human resources in world-wide competition.

BUSINESS—GOVERNMENT RELATIONS

Business is in disarray in many categories because of the plethora of government constraints, regulations and bureaucratic red tape. With its civil service organization and cumbersome size, the bureaucracy cannot competently serve the nation's enormous economic effort. What is needed is general direction, general planning and reasonable incentive to produce full or nearly full employment and a partnership between business and government based on cooperation—not an adversary relationship.

In summary, Congress must try to balance our country's economic needs or general short and long range planning while at the same time encouraging economic freedom for individuals, corporations and institutions—a most challenging assignment.

Chairman HUMPHREY. Next, Mr. Busby.

**STATEMENT OF JACK K. BUSBY, PRESIDENT, PENNSYLVANIA
POWER & LIGHT CO.**

Mr. BUSBY. Senator, I don't want to alarm you, but this small volume of 3½ inches thick is not my statement. I am here, as you know, as an individual, not representing the industry in any way. But this study, entitled "Economic Growth in the Future" and recently completed under the auspices of the Edison Electric Institute, I think represents a very responsible effort to deal with the problems of economic growth and energy supply and their interactions. I am happy to say that there is also an executive summary to this report, which is quite a bit more brief. And if the committee and the staff would be interested in additional copies of this, I am sure it is available. I think it represents a very genuine and effective effort on behalf of the industry to take a responsible look at this whole area, apart from its own history and apart from its own possible parochialism.

As far as my comments are concerned here today, I would just like to report agreement with the fact that it does seem like a reasonable scenario that we are faced with long-term energy constraints and that these energy constraints some argue can be encountered without a parallel effect on conventional economic growth. But I think it is also a reasonable scenario, until we find it is not true, to expect that limitations on energy will produce and require moderation of economic growth. This is something that we have never really experienced before as a constraint. Our society has grown up in a very different environment. I guess the principal thing I would hope for is that as we talk of planning and of road maps and these types of concepts, that we are mindful of the problems of rate of change, because I think we can't move from one kind of society to another without really quite an extensive and diverse and cautious system of experimentation. I think we should do that, rather than leaping to the answer, promulgating it, and finding that we really, as I say, bought a ticket on the *Titanic*.

And the thing that I believe we are experiencing is that our ability to evolve sound conceptual answers is useful, but not effective unless in parallel there is a broad-based understanding at a public level that the problems exist and that their participation in implementing answers is expeditious—that they are ripe and ready for it.

I would like to mention, for example, my own experience where we currently in P.P. & L. have much less construction than we normally did. And I have been visiting some of our employees, particularly some of the young men in line work. They are saying: "How come I am not moving ahead?" And it is not hard to explain that they are not moving ahead because the whole rate of change and advance and expansion of business is so much less. That can be explained as a kind of economic reality, but I don't notice that particularly changes their attitudes, changes their dissatisfaction and concern and their feeling that here I am as a young person, being frozen and locked in a situation that is going to be static and nondevelopmental in terms of my own skills, personality, income, and pocketbook. So this is just one example of many, many examples of a social situation that in those terms and more intensive terms we are going to face as we go through this.

I am very concerned that we emphasize not only the scholarly aspect of these things, but that we make sure that we can find ways to get the degree of public involvement in the change necessary, which is going to have to develop, because otherwise we will have solutions but no acceptance.

And I think one of the encouraging things to me is in the energy situation. I would say when the oil embargo hit that at least for 6 months to 1 year the reaction was a combination of anger, of disbelief and a feeling that a conspiracy had been put into effect here. I think the more recent public opinion data recognizes that a change in the public climate has come about and they really realize there is a long-term and near-term energy problem and—

Chairman HUMPHREY. Might I just interrupt to say that is not quite yet the accepted public reaction. We have had some interesting polls that have been made by Gallup, Harris, Roper, and others. And we are having a hearing on the polls on October 30. But I had a preliminary discussion on this matter of the public's reaction to certain, what I would call, prejudices and myths. And it is almost shocking what the reaction is. It is less so, in this instance that you are speaking of, for example, the energy field, but—

Mr. BUSBY. Yes, I think the recent issue—

Chairman HUMPHREY. But it is still very heavy that it is a giant conspiracy by the oil companies.

Mr. BUSBY. The survey I had reference to is a recent one called the "Public Opinion Index." I think it is by "Opinion Research" at Princeton.

Chairman HUMPHREY. Yes, it is very reliable.

Mr. BUSBY. This is one of the encouraging findings; namely, those findings were that there is recognition that there really is an energy problem and that indeed some fresh and rather painful efforts and actions are going to have to be taken. I consider that the beginnings of progress. And all I am trying to assert is that as we move into even more complex problems of social change that are intertwined with a lower rate of economic growth for a variety of reasons, I think that unless we have that public opinion base moving along, then our ability to accomplish anything is very slow and very limited. This is just an endorsement, really, of the comments made here.

We have time and rushing into preconceived answers could really be fatal. I think an experimental approach is really required.

I would like to add one other thing on the energy side, which is another paradox. It is not the capital paradox that was mentioned here, which I agree with, but the paradox between the short-term and long-term growth situation. The energy studies that I am familiar with, whether sponsored by the Ford energy project, or the Committee for Economic Development, or the recent one by the U.S. Department of Commerce, that had a blue-ribbon task force on it, they all point to both the need and the forecast of lower rates of growth in energy between now and 1985. Some would go in the range of 2 percent growth rate a year, compared with the more than 4 percent a year in the 1960's. Others considered that unlikely, and point to 3 percent.

The point I would like to make from an electric utility standpoint—and I would like to mention, Senator, that your reference to our industry is no longer the quiet backwaters of life, but in the forefront of

about every problem you can think of is certainly very correct—and I would like to say that even though we go in the next 10 years to a growth rate of maybe just 2 percent a year increase in energy compared with a prior decade of more than 4 percent, but when we take into account the constraints on natural gas that are now facing us and the uncertainties of oil—and most of the forecasts assume in the next 10 years we are not going to really have much net gains in the way of natural gas or oil—and when one takes into account that they historically had been providing around two-thirds to 70 percent of all of our energy, then we feel that what this really means is that most of the growth, even though it is a lot smaller growth overall than before, is going to be focused primarily on the coal and uranium sectors, which is really to say a significant throwover demand we call it on the electric sector. This is something that I think undergirds the necessity for conservation both short and long term and it magnifies the financing problems.

But, I mention it because it is easy to assume that because energy growth will be cut in half in the growth rate in the next 10 years, that the same will apply to all sectors of energy. My point is most energy has been provided by natural gas and oil supplies, and these are not expandable as heretofore, so most of the impact, a large part of the impact, will fall on the coal and uranium sectors. So even the Ford energy project, which talks about the minimum conservation growth, it says that in the near term, before the technical effect and the technological turnovers in lifestyles and everything can really develop much momentum, and before new technologies can be very visible or applicable, we are going to be faced with growth rates in the coal and uranium and electric sectors anywhere from—well, the low, I think, is in the 5½-percent range and the high ranges, even on the conservation-oriented energy analysis, it goes as high as 9 percent a year. And I mention that because at the same time we must support the conservation ethic and face up to the long-term constraints and limits of growth and energy and otherwise, but before we can get into a reordered kind of more stabilized adjusted society, Senator, we have to make sure that we don't run out of soap, if you will, specifically energy, in the near term. We are not going to get to Thursday unless we get through Tuesday and Wednesday.

And for the power industry for the next 10 years, those decisions are being made today. And I would like to be on record here with you and the committee as saying that we are very concerned that we are not giving enough attention to meeting capacity and construction needs for today and tomorrow and the next day. And if we find, as I think we could, 3 or 4 years from now that construction that was slowed down and stopped today should be picked up, we can't pick it up in time to meet the requirements for 1984 and 1985. And I think we have a very challenging conflict between the short term and the long term that is contradictory, sophisticated, and complex and merits most careful attention, because that more utopian world that we hope to live in is not going to arrive unless we get through the next 10 years.

Thank you.

Chairman HUMPHREY. Thank you. Mr. Busby.

[The prepared statement of Mr. Busby follows:]

PREPARED STATEMENT OF JACK K. BUSBY

My name is Jack K. Busby, President of Pennsylvania Power & Light Company of Allentown, Pennsylvania, which provides electric public utility service in 29 counties of Central Eastern Pennsylvania over an area of 10,000 square miles having a population of 2,300,000. I appreciate the opportunity to appear at this hearing and thank the Committee for inviting me.

In the remarks that follow, I shall try to state clearly my own beliefs on the subject of economic growth and then take up points 1; 4; and 5 in the Committee's letter of October 9, especially as they apply to the electric utility industry, the one with which I am most familiar.

Business response to future economic growth depends upon how businessmen view the nation's economic problems in general and how they view the growth controversy in particular. Traditional forecasts lean toward GNP growth rates of 4 to 4½ percent compounded annually. This implies that government and business will do little, if anything to influence the growth trend.

From a philosophical standpoint, however, the growth rate level should be somewhat less than the 4.5 percent attained during the 1960's. The actual rate of GNP growth should be low enough to facilitate conservation of natural resources at home and to move toward independence of foreign suppliers.

At the same time, our free democratic institutions and the free market in goods and services must be maintained. Furthermore, the rate of future growth should not preclude exercise of our options for a steady state economy if such is needed—say within a period of 25 years.

Zero growth as a short or intermediate term policy will result in drastic changes in our institutions—changes that if effected too rapidly will also cause widespread disruption in the economy, the consequences of which could be economic collapse and attendant social disaster.

A moderate growth scenario that appears reasonable would be one that results from the establishment of particular national goals and their implementation by both business decisions and government policy. This implies a shifting of the patterns of growth from high to low resource using applications, through a shift toward less capital intensive economic activity and a labor-for-capital substitution. Given a stabilizing fertility rate of 1.8, U.S. population will level off about 2030 or so at about 270 million. An overall growth in real GNP of 3.5 percent per annum should then be sufficient to maintain an orderly shift in production and consumption patterns, employment distribution and lifestyles. Such a growth rate implies an annual growth in total energy use of 3.0 percent and a growth rate of about 5.5 percent in electric energy use to the year 2000, with, however, the possibility of a higher growth rate in electric energy—in the near term, say the next ten years or so.

(1) *Capital Dependency*

Capital development and dependency (and in capital I include all natural resources) have been prime characteristics of the American economy. This is especially so in terms of energy resources use. The focus has been on two main facets: (1) the efficiency with which capital is used and (2) the substitution of capital for labor in the industrial process.

Two mutually reinforcing elements can move us in the direction of more capital efficiency i.e., greater output per unit of capital employed. First is to direct research and development toward more capital saving innovations such as we have historically enjoyed—such as the substitution of the steam turbine for the reciprocating steam engine in electricity production and the substitution of the diesel locomotive for the steam locomotive on the railways. Secondly, a rise in the price of capital, especially resources and energy, will exert a rationing effect that will move industry to adopt more efficient practices and spur capital saving innovations.

A slower rate of growth implies a lesser rate of capital need and formation—and also a necessity for comparatively greater use of labor vis-a-vis capital. A goal of labor-capital substitution is concomitant of a GNP growth rate of 3-½% because greater labor intensity would be necessary to maintain full employment. Yet is this feasible? Acceptable? With wage rates exhibiting downward rigidity and a strong upward flexibility, the tradeoffs between labor and capital are not as likely to occur as they would be with twoway flexible wage rates. Upward wage pressure tends to inhibit such a shift so that large-scale labor-capital substitutions will be hard to come by. This situation makes it almost impossible

for a labor-capital shift to take place in the industrial sector of the economy. The electric utility industry in particular offers little room for labor-capital substitution. This is not to say that there are not opportunities for labor intensive applications elsewhere in the economy. Restoration of our cities and mass transit are two areas where labor intensification is possible once institutional barriers are removed.

However, present conditions favor the employment of capital rather than labor. Construction wage rates are high so that the back-hoe has a lower cost per unit of output than that of pick and shovel labor. If the relative costs could be changed in favor of labor intensity, many so-called unemployables could find gainful employment. One way to do this is by subsidizing contractors to the extent necessary to equalize the relative costs of labor and capital. Another device would be to gain union cooperation so that able-bodied welfare recipients could now be employed. Some combination of subsidies, union cooperation, and changes in welfare arrangements may be fruitful.

Looking ahead, there is the possibility that even with population leveling off, a 3½% growth rate will not provide full employment. Rather than have the employed completely subsidize the unemployed through a negative income tax at a level which, for motivational reasons, is always likely to be at the margin of subsistence, it might be better to consider a shorter work week and work sharing.

With a projected growth rate in GNP of 3½%, total energy use will probably grow at about 3%, but electric energy use will still rise at a long-term rate greater than the rate for total energy use—probably 5.5%—as compared with a historical growth rate of 7%. This is because of substitution of electric energy for other forms in home heating, industrial applications, and railway electrification. To the extent that the electric industry's future growth will be concentrated in use of coal and nuclear fuel, this will improve things by substituting domestic fuels in long supply for oil and natural gas which are in short supply and dependent in large measure on foreign sources.

Opportunities lie in wise conservation policies by users of electricity and research and development directed toward capital saving innovations. The next 25 years must also produce new developments on the supply side. The fast breeder reactor, or fusion or other new technology is requisite. Both ways—conservation and supply—large new capital investment will be required.

(4) *Rates of Return and Capital Deepening*

The rate of return on invested capital has fallen partly due to the capital deepening process and partly because of the heavy hand of inflation. Data Resources, Inc. has shown a secular downtrend in the rate of return to capital calculated as the ratio of before tax profits to the current replacement cost of the capital stock. Since 1964 the rate of return has fallen from about 9½ percent to about 5 percent. Shortage of funds follows declining rates of return as the savings function is in large measure dependent upon the rate of reward for foregoing current consumption. Accounting systems are geared to relatively stable prices and are unable to cope with the inflation problem. Faster depreciation is an offset which can mitigate the effects of high inflation rates. The overall inflation problem, although not the subject of this hearing, pervades all economic analysis. Solution will make the whole question of future growth much more manageable.

In the electric utility industry the capital deepening process is largely due to the internalization of social costs and will be a key factor in the immediate future. Capital expenditures for air and water pollution control equipment, coal cleaning plants, aesthetic screening of substations and other efforts to make structures more compatible with the environment, have all increased capital requirements without increasing the efficiency of electric generation and transmission. Greater use of underground has the same deepening effect. In addition, basic fuel costs have increased also partially due to capital deepening. All of these have tended to make long run costs of electric energy rise. With the consumer historically accustomed to cheap electric energy, regulatory agencies have been unwilling to establish rate levels sufficient to cover these additional costs. Aggravating the problem is the lengthening period between the beginning of power plant construction and the point in time when the facility is on line and making a contribution to revenues. With the lead time for the construction of plants having moved from 3/4 to 9/12 years, funds are being used and interest and dividends paid without the facility contributing to these costs.

The electric utility industry rates of return are established by regulation and are generally lower than industry as a whole. For example, Fortune's rate of return on equity for 500 largest industrial companies was 9.1 percent in 1963 and 13.6 percent in 1974. The same figures for Fortune's 50 utilities was 9.9 percent in 1963 and 9.8 percent in 1974. For the 35 electric utilities the figure was 9.9 percent in 1963 and 9.7 percent in 1974. Regulatory lag and an unwillingness to establish electric rates at levels sufficient to attract capital intensifies the capital raising problems of the utility industry. The widening gap between utility investment returns and those of industry in general puts the utility industry almost last in line for new capital. It may be argued that investors will accept a lower return on utility investments because of stability. How much lower is a question. Equally important is the adverse effect on stability which is created by a hostile regulatory climate as evidence by the reluctance of regulatory commissions to legitimize needed revenues by granting sufficient rate relief. For the electric industry, we foresee the need for \$750 billion capital over the next fifteen years, based on a growth rate in electricity use of 5.5 percent. In view of current conditions, we don't know whether we can attract the approximately \$500 billion which will have to be raised in the competitive money markets.

The ability of the electric utility industry to raise capital depends on investor regard for the quality and return of utility securities as compared with alternative investment opportunities. This means sufficient earnings of high quality to maintain bond ratings and pay regular and increasing dividends at a rate to offset the decline in the value of the dollar. Bond ratings are a function of the amount and quality of earnings. The amount of equity earnings is the determining part of the prime investment criterion "times interest earned," while the quality of earnings is directly a matter of cash flow. If earnings are largely paper earnings because of credits to the income account of allowance for funds, i.e., credits for the cost of money expended during construction, the quality of earnings is considered poor in proportion as the cash flow is low. Without adequate bond interest coverage and adequate cash flow the credit of utilities weakens and bond ratings tend to drop. Such a state of affairs inhibits investor confidence and jeopardizes financial health and construction programs.

If the electric utility industry is to meet its obligations to provide energy, certain steps must be taken to provide the necessary capital. Such measures include the reduction of regulatory lag so as to achieve an adequate return. Forward test years, allowing tariff changes to become effective without suspension, subject to possible refund, will help. Inclusion of construction work in progress in the rate base, increasing the investment tax credit to a permanent 12 percent and permitting use of the investment tax credit as construction money is spent will do much to alleviate the capital crunch. Faster depreciation in regulatory accounting will also improve the situation.

(5) *Moderate Growth and the Roles of Government and Business*

If changing patterns of production and consumption are to be established with a 3½ percent average annual long-term growth rate over the next quarter-century, substantial business adjustment will be necessary. This adjustment must be primarily motivated by changes in demand and in costs of all inputs. Businesses are responsive to such changes, much more so than to jawboning and exhortation. Government has a two-fold role, a positive one and a negative one—positive as to providing a wise combination of regulations and incentives—negative as to permitting the markets for goods and services to adjust relative prices.

Demand conditions can play a large role in determining what business produces. Consequently, if consumption patterns which reflect decreased use of natural resources are to be adopted, positive conservation policies should be established through the use of incentives and regulation. Some examples of such are: payments or tax credits for higher standards of insulation and changes in building codes; a horsepower tax on automobiles and freeing the highway trust fund for alternative modes of transport to reduce the demand for gas consumption and reduce auto use; tolls at the entrance to congested urban areas based inversely on the number of passengers per auto to encourage both car pooling and a shift to mass transit; and imposition of higher down payments for all durable goods to reduce demand and subsequently encourage a shift away from planned obsolescence.

The most effective weapon in our arsenal is to permit prices to rise. Such increases will ration scarce resources. Concern about the poor can be handled by other means such as a negative income tax. Concern about windfall profits can be dealt with through an excess profits tax. Regulation should interfere as

little as possible with relative prices, concentrating rather on modifying consumer demand.

If such policies are implemented, business will alter its production in response to these changes in demand and changes in prices. The rising cost of capital in concert with the strong upward bias of wage rates will cause the long run survival instincts of business to work in the direction of funding research and development for new capital-saving innovations.

Government should look at each element of the overall problem and try to design policies to cope with specific problems. At all stages of implementation cost-benefit considerations should be used to establish both limits and priorities.

In summary, I urge focusing on a national goal of moderate GNP growth of about 3.5 percent, which in turn will permit conservation of scarce resources, development of less capital intensive technology, and an orderly shift in production and consumption patterns and distribution of employment. Government should generally confine itself to attempting to shift demand, provide incentives to cope with specific problems and permit the market mechanism to adjust the supply mix in accordance with overall demand.

Mr. MITCHELL. Senator, I would like to comment on Mr. Busby's statement.

Chairman HUMPHREY. This is what I would like to have you do; let's have a dialog.

Mr. MITCHELL. Yes, sir, I want to differ with him.

Chairman HUMPHREY. I want to say, Mr. Mitchell, you are the only man I have ever met that can talk faster than I can. I say that because I want to make sure that our transcript is correctly taken down and followed, because what you are saying makes very much sense, and I want to be sure we get it all.

Mr. MITCHELL. Well, I want to differ with Jack Busby, because my expertise is exploration of the Nation's fuel sources and I have drilled thousands of wells and wildcats and I want to differ with him on one category.

I think the energy shortage can be resolved by a critical path fast-track debottlenecking program in oil and gas.

Chairman HUMPHREY. What? Now, let's go over that again.

Mr. MITCHELL. A critical path fast-track debottlenecking program in natural gas. FEA has 3,000 people; 2 of them are allocating surplus supplies. My little organization has more staff acting on that than all of FEA put together. Now, the potential of the Nation in oil and gas is enormous in drilling for additional oil and gas with reasonable incentives. But where it is a tradeoff between inflationary pressures and reasonable incentives is where we have the debate and that is the big debate going on in Congress at this time. But, geologically, we can increase the exploration and development in this Nation threefold. There are geological resources there. In fact, our oil industry is not the Big Seven, who are always so criticized, but our industry is really 10,000 independents chasing 100 larger majors and that is why they are so smart, and so competitive. They have been eating me up for 30 years and I have been eating them back.

So the thing is, we have to go at oil and gas conservation and conservation of coal on a simultaneous, concurrent program and not a sequential program, as we are working on now. The same applies to uranium, too. And we can resolve the energy crisis. As to coal, of course, he is right. It is a long-term solution to a major extent until solar comes along or fission or whatever the next exotic type of energy is that is going to come on. But I can see the geological resources in our Nation and they are there. When you compare our oil industry, which is 10,000 independents and 100 larger companies, well, Pemex

of Mexico was a disaster for Mexico and Petrobras of Brazil was a disaster for Brazil, but when you compare ours to the Russian oil industry, which has five times the geological resources of this industry, and is 30 years behind us, well, you see what we have done. You know, this oil industry has conquered the North Sea, the North Slope, the Andes, and the Middle East.

In my one company we have 200 prospects in our minds that we could drill with proper incentives, Senator, to help turn this oil and gas on, but the infrastructure to do it is being bottle-necked by the debate and by the lack of attention. And we must work this out. Coal has the same problem and this was brought out very clearly. Now those are the things we must do if we are going to answer the energy crisis. Hopefully, we can get a resolution of the issues and get it done.

Chairman HUMPHREY. Let me kind of pull this together with you for a minute. First, what you are saying in substance is that the know-how in terms of the technology for drilling and exploration is available?

Mr. MITCHELL. First, the geology of the Nation is sufficient to have the future reserves to do it.

Chairman HUMPHREY. Yes; I am going to get to that.

Mr. MITCHELL. Fine.

Chairman HUMPHREY. Second, that the geology or the geological structures, which afford the relief of oil and gas are there?

Mr. MITCHELL. They are there.

Chairman HUMPHREY. And third, that the hundreds of thousands of independents have been out doing this exploration and know-how to get it, but the problem is the incentives that are required to make the investment and the application of time and resources. Is that right?

Mr. MITCHELL. That is right.

Chairman HUMPHREY. Is that the way you would put it?

Mr. MITCHELL. And the road map out of Congress as to where we get to.

Chairman HUMPHREY. Have you been talking to the FEA people and the ERDA people?

Mr. MITCHELL. Yes, all the time. I don't get very far. I have sat down and gone over the program with them and they would say: "You are right. George, about critical path debottlenecking and how we should approach this oil, gas, coal, and uranium conservation." You see, there are four categories until the ERDA people come along with fission or tertiary recovery and other things. They would say: "You are right that we should set out a fast-track program."

In other words, a good example is that we have 1,800 rigs in the Nation to drill wells. We really need 3,500. The geological prospects are there to use 3,500 rigs and yet the manufacturing capacity for rigs are only 150 a year. We should be accelerating that. There are 20 items of critical paths we should be identifying. FEA should be putting a concentrated effort on this. They have 2,000 people allocating surplus supplies, not short supplies, but surplus supplies. It is unbelievable. I say this because I know the geology of the Nation. I have drilled many wells. I think that Mr. Lundborg is very right about coal, too; the capital intensity of coal is very severe. We must move on coal fast, but that is a solution some time after the year of, say, 1995 and on

until we do get fission power or the breeder reactor or solar or whatever is going to come in the future, and we must work on that too and conserve as much as possible.

These are the programs we should be doing, but it is difficult to get through to the bureaucracy.

Chairman HUMPHREY. Well, the bureaucracy is part of it, but also the conflicting points of view of the elected representatives of the people is part of it. I think you have to understand—and this is a chance for just a little friendly discussion—that those of us who are in Congress are not necessarily well informed or experts. We are representatives of the public. You don't become a special sort of person because you got elected to Congress. When you come here, you are very much what you were when you left home. Now, hopefully, while you are here, if you take the time, like we are taking now, you learn, but it takes time. It takes a lot of time to dispel yourself of prejudice, which is just another name for ignorance. That is all it is.

I take myself for an example. I am chairman of this committee. I am not chairman because I am the smartest man in Congress and I am not chairman because I know more about economics than anybody else. I am chairman because I got on this committee and I worked my way up through this committee, and I am an interested man in this committee. I give a lot of time to this committee. I am attempting to learn.

But, Winston Churchill put it this way once. He said: "Democracy is the worst possible form of government, except all others that have been tried from time to time." And the public has a hard time understanding that we, too, are groping for answers. In the meantime, we are constantly under pressure from people back home who keep us here or remove us. You know, we have customers too. We are in the marketplace too.

Mr. MITCHELL. I agree with you. I am not being critical of the bureaucracy—

Chairman HUMPHREY. Oh, I understand that. I am not being critical of your statement.

Mr. MITCHELL. Thank you, Senator.

Chairman HUMPHREY. I am just trying to put in proper balance what is the difference between the expertise that is on the outside and, with somebody like yourself—and I have a high regard for you and great respect for you—and the problem we have here in Congress. You say: "Look, I know what to do, Senator Humphrey. Why won't you let me do it?" And I have to say to you: "Well, I am one of many around here." Not only that, but there is a lot of other people that are elected and they don't think the way I think or think the way you think. And a bureaucracy is always, by its very nature, cautious. And in this system, we are now experiencing what I call the era of suspicion. You know, every move that is made by anybody is suspect. And, quite frankly, we are in the era of suspicion even about the matter of making a profit. I often thought that a number of people who are on what we call fixed salaries, and particularly in Government, subconsciously, and not by premeditation or just being mean, but subconsciously resent the fact that you can get on out here and make a big bundle sometime, which sometimes happens you know. They don't see the risks.

For example, I come from the Midwest and every so often I run into somebody here who says to me: "You know, those farmers have that \$5 wheat." But they forget that in the last 50 years, 39 of the 50 years were losers; 39 out of 50 years of recorded farm income shows a deficit, but they think of that 1 year and think, "Boy, they've got a good deal." In the meantime, most of the farmers went broke. And these are the problems that we have.

And, of course, the thing that has been said here, which was very helpful, concerns time and the use of time. I think the conference that you promoted was very helpful. But, you see, one of the real problems isn't just the bureaucracy. If I may be blunt about it, it is also the built-in traditionalism of the business community.

Mr. MITCHELL. You are obviously very correct.

Mr. BUSBY. And Mr. Mitchell, I would like to differ a little bit more, if I could.

Chairman HUMPHREY. That is good. That is what we want. We want to get a dialog. What would you like to differ with?

Mr. LUNDBORG. First, could I raise one question? And that is as important as the energy issue is—and I know it is tremendously important, although I know nothing about it and am learning about it, as you are—but it still remains true that energy is only a small part of the total problem. Energy is only a symptom, I think of the whole growth problem. One of the problems confronting us, I think, as you look ahead in your committee, is how can we avoid waste and the other factors that are requiring the use of so much energy? That is to say, do we need to use all the energy we are now wasting, or are we wasting a great deal of the energy? So, our problem is not only where are we going to find it but how we are going to use it more effectively.

Chairman HUMPHREY. Yes; I notice that in your prepared statement.

Mr. LUNDBORG. Exactly.

Chairman HUMPHREY. Too often, for instance, we fail to do the rehabilitation and innovation that could be done. This is all wasteful and—

Mr. LUNDBORG. Yes; I think one of the worst misnomers, and it is a tragic misnomer, is called urban renewal. I mean, urban renewal doesn't renew anything; it destroys. We have destroyed a great deal of potentially useful housing, for instance, because it has been a part of our whole way of life. And this way of life is not much more than a generation old. We forget this isn't a time-honored thing. It has been, roughly, at the most, since World War I and certainly since World War II. But since that time, we have been building our economy on wasting things. It has been a wasteful economy.

Chairman HUMPHREY. Yes; with this business of built-in obsolescence and—

Mr. LUNDBORG. It is called a "garbage industry." With built-in obsolescence and terrible waste.

I think one of the things we have to face, as we look ahead, is the necessity that you and we together adopt policies that are counter to what has been the going pattern for the last generation or so. We should really frown on planned obsolescence and frown on the so-called garbage economy. Let's start this with housing. Now, there is some reversal of that now. There are two things here, and they both

grow out of a Government policy which is, in turn, encouraged by a private sector policy, and—well, go ahead, Mr. Mitchell.

Mr. MITCHELL. I just wanted to comment on that point on housing, Senator, on the example that he is bringing out, that housing is a very critical issue. Housing is a very critical issue, in my opinion, because the energy shock wave has only half passed through the economy, because when we have a mortgage rate the way it is and a utility bill that is going to double in the next 5 years, you can see a real problem here.

This project that I was speaking about in Houston is for 150,000 people. It is the largest project HUD has. And we told our people: "You've got to go to what I call compact houses." Everybody realizes that we have to have compact cars, but they have to realize we must have compact and efficient housing, too, because when the energy shock goes through the economy, we will see its effects on housing. We have utility bills doubling and mortgage rates not going down too much, and the net effect is people cannot afford the housing they would like to have in their dreams and aspirations, so they have to take whatever is available.

But, I think you can do a good job for the Nation and for the energy situation by mass producing, or really working on what I call compact and efficient housing.

Mr. LUNDBORG. I would like to come back to my original point. Housing is not the important issue here in itself, but it is important as an example of what I think needs to be done between you and us; that is, between the Government and the private sector, between the public sector and the private sector.

Now your sector has adopted a policy called urban renewal, for example, that encourages local municipalities to organize these urban renewal projects that tear down old housing and put up something new. Now, there is an example of a deliberate public policy. I think it illustrates what has to be done. I think we have to do just the reverse. If we want to have a rational economy, you are going to have to reconsider your policies and we are going to have to reconsider what we recommend as policies.

The other comment I want to make is not in the housing field, but an even larger issue, and maybe a more critical issue, and that is the tax structure has encouraged, for the last couple of decades, the tearing down of old and many beautiful and functioning office buildings and hotels.

Chairman HUMPHREY. Yes, I have watched this in New York City.

Mr. LUNDBORG. And it is a tragedy.

Chairman HUMPHREY. I remember the Savoy Hotel, the Savoy Plaza. I used to stay up there—

Mr. LUNDBORG. That was a beautiful hotel.

Chairman HUMPHREY [continuing]. And my gosh, all at once one day they got this big bulldozer out there and tore it down.

Mr. LUNDBORG. Every city, every major city in America has great long rows of uniform and monotonous glass boxes. Why? Because the Government has adopted a tax policy that made it profitable to tear down these old buildings. There is another reason why this is important, and that is we are going to have to be looking for sources of labor

intensive employment. If we do have to reduce our total level, our total rate of growth of industrial activities, we are going to have to look more and more for labor intensive occupations. The renewal of existing housing is a very good example of labor-intensive employment, whereas the destruction and reerection of these uniform and monotonous boxes tends to be capital intensive and not labor intensive.

Chairman HUMPHREY. Yes. You know, when you get to travel, as some of us do, and have the privilege of traveling to Europe, you see this very thing. You will go over there and visit with a friend and say, "My, what a fine home or apartment you have." And when you ask when was this constructed they will say, "Oh, in 1770 or 1810." I went to visit my mother's home in Norway. It was built in 1736, and it is a fine old home.

Mr. LUNDBORG. My mother's home is in Sweden, Senator.

Chairman HUMPHREY. Yes, it is amazing. You know, they have kept it up. There have been changes made, obviously, and so on, but they have kept it up. But, we've got the idea, somehow or other, you can just run through and tear them all down. Look at Washington, for example. Of course, they restored Georgetown with a considerable effort and made it into a fine residential area.

Mr. LUNDBORG. And now look at it, Senator. It is prestigious housing.

Chairman HUMPHREY. And I know we are doing some of it down in the Southwest and there is a lot more of it being done, but not enough.

Now, moving along here, Mr. Busby, we haven't gotten you into our discussion yet.

Mr. BUSBY. I would like to comment, Senator, if I may, on the point you made, which was, as you leveled with us and pointed out, you have customers and they don't always agree and they involve pressures for taking action and the action is usually immediately pleasant and protective against pain.

Chairman HUMPHREY. Right.

Mr. BUSBY. And I think one area where the panel may be in agreement is that the pain that is involved to the pocketbook in terms of market prices in energy is probably, at least from an economic standpoint, the most potent tool there is to produce conservation effects. I don't think that we saw any ads on TV about insulating your attic until it was possible to say to the customer you can save money by doing this, and then we began to get some change. Now, does that mean that prices are going up as a matter of economic theory to achieve this? No, they are going up because of cost-related factors.

All I am pointing out is if we are going to make a change toward a different attitude toward energy, one of the best indicators and one of the best incentives for people to respond to the long-term desirable needs of a lower use of energy is to let the prices rise as costs require. I know it is painful.

The other side of that coin, though, is in effect one in dealing with the future then. If one is going to prevent adjustment by protecting against pocketbook pain today, one is really just going to mean giving a signal that wide and unnecessarily extensive use of energy is going to be encouraged, because there isn't going to be enough economic pain to prevent it.

So, I think that this is very important. And I have found some signs of acceptance from the public that I have talked with eyeball-to-eye-

ball, that they see that protecting the consumer in the short-term may be disadvantaging that same consumer in the long term, and the long term is maybe as near as just 7 or 8 or 9 years away.

Chairman HUMPHREY. The point I would make you is not that your analysis is error in the long term, because, I think there isn't any doubt that energy prices are going to be going up and no matter what we do, but the question is how you phase it in? Because just as you were talking about the changes that have to be made if you are talking about any possibility of limits of growth—and I believe that one or two of you have indicated here that it is the timing of it that is important, and that you don't have instant solutions; and I put down here what somebody said about "a solution, but not acceptance"—but you've got to remember you have solutions but if you don't have acceptance out here, it just won't work.

We have an awful lot of smart people who come to see people like myself in public life. And I say to them:

Well, that is right. I think you've got a point here. In the next election in my State there are going to be 1½ million voters. Now, will you please talk to them about that wonderful solution you've got? And I will see you in a telephone booth afterward, because you are not going to go anywhere.

My point is you don't give a person a graduate course in physics in 1 day. Political life is like any other form of learning. It takes time. You have to push these frontiers.

Mr. BUSBY. I think the point, Senator, you are making is that there has been delay and delay and delay. There have been delays in gas and oil pricing and in utility rate structures. And I think that the reason there have been these delays is that in the the short term it is unpopular.

Chairman HUMPHREY. That is right.

Mr. BUSBY. The point I want to make is I feel that a wide spectrum of the public is saying, "Yes, it does help me in the near term" but there is now an understanding among the public—a recognition—saying "It is going to kill me in the long term." And the long term may be 5 or 6 years away.

There are going to be people unemployed in Pennsylvania this winter because of curtailments of natural gas. No surplus allocation, but curtailments were very much the order of life in Pennsylvania in 1974 and there will be more in 1975.

Chairman HUMPHREY. Let me give you a ray of hope which comes through the process of pleasure and pain. You know I read Jeremy Bentham's works, when I was a student in the university, and I think there is something to what we call the reactions to pleasure and pain. And I have a Humphrey axiom about politics. And it is "empty stomach, full head; full stomach, empty head." As long as things are going along OK, nobody is going to change it one bit. You are just whistling in the breeze.

Mr. BUSBY. That is right.

Chairman HUMPHREY. But when that unemployment hits, and it won't happen much before it hits, and when people are really suffering and are really hurt, then decisions will be made, but the problem then is that sometimes the decisions that are made are made hastily and they are not made with advanced preparation. Frequently, they

bring with them a good deal more misery and not quite as much relief as you want. This has been characteristic of our type of society. This is why Hubert Humphrey and Jacob Javits and others decided we at least ought to get men of your quality, men from the business community, people from the business community, men and women of foresight, to concentrate their attention on some way of looking down the road and doing some forecasting and arriving at some goals, arriving at some priorities.

If we can get people to understand that you can't do everything at once, we will have achieved something. It is like the family, you know, the average family can't send their kids to college at the same time you want to build a new home, and at the same time you want to buy a new car and at the same time you want to take a Caribbean vacation. You can't do it all at once. You have to make up your mind what are your priorities and what is the time frame in which you want to do these things.

Mr. BUSBY. We are telling our 2 million customers the best we can, and every way we can, that for them the 1984 and 1985 energy supply is here today. That is to say, unless the decisions are made today, it is going to be hell to pay at that time. There is no doubt about that. And I think that is a national problem as well.

Chairman HUMPHREY. There is no doubt about it, but your customers are suspicious of you, as a businessman, Mr. Busby, as my customers are of me, as a politician.

Mr. BUSBY. I think you are being very generous to me.

Chairman HUMPHREY. Let me just say that one of the things that has cursed our society today, although in one way it is helpful, is that everything is suspect.

Mr. BUSBY. Yes.

Chairman HUMPHREY. Now, somebody outside of you in the utility industry has got to be able to tell the utility user—somebody with credibility—"Look, it isn't that the Pennsylvania Power & Light Co. is out to give you a ripoff."

Mr. BUSBY. Well, if that is what they think, then they had better get a new chairman.

Chairman HUMPHREY. You see, it gets to that. I have people tell me every day: "Well, I know you, Senator Humphrey, you are just taking care of yourself." I know this happens. It is inevitable. It is part of my job. I resign five times a day privately, but never publicly. I know that this is one of the things that you have to face up to. Therefore, what is important is the kind of conferences that are being held so that we have a mix of people from private life and academic life and the official life of the Nation, where there comes a consensus that says that it isn't just Pennsylvania Power & Light that is doing this.

What do you think about my part of the country up there where we are having this Canadian gas problem? We are going to be an energy wilderness. All of our refineries in our part of the northern tier States get Canadian crude. The Canadian Government has just plain told us "it is over: I am sorry, buddy, but it is over." I just had them up there last week. They come down and they love us dearly, but they say "it is over." But every time I talk to somebody, they say "do you think they really mean that? They couldn't do that to us."

Of course, one of these days we are going to wake up. I know it is not news to anybody. You all know it is cold in Minnesota.

Mr. BUSBY. And in Pennsylvania, too.

Chairman HUMPHREY. And it gets even colder.

Well, I've got some questions here. We could have a great time just going on, but I don't want to keep you here all day. One thing I noted down here as we were talking is the conclusion that it isn't really that we are short of information. We are saturated with information. One of our problems today is how to use it; how to make it usable. We are almost the victims of a gluttony of information. We are starving for some decisionmaking in a mountain of information.

The Congress of the United States—your Congress right here; your Senate right here—our Congress still hasn't discovered the computer. No, we sit around here like a bunch of—I guess I'd better be careful. But, we are still arguing about whether we ought to have an information system around here. Now, the law of 1970 directed the Secretary of the Treasury, the Office of Management and the Budget, and the Congress to design an information system that would give us reasonably good up-to-date data on a computerized information gathering and retrieval system. Now, we have never been able to get them together. I have been fighting about this since 1950. I started holding the first hearings. And it is only because I am a stubborn and tenacious character that we are still at it. And one day I am going to bring a computer in and let them see it. And it is going to be a great discovery. We still like to go around and file like they did in Charles Dickens' days, you know, putting this in a box here and putting that in a box there. Our information data is just behind the times. It is an incredible system.

Now the other thing relates to the Paley report. I know one of you mentioned it. We've got reports all over the place and we get them all the time. We get excellent reports. We've got White House Conference and Presidential Commissions and so on. We had a power report, a water and power report by the Congress. The late Senator Robert Kerr did something in this field. Now all of this has been up here. Do you know what happens to it? You go down the hallways of the Senate Office Buildings and you will see these canvas carts. They are filled with these reports that we have just dumped. We print up more information here at public expense and throw it into the garbage heap than any one institution in the world. And I am furious about it. I raise hell in my office about the waste of it all, and with the Joint Economic Committee. I got after them out at Chicago and said: "Pick up the papers and get the stuff back here." I do believe there is such a thing as a little conservation in Government. But there is just no followup in Congress.

We got a Paley report for instance, and you see it filed away. No one takes on responsibility afterward for what I call legislative oversight. What are we doing about it? Why did we have the Paley Commission report? It most likely cost \$1 million to get it, because we don't do anything around here for less than that. Whatever happened to it? I know what happened to it. A couple of people read it. Well, jolly. But the trouble is, you people don't make the laws. And this is another thing I am interested in. With the business community and

these interactions that they have with the Government, I think instead of trying to make us all, you know, shape up like you would really like us to be; why don't you just tell us to kind of clean our fingernails once in a while or clip the toenails, or maybe brush off the dandruff or do something, because really we are not going to shape up as well as we ought to.

But I believe some things ought to be done.

Well, gentlemen, I think you have all commented on the rate of growth. There are some variables here. I believe Mr. Lundborg, in your statement you said that or present exponential rate of growth cannot be sustained.

Mr. Busby, I believe that you said that growth rate levels should be somewhat less than 4½ percent attained during the 1960's.

Mr. BUSBY. We would say somewhere in the range of 3 percent, as long as we understand that is an experimental figure and that the real problem is how to make the social adjustments intertwined with that.

Mr. MITCHELL. I think we can tolerate a reasonable rate of growth because, unless we do, it will be difficult, at least until the population gets under control, to fulfill the aspirations of people at the poverty level. But I think it is really going to have to be studied carefully, not only in this country, but worldwide, to see how the various disciplines could work together, hopefully, to make it fit into an overall context of review and review and review to try to see how these things can be—

Chairman HUMPHREY. Excuse me for interrupting, but how do your business associates react to this kind of a position?

Mr. LUNDBORG. May I answer? Speaking of my own associates first, if we had said this 5 years ago, I think they would have sent for a padded wagon and hauled us away. Today I find it popping into private and public utterances of practically everybody in my immediate surroundings. Your fellow Minnesotan now heads our bank, Tom Clausen, for instance, in the last three of his speeches I have seen this coming into it. I think we are facing up to the fact that we have been on a wonderful spree; we have been enjoying a great game, but it has been running rather uncontrolled, running headlong without very much sense of where it was leading us. We now have to be a good deal more rational and balanced.

Chairman HUMPHREY. Now, here we are in the Congress talking about overcoming this problem of unemployment. This is a problem we haven't talked about enough. We haven't talked about the immediate problem of unemployment; about the stress economically, psychologically, physically, and every other thing unemployment does. And we have been talking about getting our growth rate up to 6 percent and 8 percent, even to make a dent or a real impact on absorbing the unemployment. And every policy we have been trying to write is geared toward those objectives. I notice that some of you have indicated that we may very well be looking forward to a shorter work-week and a sharing of the work. Is that something that is becoming acceptable in the business community?

Mr. LUNDBORG. Not very completely yet, I think. The shorter work-week that has been talked about recently has been a symptom of a very affluent society. But as we have gotten into this recent recession,

I think that talk has gone down considerably. During the big depression of a generation ago it was used as a means of sort of sharing the misery. Now a shorter workweek may be a factor in the future, but I don't think it is yet acceptable on a broad basis.

Mr. BUSBY. When one considers a couple of points made here, we see the direction we could be heading. Take the retrofitting of housing, for instance, it is a difficult and high-labor intensive and highly essential thing from an energy standpoint. There is a vast market.

Take a look at our railroads. It is not a joke that a train derails while standing still. We transport 6½ million tons in our small company by unit coal trains every year, and there are many miles of track every year that increasingly have a speed limit of 10 miles an hour. Now there is talk about needs for reballasting and putting in new ties and new rails. These are all labor-intensive activities. They are justifiably energy intensive, insofar as they involve energy, and they do, but they are also very labor intensive. But these are things, Senator, that are crying for attention.

Chairman HUMPHREY. Well, why isn't something done about it?

Mr. LUNDBORG. Well, they won't begin to talk about it. I think one of the things you can talk about as part of your agenda, Senator, is to have a deliberate concerted effort to catalog and identify the possible uses or places where labor-intensive activity could be used.

Chairman HUMPHREY. I notice you had in your prepared statement a number of these. You said that we need to start identifying labor-intensive activities which can be justifiably used here and worldwide. You listed: Renewal of housing, reforestation, recycling of materials, et cetera. So it is becoming more acceptable, is it not?

Mr. LUNDBORG. Much more acceptable, but I think it needs to be brought into focus. As you put it earlier, you need to follow through.

Chairman HUMPHREY. Well, my daddy used to say "You've got to hound them."

Mr. LUNDBORG. To paraphrase the book of Job we all got to get going.

Chairman HUMPHREY. All right. Well, the time is running short. Oh, my goodness, I've got more here I've got to ask you about. Well, I think we've covered this employment part here.

Mr. LUNDBORG, you summarized in your statement one of the major points of the whole debate on future growth when you said, and I quote: "There must be a great shifting away from resource pursuits and other capital-intensive pursuits to resource conserving and other labor-intensive activities." I've heard this often and I, of course, personally feel the same way that you do.

My question, therefore, is do you, Mr. Mitchell and Mr. Busby, agree with this observation? And is this point of view more widely accepted by other corporate leaders?

Mr. MITCHELL. I think everybody agrees we must be more efficient. We have been talking about being more efficient in housing with the compact housing and the need for more efficient cars and other things, and that worldwide efficiency must be improved on in the use of materials. I think we have enough energy to get to another form of energy in the next 100 years if distribution is done properly, but I think we should be talking and concerned about population and other things. And I think that those can be done.

As for how the business people will respond to it, I think that they have the awareness of this now. And furthermore, if your costs of capital, which are now accelerated, finally cross over to where you do more labor-intensive things because you can't afford capital improvement, and productivity will not increase as much as you would like—what I am trying to say is to get a shorter workweek, we have to increase productivity so we are competitive worldwide. Otherwise, if we are not worldwide competitors, we will fall back. I think the way to get the shorter workweek and get more people moving would be through new labor-intensive devices, rather than capital improvement, which makes less labor available. As capital costs are getting higher now, you are going to see a lot more labor-intensive things coming on. So those things are working toward that, but I think we've still got this problem of 8.9 percent unemployment, and it is a serious problem. And I agree with you that it needs talking about.

Chairman HUMPHREY. It is a terribly wasteful problem. One of the observations I would just toss out to you—and I believe this is partly what you were trying to say—is that we need to develop a national policy development process; that is, we need a process in order to arrive at a policy. And one of the things we haven't been able to pull together is the process relating to the future use and management and protection of our Nation's nonrenewable resources.

I call to your attention, and I urge you to take a look at this. A year ago I offered—it is 1 year, Mr. Thornton, or 2?

Mr. THORNTON. Last year.

Chairman HUMPHREY. Well, last year I authored a piece of legislation known as the Forestry and Range Land Resources Planning Act, which requires the Government to make an assessment of our resources and our range lands and our forest resources, and to have that assessment brought to the Congress so that we can look ahead 5 and 10 years and plan accordingly for protection of those resources in terms of conservation and in terms of replenishment of those resources. And I am going to see, if you don't mind, that you get a copy. I am going to send you a copy of that and its explanation.

You can see we don't have the television cameras here today. We won't have them to we come to a grinding halt. You know, until it starts to explode. It is like New York City; people knew there was something wrong, but it didn't get really down to the point where people were going to do something about it until it looked like the thing was going to fall apart. And my interest is in trying to find a way to pull this information together so that we do develop a process that leads us toward the development of goals and priorities within a time frame and that lays out what the alternatives are. I mean the alternatives you have spoken of today are pretty clear. If we keep going like we are, you don't really have to be a Harvard graduate to figure out what is going to happen to us. But if you know what you are doing that is wrong and know it early enough, then you have a chance to make a sensible redirection without the kind of trauma that comes from a sudden twist that you have to give to it.

I believe one of you had the statement in your prepared statement as to what George Bernard Shaw said, and that was that every complex problem has a simple solution which is inevitably wrong. I think

that is just about right. I constantly have people throw it up to me: "Well, why don't you give us a solution to the energy problem right now?" Well, it isn't quite that easy.

Mr. BUSBY. Senator, could I just respectfully underscore that point. Let me urge—and this sounds kind of rough perhaps—but maybe the greatest contribution that the Congress can make on some of these problems is to advise the people of the country that there is no law that can be passed that will provide a fix for it.

Chairman HUMPHREY. Yes.

Mr. BUSBY. And therefore, we are in it together, and we've got to start doing something about it. We have developed a process, understandably, of looking to you and other fine public servants, you know, to solve the problem. But we are now dealing with a problem that can't be solved unless we all get involved.

Chairman HUMPHREY. You know what I wish we could do? And we will leave on this note, as far as I am concerned. I know we are in an election year and a lot of things are not going to be done that ought to be done. You and I both know that. I am not pointing the finger at anybody; I am just taking a look at the history of the Republic. There will be a lot of talk about what ought to be done, but nothing will get done.

But once this is decided, once the American people have made the decision, then I believe we ought to pretty much do what you tried to do in Houston, Mr. Mitchell, but do it all across this country. I hope we have not only the Government but a kind of consortium of leadership compacts, so to speak, in calling in people together and—

Mr. BUSBY. Yes, and not just business people and not just Government people.

Chairman HUMPHREY. We had the Economic Summit Conference, as you may recall. And by the way, that was a congressional initiative for the Economic Summit. I was on the planning board of that Economic Summit. But, anyway, we had a whole series of meetings all across America, before we arrived at the big moment in Washington where the President addressed us—and that is always a climatic moment—but we had this all over. And if we can take a couple of years now ahead of us and start to build on the example that was given us with this undertaking in Houston, and if we can do it on a broader prospective with the combination of both private and public sponsorship, and if we can start to think through not only our problems as they are now, but how we see them down the road, and if we could formulate a process that we could utilize or develop that would search for solutions to the problems, then we would certainly come up with some solutions to the problems.

You know, you have to have the process. There is no way out of it. You know there is no sense in saying to somebody cancer is a killing disease, so let's be against it; what we have done is set up a massive process all over the world, of getting at the research that is necessary, hopefully, to come to some answer on cancer.

I was over in Sweden recently, attending an international economic conference, urging that the heads of government and not their sub-Cabinet officers, but the heads, have an economic summit with some adequate preparation. I urged them to have that to do nothing more

than just simply point out that we are in the same boat and that whatever we are going to do, we have to do in a coordinated manner, because it does very little good for one country, for one industrial country like the United States, to be taking off in this direction and having another one going in that direction, particularly when it comes to resources, which are so much a part of our problem now.

Well, thank you gentlemen. If you have any time some other time, let me know. I am sorry I missed the dinner last night.

The committee stands adjourned.

[Whereupon, at 11:30 a.m., the committee adjourned, subject to the call of the Chair.]

A P P E N D I X

Comments by

Senator Hubert H. Humphrey

on The Draft of

The President's 1976 Biennial Report on National Growth

Volume Titled

"The Changing Issues For National Growth"

PART I.

NEW CONDITIONS FOR NATIONAL GROWTH

The first general observation on the draft 1976 Presidential report on national growth is that the structure of the report is programmatic. Consequently every programmatic tree is faithfully described, but no indication is given of what the forest looks like. This lack of overview is a conspicuous fault, necessarily leading to partial policy prescriptions that cannot be expected to meet the needs of the near future.

The 1976 biennial report cannot be a modification of its predecessors. It cannot fail to emphasize that the national growth we envisage, at least for the remainder of the decade of the seventies, is a recovery from the deepest economic recession in over thirty years. We have to describe how we propose to regain a satisfactory high level of employment of people and equipment. Merely to subsume inflation and unemployment among a list of adverse influences does not suffice. It will be some time before we can regain our perspective on growth as a trend, and on policy options as long-run reconciliations between available means and the efficient attainment of chosen purposes.

The report is exactly right in noting that our perspectives on national growth have been altered, but too reluctant to state that our failure to sustain growth of output and stability of prices in the past few years has necessarily affected our potential for sustained growth in the future. The outcome is not clear at present, but some reduction in the attainable pace of growth seems likely.

On the other hand, the introduction to the the report is unduly dubious about "the capability of government for managing expanding demands on limited resources." To be sure, there is a new balance to policy alternatives, and some choices will certainly be very difficult. But that is no reason to believe that governmental ability to assist has been lessened, or rendered less necessary, or that alternative forms of management can provide full, and better, substitutes.

CHAPTER ONE
THE CHANGING CONTEXT OF RESOURCE USE

The first paragraphs of this chapter emphasize the radical character of the changes in resource use, which is perfectly true. But they do not explain that the twin keys to this altered situation are resource availability and relative prices. The United States, indeed, has not experienced, short of war, as huge and sudden a shift in the relative cost of any major resources, as the 1973-75 leap in energy prices.

That very suddenness has acutely worsened the severity of inflation and of the 1974-75 plunge into recession. It is, however, an overstatement to say that "inflation, capital shortage and higher interest rates have changed the economics of development itself, negating many of the rules of finance by which both the public and private sector have traditionally planned their capital programs." Even if some old "rules of thumb" have gone by the board, the basic rules have not changed; the figures have, and with them some of the assurance of decision-making. If, however, some past planning regarded "energy and other natural resources" as "long taken for granted as relatively cheap and ubiquitous," then such an imprudent rule has indeed been rudely removed.

A. NEW RULES AND MORE MODEST EXPECTATIONS

1. Unforeseen Changes in the Economics of Growth

This section begins with a recitation of "new and disturbing problems" some of which appear to be misconceived.

It is, as the report later discusses, arguable that shortages of fuel and other critical resources occurred only as a result of interruption of supply,

such as the Arab oil embargo of late 1973. Moreover, the huge increase of materials prices in world markets during the 1972-74 period was a market adjustment to booming demand rather than evidence of nonavailability. Relatively, these materials were scarcer, but they were not all, or often, in short supply. To the contrary, there were cases of unjustified inventory build-up, in which the shortage, if it existed, was soon followed by massive unloading of the excess.

Nobody is going to argue that the rate of inflation was not rapid, and few would care to claim that it was predictable with assurance. But to lead from those problems into "the threat of sustained capital shortages and possible breakdown of the capital market" is overkill and oversimplification. For the immediate future, it would be wiser to take note of the Commerce Department report that the utilization rate of capacity in manufacturing industry during the third quarter of 1975 was 79 percent, lower than in the third quarter of 1974 and than the peak of 86 percent reached in early 1973.

There may indeed be a few bottlenecks, but the general picture is that there is ample spare capacity and no near "threat" of "sustained" shortage. As for the capital market, the year 1975 has seen remarkable stability in the costs of borrowing, even if long-term interest rates have remained extremely high, probably as a direct result of continuing expectation of too rapid inflation. That condition has created grave stresses in the housing market and for states and municipalities, but "possible breakdown" is conceivable only if we adopt a deliberate choice to bring it about.

The listing of the conditions that precipitated the present state of the American economy is flawed by some of the same features of incompleteness and overstatement. It is not that the topics are all wrongly chosen:

--"Intensified International Competition for Limited Resources"

--"The New Geopolitics of Resource Production"

--"The Inflationary Bias in the World Economy"

are widely recognized as key issues. It is, rather, that the implications of the situation are strangely expressed, and do not necessarily lead to the condition described in the fourth topic, "The Breakdown of Financial Markets and Shortage of Capital."

To describe these as "new realities" is not only debatable; there are some aspects that are absurd, for example, supposed "assumptions concerning the inevitability of growth" (my emphasis).

2. The Uncertain Pace of Economic Recovery

This section deals with the major short-run barrier to the treatment of national growth in terms of trends or potentials. Its perspective, naturally, is that of the business cycle. Its very brevity, however, gives occasion for some doubtful assertions.

"The origins of the downturn can be traced to 1973." Surely many observers would have detected warning signs much earlier, for example, in the defacto dollar devaluation of August 1971, the simultaneous boom conditions in almost every industrial country of the Western world or in the progressive price increases in world commodity markets. It is arguable however that the timing of the beginning of the downturn can be placed in 1973.

Again, "Throughout much of the last year (1975), a classic and in many respects normal recovery has been underway." For one thing, recovery certainly did not begin before May 1975. Much more seriously, however, this statement clashes violently with the grave abnormalities of persistent, though somewhat lessening, inflation and of sustained high levels of interest rates--which the report rightly emphasizes elsewhere.

It is anomalous that the concluding note of the section should identify the current condition of economic uncertainty at the end of 1975 with questions about the availability of capital itself. For the issue of capital shortage may be arguable in the long run, but certainly not in the current phase of the business cycle.

B. THE CAPITAL SHORTAGE: CAN WE FINANCE THE FUTURE?

1. America's Capital Hunger

This section makes no mention of the cyclical situation, but addresses itself to huge aggregate figures of needed investment over the next decade. To be sure, \$4.5 trillion is an astronomic sum, and the financing of such an investment is the task of an efficient capital market. But what the report does not point out is that the meaning of aggregate figures relating to the future will be profoundly affected by whatever assumptions are made about our success, or lack of success, in dealing with inflation. Again, the report takes no account of the influence of compounding rates of growth. If, together

real annual growth of little less than 5 percent and price increase of a little less than 5 percent generate an annual increase of 10 percent in nominal (or current-dollar) gross national product; that statistic for the year 1985 will be only a little short of \$4 trillion. The scale of gross private domestic investment (16 percent in 1973 before the recent recession) might be of the order of \$600 billion - in one year.

NOTE: (Typographical error in draft. "The U. S. economy used \$1.6 billion (not million) in capital funds between 1965 and 1974.")

2. A Question of Definition

The meaning of the term "capital shortage" is not elucidated in any way by the report draft. Subjective impressions of unsuccessful would-be borrowers, or of successful borrowers on the question of interest rates are not germane. On the other hand, the claim that a "capital gap" retains rigorous economic meaning from the perspective of growth policy is reasonable in the abstract. For it may be demonstrable either that aggregate investment is inadequate for the maintenance of full employment or that its distribution does not permit the achievement of otherwise attainable sectoral goals, for example in the area of housing.

It is difficult, however, to relate this concept, or the perspective it requires, to the present situation. It is not just insufficient supply of financing or sky-high mortgage rates, that are responsible for the sorry state of the residential housing industry. To use the word that the report employs without differentiating it from the term "shortage,"

there is at present a huge "gap" between the present level of homebuilding and almost any estimate of an optimum sustainable level. That, however, is not reason to declare the existence of a capital shortage. The state of the economy is such that the "gap" will not be quickly or easily closed, but the means to close the gap, labor and equipment and materials, are not unavailable. Rather, there are too many of them awaiting use idly.

3. Range and Severity of Consequences

The report quotes the moderate conclusion of a Brookings study, to the effect that capital "needs -- through large -- will be manageable in an expanding economy with a growing capacity to supply savings. However, this study, like most of the other oft-quoted studies dealing with meeting future capital requirements, was undertaken before the severity of the recent recession could be understood. Factoring in the very low levels of capacity utilization and the high unemployment levels experienced during the recession would certainly yield a much lower estimate of future capital needs. Surely in an economic environment which has experienced such wide fluctuations, one should not cling too long to studies done two to three years ago when very different conditions prevailed.

The report shifts terminology once again. The "capital shortage/capital gap" is replaced by "capital crisis." And among the ample evidence cited for this condition there is to be found "the slackening in demand for commercial and industrial land" -- a state of affairs that is symptomatic perhaps of economic malaise but certainly not of capital shortage in any accepted general sense.

If this is the quality of diagnosis of our economic condition, it is clear that no purpose will be served by adherence to the associated analysis of policy options.

C-E. THE CHANGING ECONOMICS OF GROWTH AS ILLUSTRATED
BY THE HOUSING NONRESIDENTIAL CONSTRUCTION AND
PUBLIC INVESTMENT

The report points to the severe contraction of housing construction because of the economic recession, and its slow recovery, contrary to the pattern of previous recessions when housing led the way upward. It ascribes this "historic anomaly" to increased construction costs, a slowing in demand as a result of declining real incomes, and a changed attitude among capital sources toward housing investment. It then proceeds to examine these trends with the presentation of a mass of statistics. It is impossible here to examine these figures individually or to comment on the details of the explanations, although it is possible to point to some omissions which carry important policy questions. The discussion of the increase in land prices for appropriately zoned land makes no reference to the widespread practice in suburban communities of preventing the entry of low- and moderate-income families through large-lot zoning. This practice preceded slow-growth measures resulting from environmental concerns, but now has come to use these legitimate questions as camouflage for economic and racial exclusion. In discussing rising construction costs, there is no effort to consider the price effects of shortages in materials and skilled labor, the reasons for those shortages, and ways of ameliorating them. In discussing finance, there is no reference to Federal policies which adversely affect the

mortgage market, although in a later section there is discussion of the wisdom of using construction as a counter-cyclical tool.

Of more importance than the lack of completeness in considering the individual factors, there is no effort to assess the relative impact of each, so that a judgment can be made as to where the more important points of leverage exist. In a later section, there is a discussion of the increase in size and facilities in the average house during the last decade, but there is no estimate here of how much the observed increase in cost is due to this increase in amenities and how much to rises in factor costs. Neither does the report explore the significance of developments that are short-term reactions to the general recession as compared to those that are the result of long-term trends which can be expected to continue even in a period of prosperity. Despite the chapter title, it is not clear whether there are absolute shortages of resources, or lacks induced by the short-run economic situation or by Federal or local policies which are amenable to change.

Similar comments can be made about the sections dealing with non-residential construction and public investment. We are presented with a picture of sharply curtailed production, as a result of the general economic situation but also because of high and increasing construction and financing costs, for which no end is seen. We are left with a vision of regional economies depressed by lack of private

investment in commercial and industrial facilities and of local communities unable to direct development, because it is non-existent, or with insufficient fiscal capacity to provide the improved social facilities which would encourage economic growth and improve the lives of ordinary citizens. It is a view, moreover, which contains no suggestion of any means of amelioration in the near or distant future nor any estimate of the likely duration of these adverse conditions.

F. THE END OF CHEAP ENERGY

Acknowledgment is properly made that the actual effects of energy price changes on the economy "are clouded because of the simultaneous effects of economic recession," but then this important qualifier is never returned to in the analysis which runs on as if the point had never been raised or doesn't require further treatment.

It may well be that the Southwestern and Southcentral U. S. climates make for "relatively low" electric power consumption, but there is a good bit of evidence that changes in population, income, and air conditioning usage in these regions is flattening the seasonal and geographical diversities in consumption.

While at the time of writing of this report estimates of shortfalls in natural gas delivery are accurately presented, more recent estimates place the shortage in a much more manageable light.

Supercharged words like "spectre" do not help in an objective analysis of "material shortages" and their likelihood. As is common, the scarcity and shortage discussion is deficient in that it largely ignores the dynamics of adjustment that come from the actions of markets and prices: changes in product composition and product substitution. Instead it recites the fixed stock and inventory approach and the counting of commodity units that will be "used up and

that's the end of it." On the other hand, the report could well have mentioned here the problem of the reduction of U. S. disposable income (with attendant effects on the national economy) that can come from the shock of an energy "tax" imposed by the OPEC cartel--a quadrupling of external energy payments.

In discussing the "Federal Energy Response," even briefly, one would expect to include reference to the two decades of the controversial Oil Import Quota program.

The discussion of "State Energy Initiatives" gets pretty close to saying that the individual states are messing up the action while the "feds" are doing well in leading the country out of the energy wilderness. It implies that "consumer resistance" to various utility company and certain utility commission actions is a bad thing or is misguided when there is a good deal of evidence that consumer reaction is not only appropriate in terms of being a major party of interest but also substantially "on target" in the arguments. Further, the Report accepts uncritically the utility industry position with respect to plant expansion, capital needs, increased prices to ratepayers, and increased earnings.

F. THE END OF CHEAP ENERGY

It is hard to believe that anyone in the United States who has paid even the most casual attention to the subject could--as this report does--so wholly overlook the central fact underlying all the energy issues which have surged to the forefront of national concern in the past two years. That fact is the nearly total dominance of our dependence on oil and natural gas, domestic supplies of which are rapidly being depleted. This leads inescapably to the conclusion, ignored by this report, that we must shift to other energy resources, and this must be the central focus of our National policy.

The authors of this Report have throughout this chapter and, indeed, throughout the entire report, failed to distinguish quantitatively and qualitatively between our dependence on energy in general and our critical dependence on oil and natural gas in particular.

The only statistical table (following P. I-21) referring to the mix of US energy fuels and their use includes no volumetric figures. Indeed, it lists percentage use by consumption sector for each fuel, thus ignoring the crucial point that more than three-fourths of all uses depend on oil and natural gas. This explains, but by no means excuses, such misleading statements as the following which discuss fuel consumption as a percentage of an unquantified base:

"The transportation sector now accounts for one-quarter of all energy consumed in the United States, including more than half of the petroleum... Industrial uses account for 40 percent of energy consumption, including more than half the coal and natural gas but only about 20 percent of the petroleum." (p. I-21)

As the following quantitative table shows, the more relevant point is that the transportation sector is virtually 100 percent dependent on oil. Three-quarters of industrial heating requirements, half of our electric power generation and 80 percent of all our residential and commercial energy use depend on oil and natural gas.

1973 US ENERGY CONSUMPTION MIX
(Million Barrels Per Day)

Sector	Residential and Commercial		Industrial	Transportation	Electric Generation	Miscellaneous Unaccounted	Total Consumption
Fuel							
Coal	0.17	2.10	--	--	4.11	--	6.38
Oil	3.32	2.86	8.47	1.62	0.12	--	16.39
Gas	3.78	5.11	0.38	1.85	--	--	11.12
Hydro	--	0.02	--	1.37	--	--	1.39
Nuclear	--	--	--	0.40	--	--	0.40
Total							
Primary	7.27	10.09	8.85	9.35 ^a	0.12	--	35.68
Electric Usage	1.69	1.25	0.01	6.40 ^a	--	--	--
Total	8.96	11.34	8.86	6.40	0.12	--	36.68

^aOf the 9.35 primary energy input, 6.40 became generation losses and the 2.95 is distributed to the use sectors.

Source: U.S. Engineering Prospects: An Engineering Viewpoint, National Academy of Engineering, May 1974, p. 27

The central fact that was apparently overlooked in this report is that this country is now, in nearly every facet of life, locked into an energy supply, the domestic reserves of which will last only about two decades at current rates of use. Within the past half century we have become 77 percent dependent on oil and natural gas at accelerating levels of use and now we have less than half that time to develop reliable alternatives.

It is the finite character of oil and natural gas, combined with our growing dependence on it -- not whether it is foreign or whether it is high priced -- which poses the great threat to our economy. Future industrial growth will depend primarily on unprecedented shifts to other kinds of fuels and in the rates at which they are used.

This commitment to a rapidly dwindling energy base is the very heart of the growth issue and is not simply an academic debate over a "steady-state economy," "limits to growth," or even shifts in the over-all rate of growth. The course of future growth must necessarily be made in the context of a structural and qualitative shift from predominant reliance on oil and natural gas to a still undetermined mix of presently existing or new energy sources, expanded production of which remains critically in doubt. Ultimately, it is only through the development of non-depletable forms of power such as fusion, solar, and geothermal that substantial energy growth will be possible in the future.

Only occasionally in the report is reference made to these crucial facts, and it is made only with the effect of a parenthetical or tentative acknowledgment, made casually in passing. Yet it is not as though these central facts were not readily available to the public. Indeed, they were brought to the fore and were emphasized in virtually every important report on energy supply and demand which has been published in the past two years.

Two major reports issued in May and June of 1975 -- one by the National Academy of Sciences (NAS), Mineral Resources and the Environment and the other by the U.S. Geological Survey (USGS), Geological Estimates of Undiscovered Recoverable Oil and Gas Resources in the United States -- confirmed the limited nature of recoverable domestic supplies of oil and natural gas. The NAS study estimated undiscovered recoverable resources of oil and natural gas onshore and offshore in the US, including Alaska, at amounts which would last less than 25 years at current rates of use. It also observed that world resources of oil and natural gas are not only limited, but will also be substantially consumed by the first quarter of the 21st century if present consumption trends continue. The USGS study represented a significant downward revision in estimates of future supply compared to previous USGS projections which had been criticized for their optimism.

Three other major reports emphasized the crucial importance of our growing dependence on oil and natural gas, the already declining supply, and the limited possibilities of maintaining, much less increasing, the supply over the next decade: The Federal Energy Administration report on Project Independence, the Ford Foundation Report on Energy, and the National Academy of Engineering Report on Project Independence, US Energy Prospects: An Engineering Viewpoint. The authors have unfortunately overlooked or chosen to ignore these reports and the importance of their conclusions.

The report fails to emphasize the quantitative and qualitative dependence on oil and natural gas, fails to recognize the magnitude of the task of converting to more reliable and sufficiently abundant sources of fuel and the dangerously short period of time available to accomplish it. This is an extremely serious fault in the report, so much so as to call into question the authors' judgment on other issues as well. The need for recognition of this as the central national energy policy requirement is critical.

G. THE INSTITUTIONALIZATION OF ENVIRONMENTAL VALUES

This section is a very short, over-simplified treatment of environmental issues. It restates in truncated form the discussion in Chapter Six on environmental regulations. The dismaying misconception found in that chapter on the relationship of environmental management to growth are evident in this section as well, but I will respond to them in discussing Chapter Six.

H. NEW DEMANDS ON NATURAL RESOURCES, Part 2: Agricultural Production
for World Markets

There are numerous serious deficiencies in this discussion of agricultural issues--perhaps arising in large part from its sponsorship by the Department of Housing and Urban Development, with no apparent evidence of input from the Agriculture Department. The report assumes that the reader must have some background information in order to approach the topic with understanding, but fails to provide anything but scattered, unrelated, and, in some cases, inaccurate, statements and misleading generalities. Mention of U.S. involvement in the world agriculture market seems to be made as an after-thought. Most policy implications which face American agriculture probably cannot be discussed adequately in so short a piece, but specific issues which could have, and should have been set out, but were not.

Few would disagree with the report's conclusions that 1) the American farmer has attained a productive capacity beyond compare; 2) poor U.S. and foreign harvests in recent years have changed the complexion of the food and agriculture situation and have forced some reassessment of U.S. policies; 3) U.S. stocks of grains were drawn down sufficiently to cause sharp commodity price rises; 4) there are more acres of land which could be brought into agricultural production--although many would question the economic feasibility of shifting pastureland to cropland; and 5) that U.S. farmers probably can continue to provide adequate quantities of farm commodities to feed Americans and to maintain the U.S. in a leading position in international food assistance.

However, many might resent the offhand manner in which the report discharges forty years of government farm programs, and the policies--that accompanied them. An unwary reader might draw the inference that traditional farm programs were discarded as a direct result of market changes in 1973 and 1974. In fact, groundwork for revision of the U.S. farm policies was laid with enactment of the 1970 farm bill and was augmented with passage of the 1973 Agriculture and Consumer Protection Act. However, that 1973 Act did not "discard" decades of set-aside programs, as the report claims. It authorized the Secretary of Agriculture to use his discretion in implementing production adjustment measures. The Secretary has seen fit to call for maximum production since the 1974 crop year.

The report describes a sudden shift from a situation of chronic surpluses to one of developing shortages in the early 1970's. It should be noted that for at least a decade the U.S. had not been operating with chronic surpluses. Instead, we were operating under a system of production adjustment which served rather well to enable a measure of economic stability to farmers. We were utilizing our expanding wheat, feed grains and oilseeds crops for important domestic and foreign food assistance programs, to build our domestic livestock herds, and for many other productive uses. Our stocks were large, but we were not experiencing the kind of surplus problems of the early 1950's.

It is extremely misleading for the report to utilize 1974 and 1975 crop years to illustrate anything other than the impact of weather; the 1974 crop suffered from drought and the 1975 crop fared far better. However, these

figures are used to point up "record high yields from record acreage planted" resulting from the shift to a farm market "essentially free of direct public controls." Nothing could be further from the truth, and such a statement bespeaks (either outright deception or) gross ignorance to U.S. farm activity. In 1974 the farmers and consumers of the United States were forced to respect the importance of weather. The year was most assuredly not a typical one--the summer drought forced the index of crop production to a low of 110 from 120 the previous year (1967=100) and was 12 points below the estimated level for 1975. Per-acre yields also fell back sharply due to weather factors.

It is difficult to understand why the report includes a table which is labeled to show U.S. production for wheat, corn, feed grains and soybeans for 1970-72 (average), 1974 and 1975, but does not include the 1973 crop, which reasonably could have been used for comparison with 1975. The figures given for wheat seem to represent only winter wheat production rather than all wheat; the corn figures are also inaccurate--too low for 1974 and too high for 1975; and it is difficult to understand why no figures could be provided for feed grains, when they are readily available from the Crop Reporting Board at the Department of Agriculture. Following this, the column showing an increase in production is of no real use because of the abnormality of the 1974 crop year.

It is difficult to understand why table I-6 on acreage utilization is included since it is not discussed anywhere in the section.

The last paragraph of the section is merely a reiteration of the first--a too obvious generality that American farmers can produce sufficient food and fiber on a minimum number of acres to feed and clothe not only American consumers, but also to contribute substantially to a favorable balance of payments. There are very few agricultural observers who had not already reached that conclusion.

What the report fails to discuss are the critical growth-related questions of U.S. export policy which have come to light in the past few years. These include what to do about large sales of grain to the Soviet Union and other nontraditional customers; the wisdom of Government embargoes on exports; responses to the "directives" of the World Food Conference; the possible need to establish strategic grain reserves; and the need to expand export markets for U.S. agricultural commodities.

Part 3: Continued Improvements in Productivity

While there is no doubt that the expansion of agricultural production has been impressive, many would take exception to the optimism expressed in this report, that future expansion will follow previous trends. In fact, there is concern among many farm observers about the current slowdown in productivity advancements. The agricultural research sector, which must provide the "expected technical improvements," is under fire at the present

time for failing to respond to needs for increased production, and for failing to be forward-thinking enough.

At the same time, the prospects for increased double-cropping are not as favorable, not as simple as this section would suggest. Not all crops, and not all agricultural areas, are suitable for a double-cropping system; there are substantial problems of available water supply and the availability and expense of other production inputs. Energy shortages also may constrain many kinds of agricultural advances.

Mention of "an abundance of uncropped cropland," is made several times in this section and in the one immediately preceding it. There is a danger in relying too heavily on such "abundance." At this time, shifts in land use from pasture and grazing, or from conservation uses to crop production would be so expensive as to discourage most farmers, given the level of current farm prices. Additionally, such shifts would necessitate significant changes in livestock operations, and those changes would be met with predictable resistance.

Efforts to increase crop yields and marketing efficiency have been, and continue to be, massive. We are fortunate to have both resources and resourcefulness at the disposal of American agriculture, but any approach to future gains in productivity should be somewhat more cautioned than the one set out here.

Part 5: Rising Extraction Costs and Impacts of Non-Fuel Minerals

The report is correct to note that increasing energy prices and limited availability of fuels will necessarily reduce the ability of the mining industry to extract progressively lower grade ores. The cutoff grade may actually rise rather than drop, in which case the implications for future growth are very serious. The report does observe, however, that this may be offset by recycling and substitution. It is obvious that the availability and price of energy will determine the size and scope of future mineral shortages. If energy costs are high, then only relatively high-grade ores will be extracted. If they are low, then low grade ores will be mined (along with the disturbance of proportionately greater quantities of host material) in order to obtain a comparable volume of production.

The report is disappointing in that it does not analyze the social and economic consequences of reduced availability and consumption of minerals. These consequences might include but certainly would not be limited to reduced employment, lower GNP, chronic recession, greater demands on social services, and retraining large segments of the work force in new skills to replace those made obsolete by new patterns of production and consumption. It is quite likely that these negative effects would be limited to the period of transition to a new system based less of energy-intensive extraction and more on recycling, conservation, and efficient design. Once this transition is

completed, there would be a firm basis for renewed economic growth because of the restoration of balance between resources, production, and consumption. The issue of such large-scale shifts in demand is raised by the report, but did not receive the attention it deserves.

Part 6: Renewed Conflict Over Resources on Federal Lands

The report claims in this section that, with the exception of energy-related natural resources and of recreational opportunities and land and water amenities, natural resources play a much reduced role in determining the location and nature of economic and physical growth. Growing and often conflicting demands for natural resources, in states, reflect population increase, greater material and amenity requirements associated with rising incomes, changing social values, and an increasingly complex international web of political systems and economic markets. These allegedly "new factors" are said to pose "new challenges" in managing natural resources, such that "the new focus of attention" for problems of national growth is on national themes of more efficient resource management practices, greater resource conservation measures, greater protection of resources against environmental degradation, and resolution of conflicts among resource uses, as well as on regional and local resource scarcities despite aggregate sufficiency.

While there can be no argument that the demands for natural resources are dependent on more than population size, or that our institutional and economic resource webs are increasingly international, it is questionable indeed that most of these factors in resource demands and pressures are very recent or new. Instead of discussing so-called "recent" trends such as these which extend back more than a decade, it would seem reasonable to have the present report address shifts and trends and factors more in evidence since the growth report of 1974.

The report properly identifies a continuing problem of land reclamation--specifically the drainage of wetlands for agricultural purposes, with often detrimental effects on wildlife, for agricultural purposes. Yet the subject receives only three sentences in the report, and these imply that it is increased demand for agricultural production, attributable to national growth, that is responsible for this conflict. The situation is not at all this simple, nor is it at all recent. In terms of national policies, conflicts between wetland drainage for agriculture or land development and wetland preservation for wildlife and wild flora have raged for several decades and have involved, as they still do, the irrational spectacle of different arms of the Federal government financing programs completely at odds with each other. Yet this report does not begin to treat the issue adequately, to lay out policy alternatives, or to otherwise suggest remedial actions appropriate to the problem.

In the discussion dealing with "renewed conflict over resources on Federal lands", the narrative attempts to show how Federal land ownership is significant to varying degrees in providing for outdoor recreation, commercial timber growth, and livestock grazing (as resource examples) in various regions of the country. This aggregate treatment produces a very incomplete discussion. Some reference to more definitive reports on the individual resources should be made--such as those issued in recent years on outdoor recreation and national forest products and policies, for example. Confusion is induced by the report in this discussion through use of tables that present land ownership statistics by resource type and by region, but without specifying data sources; also the figures used do not always agree with other recognized authorities (BLM's Public Land Statistics, 1974, for example, cites 2 million acres less in Federal ownership and 7 million acres more in total U.S. land area than does this report). Also, whereas earlier portions of Chapter 1 sought to play down the importance of resource location to growth and development, we find on p. I-53 that the report argues that in regions where Federal land ownership constitutes a significant percentage of all regional land, the potential of rangelands, forest timber, outdoor recreation and water resources to supply demand is directly related to proximity to users."

The report errs in the paragraph following that one by associating different levels of resource productivity on Federal and private lands (as for timber) with differences in management capability, as proof that greater Federal land capability can be harnessed than is presently the case. There is partial truth in these implications, but it is also highly significant that many of the less productive lands (forest lands are a good example) are in Federal ownership and not in private hands in large measure because they are less productive! In other words, there exist not only different management philosophies and different management accomplishments between ownerships, but also inherent productivity limitations on the lands in question.

The report does, to its credit, identify the conflict between emphasis on material productivity of commodity resources with productivity aimed at restoring, maintaining and improving the quality of the physical environment. But it fails to develop an adequate level of sophistication in treating these issues. Federal forest policy implications for county budgets and local school systems in counties which contain large Federal forest acreages should be developed and assessed. Also, Secondary and higher order implications of resource management policies would be in order for analysis (such as implications for western water management regimes of development of Montana petroleum shales and coal, for examples), but these are absent.

In sum, the report fails to clearly and specifically identify issues in a complete enough fashion to permit adequate comprehension by the reader, to address policy implications of these issues, and to lay out for consideration alternative courses of action.

CHAPTER TWO
SHIFTING PATTERNS OF GROWTH

A. CHANGING POPULATION GROWTH PATTERNS

B. STABILITY OF REGIONAL POPULATION SHIFTS

This discussion of population growth trends is basically a compilation of statistical information. Along with the presentation of data, there is some interpretation of general trends. The trends discussed are usually shortrun (1970-1974) and therefore could be considered somewhat limited in their implications for growth policy. Additionally, there seems to be heavy emphasis on regional trends, especially in the section which discusses migration patterns (Stability of Regional Population Shifts). Perhaps efforts would have been better spent on discussing the impacts of the changes of the composition of the U. S. population. It would be difficult, if not misleading, to derive or evaluate national policy implications based on regional trends.

Throughout this report, there is little mention made of national policy implications. For example, although the subject of birth rates and population growth is covered, there is no discussion of the major policy issue of population control.

Several sections appear without adequate discussion and analysis of the subject matter. In the section entitled "Impacts of Changes

in Life Style", the subject is the decline in the birth rate. The report lists several reasons that there are more single people, and therefore that there is a smaller average household size. However, it never gets to the main point: single people are less likely to have children, thus having a marked impact on the birth rate.

Another example of incomplete or inadequate analysis is in the discussion of "Legal and Illegal Immigrants." Here the report goes so far as to

say "The bulk of this immigration seems to be centered in six states, creating serious problems in these areas." However, it does not say which states are included, nor what the serious problems are. This would also seem a logical place to cover national policy implications.

The section on "Changes in Dependency Population" ends by stating that the "expected increases in the elderly dependency ratio will have economic repercussions." It does not discuss what these repercussions might be, but simply goes on to another subject.

More basic than the criticisms offered above is the question of accuracy. A problem arose in attempts to verify some of the data. There are sources listed for all table and chart materials; however, there are no references given for most of the textual statistical information. While it appears that the level of accuracy is quite high through most of these sections, several statements do not correspond with data found in the Bureau of the Census' publications.

One example of this is in the section on "The Rocky Mountain Area Growing Rapidly" where the data presented apparently are not understood by the author. The report states that "During the 1970 to 1974 period, the Mountain Division as a whole grew by 29.9 percent..." In fact, census data indicates that during that period the average annual rate of growth was 29.9 persons per thousand, or 2.99 percent. There are several similar errors included in the same paragraph.

In summation, although this section of the report is basically accurate, there are some errors, and it has only a limited amount of useful analysis.

C. A NEW URBAN-RURAL BALANCE

This year's draft report gives a much more extensive coverage to the urban-rural balance issue than did the President's 1974 report. Yet, within the array of charts, tables and statistical data presented, there seems to be missing the quality of analysis so necessary if this Nation is to adequately address the population migration trends now taking place.

I have no quarrel with the accuracy of the facts and figures in this section. During previous decades -- especially between the 1930s and 1960 -- the United States witnessed what might be called a "demographic revolution" during which almost 30 million people migrated from our Nation's farms and open countryside to the Nation's urban areas. Now, the trend is reversing. We are witnessing, as the draft report indicates, a revival of population growth in parts of non-metropolitan America, increased growth in smaller metropolitan areas, and a decline in a number of the larger metropolitan areas. There, the report stops. It fails to provide sufficient analysis as to either the causes of this new trend or the effects it is going to have on the people and the communities affected.

As I have stated on numerous occasions, future population settlement patterns in the United States should be a matter of great national concern. It obviously has not been so in the past. And our failure in the past to make it a national concern created many major problems -- both in the rural regions of our nation and in urban regions.

We need to ask ourselves as a Nation if we are going to sit back while new shifts in our Nation's population take place without understanding the implications of such shifts -- both for those regions losing

population and those gaining it. Unfortunately, the report is mute on these points, so I shall suggest some issues that need to be further addressed.

Why are people moving? Who are the migrants? Is their departure depriving cities of certain professionals, such as doctors, already in short supply?

What is it about modern urban living that may be causing part of the urban population to flee to rural areas? The reasons for the new reversal of past population movements can be partly explained by some of the very problems created within our urban regions due to earlier rural-to-urban migrations: overcrowding, pollution, traffic congestion, lack of jobs, dislocation of essential social services, rising crime rates, sharp per capita tax rate increases, and lower quality of community services. If these problems continue to go unresolved and people feel 'pushed' into moving, this Nation is failing to provide its population with an opportunity to chose among different life styles. Until we know why people are moving, we remain without sufficient information regarding the importance of the 'push' factor. In the year of the bicentennial, it behooves us to remember that this Nation was built on the principal of freedom of choice.

If migration is indeed occurring because of a free choice people are making between alternative urban and rural life styles, there exists quite different implications for public policy. We should focus on preserving and encouraging the rural way of life and, in order to meet the demands of the population, we should perhaps focus on the development of "planned rural communities.

Just as the draft report leaves us uninformed as to the causes of migration, it fails to tell us much about the effects. With all the public research funds spent on demographic studies by the Departments of Housing and Urban Development, Agriculture and Commerce, someone in the Executive branch should be able to include something about this matter in the report. Otherwise, the section remains a voluminous compilation of facts and figures, devoid of policy implications.

What are the effects of increased in-migration on rural communities experiencing rapid population expansion? Is the quality of life being lowered for the population that existed prior to the in-migration? What directions can national policy take to encourage and assist such communities in preparing for such expansions? How can we avoid the mistakes of cities and suburbs which have developed on an 'unplanned' basis? The costs of repeating such experiences are very high -- not only in terms of Federal and State expenditures, but also in terms of providing and maintaining a decent human environment for those citizens who will be living in the communities.

The draft report again raises, without going into sufficient detail, those old questions of quality of life and optimum city size. Is it in the nation's best interest to encourage the development of a certain size city? Is quality of life superior in smaller towns than in larger cities? Are some cities too large and should be decentralized? If so, what will become of the existing resources and urban infrastructure, to ensure that past capital outlays will not go to waste?

Some population experts argue that many cities should in fact be larger so that efficiencies of scale can be achieved. How is efficiency balanced against quality of life? How is quality of life defined? Today, statistical

measurement of quality of life is at best a form of art and imagination than a science. In trying to measure quality of life and compare it among cities, how are the individual ingredients weighed? Is air pollution, for example, twice as important as the number of traffic accidents, or only one-third as important?

In all, this section of the draft report encompasses a number of important policy issues. It is now up to the authors to adequately address them in the final report.

D. CONTINUED DISPARITIES BETWEEN CENTRAL CITIES AND SUBURBS

The draft report suggests that suburbs are becoming more affluent relative to their central cities, with the gap widening over the next decade. Firms, and in some cases entire industries such as manufacturing, are abandoning the central city, leaving blue collar workers without jobs. The urban population is becoming poorer, and during the 1970s it will contain a greater concentration of minorities.

Again, I have little quarrel with the data that support these statements. It is, however, quite unfortunate that a careful analysis of this situation -- a step beyond the data -- is not apparent.

Of prime concern to me are the underlying causes of the current urban fiscal problem. The Joint Economic Committee, which I chair, has recently attempted to address this issue. The staff has just completed a survey of 48 State governments and 140 local governments, issued as a joint committee print entitled, The Current Fiscal Position of State and Local Governments (U. S. Gov't. Print. Off., 1975). The survey indicates the negative impact which the current economic situation has had on these local governments. The study provides a great deal of information about tax changes, expenditure cutbacks and capital construction modifications these governments are undertaking.

An analysis of the fiscal problems must be taken one step beyond our JEC survey. What we need to know is the relationship between short-run and long-run causes of the urban fiscal problem. Is it a short-run problem, cyclical in nature, due to inflation and the economic recession? Or, do the current fiscal problems result from more long-run causes, as illustrated by

the persistent erosion of the central city employment, population and tax bases. Statistics provided in the draft report seem to point to the long-run nature of the problem.

The President's report should address two additional issues of public policy. First, given that jobs are leaving the central city, a national growth policy will necessarily confront different options concerning the location of people and jobs. Should national policy encourage the formerly-employed workers, through tax incentives or other means, to follow and relocate near to their source of employment? Or, should national policy encourage firms to remain in the central city, where their current work force reside? Several pieces of legislation before Congress provide incentives to keep firms from relocating. If the report were to provide background analysis on these issues, Congress could more effectively evaluate the pending legislation.

Second, how should the Federal government decide where to intervene in seeking to address urban fiscal problems? Should we create across-the-board revenue sharing programs which supply aid to all localities? Should we focus on those localities experiencing the most difficult problems?

The academic literature covering the topics in this section is extensive and could provide the report's authors with useful insight into the questions I raise. Therefore, I suggest the following recent publications in addition to the JEC print: The entire November 1975 issue of The Annals of the American Academy of Political and Social Science is devoted to "The Suburban Seventies;" W. Patrick Beaton's volume of readings on municipal expenditures, entitled Municipal Needs, Services and Financing (Center for Urban Policy Research, 1974); and The Politics of Neglect: Urban Aid From Model Cities to Revenue Sharing by Bernard J. Frieden and Marshall Kaplan (MIT Press, 1975).

While the draft report spends a considerable amount of space discussing the inner city-suburban and the urban-rural cleavages, it hardly touches upon the regional differences that policy makers should note in formulating a national growth policy. By skipping over this important area, the report fails to draw conclusions from the statistics it scatters here and there.

My reading of current data is that an entire section of the country -- the Northeast -- is experiencing declines in both population and economic growth rates. These declines are accompanied by an under-utilization of existing capital resources, and accelerated deterioration in the housing stock, in transportation systems and in the delivery of vital social services. Some statistics will serve to illustrate:

In terms of total employment, between the years 1967 and 1972, the Southern Atlantic states experienced a growth rate five times that of the Middle Atlantic States. Georgia's rate of total employment growth for the same years, for example, was nine times that of New York. Projections to 1990, made by the Bureau of Economic Analysis of the Department of Commerce, indicate a pronounced shift of income away from the Northeast and North Central parts of the country to the Southern and Western regions. According to recent reports, the metropolitan housing stock in the South is increasing one and one-half times faster than in the Northeast. In addition, the Northeast possesses a much older inventory of housing than the other regions and, because of climate and increasing costs of fuel and maintenance, this housing is deteriorating at a fast pace. Housing in the Northeast is also more expensive to buy and maintain; the sales price of a newly built one-family home in the Northeast is 25 to 30 percent greater than in the South.

In the past, Federal actions have greatly influenced the development of certain regions of the Nation. One cannot ignore the fact that three decades of war across the Pacific were a primary cause for the development of the West Coast. But, likewise, Federal policies can have a positive effect on the redevelopment of decaying parts of the Nation. The report needs to fully address these issues. Although Federal tools for economic development are discussed, the discussion needs to be expanded and a new section of the report should be added to specifically focus on the problems of the Northeast. In the absense of such an examination, Federal policy, by continuing its present benign neglect, will accelerate the decline of the Northeast region.

CHAPTER III

GROWING GAPS IN FAMILY NEEDS AND RESOURCES

A. THE INCREASED MAGNITUDE OF THE PROBLEM OF POVERTY

I have no comments on points 1-6 with the exception of the following technical changes: 1) the percentage of poor persons in 1969 reported on page III-1 should be corrected from 12.6 to 12.1, and the percentage of poor persons in 1974 should be corrected from 11.4 to 11.6; 2) the percentage of poor blacks in rural areas reported on page III-4 should be corrected from 30.7 to 42.

I have the following substantive comments concerning point 7, Increased Problems of the Elderly and point 8, The Growing Housing Gap for the Poor and Disadvantaged:

7. Increased problems of the elderly

Contrary to previous years, since 1972 social security benefit increases have not kept pace with inflation. The 11 percent benefit increase that became effective in June 1974 covered the same period in which the CPI rose by 16.3 percent. Similarly, the 8 percent social security benefit increase effective for June 1975 covered the rise in prices during the prior year, however, the CPI during this period rose by 9.3 percent.

With respect to the rise in costs, per capita out-of-pocket health care costs for the elderly increased from \$367.40 in 1972 to \$415.37 in 1974. Out-of-pocket expenses are those not covered by medicare, medicaid private health insurance or philanthropy and industry. They are the responsibility of the patient.

The 1970 Census defined, in part, substandard housing as homes which lacked some or all necessary plumbing facilities. The Census, however, did not measure the number of homes with inadequate plumbing facilities. It is generally assumed that many elderly people live in homes which need repairs, are architecturally unsuitable and lack adequate plumbing facilities.

In addition to the 16 percent of the elderly with incomes below the low-income level, a significant percentage of older people are considered near poor. The 1974 median income of older families (head of family aged 65 and older) was \$7,298 and for persons living alone or with nonrelatives it was \$2,958.

You may want to consider, however, that the percentage of older people with poverty incomes has decreased in recent years. In 1970, 25 percent of the elderly had poverty incomes, in 1972, nearly 18 percent had poverty incomes while in 1974, 15.7 percent of those aged 65 and older had incomes below the low income or poverty level.

8. The Growing Housing Gap for the Poor and Disadvantaged.

The general thrust of this section indicating a major housing problem for poor households is certainly valid. The question of the direction of change, however, is not dealt with adequately. A number of statistics are presented showing the housing status of families in 1970. A number of other, non-comparable statistics, are given for 1973. Thus, it is reported that 2.5 million households (the number, in fact, is 3.6 million, according to the 1973 Annual Housing Survey) live in units lacking some or all plumbing facilities. The comparable figure for 1970 is not given; it is 4.4 million, and, hence, supports the report's claim that there has been improvement in the three years. It is also reported that 1.5 million households live in dilapidated units with plumbing; the source of this figure is not given, nor a comparison with 1970, although presumably it represents improvement, since it is cited as evidence of progress. The statement is then made that despite the improvement in physical housing deficiencies, "the number of families with financial housing problems increased." No evidence is given for this statement. The crucial question for housing policy is why financial difficulties increased even as physical conditions improved. Do the over-all figures hide disparate movements among different sections of the population? Has the supply of low-quality stock been so reduced that only higher quality units are available to people who would otherwise choose bad quality rather than higher housing costs? Has the preference for good housing risen to such a degree that families choose to spend more than HUD's standard expenditure in order to occupy better units? Only a more thorough analysis of the data can supply

the answers, and only with those answers can the most effective housing policy for the country be determined.

There are a number of other technical points. When reporting the number of homeowners with housing valued at over four times current income, elderly households should be distinguished since they have currently low income but frequently occupy homes free and clear, with consequent low housing costs. The error in the number of households in 1973 lacking complete plumbing facilities is noted previously. The percentage used in comparing the total deficient stock with plumbing deficiencies in units occupied by blacks is similarly too low, being 4 rather than 3 percent.

B. THE SQUEEZE ON THE MIDDLE CLASS

There is nothing particularly startling about the statement that the middle class is especially hurt by a combination of inflation and recession, and the supporting arguments given in this report are relevant. However, many of the statistics used in this report are mislabeled, outdated, or otherwise misused. (There are also many blank spaces and many with inadequate documentation which could not be traced in the time allotted, so the fact that a statistic is not mentioned here should not be taken to indicate that it has been verified.)

The report states that real disposable personal income dropped 3.4 percent in 1974. This was actually the percent by which per capita real disposable income fell, while the total declined by only 2.8 percent (less than per capita since population increased). In the same paragraph the report states that household savings and other wealth declined 11.7 percent in 1974 while household debt rose by 18.6 percent. I have been unable to find any estimates approaching these magnitudes, but can note that the usual sources for such data are the flow-of-funds accounts of the Federal Reserve. In these accounts the household sector (which includes households, personal trusts, and non profit organizations) showed a decline in assets of 5.2 percent and an increase in liabilities of 6.4 percent in 1974.

The value of a 1967 dollar was 72 cents at the end of 1973, not 75 cents, which was the average value for the year as a whole. This

statistic is obtained by dividing the Consumer Price Index for the year chosen as base by the index for another year. Thus, the change in the value of the dollar is not an alternative to the change in the Consumer Price Index as a measure of inflation, but is actually the change from the year being compared with the base year, which, whenever the value of the dollar has declined, will always be smaller than the change in the Consumer Price Index. (The 28 percent decline in the value of the dollar, from \$1.00 to \$.72 resulted from a rise in the Consumer Price Index of 38.5 percent.) The average for the Consumer Price index in 1973 was 133.1. The December 1973 index was 138.5. The Wholesale Price Index averaged 134.7 in 1973, and was 141.8 in December 1973. (The 135.5 given in the report was the 1973 average before major revisions in the petroleum components which affected the total index.) These are all widely available Government statistics that are easily verified.

While some private colleges may now cost \$25,000 to \$30,000 for 4 years, and some public ones \$18,000 or more, the College Board estimates of average annual costs, including tuition, room and board, books and personal expenses, for the academic year 1975-76 were \$4,391 for private institutions and \$2,679 for public institutions.

The paragraph on net financial assets of households mixes current and constant dollars in a way which would be misleading, and may also contain some errors. According to the flow-of-funds accounts total

net financial assets of households were slightly lower at the end of 1974 than at the end of 1968. The 1974 level was 81.6 percent of the 1972 level, the 64 percent given in the report was probably obtained by converting the 1974 figure to 1972 dollars without so indicating. The next sentence says that household insurance and pension reserves declined 40 percent from 1968 to 1972 when in fact they increased 40 percent in current dollars (which would be more consistent with the conclusions of this report) and increased 17 percent in 1968 dollars. From 1972 to 1974 reserves increased 3 percent in current dollars, and declined 15.6 percent in 1972 dollars, while the report says they increased 18 percent.

The report quotes estimates by the Joint Economic Committee that the median price of new single family housing reached \$41,300 by mid-1975. This number apparently comes from a CRS study released by the JEC which quoted a Federal Home Loan Bank Board estimate of \$41,300 for November 1974. This study found that a minimum annual income of \$23,330 was required to finance such a house in 1974. According to the Census, in 1974, 28.3 percent of all families had incomes between \$15,000 and \$25,000, and 11.5 percent had incomes of \$25,000 and above. The report gives \$16,000 as the income needed to finance a \$41,300 house, and claims only 16-1/2 percent of families had that income or more.

The second part of this section of the report speaks movingly of

the difficulties of the middle class, especially in financing higher education and housing, but makes no real reference to policy questions which have been extensively debated elsewhere.

Concerning education, the major program developed to deal with the "squeeze on the middle class" was the student loan program. This is now in disarray because of the ability, and frequent willingness, of borrowers to avoid repayment by declaring bankruptcy. A discussion of national policy might be expected to explore ways to make the student loan program work, and also the broader questions of the extent to which society should be responsible for making higher education available.

This sections also contains the statement that "... the nation must consider whether it must modify or lower its standards of housing and postpone the goal of universal home ownership." It does not make any reference to the frequently raised question of whether such a goal is consistent with environmental concerns and energy conservation. Since, in the eyes of many, this goal of "universal home ownership" is more a result of national policy as carried out through the tax system, the Federal highway program, and other policies which favor suburban over urban growth, a discussion of national policy might be expected to consider what the national policy on housing has been, what it now is, and what future policy would be most desirable.

CHAPTER FOUR

NEW PRESSURE IN GOVERNMENT

A. THE FISCAL PROBLEMS OF GOVERNMENT

Recent congressional hearings on the role of the Federal Government in assisting New York City during its fiscal crisis gave evidence of the lack of comparable data on the current financial condition of State and local governments.^{1/} Census Bureau data do not provide periodic information on cash receipts and cash disbursements of operating funds, unencumbered cash balances, investments on hand, and short-term loans outstanding. Information that is presented in special surveys by various public interest groups and media representatives summarizes individual State and local governments reports which are based on varying accounting principles. Particularly misleading is the use of State and local budget documents which are frequently based on accounting principles other than those used for maintaining the official State and local fiscal records. In addition, national aggregates on State and local finances, as developed for the national income accounts, are based on concepts entirely different from Census Bureau data.

This chapter is not consistent in the use of the annual statistical

^{1/} See testimony on July 10, 1975, by John Shannon, Assistant Director, Advisory Commission on Intergovernmental Relations before the Intergovernmental Relations and Human Resources Subcommittee of the House of Representatives Committee on Government Operations; also a Department of the Treasury memorandum summarizing efforts to develop a Treasury program to analyze the finances of all major U.S. cities submitted on November 7, 1975, to the Commerce, Consumer and Monetary Affairs Subcommittee of the House of Representatives Committee on Government Operations. (Hearings have not been published as of January 5, 1976.)

series on governmental finances developed by the Census Bureau. It does not identify the concepts used in data assembled by other than governmental sources. In several instances statistics used are not properly supportive of information for the conclusions at hand. For example, the following statement (page IV 1) is made: "The cost of running cities has been rising at an annual rate of eleven to fourteen percent, but the yield of local taxes has risen at a rate of only 8.8 percent." The Census Bureau report, City-Government Finances in 1973-74, shows the following percent changes from the prior fiscal year for total direct expenditures and total tax revenues:

<u>Fiscal Year</u>	<u>Total Direct Expenditures</u>	<u>Total Tax Revenues</u>
1973-74	8.9	5.1
1972-73	9.3	8.3
1971-72	12.3	13.0
1970-71	14.3	10.6

It is possible that instead of "city governmental finances" comparison was meant to cover all local governments. In that event local government tax revenues collected during fiscal year ending June 30, 1975, amounted to \$6.13 billion or 9.1 percent above fiscal year 1974 contrasted to a percentage increase of 8.5 percent in fiscal 1974 over 1973 and 6.6 percent in fiscal 1973 over 1972.^{1/} Increases in

^{1/} Bureau of the Census, Quarterly Summary of State and Local Tax Revenue, April-June 1975 issued October 1975. Computations by CRS.

direct general expenditures of local governments over the previous year were as follows: 9.5 percent in 1973-74 over 1972-73, 8.6 percent in 1972-73 over 1971-72, and 11.3 percent in fiscal years 1971-72 over 1970-71.

Since tax revenues at the local governmental level do not constitute the major portion of local governmental resources, more proper comparisons would relate either of two concepts developed in the statistical compilations by the Census Bureau. These are: total revenues and total expenditures and "general revenues from own sources" and "direct general expenditures." The first concept includes transactions of liquor stores, public utilities, social insurance funds, and all operating funds; the second covers transactions relating to "general governmental purposes."

Data in Table 1 indicate that total annual increases in local governmental expenditures amounted to 9.7 percent in fiscal years 1973-74, 9.5 percent in fiscal 1972-73, 11.2 percent in 1971-72, and 13.7 percent in fiscal 1970-71. Increases in total local revenues from all sources (see Table 2) amounted to 10.9 percent in 1973-74, 14.1 percent in 1972-73, 12.1 percent in fiscal 1971-72, and 13.4 percent in fiscal 1970-71. On the basis of this concept, the discrepancies in revenue and expenditure growth in the past four years do not approach the dimension outlined in this chapter.

If the relative changes for local governmental "general revenues from own sources" are compared to "direct general expenditures," the

Table 1

Total Expenditures by States and Local Governments and Separately for States and Local Governments (Amounts in Millions of Dollars) and Percent Change from the Prior Year, Fiscal years 1963-64 through 1973-74

Fiscal years	<u>1/</u> Total Expenditures	<u>2/</u> State	<u>3/</u> Local
1963-64	80,579	42,583	51,199
1964-65	86,686	45,639	55,482
1965-66	94,906	51,123	60,994
1966-67	105,978	58,760	66,648
1967-68	116,234	66,254	72,357
1968-69	131,600	74,227	82,698
1969-70	148,052	85,055	92,522
1970-71	170,766	98,840	105,167
1971-72	188,825	109,243	116,913
1972-73	205,195	118,836	127,983
1973-74	226,032	132,134	140,387
Percent change from prior year			
1963-64	-	-	-
1964-65	7.58	7.18	8.37
1965-66	9.48	12.02	9.93
1966-67	11.67	14.93	9.27
1967-68	9.68	12.75	8.57
1968-69	13.22	12.03	14.29
1969-70	12.50	14.59	11.88
1970-71	15.34	16.21	13.67
1971-72	10.58	10.53	11.17
1972-73	8.67	8.78	9.47
1973-74	10.16	11.19	9.69

Source: U.S. Bureau of the Census: Governmental Finances in 1973-74 (annual); Historical Statistics on Governmental Finances and Employment, 1972 Census of Governments, Volume 6, Number 4.

- 1/ Covers fiscal year endings between the twelve month period beginning July 1.
- 2/ Includes expenditures for all purposes- general governmental, liquor stores, insurance trust, and public utilities. Excludes duplicative transactions between levels of government.
- 3/ Payments to other governmental units are included.

gap does not approach the 8.8 percent rise in revenue or the 11.0 to 14.0 percent rise in expenditures quoted in the report. The summary below is abstracted from Appendix Tables 3 and 4 and shows percentage changes from the prior year:

<u>Fiscal Year</u>	<u>General Revenue from Own Sources</u>	<u>Direct General Expenditures</u>
1973-74	8.8	9.5
1972-73	9.4	8.6
1971-72	12.1	11.2
1970-71	11.9	14.1

Whether 8.8 percent increase in "general revenues from own sources" is only coincidentally identical with the data on page IV is not known since the report does not identify the time period to which it applies. It will be noted that the range in the rate of increase used in the report was true for fiscal years 1972 and 1971.

3. Rising Expectations for Government Services and Benefits

Although the report on page IV 1) quotes the "\$27 billion deficit for State and local governments," it does not put it in context of the national income accounts or the analysis developed by the Council of Economic Advisers. According to the presentation by the Council's Chairman before the Subcommittee of the House General Operations Committee, State and local outlays, in real terms, grew by 1.8 percent during calendar year 1975.^{1/} This rate was considerably below the annual rate of 4.3 percent (real terms) during the preceding five years. Prospects for calendar year 1976 projected by the Council

1/ See footnote 1, hearings of November 7, 1975.

Table 2

Total Revenues by States and Local Governments and Separately for States and Local Governments (Amounts in Millions of Dollars) and Percent Change from the Prior Year, Fiscal Years 1963-64 through 1973-74

Fiscal years	<u>1/</u> Total Revenues	<u>2/</u> State	<u>3/</u> Local
1963-64	81,455	45,167	49,578
1964-65	87,777	48,827	53,408
1965-66	97,619	55,246	59,268
1966-67	106,581	61,082	64,608
1967-68	117,581	68,460	70,171
1968-69	132,153	77,584	79,274
1969-70	150,106	88,939	89,082
1970-71	166,090	97,233	100,993
1971-72	189,724	112,309	113,162
1972-73	217,616	129,808	129,082
1973-74	237,916	140,815	143,193

Percent change from prior year

1963-64	-	-	-
1964-65	7.76	8.10	7.73
1965-66	11.21	13.15	10.97
1966-67	9.18	10.56	9.01
1967-68	10.32	12.08	8.61
1968-69	12.39	13.33	12.97
1969-70	13.59	14.64	12.37
1970-71	10.65	9.33	13.37
1971-72	14.23	15.51	12.05
1972-73	14.70	15.58	14.07
1973-74	9.33	8.47	10.93

Source: U.S. Bureau of the Census: Governmental Finances in 1973-74 (annual); Historical Statistics on Governmental Finances and Employment, 1972 Census of Governments, Volume 6, Number 4.

1/ Covers fiscal year endings between the twelve month period beginning July 1.

2/ Includes expenditures for all purposes- general governmental, liquor stores, insurance trust, and public utilities. Excludes duplicative transactions between levels of government.

3/ Payments to other governmental units are included.

included a continuation of the 1975 growth rate into calendar 1976 and a liquidation of the "deficit" by the fourth quarter of 1976. For the most part, the Council envisioned a "virtual cessation" in the growth of outstanding State and local indebtedness and an adjustment of operating expenditures to fit existing revenues.

The Council of Economic Advisers presentation did not specify the extent to which the slowdown in ^{the} 1975 actual growth rate and in the projected 1976 rate can be attributed to such long-term demographic factors as the slowdown in the increase of school-age children as opposed to cyclical factors. "But without the recession and the difficult adjustments which it posed, the slowdown would certainly not have been as abrupt or as painful as it has proven."

In the discussion in this section no attempt has been made to quantify the recent changes in the demand for governmental services or in the willingness of State-local decision makers to assume improved or additional services. While the historical account provides useful perspective, the conclusions assume that the long-term trends are continuing.

5. The Escalating Cost of Capital Financing

There is no assessment in this section of State and local borrowing in constant dollars. From fiscal 1963-64 to fiscal 1973-74, State and local outstanding indebtedness in current dollars increased by 147 percent. In constant dollars, the increase for this same ten-year period amounted to 53 percent. Preliminary figures for fiscal year 1975 indicate, that in real terms, the outstanding indebtedness declined by one percent from fiscal year 1974. Materials in this report

Table 3

Total General Revenues From Own Sources by States and Local Governments and Separately for States and Local Governments (Amounts in Millions of Dollars) and Percent Change from the Prior Year, Fiscal Years 1963-64 through 1973-74

Fiscal Years ^{1/}	General Revenues From Own Sources ^{2/}	State	Local
1963-64	58,440	28,184	30,256
1964-65	62,971	30,610	32,361
1965-66	69,822	34,511	35,311
1966-67	75,827	37,782	38,045
1967-68	84,083	43,197	40,886
1968-69	95,398	49,537	45,861
1969-70	108,899	57,507	51,392
1970-71	118,782	61,290	57,492
1971-72	135,100	70,651	64,449
1972-73	150,958	80,432	70,526
1973-74	165,899	89,157	76,742
Percent change from prior year			
1963-64	-	-	-
1964-65	7.75	8.61	6.96
1965-66	10.88	12.74	9.40
1966-67	8.60	9.48	7.46
1967-68	10.89	14.33	7.47
1968-69	13.46	14.68	12.17
1969-70	14.15	16.09	12.06
1970-71	9.08	6.58	11.87
1971-72	13.74	15.27	12.10
1972-73	11.74	13.84	9.43
1973-74	9.90	10.85	8.81

Source: U.S. Bureau of the Census: Governmental Finances in 1973-74 (annual); Historical Statistics on Governmental Finances and Employment, 1972 Census of Governments, Volume 6, Number 4.

^{1/} Covers fiscal year endings between the twelve month period beginning July 1.

^{2/} All revenues collected except utility revenue, liquor stores, and insurance trust revenue.

Table 4

Total Direct General Expenditures by States and Local Governments and Separately for States and Local Governments (Amounts in Millions of Dollars) and Percent Change from the Prior Year, Fiscal Years 1963-64 through 1973-74

Fiscal Years <u>1/</u>	Total Direct General Expenditures	<u>2/</u>	
		State	Local
1963-64	69,302	24,275	45,027
1964-65	74,678	26,273	48,405
1965-66	82,843	29,162	53,681
1966-67	93,350	34,249	59,101
1967-68	102,412	38,446	63,966
1968-69	116,727	43,244	73,483
1969-70	131,331	48,749	82,582
1970-71	150,674	56,478	94,196
1971-72	166,873	62,051	104,822
1972-73	181,086	67,264	113,822
1973-74	198,618	73,950	124,668

Percent change from prior year

1963-64	-	-	-
1964-65	7.76	8.23	7.50
1965-66	10.93	11.00	10.90
1966-67	12.68	17.44	10.10
1967-68	9.71	12.09	8.23
1968-69	13.98	12.42	14.88
1969-70	12.51	12.73	12.38
1970-71	14.73	15.85	14.06
1971-72	10.75	9.87	11.28
1972-73	8.52	8.40	8.59
1973-74	9.68	9.94	9.52

1/ Covers fiscal year endings between the twelve month period beginning July 1.

2/ Includes expenditures from all funds and for all purposes except liquor stores, insurance trust, and public utilities.

Source: U.S. Bureau of the Census: Governmental Finances in 1973-74 (annual); Historical Statistics on Governmental Finances and Employment, 1972 Censuses of Governments, Volume 6, Number 4.

do not provide any perspective on the extent to which capital needs are being met. (For example, to what extent has the "classroom backlog" as reported by the Department of Health, Education, and Welfare been scaled down in the past year?)

6. Leveling off of Federal Financial Assistance to State and Local Governments

Reference to Federal budget data has provided us with an entirely different perspective on the "leveling off of Federal financial assistance to State and local governments" than that reported on page IV-9. Although Federal aid to States and local governments increased only by 4 percent in fiscal year 1973 and 7 percent in fiscal year 1974, the increase from fiscal year 1974 to 1975 amounted to 20.4 percent. Unrevised budget data for fiscal year 1976 place the increase at 13.6 percent. These increases are sufficiently large to match the rate of inflation (i. e. the GNP deflator on the 1959 base).

If Federal aid payments are related to State and local revenues from their own sources, ^{1/} Federal aid funds were equivalent to 26.0 percent of revenues raised by State and local governments in fiscal years 1972-73. By fiscal years 1973-74, Federal aid payments amounted to 25.3 percent of State-local revenues from their own sources. Part of the reason for large 1972-73 proportion were retroactive payments of general revenue sharing entitlements.

7. Obstacles to Increased State and Local Taxes

The discussion on the obstacles to increased State and local taxes

^{1/} Census Bureau data are not available for expenditures "from own sources" as implied in the report.

does not provide information on the progress made in the past two years in lessening reliance on local property taxes and in the increase in income based tax levies. It is misleading to quote the ACIR burden comparison without showing the extent to which social security taxes account for the "increased regressivity."

On page IV-11 the statement on the slowing of the rate of growth in State and local taxes "due to economic conditions" is misleading. For fiscal year 1974, the smaller increase of 8.9 percent (contrasted to 10.1 percent in fiscal year 1973) was attributed to increased revenues from general revenue sharing. State-local tax revenues for fiscal year 1975 were 8.7 percent greater than in fiscal year 1974. The taxes with the smallest proportion of growth during fiscal year 1975 were generally those based on volume rather than price, e.g. motor fuel taxes. Income tax receipts increased by 11.1 percent (contrasted to 9.1 percent in 1974); corporate income taxes-- 17.1 percent (contrasted to 10.8 percent in 1974); but general sales taxes rose only 10.7 percent (contrasted to 16.4 percent in 1974).

8. Fiscal Imbalance in the Federal System

Finally, the reference to the special HUD study (IV-13) on composite finances of selected local governments is not the best source for disparities in service levels between central cities and the suburbs. A more complete analysis based on 72 metropolitan areas was made in the 1973 publication by the Advisory Commission on Intergovernmental Relations on financial emergencies in cities.

B. DECLINING CONFIDENCE IN THE CAPABILITY OF GOVERNMENT INSTITUTIONS

Decline in Confidence in Governmental Institutions

The report refers to the general decline in confidence in Government among our citizens and contends that "ambitious federal social programs of the 1960's" have been a major contributor to "the gap between what government has promised and what it has delivered." This, it contends, in turn is a major cause of the loss of confidence.

While our failure to adequately fund the programs needed by our people may contribute to the lower rates of confidence, these rates are also related to other factors not included in the report. Recent surveys suggest that confidence is lowered by perceptions that politicians do not care about the people, are not listening to ordinary people, or lack integrity. In a landmark survey of this issue, Louis Harris reported to the Senate Government Operations Subcommittee on Intergovernmental Relations:

"Americans expect more integrity and energy of the men and women in government than the public thinks elected and career officials are now delivering, and Americans are only moderately optimistic that these important standards of political leadership can be realized."

The events since 1973, when the Harris study was conducted, have demonstrated that the integrity of the political process is essential to restoring that confidence.

As the HUD report rightly points out, "Government policymakers moved from crisis to crisis responding to one after another... But there was limited follow through in the provision of adequate financial resources..." However, we should not confuse dissatisfaction over inadequate funding with lack of public support for needed programs. The report appears to do so.

In recent testimony presented before the Joint Economic Committee, several distinguished experts in public opinion polling did not attribute lowered confidence to enactment of the social programs of the 1960's. In fact, according to results reported from a recent poll taken by Pat Cadell, 43 percent of the public would like to see an increase in Government spending on the elderly, 46 percent would like to see more spent for health care, and 32 percent would like to see more spent for education. Leading the list of those areas in which the public would like to see spending reductions (according to Cadell are foreign aid, defense, and space exploration.

The way to restore confidence in Government is to assert our leadership to ensure that the needs of the people are met. Confidence is not damaged by Government's size or breadth but by its ineffectiveness.

CHAPTER FIVE

ACCOMMODATING ENERGY IMPERATIVES

The serious errors and omissions resulting from failure to recognize the central significance of our present overwhelming dependence on diminishing supplies of oil and natural gas are once more demonstrated in the cursory treatment of this crucial topic in the report. The primary energy imperative -- the inescapable need to rapidly shift the economy from a petroleum base to fuels that will be domestically available over a large period of time -- is not addressed at all, even in the section entitled, "The Challenge of Coal and Oil Priorities." This fault is compounded by the additional failure -- whether from ignorance or choice -- to even take note of several major congressional legislative initiatives which mark 1974 and 1975 as historic years in the shift to a new national energy policy, a shift which does recognize this primary imperative.

The many laws passed by Congress addressing this point seem to be unknown to the authors of this report, and as a result, the report not only misstates the amount which was recommended for conservation research and development by the Conference Committee on ERDA authorizations for FY 1976 and the transition period, but also neglects to mention the \$218, 728, 000 authorized for solar energy development in the same bill, an activity acknowledged by the authors as a major conservation measure in the same section.

The report also fails to mention the far-reaching conservation measures which, in addition to promoting automotive fuel economy and encouraging conservation in energy-intensive industries, were authorized or mandated in Title III of P.L. 94-163, the Energy Policy and Conservation Act signed December 22, 1975. Furthermore, Titles II, III,

and IV of the companion omnibus Energy Conservation and Conversion Act of 1975 which passed the House on June 19, 1975, include strong measures, including taxation, to encourage or require energy conservation and conversion to non-petroleum fuels.

In addition to emergency energy conservation measures and the establishment of strategic petroleum reserves, the newly enacted Energy Policy and Conservation Act requires improved automotive fuel efficiency. It requires that average fuel economy for passenger cars be no less than 27.5 miles per gallon by 1985, with strong civil penalties for non-compliance. The law also authorizes a \$150 million Federal grant-in-aid program to assist States in developing and administering State energy conservation programs, the target being a 5% reduction in projected levels of energy consumption by 1980.

An industrial energy conservation program for the ten most energy-intensive industries has a target savings of 400,000 to 600,000 barrels of crude oil per day by the early 1980's. All Federal agencies are required by the Act to develop a ten-year plan for energy conservation. Under authority previously granted and exercised under the Energy Supply and Environmental Coordination Act of 1974, the Federal Energy Administrator is authorized to direct power plants and other petroleum burning installations to convert to the use of domestic coal. All power plants that have a coal-burning capability on June 22, 1974, or acquire it thereafter, would be required to use coal. An even stronger provision is included in S. 1777, the National Petroleum and Natural Gas Conservation and Coal Substitution Bill, which is scheduled for Senate vote early in the Second Session.

The companion bill H. R. 6860, which is being marked up in the Senate Finance Committee, also mandates improved auto fuel efficiency. In addition it provides five-year amortization and investment credits for energy-conserving capital equipment purchases and investments, substantial income tax credits to offset costs of home insulation, installation of residential solar energy equipment, purchase of electric-powered motor vehicles as a gasoline conservation measure, and creates an Energy Conservation and Conversion Trust Fund, revenues for which may total up to \$5 billion in any one year, through 1985, to promote conservation and develop new energy sources.

An even greater gap in comprehension of the policy issues central to "Accommodating Energy Imperatives" appears in the handling of "price regulatory strategies" which receives only one-page treatment as one of eight sub-points under a section called "Growth Implications." There is not the slightest recognition of the fact that price and regulatory strategies are the major means by which both the Administration and the Congressional Majority have approached the task of "accommodating energy imperatives." There is no recognition that on matters of both price and regulation, the Administration and the Congressional Majority have taken diametrically opposing positions, the respective position of each reflecting fundamental differences in the philosophy of energy management and policy.

The Administration has taken a policy position which would order deregulation of natural gas and removal of price controls on old oil, coupled with establishment of a floor price of oil to insure long-term high prices to stimulate domestic production and protect synfuel industry. Its spokesmen

argue that reliance on price and the free market would be the best way not only to promote conservation but also to promote increased production of all domestic fuels, particularly the expensive synthetics which might otherwise suffer from cartel price-cutting tactics. Stand-by allocation authority is considered by the Administration to be adequate to handle any instances of regional shortage.

The Congressional Majority, on the other hand, flatly rejected this negative approach, arguing that the price of energy is not being determined by the free forces of the market but by the governments of the oil-producing nations. There is little to be gained by allowing the price of oil produced in this country under any circumstances to be set by those governments as well, whose objectives are far different than our own.

Recognizing that the era of inexpensive oil and gas is over, Congress has nonetheless insisted on maintaining the authority and option to monitor and manage the price increases that occur. This continued authority, which is reflected in the recent Energy Policy and Conservation Act, represents a compromise which leaves that basic management authority clearly under Congressional oversight and control.

Pricing policy is not the only means by which the Congressional management is being promoted. Perhaps the most unique feature of the Congressional energy initiatives during this period has been the emergence of the use of quantitative limits as a major management tool in conserving energy, redirecting demand and stimulating increased production. This approach is a distinctive alternative to the Administration's heavy reliance on market oriented approach.

Four key bills have incorporated quantitative control concepts of this type: The House Ways and Means energy bill, H.R. 6860, approved June 19, 1975, would place quantitative limits -- subject to some flexibility -- on the volume of crude oil and oil products which could be imported.

The Senate National Petroleum and Natural Gas Conservation and Coal Substitution bill, S. 1777, and the National Energy Production Board bill, S. 740, both of which have been targeted by the Congressional leadership for floor action early in the Second Session are oriented toward quantitative limitation concepts. The Coal Substitution bill would limit the number of oil and gas fired power plants and industrial boilers to those existing now and would require them to convert to coal by 1980; and require all new power plants and industrial boilers to be capable of burning coal and to convert to coal by 1985. The National Energy Production Board, to be patterned after the War Production Board of World War II, would be charged with establishing quantitative energy production goals and programs whose priority claims on scarce materials and capital would have the effect of placing quantitative limits on all less essential claims on energy and materials.

What is unique is that these particular ceilings are set in volumetric, not percentage, terms. Even the long standing mandatory oil import control program did not have limits fixed in quantitative volumetric terms.

Enactment of legislation setting a quantitative ceiling on oil imports and mandating conversion to coal for key industrial uses would mark a major change in U.S. oil policy and require significant conservation in the use of oil and a shift to other fuels.

The Energy Policy and Conservation Law (P.L. 94-163) included a quantitative ceiling limiting the volume of gasoline which could be consumed

during the next three years to no more than the 1973-1974 levels and authorized the President to impose direct controls on refiner operations to limit the production of gasoline if this were required to achieve the ceiling. The ceiling on gasoline consumption was dropped in conference but the Presidential authority to control refinery operations was retained.

It should not be forgotten that the 94th Congress has also taken the unprecedented act of repealing the almost sacred depletion allowance which had served in the past as the major policy measure intended to encourage production.

After sixty years in which this provision was a key factor in the U.S. petroleum industry's exploration, production and pricing policies, Congress repealed the 22 percent depletion allowance in its entirety for all major oil and natural gas producers, identified as those producing more than 2,000 barrels of oil per day, or 12 million cubic feet of natural gas per day, postponing its abolition for independent companies who do not have retail outlets and produce less than these amounts, on a graduated schedule until 1984.

Although a number of major companies have stated that removal of the depletion allowance would require reconsideration and reduction in their capital investment plants, much of the reductions has taken place in projected capital ventures other than exploration and investment.

Regardless of what the role of the depletion allowance has been in the past, its recent repeal clears the way for a fresh look at oil and other fossil fuel production incentives whose effectiveness as stimulants to increased domestic production can be more easily measured and identified.

Even though there is much that may be of interest in the 38 pages of discourse in this chapter, these fundamental omissions result in a final product that is unbalanced and incomplete.

While this section of the draft report quite correctly points out that there is considerable debate over the role of energy conservation in energy policy goals, and further recognizes that many proponents of energy conservation are, in fact, no growth advocates. The bulk of the section catalogues various conservation measures which can be taken in urban development, transportation, building design and energy pricing, and does point out that there are other social and economic goals which must be balanced against energy conservation policies.

The principal comment on this section is that there does not seem to be an overall development of growth policies which can be achieved and also be consistent with national policies on energy conservation. Indeed, the issue of the possible trade-off in growth for conservation is to some extent sidestepped in each of the subsections. This section suggests that energy demand is insensitive to price. It is probably true that in the short run, energy demand is relatively price inelastic. But in the longer run, rising energy prices can be expected to bring forth technological innovations which are directed at improved efficiencies in energy use. In this case, there would not necessarily be a growth/conservation trade-off; and it is here that a paper on national growth policies should focus.

In the transportation section (B. 5.), no recognition is made of the recent increased use and production of the small, fuel-efficient

car, primarily as a result of the rising oil prices following the Arab boycott of 1973. And the electric car is also not mentioned as a new or emerging technology which could certainly change the gasoline/oil consumption patterns in the U. S.

In the section on electricity rate structures (B. 7.), the statement that electricity is a relatively inefficient source of energy requires fuller explanation. Although electricity is inefficient in production, it is 100 percent efficient at end use, whereas oil and gas can have as high as 40 percent energy loss in end use conversion.

One final point: In any discussion on energy conservation and national growth, there should be a fuller development of the role of electricity in national energy conservation programs. Continued economic growth may in fact depend on national energy independence. One way to achieve independence and to "conserve" our domestic oil and gas supplies for nonsubstitutable uses, is to substitute electricity produced from domestic coal and nuclear energy for oil and gas used in residential and industrial heating processes.

CHAPTER SIX

GROWTH CONSEQUENCES OF ENVIRONMENTAL RE-EVALUATION

With the maturing of environmental awareness, many relationships among economic needs, environmental quality and social concerns have become more obvious to us, it is true. However, the attempt in this report to discuss these issues reveals a woeful lack of understanding of these interrelationships. To view environmental quality in opposition to growth, the perspective apparently underlying much of this chapter, is to fail to deal with one of the most fundamental aspects of growth problems: the need to incorporate the two.

Section A: The Impacts of "Impact Statements."

The first part of Chapter Six, "Growth Consequences of Environmental Regulations", which addresses the "Impact of 'Impact Statements'", has numerous disturbing inadequacies. Although it is couched in terms of a pro and con discussion of environmental impact assessment procedures, its tone, use of misleading facts or assertions, and undue attention to several "horror stories" result in a vague polemic. The result does not adequately treat either side of the issue; and its publication in the present form would seriously mislead anyone interested in an evenhanded analysis of the issues involved. This discussion of impact statements is of the type frequently encountered in interest group literature where the sole purpose is the presentation of the negative aspects of things, in order to make a case for the desired relief. It is far from adequate as part of a Federal agency's report of findings and recommendations concerning an increasingly significant area of national policy. Moreover, in this case, the

Department which is making the report has been subject to continuing criticism concerning its own compliance with the law requiring analyses of the environmental impact of its "major Federal actions." The drafters of this report on national growth policy obviously were aware of how their bread is being buttered. Few terms, if any, are adequately defined as they are used in the impact statement section of the report; neither are appropriate statistics used to support the assertions made. The result is an anecdotal survey of the questions raised. The chapter's theme is reflected in the title: "Growth Consequences of Environmental Regulations." Specific meanings of "growth" or assumptions underlying the growth ethic are not made clear, but numerous environmental quality requirements are said to impinge upon growth. In this context "growth" is often used synonymously with the ability to complete challenged projects, thus by direct implication denying the desirability of an impact assessment process. This abuse of the English language is carried further by overly broad generalizations which blur the necessary distinctions between the basis for the environmental assessment process and the issues involved in activities which constitute growth. Much of the discussion of this type attacks the assumptions behind the National Environmental Policy Act (NEPA) and its impact assessment requirements. The corresponding issues which relate the desirability of maintaining increased rates of growth or economic development to other social necessities are not even directly examined.

The report contains several erroneous facts about impact statements, as well as doubtful judgments concerning public reaction to the assessment process -- judgments not substantiated by most of the relevant documentation

available outside this report. The basic mistake is confusion of the environmental impact assessment process with other, separate environmental quality standards or regulations. The assessment process is the use of analytical techniques and methodologies, combined with intergovernmental coordination and review procedures, which identify important environmental issues but do not affect the discretion of public-decision makers.

This confusion of a process with other standard-setting activity, leads to a gross error of fact in the report when it states that the Environmental Protection Agency and the Council on Environmental Quality -- in that order -- are the "agencies that supervise and monitor NEPA's requirements." This statement reveals a lack of understanding of the NEPA and its requirements. In fact, it is only the Council -- not EPA at all -- that "supervises" the process. Although the EPA's participation in the process is considerable as a reviewing agency, its role is similar to that of the other mission agencies.

The Department of Transportation is cited as an example of a Federal agency that has "taken these [growth-related environmental assessment] admonitions to heart, whether growth is interpreted as a medium of environmental impact or a primary aspect of it". This, apparently, is because the Department's highway impact statements outnumbered those filed by other agencies. But instead of examining the Department's impact assessment procedures and compliance under NEPA, the report quotes extensively from the September 1975 "Statement of National Transportation Policy" to indicate that the Policy incorporates the objectives of NEPA related to "secondary" growth impacts.

The report's attempt to balance its discussion of the impact assessment process includes the inference that environmentalists agree on five problems with NEPA's implementations. These are highly questionable, and only one or two of these problems would likely be taken seriously by recognized experts on NEPA. One of these "problems" seems to revive the "chicken-egg" argument in relation to government decision-making: "The postponement of public review until after the statement has been prepared (and . . . after the agency decision has been made. . .)".

Another criticism attacks the "snapshot" nature of assessments, or that they evaluate an action in the context of constraints in the form of "fixed assumptions as to existing environmental quality levels and the nature and direction of growth." These constraints are implied to bias the assessment process toward anti-growth attitudes. These "fixed" assumptions are in fact completely outside the NEPA process. Furthermore, this criticism ignores the central focus of environmental impact assessment as provided for in Section 102(2)(c) of the law, to wit that "alternatives to the proposed action" must be assessed also.

A predominant theme in the report's impact statement discussion is the extent to which a "reconsideration" of the desirability of environmental impact assessment is needed. Notwithstanding improvements that may be legitimately needed in the assessment process -- as stated by serious students of it -- the report uses examples of opposition (primarily by development interests) to set up "strawmen" or false dichotomies to create cause and effect relationships between impact assessment and broad economic problems including recession, unemployment, and inflation. In this case, the use of data and statistics is sorely lacking; again, anecdotes

and superficial references are relied upon in an attempt to establish a broad line of reasoning about delays and expenses caused by impact statements. Again, too, this attack was made in the context of a discussion which failed to adequately define and analyze the elements of the assessment process or the growth issue; although it dwells at some length on the "uncertainties and slowdowns in development".

The report continued its anti-environment tone by lending credence to the argument that during six years NEPA had led to "protracted delays caused by extensive litigation," and "that inadequate consideration is given to the immediate social and economic consequences of long-term postponements in development" [emphasis added]. In fact, such delays are not likely to have truly long-term effects except in cases where serious and extensive real public opposition exists.

The tortured language of the report implies as a whole, that environmental impacts may be nice to consider, but the benefit of the doubt should nearly always be given to development interests. In other words, if an impact assessment is to be done, it should focus on the reasons why development should take place.

The report also discusses a pending Supreme Court case charging the Department of Housing and Urban Development (HUD) with failure to consider the environmental impacts of private developments registered with its interstate land sales office. This discussion develops a "horror story" of the voluminous workload that might be imposed on the Department if it loses the appeal. However, no mention is made by the report of the very real problems involved in potential environmental impacts -- or

growth impacts -- of these long standing, controversial, interstate land sales which include resort developments, and suburban housing subdivisions.

The issue was thus stated in such a way as to exclude the question of what environmental consequences would result from the land-sales program and focus only on the negative "growth consequences" of environmental assessments that would result.

Recent statistics compiled by the Council on Environmental Quality refute these contentions and allegations of significant adverse impacts on the national economy. In Congressional testimony during September 1975, the Council reported a majority (496 of 879) of NEPA-related court cases had been settled; and it pointed out that many of these suits were brought against agencies for failing to prepare impact statements -- not primarily as nuisance suits intended to delay actions. Further studies released by the Council in late 1975 indicated that environmental protection laws in general provided net benefits in economic activities.

One of the most misleading assertions made throughout the report about environmental impact statements was the extent to which advocates of strong impact assesment procedures, i. e., "environmentalists", sought to "re-evaluate" the effectiveness of the procedures. This assertion was reiterated several times in the discussion; but at no point were any groups, organizations, or individuals identified, or their positions on issues stated. Analysts of public interest and environmental group affairs have not in fact perceived a significant backlash such as the report indicated.

However, this did not prevent the report's frequent use of sweeping generalizations indicating extensive opposition among such groups or individuals. Not did it prevent the similar categorization of local public

officials and minority group leaders, who were said to be likewise disenchanted with such procedures. Again, no specific, organized opposition was cited or documented, nor were accounts of local government support for environmental programs and use of growth control programs included. This is not to deny that many people perceive problems or shortcomings with the implementation of NEPA by Federal agencies; but it is a distortion of reality to suggest, as the report does, that environmentalists in general "criticize the deficiencies of impact assessment as a means to accomplish these aims." A more realistic judgment would be that most environmentalists think the process should be strengthened, because in some ways, they feel, it has not been implemented as vigorously as it could have been.

When convenient to its purpose, the report overlooked or criticized the NEPA guidelines requiring the assessment of "cumulatively significant impacts" -- clearly central to growth issues, as in the thousands of interstate land development actions by HUD. In other instances, however, it was lamented: "there is no agency with either a mandate or capability to establish guidelines and criteria for examining growth consequences of decisions on their own terms" [that phrase again.] (my emphasis and bracketed note).

This is a glaring commentary on the report's failure to recognize that growth is connected intimately to most other human concerns. It does not have "its own terms."

In summary, the report failed to come to grips with the interconnections between growth issues and environmental impact assessment issues; it fails to recognize an inextricable relationship. The environmental impact assessment process is an attempt by our society to deal with growth problems. It is growth analysis, and responds directly to a perceived need

to better manage growth-related impacts. In this regard, the report is characterized by the following ambiguous passage: "Ironically, what gives force to attacks on the inadequacy of growth analysis is the growing dissatisfaction with the unanalyzed but manifest impacts on growth of the 'procedural' problems of environmental impact assessment; increased delay, expenses, uncertainty and slowdowns in development." (my emphasis)

One might conclude that the implicit recommendation of this part of the report is that growth can best be studied by looking the other way while moving full speed ahead.

B. NEW ISSUES IN THE IMPOSITION OF FEDERAL STANDARDS

Although the report discusses some very pertinent questions with regard to the economic and growth impacts of environmental regulations, it takes a two-pessimistic and often one-sided view of their negative effects while largely ignoring their demonstrated benefits. The report focuses on industry's arguments against abatement equipment, transportation control plans and indirect source review, and the court ruling of non-significant deterioration of air quality; but the study fails to consider adequately the national and regional benefits of environmental standards in terms of improved health and agricultural productivity as well as positive economic effects of air and water pollution control, such as employment in the abatement equipment industry.

By treating air and water pollution regulations together, the report confuses the analysis because the problems one is trying to cure in each of these areas and their effects on growth are different. Air pollution is above all the health problem, while water pollution, because of its recyclability is largely a problem of cost.

While achieving pollution control objectives to improve environmental quality will have some negative economic impacts on portions of some industry or at some local or regional level, it is counter-productive and misleading to emphasize the early closing of particular plants due to the high costs or installing pollution abatement equipment, when it is actually the inefficiency and marginal profitability of these plants that is the major factor in a decision to close them rather than to modernize. The report plays down the number of jobs generated as a whole from 1975 expenditures

for pollution control contrasted with employees affected by the plant closings of the last four years.

The JEC looked into the employment question and a host of others in its hearings just over a year ago on The Economic Impact of Environmental Regulations. The purpose of the hearings was to determine the nature of, and the degree to which, environmental regulations impacted on the economy. The conclusions were quite clear. There was very little impact on inflation, either in the past or expected over the next decade. The overall net effect on employment was virtually nil, with positive effects over the next few years being countered by negative impacts the following few years. A similar trend was discovered for economic growth. The analysis of costs and benefits was based on the best available estimates to date. Though admittedly these estimates are quite rough, their order of magnitude was clear enough to enable the Committee to conclude that environmental benefits to date had exceeded the environmental compliance costs and thus the nation as a whole was getting a good buy.

Although the negative effects of environmental regulations on plant closings and employment were discussed, no consideration was given the positive benefits to industry of pollution control. Dow Corporation is perhaps a leader in capitalizing on these advantages. According to comments by its Chairman of the Board, quoted in the Congressional Record:

"At Dow's Midland, Mich., plant, we are installing 28 cooling towers, at a cost of \$7.2 million, to reuse our cooling water. Better operating efficiency and lower water costs will give us a 10-percent return on this investment. That's not great, but it's not bad, either.

The Dow Corning Corp., at Hemlock, Mich., invested \$2.7 million to recover chlorine and hydrogen previously lost to the atmosphere in making silicon metal. The savings in operating costs are \$900,000 per year -- not a bad return.

Hercules spent \$750,000 to reduce the solids discharged into the Mississippi and is now saving \$250,000 yearly in material and water costs as a result.

Dow Midland division has saved \$6 million in materials that were previously lost to the sewers, in the last 3 years alone.

Seven pollution control projects, when installed in our 14 latex plants around the world, at a capital cost of about \$2 million, are expected to cut operating costs by almost \$2 million per year.

Through a project to save chlorinated solvents now being vented, Dow's Freeport, Tex., plant expects to save \$100,000 per year with a capital investment of only \$250,000."

The most serious omission in the report is its failure to discuss health dangers and many other adverse effects caused by polluting facilities. These include many damaging effects on agriculture, materials, and recreational and fishing industries. The report also fails to mention the high economic costs that may arise from the failure to regulate pollutants. For example, the regulatory breakdown that permitted occupational and environmental pollution by the chemical agent Kepone is now exacting a high price from former workers and from the fisherman who harvested fish

and shellfish from the James River. The river is now closed to fishing because of Kepone contamination. The extent of such risk remains disturbing because of EPA's failure to control nine identified toxic pollutants, including aldrin/dieldrin, toxaphene, cadmium, cyanide, DDT (TDE), endrin, mercury and PCB's, for which effluent discharge standards have not yet been established. The economic costs of not regulating pollutants deserve equal time with the report's discussion of the costs involved in pollution abatement.

The report's assessment of the transportation control plans promulgated under the Clean Air Act Amendments of 1972 contains inaccuracies. These plans do not focus on taxing and reducing central city parking as the report states, but rather incorporate a variety of strategies, depending on the city, for reducing vehicle miles travelled. It was not these plans per se that were "strenuously resisted" by the metropolitan areas. On the contrary! During Congressional oversight hearings on the Clean Air Act, elected representatives from these areas supported the plans as an effective approach to achieving air quality, but said the need for greater flexibility to deal with individual regional problems and especially the need for Federal funds to aid in the implementation of these plans. What's more, the delays imposed by Congress on parking surcharges was the result not so much of the "intensity of local opposition" as it was the opposition by Congress itself to parking restrictions in the Washington, D. C. area until satisfactory transportation alternatives become available.

The report's contention that environmental programs may determine and constrain the location of future development is accurate -- but the insinuation that this is automatically undesirable is objectionable. For instance, the court decision to prohibit "significant deterioration" of air quality even where it exceeds secondary standards forces states to develop a mechanism for rationally planning their development so that sufficient land is set aside for commercial, residential, and recreational purposes to satisfy the diverse and conflicting needs of a growing population. In fact, this process facilitates the benefits and minimizes detriments of growth -- and is not as implied by the report anti-growth activities. While the report states that "the implementation of a prohibition against a reduction in existing air quality would widely preclude new development in many rural areas now experiencing a long-awaited reversal of economic decline", California, Minnesota, Michigan, Texas, Illinois and 26 environmentally concerned organizations argue such a policy does not preclude economic growth. New Mexico and 15 other states hold a similar, but stronger view, that agriculture, mining, and craft production, tourism, health related services, movie production and other activities require a clean environment. In addition, the State of New York, Boston and New York City argue that in the absence of a no significant deterioration policy, the urban areas would be deprived of pollution-free air that now reached the urban areas and dilutes the polluted urban air. Furthermore, there is increasing evidence that atmospheric pollutants may seriously effect growth rates and yields of many sensitive agricultural crops. If industrial development is allowed to expand uncontrolled into rural areas, at some point there is likely to be substantial damage to agricultural production.

In general, the discussion of environmental regulations betrays a most unfortunate anti-environment bias which is entirely out of place in a serious discussion of growth questions. It is true that there are difficult questions to resolve, but the experiences of the past several years in pollution control has yielded many benefits both economic and social which deserve inclusion in a discussion of growth and the management of its effects.

Part 4: "Land Use Planning and Environmental Goals."

The discussion of land use planning requires separate discussion. It would take a whole essay to set the authors straight concerning this section of the report, so strange are the assumptions and so astonishing the assertions made. The primary assumption seems to be that something called "land use planning" is an inflexible system of incontrovertible values that they are at odds with other needs. The report apparently considers these values to dictate that people shall live packed together in metropolitan areas, if only for the energy savings this would produce.

Since this is inaccurately viewed by the report as the obvious goal of land use planning, the authors are constrained to conclude that there is no way to avoid an unreconcilable conflict between land use planning and goals to abate air and water pollution, because, as everyone knows, people packed together produce pollution. Thus, if you don't want pollution you have to disperse pollution-producers and this then disperses people uneconomically and unenergetically.

It seems impossible to unsnarl all this. But first of all, the authors should be aware that land use planning is a process by which public values can be expressed in a system of private development. One of the public

values -- expressed in many Federal and local laws -- is that air and water should not pose threats to human health. It cannot happen in any kind of systematic logic, therefore, that "planning" is antagonistic to pollution control. Planning must be used to facilitate it, in fact.

This confusion over what planning is has led the authors to some truly astonishing assertions: for example that pollution reduction has an anti-urban bias. Or that consumers are unwilling to pay the cost of pollution control, and are willing to put up with pollution in order to live in cities. This is at odds with every recent poll taken on this point. Another unsupported assertion is that "studies" have shown no correlation between air and water quality and the choice of where to live, as if the flight to the suburbs has no environmental causes or as if the polls which show that people want to live in small cities or rural communities more than anyplace else do not at all reflect disgust with environmental conditions. From the beginning of industrial settlement, the rich have lived upstream and upwind of the pollution sinks in the factory hollows. Are the authors unaware of that rather obvious piece of historical evidence or pollution awareness?

But rather than continue to take apart this section of the report, in a vain attempt to find something good in it upon which to build, one must simply state that if there is an unreconcilable conflict between the public goal -- and it is a public goal -- to reduce pollution, and some land use planners, then it is the planners who must be taken to task, not the public, or EPA, or the Congress for passing the pollution statutes to begin with. Irving Kristol, writing in The Public Interest in a widely reprinted article, provides a useful concept in the "faute de mieux" problem

of metropolitan growth. Too often it is assumed that because people choose A as a place to live (say the suburbs) rather than B (the inner city) it is because people really like A --- the suburbs--best of all. Not so. They like suburbs better than the inner city for the lack of any other choice. If people had their druthers, more often than not they would choose small towns, according to the polls, or rural communities near to, but not part of, a metropolitan area.

There is nothing inherently polluting about this desire, nothing inherently wasteful -- of energy, money, time, or anything else. In fact, the decentralist impulse that these attitudes suggest could have quite the opposite effect. It could reduce pollution, could reduce energy use, could increase employment diversity, could provide a host of other human benefits that this nation might well supply if we had the will and the gumption to ignore the "experts" who say things like the authors of this report. It is, in fact, the process of land planning which can help the nation, finally, to achieve many of its values -- including environmental quality incorporated at an optimum level with energy efficiency, economic needs, and social benefits.

CHAPTER SEVEN

HARD CHOICES IN NATURAL RESOURCES

There are, indeed, hard choices in decisions involving use of the Nation's natural resources, but the discussion in this chapter falls far short of identifying or delineating the true problems -- focusing mainly on that have been concern in the past, while ignoring the really critical choices imposed on us by the need to accomodate growth. In other cases, the issues are discussed without inclusion of their most salient characteristics.

Altogether, as a discussion of natural resources problems and policies, this chapter of the report has too many inadequacies to be acceptable.

A. Timber: Changes in Demand for a Renewable Resource.

The draft report fails significantly to present timber-related issues adequately or correctly. A discussion of hard choices for the forest, and they do exist, has to start with the forest land base, the forest resource structure, the pattern of ownership and the condition of the several resources. These are the variables in the supply equation, yet they are not discussed at all in this report.

The demand questions related to timber are discussed, but with serious errors. The demands on the several resources of the forest, and the several kinds of demands on trees both as an economic and an esthetic good, are very inadequately treated. To begin with, it is inaccurate to indicate as the report does, that the current recession, which has particularly affected housing and thus softwood demand, has reduced the possibility of future supply problems. A reduction in immediate strident concern does not actually increase supply, and in the case of timber, the

long time period associated with growing trees and the need to improve and maintain adequate growing stock of trees are key aspects of assessing supply potential over time.

Long term population trends and housing demands, for example, will definitely increase. Even if the per capita trends of reduced wood use for housing persists, reputable forecasts are for increased wood use for housing. In addition, there are other uses of wood which continue to increase, and a major one is paper manufacture. Tree quality issues are important, both in softwoods and hardwoods. The drain on the two principal softwood construction species that have superior strength, Douglas fir and Southern Pine, become important factors. In hardwoods, quality has been a problem for several decades. One sees a growing substitution of simulated wood panels.

The change in the cost of energy will affect the extraction and fabrication of non-renewable materials more heavily than wood, but there are other plusses and minuses that need to be analyzed to assess the likelihood that the relationship will change.

The report says that "monoculture" will increase supply, along with other actions, although this is open to question. On page VII-4, the term "mixed use" is used to describe "multiple use". Clear-cutting is erroneously defined as "cutting all growth on large tracts". Such erroneous and simplistic states confuse rather than illuminate the hard choices which this section supposedly covers. Throwing in the cutting of private timber adjacent to the Redwood Park in California and Congaree Swamp in South Carolina, further unfocuses the choices.

There is no discussion of imports and exports of wood and forest products, despite their importance to any treatment of "hard choice."

It should be noted that in this 2.2-billion-acre, 200-year old Nation, there are 500 million acres of commercial forest land plus another 250 million acres of non-commercial forest and woodlands. Of the 500 million acres, 73% is privately owned -- 14% by the forest industry, 27% publicly owned, 21% of this by Federal agencies. There are 649 billion cubic feet of standing timber in growing stock, 432 billion cubic feet in softwoods and 217 billion cubic feet in hardwoods. The perspective revealed in these facts is totally lacking in the report's discussion.

A proper definition of hard issues related to timber would have to include:

(1) Organizing the potential for growth on the better site-class lands in private and public ownership;

(2) Defining the role of wood as in industrial material in the light of the energy situation;

(3) Achieving the desirable outputs of water, recreation, and wildlife, along with wood, from the forested lands of the Nation.

(4) Devising mechanisms, based on supply and demand and environmental considerations, to achieve desired long-run goals for growing stock.

(5) Setting targets for exports and imports of forest products in the light of domestic and international considerations.

Of special note, and ignored by the draft, is a pending requirement under Public Law 93-378, the Forest and Rangeland Renewable Resources Planning Act of 1974 which I authorized. In January of 1976 the Administration required to submit an Assessment and Program for forest and rangeland renewable

resources based on long term planning, and a proper mix of short-term and long term activities. To the extent that this draft ignores or is inconsistent with the requirements that this 1974 Act places on the President, and the subsequent impact the 1974 Act has on the annual budget, its utility will be further diminished. This plan deserves a central focus in any discussion of timber issues, and should certainly not have been totally excluded from the discussion. Internal administrative concurrences must be developed between any consequences of this report and the requirements of the 1974 Act.

Finally, there is the question whether the Department of Housing and Urban Development is the appropriate sponsor of a report which attempts to discuss an overview of timber issues. In contrast to this report's treatment is the recent report on timber from the Department of Agriculture, which also houses the Forest Service. In "The Demand and Price Situation for Forest Products, 1974-1975" (U.S. D.A. Misc. Pub. 1315, Sept. 1975), a contrasting thoroughness is revealed in discussing those issues. An example of its discussion is attached as Appendix A for purposes of comparison.

B. RENEWED CONCERN OVER MINERAL SHORTAGES

Although the report is quite correct in noting that there is renewed concern over mineral shortages, much of that concern has been generated by factors other than those cited in the report. The statement that "sup-
ply cartels would, in the short run, have a considerable probability of en-
forcing their price demands" will be true only to the extent that effective
cartels exist prior to the shortage. The only existing successful mineral
cartels are the Organization of Petroleum Exporting Countries (oil) and the
DeBeers Group (diamonds). Establishment of other cartels by producers
of copper, bauxite, tin, and other mineral commodities has been attempted
but none of these recent attempts have been successful, and none are likely
to be, largely because of the widely divergent needs and policies of the
producing countries.

A far more disturbing aspect of mineral importation -- unmentioned
in the report -- is the greatly increased pressure that is being placed
upon world resources as a result of uncontrolled growth, not only in the
United States but in the rest of the world as well. This country is import-
ing larger quantities of foreign minerals because they are not available
domestically in economic concentrations. As other countries have develop-
ed industrially, their mineral needs have also risen. During the past three
decades, in fact, world consumption has risen far more rapidly than it has
in the United States. The list of strategic minerals for which the United
States was once self-sufficient but is now import-dependent includes over
half of the total. In addition to the balance of payments deficit this creates,
it is leading increasingly to an undesirable situation in which otherwise friend-
ly nations will be bidding frantically for dwindling world supplies. Jealous

competition of this type could lead to rivalries that might add to international political instability. This is a far greater consequence of world mineral demand than the unlikely occurrence of a "mineral embargo." An Administration task force (composed of representatives of the Domestic Council, the Bureau of Mines, the Economic Policy Board, and the National Commission on Supplies and Shortages) recently prepared a classified review of the Nation's stockpile policy of critical materials for the National Security Council. Such a reevaluation has been long overdue. Where possible, the findings of this study should be reflected in this report so that appropriate attention is directed to those critical minerals where conservation and recycling practices should be accelerated and where actions are necessary to increase production from both Federal Government and private holdings.

Another major aspect of the growth in mineral demand, ignored in the report's discussion of minerals, is the impact that its extraction and use will have on the environment. Efforts of the mining industry to open to mining Federal lands reserved for other purposes reveal the negative effects that incessant growth will have on our quality of life. Congressional attempts to limit the environmental damage caused by surface mining and to require the restoration of the land after the completion of mining activities have also been bitterly and, for the most part, successfully opposed. If increased quantities of these minerals are to be produced in response to growth, then appropriate environmental controls must be instituted. Without them the social and environmental costs of unlimited mineral development will be high. The policy of this Nation has been to increase production to

meet the growth in demand, rather than to limit growth to meet the limitations of supply. This alternative policy, unfortunately, was not addressed by the report. Yet surely management of growth in this context ought to be a central focus of a report on national growth.

Perhaps the most disturbing aspect of this section of the report is that it does not consider the possibilities at all for reducing growth. The underlying assumption in the report is that U.S. mineral demands will continue to increase and it consequently explores only methods by which such needs might be met. In the past, it had been widely assumed by many, including the authors of this report, that an increase in economic growth necessarily requires an increase in mineral consumption. This need not be the case. The economy can continue to grow and mineral demand decline if we promptly initiate a policy oriented toward that goal. This policy should be based on conservation of materials both in recovery and in use; improvements in methods of material recycling and intermaterials substitution, and development of new materials. These actions would reduce the need for greater mineral production while maintaining a prosperous economy and full employment. This should be the direction of our mineral policy because in the long run it is the only practical policy. It is no less than astonishing that this is not the key focus of the report's discussion of this subject. We cannot project our exponential demands indefinitely or we will fall off the curve.

The fundamental problem confronting the makers of U.S. mineral policy, therefore, is in determining the least traumatic means of shifting our economy from exponential to linear demand growth. It is not a matter of choice. The transition is inevitable because the resources of this planet are finite and will support additional growth only to a limited extent.

It is imperative, therefore, that a positive mineral policy be adopted that reflects these realities. The report asks "whether or nor there is need for new action beyond existing programs. " Of course, new action is needed. It is this type of narrow thinking that has in the past impeded constructive efforts to achieve innovations in meeting mineral needs and consequent limits on growth of demand. If the problem cannot be perceived any more clearly in a Presidential report on national growth, then the prospects for constructive and comprehensive policy development are bleak indeed. The shallow treatment of this subject by the report reflects a disappointing and retrograde attitude by the Administration on the entire range of growth issues.

C. PROVISION OF OUTDOOR RECREATION OPPORTUNITIES

The two key policy issues relating to outdoor recreation are resources -- primarily financial, but also physical -- and responsibility for management of resources. The draft report discusses both of these issues but a presentation of specific action plans is missing, apparently deferring to the nationwide outdoor recreation plan which was released by the Interior Department late in 1973. If such deference was the motive, it is a serious error in this report, as the 1973 Interior Department plan has been criticized by numerous State recreation officials. This criticism was expressed most clearly in a survey analyzed by the Congressional Research Service and published in 1975 by the Senate Interior Committee as a print titled "The Nationwide Outdoor Recreation Plans: Critiques by State Officials."

An assessment of outdoor recreation from the perspective of growth policy must obviously note the supply and demand equation which exists at present and that which is likely to exist in the future. This report has noted the disparity which now holds in geographic distribution of recreation resources, in which most of the prime recreational lands are in the West, and in the paucity of recreation opportunities in and near urban centers of population. It is the latter which the report has identified as the chief challenge of the coming years.

The means of meeting these urban demands are largely measured in acres and dollars. The acres have been provided to some extent by the "legacy of parks" program which has shifted some surplus Federal lands into recreational use under State or local government administration. Much more needs to be done in this regard, along with the development of a program which will allow for recreational use of lands retained in Federal ownership in urban areas.

The dollars from the Federal Government have been the key to significant growth in recreational opportunities at the State and local^{level} in the past decade. Under the Land and Water Conservation Fund more than \$1 billion has gone to these governments to expand and develop their recreational assets.

Whether the growth rate remains constant or not, there will be a need for continued funding of this vital recreation support program. Yet, the Office of Management and Budget has made the incredible suggestion that no dollars be allocated to the Land and Water Conservation Fund in the coming fiscal year.

If the final version of this growth report is to make any policy suggestion in the area of outdoor recreation, it should be that the Land and Water Conservation Fund be strengthened, not eliminated. Although the draft suggests a need for increasing the fund and incorporating related Federal programs in operation of the Fund, this language should be made much more forceful.

If the matter of adequate resources, financial and physical, can be assured, then we are left with the need to ensure adequate management responsibility. A major recreation management role for the Federal Government has been explored in the creation of urban recreation areas in the New York and San Francisco metropolitan areas a few years ago. This effort was expanded with the addition of an urban recreation area in the Cleveland-Akron corridor in Ohio (not near Columbus, as the draft erroneously states) in the 93rd Congress.

This development has created a painful dilemma in that the need for recreation opportunities available readily to population centers is obvious,

The report's contention that environmental programs may determine and constrain the location of future development is accurate -- but the insinuation that this is automatically undesirable is objectionable. For instance, the court decision to prohibit "significant deterioration" of air quality even where it exceeds secondary standards forces states to develop a mechanism for rationally planning their development so that sufficient land is set aside for commercial, residential, and recreational purposes to satisfy the diverse and conflicting needs of a growing population. In fact, this process facilitates the benefits and minimizes detriments of growth -- and is not as implied by the report anti-growth activities. While the report states that "the implementation of a prohibition against a reduction in existing air quality would widely preclude new development in many rural areas now experiencing a long-awaited reversal of economic decline", California, Minnesota, Michigan, Texas, Illinois and 26 environmentally concerned organizations argue such a policy does not preclude economic growth. New Mexico and 15 other states hold a similar, but stonger view, that agriculture, mining, and craft production, tourism, health related services, movie production and other activities require a clean environment. In addition, the State of New York, Boston and New York City argue that in the absence of a "no significant deterioration" policy, the urban areas would be deprived of pollution-free air that now reached the urban areas and dilutes the polluted urban air. Furthermore, there is increasing evidence that atmospheric pollutants may seriously effect growth rates and yields of may sensitive agricultural crops. If industrial development is allowed to expand uncontrolled into rural areas, at some point there is likely to be substantial damage to agricultural production.

but that providing these opportunities as a federally managed program is straining the manpower and budget capabilities of the National Park Service to the detriment of older, traditional national park units.

The responsibility for management of urban recreation areas should be that of State and local government if there is a good faith policy by the Federal Government in providing financial assistance through the Land and Water Conservation Fund.

Residents of urban areas which lack adequate recreation opportunities have legitimate reason for complaint, but their complaints should be made to, and resolved by, the governmental entities which have failed these people, not by the national government. The great park and wilderness areas of America are resources of all the people and, as such, should be managed and protected by Federal agencies. Those Federal agencies should not be in the business of managing areas lacking national significance.

Fortunately, the terms of this partnership for recreational opportunities are recognized by the draft report, but, as in the case of the comments regarding support of the Land and Water Conservation Fund, they should be presented more vigorously.

In summary, the draft has identified the major policy issues in outdoor recreation which are most clearly related to the future patterns of growth in America, and has recognized the implications of the social and other trends which are now evident. The policy options which are offered in the draft are neither exhaustive nor imaginative, but they do offer a starting point for the needed fuller elaboration of the questions we should ask and the answers we must find.

Part D: A Re-evaluation of Water Resource Development

The discussion focuses more on the economic efficiency of water resources projects and on pricing and cost sharing practices as methods for placing the burden of development on beneficiaries than on identification of critical national water resources problems and consideration of how these relate to growth. While the economic measures discussed are important, they are not water resources issues in themselves. National and regional growth are affected by the manner in which natural resources are developed and used. In this context, the following issues either deserve greater attention or have not been mentioned: conservation and reuse of water resources; water supply for small communities; Indian water rights and reservation resources; environmental considerations in water resources development; management of urban storm water runoff and urban wastes; water requirement for management of Federal lands; salinity problems; erosion and sedimentation; energy-water relationships; land-water planning coordination; flood plain management and flood hazard assessment; increased recreational use of water resources; weather modification practices and impacts; inter-basin transfers of water; irrigation efficiency and technology; conjunctive use of surface and groundwaters; water quality-water quantity relationships; and transfer of water rights.

In view of the limited treatment given water resources issues, a more direct input from the Water Resources Council to this phase of the report would be worth considering in the future. The Council's mandate to prepare a national assessment of water problems and needs, to evaluate programs and policies related to water resources, to make appropriate recommendations to the President with respect to these; and its coordinating role relative to all Federal factors in water resources planning makes it uniquely qualified for this task.

In the following paragraphs several of the issues listed above are amplified.

Water for Energy

The role of water in meeting future energy needs is related principally to the development of reserves of coal and oil shale, waste heat disposal from thermal electric and fuel conversion plants, supplying expanded populations associated with fuel production, and providing hydroelectric peaking power capacity. Development of new and enlarged sites required for mining, processing and energy conversion located in the Southwest, Rocky Mountain Region, and Northern Great Plains will have a significant impact on both the quality and quantity of water supplies. Because many of the energy resource sites are located in or near areas of high environmental value, great care will have to be exercised in the joint land-water use planning aspects associated with the exploitation and management of these areas.

Water for Indian Lands

Optimal development of opportunities for Americans who live on Indian reservations will be subject to the availability of dependable supplies of good water. Since existing demands compete for water which could be used to promote Indian developments, the Federal Government will have to ensure that water to which the Indians are entitled remains available for such use as may be determined beneficial and equitable. Determination of these rights must be made if the Tribes are to plan and realize full development of their reservation potentials.

Urban Storm Water and Waste Water

The volume of urban effluents discharged into rivers is expected to increase by 300 percent between 1975 and the year 2000. Most water

supply plans for principal cities are based on utilizing the natural flow of rivers and ground waters with little attention being given to development of urban storm and wastewater as sources of water supply. Because waste water must be extensively treated to meet pollution discharge requirements, its further use warrants consideration. Specific benefits which can be obtained include (1) additional use through recycling; (2) environmental enhancement; (3) improved water quality; and (4) possible economic benefits if alternative sources of water are more expensive.

Conservation and Reuse of Water

Conservation and reuse of existing water supplies should be more heavily emphasized in plans for meeting future water requirements. Where water is in short supply and water use efficiency is low, conservation and reuse practices can alleviate serious economic dislocations and adverse water quality conditions. Conservation can be achieved by adopting new technology and implementing better management practices. A major effort is needed in irrigated agriculture which accounts for over 80 percent of western water depletion.

Municipal and Industrial Water Supplies for Small Communities

Many small communities lack sufficient quantity and/or quality water to maintain or improve the viability of the community. At least one-quarter of the 6,500 nonmetropolitan communities face water supply problems and financial and technical assistance is needed if a reasonable level of living is to be maintained. Although there are several Federal programs which can provide assistance, low funding levels, and lack of local resources, have limited their effectiveness.

Coordinated Land Use and Water Resources Planning

Planning to assure availability of water supplies needed to support and complement desired land uses is essential. In the past, water resource development has significantly influenced the character of national and regional growth. While water may not play as dominant a role in the future, its careful development and wise use in association with related land uses will be necessary if food and fiber, energy, economic, environmental, and social needs of the Nation are to be met in the best possible way. Adequate information on quantities of water necessary to support and maintain desired alternative land uses is an important requirement. Mechanisms for complete coordination of land and water planning must be strengthened at local, State, and Federal levels.

E. THE EMERGING STATE ROLE IN RESOURCE MANAGEMENT

This section is rather a better expression of state-level initiatives in land-resource planning than that which appears in Chapter XI, Section D on state planning legislation. But in neither place does the report identify and treat with new and compelling issues in resource planning. This section tends instead to rehash problems identified in the 50's and 60's.

The authors (or perhaps the sponsors) have chosen to discuss coastal zone management, the conversion of prime agricultural land to urban uses, and recreational second home development in the hinterlands, together with the state planning efforts and supportive federal activities designed to meet these problems.

Although these aspects of growth are indeed concerns of states, the subject of federal coordinating activity, coastal zone management, prime lands, and second home development are treated in a way that lags behind state-level issue identification by perhaps five or even ten years. The compelling aspect of coastal zone development -- onshore impacts of offshore oil exploration and development -- is not dealt with. In connection with prime lands, the issue has changed of late from metropolitan aesthetics to the productive capacity of such lands and their proximity to markets -- a change unrecorded by the report. As for the second home issue, this concern has been replaced in these less affluent times with finding ways to encourage rural development and settlement as an alternative to increased metropolitan growth.

The most important trends at the state level in resource planning and allocation have to do with these important national issues:

1. Energy development and conservation. Daniel Moynihan remarked a few years ago, "We have a national land use policy, its called the interstate highway program." Today's version of that insight would have it that the national policy for land use is dictated by something called "energy independence." The states are aware of the primary conflict inherent in a national program of energy development (however inchoate) posed against the states' constitutional right to determine its own land uses. Hence state legislatures and the courts are the scene of official and unofficial reaction against offshore oil development, coal stripping, slurry pipelines, oil shale development, and power plant construction to name a few federally sponsored incursions on the land. Durham, New Hampshire rejected an oil refining and storage facility. The State of Delaware has barred further industrial development of its shoreline -- a move directed at big oil. This summer, California may be the first of a series of state ballot initiatives which could bring nuclear development to a standstill. Governor Richard Lamm of Colorado has identified federal energy efforts as a kind of "colonialism." The land-energy conflict is clearly the primary resource issue at the state level today.

2. Agricultural Land vulnerability. Agricultural land lies at the base of a wobbly pyramid of issues that may soon merge to form a new "national crisis" of some importance. The loss of prime lands to urbanization is beginning to be seen as having to do with food and nutrition, not just metropolitan planning aesthetics, as important as that might be. Part of the problem has been identified by Senator McGovern's Senate Nutrition Committee and by some state governments as well. Agricultural land tax deferral or other preferential treatment becomes quite meaningful and necessary when attached to reasons having to do with basic production as opposed

to reasons heretofore advanced by metropolitan planners concerned about the urban fringe. Other issues in the pyramid concern potential increases in fuel costs that could affect such an energy intensive industry as agriculture. The energy subsidy (that is the energy coming from fuel rather than human labor and the sun) is a high one for agriculture: on the order of nine to one -- meaning that nine calories of energy are required to produce one calorie of food. Also, ecological problems abound for agricultural land. Many areas of heavily irrigated land in the West are beginning to salt up; increasing pollution, including "acid rain" from coal-fired generating plants is expected to take its toll. Overall, agricultural land is a somewhat weakened foundation for an increasingly attenuated, food production and distribution system. The land base is not, some believe, in good enough shape to withstand much pressure. A significant stressing of one part of the system could disrupt the system as a whole, leading to domestic shortages with significant international repercussions. "A collapse of developed agriculture," writes economist Kenneth Boulding, "however remote the possibility seems today, threatens major disaster for the human race, with a probability over the next two or three generations that cannot be put at a comfortable zero." That, today, is why there should be emphasis put on the preservation of agricultural land, and why that preservation should be combined with other policies seeking to improve the productivity and wealth of the agricultural land base.

3. Decentralism of settlement. This, rather than second home development, may be the emerging focus for state initiatives in rural development. In California, for example, Governor Edmund Brown has signed a bill to permit the waiving of building code requirements for housing in cer-

tain rural areas. Such codes have tended to frustrate non-metropolitan settlement patterns. The trend toward non-metropolitan settlement -- quite aside from policies having to do with new town construction -- must be dealt with. A settlement trend analysis by Calvin Beale of the Department of Agriculture reveals that non-metropolitan growth has, for the first time, increased more than metropolitan growth. Importantly, Beale points out that this growth is not confined to counties adjacent to metropolitan areas as most planners might too quickly conclude. In fact, non-adjacent counties are also growing faster than metropolitan counties. This emergent trend may suggest new approaches to land use planning policies by state governments. As Beale points out, "under conditions of... urban population massings so large that the advantages of urban life are diminished, a downward shift to smaller communities may seem both feasible and desirable."

The significance and interpretation of these issues in land resource management as it relates to state-level responsibility for managing growth may be arguable. But the exclusion of any reference to these topics in this section is surprising. Since these trends were not identified, the whole section cannot conclude with policy options that have much relevance to contemporary national issues. One is disappointed that in so important a report, the sponsors could not go further than to assign consultants to review old issues, rather than making the effort to observe and report on what is happening to real people in real places throughout the United States right now.

APPENDIX A:
To Comments on Chapter Seven

"The Demand and Price Situation for Forest Products, 1974-1975."

(U.S.D.A. Misc. Publ. 1315, Sept. 1975)

HIGHLIGHTS

In late 1974 and early 1975, many of the major timber products markets were continuing the declines that began in 1973. However, for most, there were prospects for some recovery in the last half of the year with activity continuing to rise in 1976.

Residential construction, the Nation's largest market for softwood lumber and plywood and for substantial amounts of other timber products, declined sharply in 1974. Although there was some month-to-month fluctuation early in 1975, starts in the first quarter continued down. Nevertheless, several factors, including large inflows of funds to the major mortgage institutions, declining interest rates, and sharply rising housing starts and permits in the second quarter, suggest an improvement in housing in the last half of the year.

In contrast to housing, nonresidential construction dropped only slightly in 1974, but began to decline rapidly in the first quarter of 1975. The results of several surveys and analyses indicate that expenditures should gradually rise in the last half of the year.

Most of the major industrial markets were also down sharply in 1974 and early 1975. Production of furniture and fixtures showed an especially rapid drop in the first quarter of 1975. Industrial markets should begin to turn up in the second half of the year as the general economic situation improves. Furniture demand is expected to rise with improving housing construction.

In response to the general decline in activity in the major markets, consumption of industrial roundwood dropped to 12.6 billion cubic feet in 1974—6 percent under the record volume consumed in 1973. Production showed a somewhat smaller 3 percent decline.

Prices of standing timber (stumpage) were also down in 1974. However, data from National Forest timber sales and from scattered State reports indicate that stumpage prices of many species were bottoming-out in late 1974 and early 1975. The available data also show that log prices were following similar trends.

There were rather substantial declines in apparent consumption of nearly all the major timber products in 1974. For example, hardwood plywood consumption was down 27 percent, softwood lumber 14 percent, softwood plywood 7 percent, and hardwood lumber 1 percent. Particleboard, hardboard and insulation board consumption also fell. In contrast, production and apparent consumption of pulpwood increased in 1974. However, late in the year and early in 1975 both were declining because of falling paper and board demand.

Prices of nearly all major timber products declined in late 1974. However, early in 1975, prices for most were up somewhat in response to a number of factors, including production cutbacks, expectations of improving conditions, and the general inflation.

Trends in the important markets indicate the probability of some rise in the demand for most timber products in the last half of 1975. This suggests the possibility of some further increase in prices and a resumption of the upward pressure on stumpage and log prices.

The longer term outlook is one of continued and rapid growth in demand for most timber products. Timber supplies are not likely to rise significantly unless forest management, utilization, and research programs are substantially expanded.

The longrun outlook is thus one of increasing competition for the available timber and higher prices for stumpage and timber products. This could adversely affect housing and other programs that will be necessary in the rest of the 1970's and beyond to meet the needs of a growing population and expanding economy.

There is much that can be done to increase timber supplies and minimize the undesirable impacts of high prices. Under intensive management, U.S. forests have the capacity, in time, to grow substantially more timber than is currently being produced. In addition, there are opportunities for improvement in the utilization of the timber that is harvested.

Demand likely to increase more rapidly than supplies

There are three possibilities for meeting the prospective increases in demand. These are by: (1) increasing the volume of net imports, (2) improving the utilization of the timber harvested, and (3) growing more timber in domestic forests.

With respect to imports, it seems clear that Canada has the timber resources to support a large expansion in shipments of softwood lumber and pulp products to the U.S. (7, 21, 22). The tropical regions of the world also have huge

⁵ The following material on the longrun demand-supply-price outlook is condensed from a comprehensive Forest Service appraisal of the present and prospective timber situation (41). This study is available from the USDA Forest Service, Office of Information, Washington, D.C. 20250.

hardwood resources which can supply much larger amounts of material for import. However, most of the unused resources both in Canada and the tropics lie in undeveloped regions, without transportation systems, manufacturing plants, and other necessary facilities. Utilization of this timber will involve significant increases in production costs and U.S. imports are unlikely to grow appreciably unless there is a substantial increase in relative prices.

The growth in U.S. exports of pulp products and softwood logs in the 1950's and 1960's reflected a combination of rapid increases in demand and insufficient timber supplies in western Europe and Japan—the major importing areas—and relatively stable prices in the U.S. The latest studies of the timber situation in the importing areas indicate that demands will continue to grow and that domestic timber supplies will fall increasingly short of prospective demands (15, 36).

This suggests continuing increases in foreign demand for U.S. timber products. It also suggests—along with the higher costs involved in using the timber resources in Canada and the tropics—that, with relative prices close to those of the 1950's and 1960's, the U.S. net import situation may not change appreciably. At higher domestic prices, however, net imports could show a material rise, especially net imports of softwood lumber, woodpulp, and paper from Canada. However, such prospective increases are relatively small in comparison to the projected growth in demand.

Part of the projected growth in demand for timber could be met by increasing the utilization of residues and salvage of timber killed by destructive agents, by reusing paper and board, and by extending supplies through increased efficiency in manufacturing and construction.

There have been large gains in the utilization of coarse manufacturing residues of primary wood manufacturing plants in the past two decades. The production of chips for use in pulp mills, for example—mostly from slabs, edgings, veneer cores, and other similar coarse material—has increased from 0.1 billion cubic feet in 1950 to about 2.3 billion cubic feet in 1974. Use of shavings and other fine secondary residues in the manufacture of particleboard has also increased very rapidly.

Despite the improvement in utilization, there are still large volumes of unused residues. In 1970, for example, over 3.0 billion cubic feet of wood was left in the forests after logging or land clearing, and an additional 1.0 billion cubic feet was left unused at primary manufacturing plants.

There are also large volumes of secondary manufacturing and consumer residues that could be utilized. For example, of the 65 million tons of paper and board consumed in the United States in 1974, only 14 million tons—22

percent of the total—was recycled. In some western European countries and Japan, close to 40 percent is reused.

In addition to the increased use of forest and manufacturing residues, it is possible to meet some of the projected increases in demand for lumber and plywood by increasing raw material conversion efficiency through the use of thinner saws and more precise manufacturing methods and equipment. Development of stress grading systems and better product design to increase the efficiency of use in construction and manufacturing could extend lumber supplies. Timber supplies could also be extended by the development of economically competitive types of structural particleboard and laminated dimension lumber.

Although part of the projected growth in demand can be met by increases in net imports and improved utilization, the potential gains are relatively small in comparison to the projected total growth in timber product markets. Thus, if the projected growth in demand is to be met, it must come from domestic resources.

Comparisons of projections of timber demands after allowance for net imports and improved utilization, with prospective supplies from U.S. forests assuming a continuation of 1970 management levels, show projected demands for softwood sawtimber rising much more rapidly than supplies assuming current relative prices. This means that unless management is intensified, the Nation is faced with the prospect of substantial increases in softwood timber product prices. For example, alternative projections of demand under other price assumptions indicate that the equilibrium prices at which softwood lumber demand and supply would apparently balance in 2000 would be some 50 to 60 percent above 1970 and the general level prevailing in the 1950's and 1960's. The projected equilibrium price for paper and board, on the other hand, would be only 15 to 20 percent above those levels.

Projected hardwood sawtimber supplies are somewhat above projected demand at 1970 price levels for the next decade or so. However, recent increases in relative prices of hardwood timber suggest that the projection of timber supplies probably overstates the volume of timber, and especially of sawtimber, that is economically accessible and available for sale. For example, much of the projected supply, including sawtimber, is in species and low-quality trees for which markets are currently limited. Much of the demand, on the other hand, is for species such as select white oak and red oak, sweetgum, yellow birch, hard maple, walnut, and black cherry, and for the larger sized high-quality trees. Removals have been close to or above annual growth for this preferred material in recent years.

In addition, part of the larger sized hardwood sawtimber that is suitable for the manufacture

of high-quality lumber or veneer occurs as widely dispersed trees or groups of trees that may not be economically harvestable. A substantial part of the hardwood timber is also in privately owned tracts that are held primarily for recreation or other purposes that are not compatible with timber harvesting.

The prospective increases in relative stumpage and timber product prices would have substantial effects on the demand for most timber markets. For example, a rise in lumber prices at something close to the amounts indicated by the demand-supply comparisons discussed above would mean a major reduction in the demand for lumber and in the loss of large potential markets for the lumber industry. The plywood industry would be affected in much the same way. The outlook is more favorable for the pulp and paper industry because this industry can use small trees and low-quality material, including residues. Nevertheless, this industry will also be affected by stumpage price increases, because it will have to directly compete with other industries for sawtimber and other roundwood.

Increases in timber product prices would also adversely affect consumers by raising the costs of products such as houses, furniture, and paper made in whole or in part from wood. This would mean, for example, that fewer people could afford adequate housing and that public and private programs to improve the housing environment would become more expensive. It could also cause some decline in housing quality, resulting from such things as a reduction in average unit size or a shift to less desirable types of units.

Rising timber product prices of the magnitudes indicated by the demand-supply comparisons would also induce substitution of other materials, such as steel, concrete, aluminum, and plastics, for wood in many end uses. A shift from timber products to other materials would have some adverse impacts on the environment. The air, water, and land pollution resulting from the mining, industrial processing, and power generation that would be associated with the use of substitute products are of higher magnitude than those associated with timber products. The energy requirements for producing substitute products are also much higher than for timber products.

A shift from timber to other raw materials would accelerate the rate of use of nonrenewable stocks of ores and energy materials. Technology has been extending the useable supplies of such materials. But continued geometric growth in the use of energy and many materials is likely to result in severe supply and cost problems. At that time, timber, a renewable resource, may take on increasing importance as an industrial raw material.

Timber is also an expandable raw material. Through intensified management and research it would be possible in time to more than double present net annual growth.

Opportunities for increasing timber growth

There are opportunities for increasing growth on all types of forest ownerships. For example, net annual growth on the 67 million acres of commercial timberland in forest industry ownerships averaged only 52 cubic feet per acre in 1970—about 60 percent of the average attainable in fully stocked natural stands and less than a third of that attained in some intensively managed plantations.

There is a major opportunity to increase timber growth on the 296 million acres of commercial forest land in farm and miscellaneous private ownerships. Management of most of these lands for timber production is limited and average net annual growth per acre—36 cubic feet in 1970—is far below potential. Because of short planning horizons, limited capital, lack of technical forest management skills, and other problems, the realization of any substantial increase in growth on these ownerships will require large public technical assistance and cost sharing programs.

There are also substantial opportunities to increase timber supplies on the National Forests and other public lands while at the same time intensifying management for other uses. Sizeable investments in such measures as planting, timber stand improvement, thinning, and road construction will be necessary, but these would make it possible to promptly achieve an increase in timber growth.

Attainment of potential increases in timber growth on all ownerships will depend in part on an adequate program of research as well as accelerated action programs. There is special need to develop more effective programs of regeneration with desirable species, propagating superior trees, determining optimum levels of stocking, and improving protection.

The attainment of increased timber growth also will depend in part on the success achieved in managing commercial forest lands for multiple purposes. In the past decade there have been growing demands for the withdrawal of commercial forest lands from timber production, and modifications of forest land management practices to provide wilderness or other recreation areas. There also have been increasing demands for the modification of management practices to insure the protection of forested watersheds, control soil erosion, prevent water pollution, and provide for the needs of wildlife.

CHAPTER EIGHT

A PERIOD OF ADJUSTMENT IN TRANSPORTATION POLICY

The chapter is a rather well-balanced summary of population, economic and social trends and government policy developments. It could have given some greater emphasis to population growth trends away from large metropolitan areas to rural areas and from the North and East to the Southwest and West. The chapter shows concern for both rural and urban transportation needs and policy options. As an instrument for stimulating debate on alternative policies available to the American people, the document is somewhat weak. However, by taking a rather neutral and objective viewpoint throughout the chapter, the effect of an arbitrator and detached observer of priorities and overall perspective is achieved. Examples are the reference to the possibility of initiating waterway user charges and increasing the highway user charges on trucks. The chapter rather evenhandedly summarizes Administration regulatory reform proposals. The brevity of the discussion in Chapter Eight increases the chapter's succinctness but significantly reduces the richness and dimension that the authors appear capable of giving to the topics covered.

My specific recommendations and comments regarding this chapter follow.

A. A LESS DISRUPTIVE ERA OF TRANSPORTATION INVESTMENT

1. Intrusive Concerns from the World at Large

Page VIII-1. The chapter states, correctly, that the interstate system is nearing completion. It could have gone on to discuss the significant retardation in completion that is being caused by the inflation of highway construction costs and the expense of maintaining the highway system that is already in place.

2. The Changing Nature of Transportation's Growth Impacts

Page VIII-3. Here it seems to take for granted, without alarm, and without proposing any solutions, that, "For the most part, however, particularly in the inter-city component of the (transportation) industry, the significant growth impacts from transportation policy over the next five years will stem from the contraction rather than the expansion of basic services and from the elimination rather than the addition of rights-of-way. The retrenchment now in progress in the transportation sector will have particularly serious consequences for those smaller cities and rural communities confronting the termination of rail services altogether." Some aspects of this problem are dealt with under the various relevant headings further on in the chapter.

Page VIII-4. In discussing the capital replacement problems of airlines, the report states that this problem "may prove particularly worrisome on the grounds of rate structures...." From the context of the sentence, the words "rate levels" seem more appropriate than "rate structures."

3. The Transportation Inventory Today

Page VIII-6. The report implies that "periodic complaints of freight car shortages still occur" as a result of railroads having too few freight cars. While it is likely true that railroads have too few freight cars, much of the complaint about car shortages occurs during the harvest season. Demand for rail cars peaks sharply during the harvest season. If no shortages occurred during peak demand, there would be excess cars during the off-peak season. It represents a classic case of the dilemma of determining the optimum level of capital investment under conditions of peaked demand. The report should also note that ownership of rail cars by nonrailroad entities promises a significant, new solution to the problem of rail car shortages. The development seems to be progressing satisfactorily.

B. DEREGULATION, RAIL REORGANIZATION, AND SMALLER COMMUNITIES

1. Towards a Freer Market in Transportation Services

Page VIII-14. The following sentence, discussing regulatory reform needs to be explained and discussed. "Compromise proposals have also been made before the Interstate Commerce Commission to allow privately negotiated but publicly approved contracts."

At the bottom of that same page the discussion would be more balanced if some comments were made about the reason for present policy and the implications for intermodal competition from changing present policy concerning enlarged carrier "discretion in raising and lowering rates free from ICC interference."

3. The Status of Rail Reorganization

Page VIII-20. The impression is left with the reader that ConRail will be expected to achieve a needed retrenchment that the private rail industry was unable to achieve. The report should clarify this point by stating that much of the needed retrenchment was a part of the process of reducing miles of track undertaken as part of the legislation creating ConRail rather than being left for ConRail itself to do at some future time.

4. Local Adjustments to Rail Abandonments

Pages VIII-21 and 22. Here the report discusses the problems of rural communities resulting from rail abandonments authorized under the massive reorganization of railroads in the Northeast and Midwest,

and abandonments that are anticipated will occur under normal ICC procedures for many areas of the Nation. The report should enlarge the discussion by indicating the extensiveness and magnitude of the problem, alternatives for meeting the problem, how much it might cost the Federal Government to subsidize the service that is abandoned or proposed for abandonment, and how this program corresponds, in costs and benefits, to other Federal Government priorities.

5. Rail Properties: A Valuable Land Bank for Urban Development

Pages VIII-23 and 24. The discussion does not give sufficient weight to the possible need for rail rights-of-way at some intermediate future time in which petroleum-fueled vehicles perhaps will be so uneconomical or such a drain on the balance of payments that coal and electric-powered railroad transportation will again be a high national priority. If urban rail rights-of-way are sold now and used for construction of buildings, these urban transportation nexuses will be extremely difficult to replace or reconvert, if need be, at some future time.

D. LOW COST URBAN TRANSPORTATION ALTERNATIVES

2. Choices Within the New Orientation

Page VIII-30. Figures related to San Francisco's BART system are referred to but not given.

Page VIII-31. The report gives a good example of urban transportation facilitation--the 4.5 mile busway on Shirley Highway in Metropolitan Washington, D.C., that increased the ratio of bus users to private auto users on the highway from 1:4 to 1:1. The report would be significantly improved if it then went on to generalize about how representative this example might be for the Nation as a whole.

E. THE SUBSIDY OF PUBLIC TRANSIT DEFICITS

2. Alternatives to Financing Urban Transit Deficits

Pages VIII-32 through 35. The report needs to discuss in greater depth the potential Federal role in subsidizing urban transportation services.

F. TOWARDS MORE BALANCED AND FLEXIBLE TRANSPORTATION PLANNING

5. Capturing Opportunities for Joint Land Use Development

Pages VIII-41 through 44. The important subject of developing intermodal transportation terminal facilities, for passengers and for freight, needs to be discussed in this section of the chapter. It is an important topic that the chapter overlooks.

CHAPTER NINE

IMPROVING AMERICA'S HOUSING AND NEIGHBORHOODS
(Sections A - C)

This section presents recent trends in housing construction from the high points in 1972 and 1973 to the current low levels, and briefly discusses some of the most important causes and effects of the sharp decline. In its section on multi-family construction, however, it glosses over the extremely serious impact which rapid increases in operating costs, particularly for utilities, have had on the profitability and capital risk of investment in rental housing. While explaining the need to stabilize construction and stimulate the market, it reports on Congressional action to provide \$10 billion in new authority for GNMA mortgage activities and to establish a system of insurance for mortgagees to forestall foreclosures, but fails to mention that the Administration has not yet chosen to put the latter insurance into effect and has just released \$3 billion of the authorized GNMA funds. While discussing the budgetary cost of suggested programs to lower interest rates for home mortgages for moderate-income families, it fails to estimate the real numbers implied by "greatly expanded" costs, or to assess the economic effects and impact on the budget of failure to stimulate the industry through this or other means. Its discussion of possible ways that have been suggested to increase private mortgage investment is descriptive rather than analytical, and hence does not permit a decision on the most appropriate or effective policies.

The report rightly points to the need for re-evaluation of Federal housing policies. It summarizes the arguments for and against subsidy programs directed on the one hand toward production and on the other toward income-maintenance or housing allowances. It indicates that Federal housing subsidies have thus far helped moderate- and middle-income households more than lower- or very low-income families. It merely describes the re-activation of Section 235 and the Section 8 programs, without attempting to show how these will materially increase equity among or within income classes, although there is a question as to whether they are an improvement over earlier suspended programs in this respect. In pointing to the difficulties so far experienced with Section 8, there is a tendency to accept the problems it poses for both private and public financing of new construction as integral parts of the program, rather than a reflection of legislative or administrative rules which can be changed. Its discussion of the pros and cons of housing allowances fails to consider the experience thus far gained through the housing allowance experiments, or to suggest waiting for the final results before making a judgment. Indeed, it sensibly concludes that both housing allowances and construction subsidies may be of value with different mixes in different places, depending upon the nature of the local housing stock and market. Because of the differing needs of individual localities, it suggests the possibility of block grants for housing. Although recognizing the difficulty that block grants to individual cities would

pose for achieving regional and national housing goals, such as renewal of center cities or dispersion of low-income families, the report does not suggest Federal policies for ensuring the achievement of national goals if block grants are adopted.

The issues which are considered are those of immediate concern, a reaction either to the general economic situation or to immediately past or existing housing programs. There is no discussion of the possible impact on housing needs of the changing demographic structure or geographical location of the population, as described in another section of the report. For example, although the increase in recent years in relative importance of multi-family units and the relatively greater difficulty such construction is now incurring is reported, the interrelationships of this form of construction with demographic change, construction constraints, and environmental needs is not explored. Even while presenting immediate problems, a national growth report should serve as the vehicle for examination of changes likely to be imposed by long-range developments in urban structure, and of policies needed to achieve our housing and community goals in the face of these demographic and market requirements.

D. CONSERVING AMERICA'S EXISTING HOUSING STOCK

With urban conservation currently the major emphasis at HUD, housing rehabilitation, an essential component of that policy, needs to be examined in greater detail than allowed it in the draft report. The President's 1975 Housing Goals Report, as well as this draft report, documents the increasing deterioration and abandonment in the housing stock and presents the rationale for the conservation approach. My major concern is not with the need for this policy (which I enthusiastically support) but with its efficacy. The draft report discusses some of the constraints to rehabilitation but falls short of adequately exploring them and discussing ways to surmount them.

Quite frankly, I am not overly optimistic with the prospect of HUD's reversing its traditional focus which has been on the production of new units. In the last 40 years, less than 1% of all units insured by the Federal Housing Administration were "rehab." And past performance at HUD -- according to studies by the General Accounting Office, and the House and Senate oversight and appropriations committees -- indicates the department has rarely managed any of its programs effectively.

Nor can "rehab" be left entirely to the private sector. Although the draft report refers to an Urban Land Institute survey which it says "discovered a significant amount of unsubsidized, private market renovation in two-thirds of all cities with over 100,000 persons," my reading of the cited study is different. The ULI study offers the general conclusion that the level of private renovation (54,600 units since 1968) "appears relatively insignificant when compared to total new housing production in metropolitan areas of over 7 million units since 1968 or the over 2 million units added in central cities."

If the draft report is attempting to suggest the the private sector can "rehab" a sufficient number of units alone without government help, I believe it is misinterpreting past experience.

To ensure that housing rehabilitation can be realistically achieved, at least four issues must be discussed -- standards, skills, management and counseling.

An examination of past Federal, State and local "rehab" activities presents a discouraging picture for, as the report points out, in the past "rehab" largely failed to serve as an effective housing strategy. Why? I submit that one reason it has failed to be cost-effective is because generally renovation has taken the "substantial rehab" approach which is often more costly than new construction. Modest rehabilitation, however, addresses the problem that abandonment will occur unless preventive maintenance or moderate rehabilitation is undertaken. The realization of a rehabilitation standard that will be sufficient to halt abandonment but at the same time not exceed the financial constraints of an individual owner is the key to the success of the strategy. In particular cases of low-income property owners, moreover, this strategy is not feasible without additional subsidy.

Since "rehab" over the years has not been the emphasis of Federal housing policy, I question whether the building industry has yet developed sufficiently advanced technology to undertake cost-effective rehabilitation. This "skills" question is crucial, not only to permit "rehab" on a large scale, but also to provide the individual homeowner and small landlord the knowledge and tools he or she needs to keep a housing unit properly maintained.

Rehabilitation is only an initial step in preserving the housing stock. Once a unit is remodeled it must be properly managed. Lack of sophisticated management has been an enigma with Federally subsidized housing, and has

resulted in thousands of multi-family units being foreclosed and handed back to HUD. Management is also important to the individual homeowner. One program designed to provide homeowners with proper counseling was the Sec. 237 program. Yet, HUD never funded the program and the absence of homeownership counseling accounts in no small part for the volume of defaults the Department is now experiencing in its homeownership programs.

I believe the draft report needs to further explore these areas. Only by adequately meeting the real issues of standards, counseling, management and skills can a rehabilitation strategy be effected.

E. RECYCLING THE AGING CITY

The draft report, in its section entitled, "Recycling the Aging City," recounts the history of OEO, Model Cities, and past urban renewal efforts and presents the underlying reasons for the consolidation of community development programs into block grants. The report does, I believe, an adequate job in presenting many of the issues surrounding community development block grants (CDBG), but the section remains weak because of insufficient analysis of empirical data for the initial CDBG year. The authors of the report should not be blamed, however; the fact is that HUD, although spending over \$1 million on an evaluation of CDBG, has yet to answer the many questions we are all asking. It is the lack of data, not an absence of theory, that makes this new discussion of CDBG seem strikingly similar to previous discussions on the subject.

One of the major questions we in Congress need to ask regarding the CDBG program is:

Which types of programs are given priority by Congress but are left unfunded through block grants?

In other words, is there a need for reinstating certain specific categorical programs, whose activities are not now being covered? Other questions, covered in the report, which I believe are of special interest to us in Congress are:

- Are low and moderate income groups the principal beneficiaries?
- Do block grants reduce "red tape," the use of outside consultants, and the number of unnecessary special purpose bureaucracies?
- Are there adequate mechanisms for the poor to participate in the planning and implementation of programs?

- Are block grants merely substituted for local monies that would have been spent for community development in the absence of block grants?
- In light of specific congressional requirements for evaluation, is HUD adequately administering and monitoring the program?

In addressing the problem of urban disinvestment, the report fails to draw sufficient attention to the fact that many neighborhoods are not receiving vitally needed mortgage funds. The disinvestment problem was recently debated in both Houses prior to Congress' enacting the Home Mortgage Disclosure Act of 1975. I suggest that the report needs to tackle the complexity of this issue, in a separate section, by trying to say something about the individual causes of disinvestment. For example, what proportion of property in stabilized or declining urban areas is beyond the state of being salvagable? What impact could a credit counseling program have to improve the credit-worthiness of potential mortgagors? Is the demand for loans in inner city neighborhoods often so low that a lender has no incentive to remain in the community? Is the availability of mortgage money insufficient, suggesting that the Federal Reserve increase the supply of money? Are some institutional lenders "redlining" neighborhoods through unjustifiable and discriminatory mortgage practices? The draft report does not sort out the relative importance of these different causes of urban decay, thus leaving the policy-maker uninformed as to where to place the focus of any attempt to revitalize the cities.

F. OPENING UP THE SUBURBS

The title of this section of the draft report is identical to that of a book by Anthony Downs (Yale University Press; 1973). The draft report does the complexity of this issue a serious injustice by not exploring it in sufficient depth. Some major issues, as summarized by Mr. Downs are:

...America's remaining urban poverty cannot be attacked effectively, without reducing the spatial concentration of the poor. ... [P]ractical means of achieving this goal exist -- means that would not seriously threaten the quality of life of the middle and upper-income majority. However, adopting those means would require many members of that majority to make additional sacrifices in money, power, and degree of neighborhood dominance.

Mr. Downs is correct, I believe, in stating that the task of dispersing the poor to the suburbs is necessary, but indeed difficult. This need, however, should not negate the equally important task of improving the central city for the residents who will remain there, given their own personal choice or the constraints placed on their moving elsewhere.

The major tool for achieving Federal fair housing policy is the "housing assistance plan" (HAP), required of each CDBG recipient to be submitted with its application. A recent evaluation, entitled The Housing Assistance Plan: A Non-Working Program for Community Improvement (Potomac Institute; 1975) seriously challenges the effectiveness of the HAP. It finds that HUD appears to have adopted a policy of approving HAPs submitted during the first year of the block grant program routinely and almost without exception, despite negative comments on the plans from regional or statewide agencies and negative reviews from within HUD itself. According to the evaluation, with a few special exceptions, the monitors could not discern that a lower income metropolitan housing dispersal plan, or regional perspectives of

housing needs, had any significant impact on HUD's approval of local HAPs. The report found that HUD is emphasizing meeting the needs of lower income people through existing rather than new housing but its regulations would frustrate the mobility of assisted families to move into existing housing from one community to another in the metropolitan area. Finally, the report concludes that HUD's dismal record in stimulating subsidized housing production under Section 8 calls into question the entire statutory structure of tying eligibility for 100 percent Federal CDBG funds to HAPs that may never be carried out.

These charges need to be answered in the President's report. If they prove to be valid, Congress should seriously think about developing an alternative to the HAP.

What is most surprising is that the section does not mention what many legal commentators have viewed as the most important recent decision in favor of housing dispersal. In March, 1975, the New Jersey Supreme Court in *Southern Burlington County NAACP v. Mount Laurel* held that developing municipalities in the State must make land available for housing people of all income levels through local zoning ordinances and the development of fair share plans, which allocate low-income housing units on a formula basis over the entire metropolitan area.

CHAPTER TEN
TOWARDS BALANCED ECONOMIC GROWTH

A. THE CURRENT BALANCE BETWEEN STIMULATION AND CONSTRAINT

While correctly pointing out that the current economic policy position is primarily one of restraint the report does not fully discuss the implications of such a policy. The report assumes that all would agree that constraint is the proper policy, because of continuing inflation nationally. This is not only a false assumption--many economists believe more general stimulation is needed--but ignores the possibility of regional and sub-regional development providing a means for directing stimulation. Regional and sub-regional economic programs can be directed precisely to those areas where the economy is lagging most severely and thereby provide stimulus with less risk of reigniting inflation.

Furthermore, the report does not discuss the role of regional development programs as a means of setting investment priorities. Even within a policy of constraint funds can be redirected to those areas selected by some rational decision process as being most credit worthy. The "market" left alone observes only profit criteria without considering desired social priorities. It must be remembered that even a decision to let the market allocate the available investment funds is a priority setting decision since we are well aware of what directions these decisions will follow, and have the power to alter these directions if we so desire.

B. MODIFICATION IN FEDERAL ASSISTANCE FOR URBAN AND RURAL ECONOMIC DEVELOPMENT

The report contends that recent changes in Federal programs are significant and will have a greater impact on the economic development of urban and rural areas than earlier programs. Of the four changes mentioned, new authority for the Economic Development Administration, continuing experimentation with labor mobility as an alternative to capital mobility, a change from categorical to block grant programs in urban areas and a change in emphasis from infrastructure to industry in rural development programs, only the third and fourth ones can be considered new or significant modifications of Federal programs.

1. The Economic Adjustment Act of 1974

The new authority provided the Economic Development Administration through the Economic Adjustment Act of 1974 (in addition to a two-year extension and some minor changes) allows the Secretary of Commerce to give grants to designated areas that have either experienced or expect to experience severe economic disruption causing high levels of unemployment. Although this cushions a community from an economic dislocation it does not in itself revitalize the community. Other sections of the Economic Development Act are potentially more effective in assisting in a community's economic growth.

2. The Promotion of Labor Mobility

The second modification, Federal experimentation with labor relocation out of chronic poverty areas, is currently insignificant in scope. The report itself discusses this concept more in terms of a future Federal program than a current one. The report does not discuss potential political and ethical difficulties involved in a Federal program directly to relocate workers from one place to another even if it is in the workers' best interest or with their approval. The political problem becomes enormous when one realizes that shifting population will empty some political regions and fill others. The ethical problem revolves around the question of freedom of choice or who decides where a citizen lives. Is it a proper function of the Federal government to directly encourage population relocating, for the purpose of economic growth or development? One must be aware that this is done now, indirectly, by all levels of government through differences in taxes, zoning, licensing and services provided; the question is should it be made direct and explicit.

3. Use of Community Development Block Grant Funds for Urban Economic Development Purposes.

A significant modification in the Federal assistance package has been the change from categorical grants to block grants for urban development. As the report states, "communities have greater discretion than before to concentrate federal aid in support of specific activities perceived as having a high local priority."

In addition, there is a change from prior review to a post audit. Although the report tends to gloss over the theoretical problems involved in changing from categorical to block grants it does state that many communities receiving these funds are under extreme pressure to use them for current operating expenses instead of capital projects for which the money is intended. The report also does not mention that without some control over how the money is spent some communities are using these funds for trivial projects that are of use to limited segments of the population. There is also a lack of discussion on how it is possible to coordinate a comprehensive national growth policy if local governments are given money to spend as they please without any regard to the needs of the country as a whole.

4. Toward Direct Production Investment in Rural Economic Development

The report in this section gives a very short explanation of the earlier, and to some extent current, strategy of the Economic Development Administration to invest in communities it considered potential growth centers with the belief that the benefits so derived would trickle out to the surrounding rural areas. But the report claims the spread effects of this strategy didn't seem to work, so more emphasis is now being placed, especially under the impetus of the Rural Development Act, on providing needed infrastructure directly to rural areas. Two factors are given as encouraging this trend: one is that the amount of infrastructure already provided to

nonmetropolitan communities is large enough to allow public investment directly in the infrastructure of rural areas; the second is the spontaneous movements of manufacturing concerns into rural areas. Although it may be true that the trickle effect hoped for in the growth center strategy has not worked well, it can be argued that nonmetropolitan community infrastructure has not yet been provided in the quantity (or possibly quality) needed. Rural areas should not be denied or supplied with development funds on the basis of the status of the infrastructure of nonmetropolitan communities but on the basis of need in the rural area. The report also does not explain how or why rural economic development is tied to national growth.

In the discussion of the Rural Development Act of 1972 and its major sections dealing with rural development, there is no mention of the difficulties that have surrounded this program since its enactment. No mention is made of the difficulty in getting some provisions of the program implemented and funded at adequate levels. No mention is made of the seeming apathetic reaction of the Secretary of Agriculture to the provision requiring him to coordinate all Federal rural development programs to eliminate duplication and waste. No mention is made about the continuing conflict between the Department of Agriculture's attempts to allow the States and localities to decide how to spend the money and the Congress's explicit desire for the Agriculture Department to make all the decisions.

The report in general has its facts correct, although some are selective, but it does not present an overview of the problem of urban and rural economic development and how it is related to the question of national economic growth. Without stating it explicitly, the report seems to imply that it is necessary for economic growth to occur in all urban and rural areas for national economic growth to take place, which is simply not true. There will always be some areas in economic decline for any number of reasons and some areas experiencing a boom. As long as economic growth exceeds economic stagnation or decline in the various regions of the country, national economic growth is assured.

C. INNOVATIVE DIRECTIONS FROM THE STATES

1. From "Beggar Thy Neighbor" to "Positive Sum Approaches"

This discussion of the industrial revenue bond device makes no reference to the current re-examination by Congressional committees of the use of "tax-exempt" securities on behalf of private corporations to finance pollution control facilities required by the Federal Clean Air Act of 1972 and the Water Pollution Control Act of 1972. Such a use was made possible by the exclusion of certain public purposes from the size-of-issue restrictions on industrial revenue bonds imposed by 26 U.S.C. 103(c)(1) of the Internal Revenue Code. (Section 103(c)(4) allows the exemptions for residential property, sports facilities, convention facilities, transportation facilities, sewerage, water solid waste and energy facilities, industrial parks, and air and water pollution control facilities.)

During calendar year 1974 and 1975, reported sales of tax-exempt pollution control bonds amounted to about \$2 billion. The size of such financing is now larger than the volume of industrial development bonds in 1968, which prompted the initial Federal legislation restricting their use. An analysis by the Municipal Finance Officers Association (MFOA) issued March 10, 1975, estimated that governmental costs in 1974 in foregone Federal State and local tax revenues amounted to \$53.8 million and to \$12.5 million in increased costs of State and local borrowing. By 1980, the MFOA puts the governmental costs for outstanding pollution control bonds at \$790 million.

D. IMPROVING THE AVAILABILITY OF CAPITAL FOR REGIONAL ECONOMIC DEVELOPMENT

In this section, the report raises the two fundamental institutional questions of "...the possible transformation of development finance agencies from government bureaus into autonomous financial intermediaries; and the tighter linkage of local, state, regional, and federal agencies through the creation of a hierarchical development finance system."

The question of substituting autonomous financial intermediaries for government bureaus in order to finance regional economic development raises several important issues. Firstly, making such activities "off-budget" flies in the face of Congress' desire to oversee the budget more carefully, a desire indicated by the creation of the Congressional Budget Office and system.

Secondly, to the extent that such an intermediary borrowed from the Federal Financing Bank (FFB) to finance its activities, it would, while not appearing in the budget, contribute to the Federal deficit as the FFB borrowed from the Treasury to cover its obligations to the financial intermediary.

Thirdly, an issue related to the second above is the fact that as the FFB borrows from the Treasury, the Treasury will need to borrow from the public to meet its obligations. The Treasury's selling of bills and notes will raise market interest rates and could possibly "crowd out" some of the very persons who are to be helped by the financial intermediary.

Fourthly, the establishment of such an autonomous financial intermediary would probably require some form of regulation if it is to have any ability to respond to Congressional desire.

Fifthly, there is some legitimate concern about the success rate of these financial intermediaries - for example, some have characterized the Economic Development Administration (EDA) as a "loser" since it has done things such as financing in rural areas industrial parks which have been only half-filled.

The question of creating a hierarchical development finance system also raises some issues. In the first place, rural banks tend to invest their moneys conservatively and don't advance locally credit available from their deposits, but rather tend to invest their moneys in the larger metropolitan financial markets. This raises the question of what guarantees exist that regional banks will do better jobs in meeting rural credit needs. Moreover, some argue that changes in the banking laws to encourage more regional development may be more advantageous than creating a new hierarchy of development finance agencies. It is also contended that the purposes of such a system might better be achieved through the private market.

E. EMPLOYMENT AND TRAINING ASSISTANCE

The draft report discusses historical employment patterns and recent manpower programs but appears to overlook certain critical problem areas brought on by the recent recession. In other areas, the report places too little emphasis on possible policy options in the area of job development and manpower policies and the impact they have on overall economic performance. More specifically, the distortions triggered by wide swings in economic activity, both domestically and internationally, deserve additional attention with a greater choice of options to avoid recurring spells of extended and deep unemployment in America.

The personal burdens generated by the high incidence of unemployment in the United States were a necessary concern of our government in 1974 and 1975. One approach to relieve the financial pressures generated among the long-term unemployed by the recent recession, and to maintain a modicum of purchasing power in our economy, was to enact major extensions and expansion of the unemployment insurance system in those years. However, with little real improvement in the nation's employment situation over the past year, and with no significant decrease in the jobless rate forecast for 1976, this problem continues to plague our country.

To deal with the 1974-75 recession, Congress passed and the President signed the 1974 Emergency Unemployment Compensation Act

which provided millions of jobless workers with extended benefits under the bill's Federal Supplementary Benefits provisions. However, under the 1975 Emergency Compensation and Special Unemployment Assistance Act (Public Law 94-95), Federal Supplementary benefits are to be based on a State's insured unemployment rate for a sliding 13-week period. According to the new trigger mechanism, a number of states will reduce their benefit duration period from 65 weeks to 52 weeks while other states will drop the maximum benefit period to 39 weeks. In those states with an average insured unemployment rate of 6 percent or more on a 3-month sliding basis, the 26 added weeks under FSB will continue providing up to 65 weeks of unemployment benefits. However, the cut-backs in unemployment insurance benefit duration periods in other states and the normal heavy fall-out from the program caused by continuing high unemployment are bound to expand the welfare rolls of our nation particularly among specific states. This drain of our financial resources and the concomitant loss of potential output during a year in which our economy should be on a slow growth path is sure to threaten economic recovery. A national growth report should include a more thorough discussion of this problem and should explore a series of policy options to deal with the issue.

While labor immobility, changing technology, foreign competition and job discrimination have each contributed to long-term unemployment,

this problem, in more recent times, has been further compounded by an economically depressed labor market which has taken new tolls in jobs across occupational, industrial, ^{and} /geographic lines as well as among blue and white collar workers and an increasing number of household heads of both sexes. In view of highly obvious changes in both domestic and international factors affecting our economy, a re-evaluation of employment and manpower policy in the United States appears to be necessary. Expected high unemployment levels attributable, in great part, to new economic dislocations in combination with older institutional causes deserve a greater degree of attention and analysis and more imaginative and effective solutions. A national economic and manpower policy in which a simple statement of purpose, however laudable, is supplemented by specific procedures to achieve desirable goals--such as full employment--should be considered.

The advances made in equal employment opportunities since passage of the 1964 Civil Rights Act are certainly to be commended and appreciated. But, much more remains to be accomplished in this area especially in view of new problems arising from deep fluctuations in our economic cycle. For example, in addition to the equal employment opportunity programs discussed in the report, equal employment opportunity problems brought on by a severe dip in economic activity and mass lay-offs in a number of critical industries must be considered. Among these is the clash between traditional and, in many cases,

contractual seniority principles on the one hand, and equal employment opportunity goals for minorities and females on the other. This more recent problem requires clearer guidelines to balance the long-term interests of legitimate worker groups in our society.

Youth unemployment is a continuing problem which has been further aggravated by the economic downturn of 1974-75. Yet the future prospects of increased job opportunities for our young workers should not be^{as}totally pessimistic as presented in the report.

First, while the recent recession displaced many young workers and tightened job opportunities for new entrants into the labor market, a slowing down of the rate of growth of the teen-age working population generally, and especially for males in the coming years, and a more intensive education and training program for needed job skills, can contribute significantly to a better labor market for young workers. In the final analysis, an adequate rate of overall economic growth and the resulting expansion in economic activity across industry lines and geographic regions will ultimately cause employers to dip deeply into a better trained and readily available young work force regardless of real or imagined constraints imposed by current statutory wage standards^{which are}assumed in the report without adequate support.

Although the concept of an expanded and continuous Federal role in the provision of employment opportunities for the total civilian labor force has some inherent implementation problems it should not, however,

be ignored as the report appears to do. A clearly devised program in which planning for overall economic growth can include a full employment commitment in which both the private and public sectors are more fully utilized to employ all persons able and willing to work. In such a program, designed to encourage transfers from public employment to private employment while public jobs stand ready to take up the slack during economic slowdowns, the ravages of high cyclical unemployment can be minimized, if not avoided altogether, while at the same time the vast manpower resources of our Nation will be more fully utilized.

Selected Detailed Comments

1. The section is marked by a substantial number of technical errors, e.g.
 - a. The budget data appears to be taken from the original 76 budget and does not incorporate the substantial changes which have occurred since then.
 - b. Funds to compensate the unemployed were never exhausted--at least not in the sense that the unemployed were denied their compensation.
 - c. CETA is not a revenue sharing program.
 - d. A major shift has occurred in manpower programs under CETA--there is a large increase in employment as opposed to training programs (the error in the text is caused by failing to include Title VI as a part of CETA--though it is).
 - e. The conclusion that the exhaustion of unemployment benefits has forced many workers onto welfare is open to question, particularly for the period covered by the Report.
 - f. There is no longer a national JOBS program.
 - g. Under current conditions, the long-term unemployed and the "hard-core" unemployed are by no means the same group of people.
 - h. The discussion of the tax credit does not relate to the particulars of the major bills pending in the Congress which deal more with hiring than with training.
 - i. The Job Corps bears very little similarity to the proposed revival of the CCC or the Young Adult Conservation Corps. The former is geared to remedial education and skill training for the disadvantaged; the latter to providing jobs for a broad spectrum of youth.
2. The Report makes no serious discussion of the Congressional initiatives to use manpower and training as a substantial tool to reduce current unemployment rates. The funding levels proposed in the Budget resolution, the proposals to increase public service employment levels stemming both from the substantive committees and the Joint Economic Committee, the new youth employment programs, and particularly the proposed "Full Employment and Equal Opportunity Act" demonstrate a variety of alternatives to using manpower programs to reduce unemployment levels. That is the key issue in manpower--and it is not seriously addressed by the Report.

F. LINKING LOCAL ECONOMIC DEVELOPMENT TO BALANCED COMMUNITY PLANNING AND DEVELOPMENT

In this section the problem of bridging the gap between economic development and manpower activities is correctly identified. However, beyond identification of the problem and a general statement encouraging better co-ordination no useful insight is given. Perhaps the Administration should take the lead in solving this problem by developing alternative programs to those offered by Congress rather than simply vetoing those passed, leaving the problems unsolved.

G. THE BASIC NEED FOR ECONOMIC RECOVERY AND GROWTH

This section attempts to summarize the major point of Chapter X -- economic stability and growth are necessary to promote the various economic development programs discussed. Again it totally ignores the powerful role that can be played, by programs directed specifically at regional and sub regional levels in accomplishing this goal. During a period of insufficient growth that occurs simultaneously with inflation the regional approach can direct assistance directly to those areas that not only have the greatest need, but are likely to produce the smallest inflationary effect.

If the focus of the report had been more attuned to overall growth policy rather than the more narrow individual program approach, it is likely that many of the important inter-relationships among programs would have been more fully explored.

CHAPTER ELEVEN
GUIDING AND CONTROLLING GROWTHA. ONGOING EXPERIMENTATION WITH LOCAL GROWTH MANAGEMENT SYSTEMS

I find this an interesting and informative section. In reading it I found myself asking what would be the appropriate Federal role in assisting local governments achieve desirable forms of development. Is the 701 approach adequate? I also asked myself what would be the Federal interest in desirable forms of development at the local level? I think we must ask what national priorities are involved here and what are strictly local matters. Where would Federal leadership be appropriate and where is local discretion without a Federal involvement more appropriate? You may wish to consider addressing the question of the what if any Federal interest exists in experimentation with local growth management systems.

B. PREVENTING RURAL SPRAWL

The draft report does not devote a special section to rural areas, a treatment which I believe would be preferable to the almost cursory attention given the subject in the current draft. It does discuss, in passing, some important issues facing rural America. Earlier in my remarks, under the rubric "urban-rural balance," I suggested additional topics worth considering, especially the quality of rural life. Here, I shall confine my statement to two topics covered inadequately in this section of the report -- developing local capacity for planning and the preservation of agricultural land.

Quite correctly, the draft report draws attention to the responsibility of the Federal Government in assisting rural governments to develop local capacity for planning and growth management. In the last decades we have witnessed a "de-ruralization" of the Nation. Between 1950 and 1970 the total U. S. population increased by slightly more than one-third. Correspondingly, land committed to "urban uses" increased from 27.2 million acres in 1960 to 34.2 million acres in 1970. Nearly half of this new urban land came out of the agricultural land inventory. If the United States is to remain agriculturally self-supporting, the retention of agricultural land is a necessity. However, neither Federal policy, nor the draft report, adequately addresses this point.

The draft report mentions three channels of Federal planning assistance to rural areas -- HUD's community development block grant program (CDBG), HUD's Comprehensive Planning Assistance program (Section 701), and the Rural Development Act of 1972. CDBGs, which I discussed in an earlier section, were authorized by the 1974 Housing and Community Development Act. During 1975, Congress, upon realizing that HUD had underestimated

the number of eligible urban counties, provided special appropriations so that small towns would not be excluded during the funding process which was about to happen due to the addition of the urban counties.

The words in the report regarding the Sec. 701 comprehensive planning assistance program are not consistent with the actions of the Administration. The report states the importance of comprehensive planning assistance. If this indicates the Administration's full acceptance of Sec. 701, I commend the Executive branch. But I fear that the Administration is still attempting to phase out the program.

In March 1975, Congress passed a resolution, which I sponsored, disapproving the President's proposed deferral of budget authority to carry out the Sec. 701 program. Without this Congressional action, which reaffirmed Congress' support for Sec. 701, the program would now be dead. But later during the year, in August, at the annual meeting of the American Institute of Planners, two senior HUD officials advised local governments to seek elsewhere for funds to support comprehensive planning.

I do not quite understand why Sec. 701 has become an unwanted child of the Administration. I have seen no evaluation reports or studies critical of the program, and in fact, it receives much praise by local officials testifying at Congressional hearings.

As I have said before, the Sec. 701 program has assisted States, counties and cities of all sizes. It has fostered regional cooperation throughout the country, both on a metropolitan and nonmetropolitan basis, and it has funded economic development districts and Indian tribal councils. The program serves to assist State and local governments in protecting the investment the Federal Government makes in the wide variety of Federal programs

in which they participate. It has provided a coordinated management framework, it helps produce policy and decision-making documents and tools, and it has served as a measure for community values. A statement of the Administration's views on Sec. 701 appears warranted.

By devoting only one sentence (65 words) to the Rural Development Act of 1972, the draft report has almost ignored this important piece of legislation, much as the Administration has ignored Congressional intent behind it. The 1972 Act called on the Administration to develop a national program for rural development, a program that would be an essential ingredient to the national growth policy. Criticisms addressed to the Secretary of Agriculture's Second Annual Report on Rural Development Goals were expressed at Congressional hearings last year. They indicate the Administration has been negligent in its responsibility to Congress.

In advising the draft report's authors to revise this section to include a full discussion of the 1972 Rural Development Act, I refer to two sets of Congressional hearings which provide insight into the Act and its implementation. The Subcommittee on Rural Development of the Senate Committee on Agricultural and Forestry, on which I serve, held hearings in January and March of last year and the Subcommittee of Family Farms and Rural Development of the House Agricultural Committee held hearings in June and July, 1975. I reserve my substantive comments on the report's discussion of the Act until I can review the revised report.

C. THE UNCERTAIN PATTERN OF JUDICIAL INTERPRETATION

A general criticism of the subpart is that it was evidently written by someone with little understanding of the judicial process. It is useful primarily for its identification of issues, and not for its summary of court decisions.

Although the description of the Oregon Supreme Court's holding in Fasano v. Bd. of County Com'rs, 507 P.2d 23 (Ore. 1973), is basically accurate it is not accurate to suggest that courts have routinely deferred to legislative judgments on issues of "piecemeal" zoning. "Spot zoning," i.e. zoning singling out one piece of property for special classification not supported by reference to a comprehensive plan, has frequently been invalidated when challenged in court. 101 C.J.S. Zoning §34 (1958).

It is a bit arrogant to conclude, following a brief, superficial, incomplete, and, in some respects misleading effort to summarize as complicated a subject as the "taking" issue, that "the judicial branch is not immune to new perceptions of what may be reasonable efforts to achieve public purposes through the regulation of private property." A 1973 study prepared for the Council on Environmental Quality -- Bosselman, Collier, and Banta, The Taking Issue: An Analysis of the Constitutional Limits of Land Use Control -- analyzed the issue in depth, and did find strong support in case law for statewide or regional zoning genuinely based on the necessity for environmental control. The Pennsylvania cases referred to in the subpart, however, relate to this trend only to the extent that they indicate courts will look beyond mere allegations of environmental need to determine if ordinances are in fact based on such a legitimate objective. As indicated, those cases deal primarily with the issue of "exclusionary zoning," and stand for the general proposition that Pennsylvania communities must make some provision within their planning and zoning for high density residential uses.

The subsections on interim development controls, adequate public facilities ordinances, and exclusionary land use controls contain no glaring inaccuracies. One statement in the subpart on exclusionary zoning is perhaps worthy of note. The Supreme Court decision in the so-called "Penfield case" -- Worth v. Seldin -- provides no guidance whatsoever on the constitutionality of "exclusive zoning."

The concluding two paragraphs could cause some confusion concerning the role of Supreme Court review. There are only a few limited circumstances under which there is a right to Supreme Court review by way of appeal. Most Supreme Court review is completely discretionary, and exercised by way of its certiorari jurisdiction. In denying petitions for writs of certiorari, i.e. in refusing to review such cases, the Court seldom states a reason, and no reason can be inferred from such a denial. The "Ramapo" case, Golden v. Planning Bd., 30 N.Y. 2d 359, 285 N.E. 291 (1972), appeal dismissed 409 U.S. 1003, was before the Court on appeal, and the Court explained that the appeal was dismissed "for want of substantial federal question" -- another way of saying that the constitutional issue raised was not substantial enough to bring the case within the appeal jurisdiction. Needless to say, the Court made no mention of "family affairs." Furthermore, given the fact that most Supreme Court review is discretionary, it is seldom that a case moves "inexorably upward through the Federal Courts."

D. TENTATIVE PROGRESS TOWARDS AN EFFECTIVE STATE ROLE IN
LAND USE MANAGEMENT

To an extent, this section of Chapter XI covers the same ground as Section E of Chapter VII, and the commentary supplied concerning that section would apply here as well. Nevertheless, the section does provide a bit more detail in state-level initiatives in planning and growth management. The section, in effect, is an explanation of a state-by-state land-use legislation box-score (copied from a Council of State governments report) and categorizes states on how much land use control power they have managed to wrest from local governments. The conclusion is not much.

The trouble is, the reader of the section is liable to draw an erroneous conclusion from this approach. It would seem that the only basis for "success" is the extent to which the state level of government has been able to achieve state-wide growth control mechanisms. As it happens, this may be the least remarkable of state-level achievements in de-localizing land-use planning. The most impressive state-wide planning legislation (in Hawaii, Oregon, Vermont, and Florida) has been achieved in recreational states, which are not really representative of the states where most people live -- the urban states of the Northeast, Great Lakes, and Pacific Coast. In these states, the approach is toward growth controls in specific geographic regions under state auspices and through state legislation. Two notable examples of this are the California coastal management program and the protection of the Adirondack area of New York State. There are many other examples, but at least these two should have been discussed in this section. In the case of California, where a "legislative initiative" process permits citizens to put propositions on the state ballot quite independently of the

legislature, "Proposition 20" created a coastal management program which has led to a fundamental change in the right of the public to control treasured landscapes in spite of the claims of private owners. In the Adirondacks, legislation creating the Adirondack Park Agency, produced growth control measures for a six million acre area of the state, the Adirondack "Park", of which almost two-thirds is privately owned. Some fifty percent of the private land is "zoned" for no more than one principal building per 43 acres. Any subdivision of more than five units is reviewable by the state-level Adirondack Park Agency, and the "resource use" lands (the 43-acre zone), any building must be reviewed.

These regional approaches to growth management under state auspices are, many analysts believe, a much more important phenomenon than state-wide planning efforts and hold much more potential for land use reform through state-level initiative.

E. A NATIONAL LAND USE ACT AND ALTERNATIVES

This section deals with the national land use bills and what the authors call "less inclusive alternatives." Since the section deals with federal-level activities by definition, it does manage to avoid glaring omissions of issues and trends so prevalent in associated sections concerning non-federal activities. Nevertheless, it does not manage to avoid some glaring errors in fact and in analysis.

In this discussion of the national land use bill, it might have been helpful to specify that the Senate did in fact twice pass a national land use bill, though the House did not. To say that "Congress" has declined to pass the legislation is not incorrect, but rather misleading.

More worrisome is the assertion a few paragraphs later that there are now "alternative bills" which contain "penalties for not implementing the required procedures." The versions referred to have long since been abandoned. No bill is before Congress at present containing federal sanctions for non-participation.

As an alternative to national land use planning legislation, the report seems to favor "non-statutory" coordinating mechanisms of Federal agencies to overcome a problem that a national bill could help solve: the conflicts and anomalies of various federal programs that require planning or support planning at the state and local level (CRS analysis identified 122 such programs). The problem led to some of the language in the present land use bills pertaining to "federal consistency."

"Growth policy", which national land use legislation could begin to address, has to do not with the complexities of existing programs, but with actual, on-the-ground degradation of the quality of life for the American People. The land-use issues of growth are: the maintenance of ecological balance, so critical to economic stability, health and a host of other human concerns; the protection of agricultural land, fundamental not only to our own food supplies but having wide international consequences; the containment of urban sprawl which eats up energy, money, time, and destroys city and countryside alike; the control of the location of "key facilities" - including energy facilities - which we have learned can change the development patterns of whole regions almost overnight; the management of development in connection with natural hazards, particularly areas subject to flooding, earthquake damage, or hurricanes - all of which take lives and destroys property needlessly because of the lack of land planning mechanisms where it counts; and finally the protection of landscape quality so that we can have places to live, work, and spend leisure time that are not degraded by unrestrained growth. These are the substantive issues that could be addressed by national legislation, and the authors (or more accurately, perhaps, their sponsors) missed an opportunity to identify and deal with true policy options by failing to take these realities of land use into account.

F. LARGE SCALE PLANNED DEVELOPMENT

This section of the draft report deals with the role of the Federal and State governments in promoting large-scale planned development. It focuses on HUD guaranteed new communities and the New York State Urban Development Corporation (UDC).

New communities are one of the many tools we have available for achieving a coordinated and balanced national growth policy. Title VII of the 1970 Housing and Urban Development Act, in fact, ties together new communities and growth policy by its very title, "The Urban Growth and New Community Development Act."

As Congress intended in passing the legislation, new communities could serve a three-fold purpose. First, in the suburbs, they could promote better planning and resource conservation by preventing wasteful use of the land. This type of waste has been traditional in conventionally built, "tract" subdivisions, a form of growth many label the "slurb." Second, in rural areas, new communities could serve as "growth poles" to bring much needed economic growth to the less developed parts of the nation. And third, in the central cities, new communities could serve as a means to revitalize the urban core, could tap existing infrastructure (such as highway systems and employment bases), and could make use of facilities and services which today go underutilized in many cases.

Sadly, I have had to use the word "could." For, in fact, new communities as administered by HUD have not achieved these goals. HUD has generally neglected the development of free standing new towns in rural localities or "new towns in town" inside the city. The only exceptions are

Cedar-Riverside, a new town near the center of Minneapolis and Soul City, a new town located in rural North Carolina. Thus, as an urban growth tool, new communities have not lived up to their potential.

I am saddened by the financial problems facing new communities around the nation. So many of these problems result from the state of the economy which is severely hurting all the building industry. Many of the immediate problems can be corrected if HUD begins to take the program seriously and attempts to remedy its past mistakes. For example, HUD should utilize the supplemental grant monies appropriated by Congress for new communities. Also, the Department should take whatever immediate steps are necessary to keep the communities from becoming financial disasters. At the same time, the Department should seriously explore the development of smaller scale, inner city and rural new communities, including using Title X mortgage insurance authority.

The draft report section presents a background historical analysis of new communities, defining some of their problems and offering possible policy options. I believe this is a strong section in the report, capitalizing on the number of evaluative studies that have appeared recently. Moreover, I believe the Administration should use the 1975 growth report as an opportunity to report back to Congress with a comprehensive plan for alleviating the financial problems that existing HUD-guaranteed new communities face. If the Department chooses to redefine the program as a demonstration, it could present Congress with the specifics of this proposal. If it wishes to redesign the program, placing the emphasis on smaller scale Planned Unit Developments (PUDs), or on the redevelopment of older communities, it could state its case. The draft report says that the nation, learning the

lessons of recent experience, must pursue large scale new community development differently in the future. It is now up to HUD to suggest the alternative she wishes to follow -- a step beyond the draft report which merely presents a list of policy options.

The draft report focuses on the New York State urban Development Corporation which it calls "the single important precedent for public land development in the continental U.S." The report concludes that the "UDC experience does not appear to irretrievably discredit the public development concept, but it does suggest the need for far more moderation and fiscal accountability in its application." This is sober advice which should well be heeded by other States contemplating public land development.

CHAPTER TWELVE
THE ROLE AND CAPACITY OF GOVERNMENTA. THE APPROPRIATE ROLE OF GOVERNMENT IN THE 1970'S

This is a potentially vital section of the 1976 growth report, a section that could have special meaning during the year in which we celebrate the nation's two hundredth anniversary. It identifies several important issues; it could take steps toward spelling out the issues and policy options each suggests; and it could propose an action agenda for developing a fuller understanding of the issues and for making necessary policy decisions.

I confess that I am disappointed that the report does not take a advantage of this excellent opportunity. I realize that the introduction to the chapter says that no effort is made to resolve any of the issues discussed, but I do not ask that the issues be resolved within the pages of the report. I believe, however, that it is entirely appropriate and necessary that the Congress be given some sign that the Administration intends to come to grips with this set of issues in some sort of systematic way. The Congress is aware of what the important governmental issues are; it does not need a mere listing decorated with rather superficial discussion. Congress needs to receive thoughtful analysis of the issues and recommendations on ways to seek their resolution.

The memorandum sent to me asking for comments on the draft report says that the 1976 report is limited to being diagnostic, i.e., that the report does not contain policy recommendations. While I support the intent to present good diagnosis of issues and problems, I do not see an adequate level of diagnosis in this section of the report. Moreover, I believe that the Administration's refusal to present policy recommendations or to discuss policy alternatives in any depth is a decision that should be reconsidered in order not to lose the excellent opportunity this section offers for setting forth proposals on how to go about handling the many issues related to the role of government in our society today.

On a somewhat more specific level let me point out that there is an omission of what I consider to be a major issue on the role of government. That is the issue of the government's appropriate role in affirmatively pursuing balanced economic growth and development. By ignoring this issue and by not treating matters encompassed by S. 1795, which Senator Javits and I introduced during the first session of this Congress, the draft report leaves out a major, growth-related concern. The issue of national economic planning is a serious one--one that is part of the broader question of the appropriate role of the Federal government should play in our society. I would hope that the final version of the 1976 growth report will include at least a recognition that national economic planning is an important matter and that it is an issue that is currently receiving careful attention.

In the portion of this section dealing with the size and cost of government it would be helpful, I believe, if distinctions were made among Federal, State and local employment. They are quite different in both levels and rates of growth. Federal civilian employment has been quite stable, hovering at around 2.9 million employees since 1970. Moreover, Federal employment as a percentage of the total U.S. work force has been dropping rather steadily since 1967. In 1974 it was 3.06 percent. On the other hand, State and local employment has been growing steadily both in absolute level--11.8 million in 1974-- and in percentage of the national work force--12.64 percent in 1975)

B. FISCAL RELIEF FOR STATE AND LOCAL GOVERNMENTS**a. General Revenue Sharing:**

On the basis of preliminary data recently released by the Treasury Department on Federal aid payments, general revenue sharing payments amounted to \$6,130 million or 11.3 percent of total Federal aid payments (including general revenue sharing payments) reported of \$54,193 million in fiscal year 1975.

Page XII-15--In discussion of criticisms of general revenue sharing, one additional point might be added:

Some question whether the financial plight of State and local governments is any more serious than that of the Federal Government, and hence, whether there is any justification for continuation of this program beyond its 1976 termination date.

Page XII-16--7th line from bottom of the page, insert the following correction and updated information:

According to information from recipients, in the first 1 1/2 years of the program (from January 1, 1972 through June 30, 1973), 45 percent of general revenue sharing funds was used to reduce taxes or to prevent a tax rate increase. On the basis of Office of Revenue Sharing data provided for the period from July 1, 1973 through June 30, 1974, only 4 percent of all governmental recipients reduced tax rates.

Page XII-18--One more recommendation for change in the legislation might be added at the end of the first paragraph:

Other recommendations have been made for discontinuation of funding by means of permanent appropriations, and instead making the program subject to annual Congressional review and action via the appropriations process.

The last paragraph should be modified to include mention of "anti-recession grants" provided as part of the Local Public Works and Capital Development and Improvement Act (H. R. 5247). As reported by the Conference Committee \$1.5 billion dollars would be authorized for 5 calendar quarters beginning with April 1, 1976. (Two-thirds of the payments under the Act would be made to local governments and one-third to States in which the seasonally adjusted unemployment rate exceeded 6 percent.) The Senate acceded to the conference Report on December 17, 1975 and the House is expected to take action early in the second session.

Page XII-20--In the last two lines before discussion of Categorical and Block Grants, these corrections might be inserted:

Appropriations totalling \$39.8 billion have been proposed to finance extension of general revenue sharing for an additional 5-3/4 years (through September 30, 1982), with disbursements gradually increasing by \$150 million annually to \$7.3 billion in the fiscal year 1982 in order to allow for inflationary price rises.

