EXTENSIONS OF REMARKS

EARTH CONFERENCE AT OHIO UNIVERSITY

HON. KEN HECHLER

OF WEST VIRGINIA

IN THE HOUSE OF REPRESENTATIVES

Monday, June 21, 1971

Mr. HECHLER of West Virginia. Mr. Speaker, it was my honor to deliver the keynote address at Earth Conference I, sponsored by SCOPE—Student Council on Pollution and the Environment—and the Athens Ecology Group. The conference was held at Ohio University, Athens, Ohio, April 4–5, 1971, and I am pleased to submit the text of papers presented and discussion held at the conference whose presiding chairman was Edward M. Dobson:

EARTH CONFERENCE I

PRESENTATION: EDWARD M. DOBSON, CHAIRMAN, ATHENS ECOLOGY GROUP, ATHENS, OHIO

Mr. DOBSON. Ladies and gentlemen, it is a pleasure to have you here this evening, and on behalf of the Athens Ecology Group, welcome to Earth Conference I. This conference is sponsored by the Student Council on Pollution and the Environment, a branch of the Environmental Protection Agency. Here to welcome you on behalf of the city of Athens is the President of our City Council, Dr. Harry Crewson.

Dr. CREWSON. Thank you, Ed, very much. As President of City Council I do welcome you to the City of Athens. I hope this Conference is a very fine success. Also, in another capacity, as a member of Governor Gilligan's Citizens' Task Force on Environmental Protection, I cannot overemphasize the importance of this type of conference, and I trust that beginning with Congressman Ken Hechler it will be a very, very great success. Thank you for coming and I wish you well.

Mr. DOBSON. Thank you, Dr. Crewson. There is another very important entity in Athens County, Ohio University. Here to welcome you on behalf of the University and explain the role of the University in such activities as this, University Provost, Dr. Robert Savage.

PRESENTATION: R. L. SAVAGE, PH. D., PROVOST, OHIO UNIVERSITY, ATHENS, OHIO

On behalf of Ohio University, it is my privilege to welcome our visitors to our campus and to welcome them together with our own students and faculty to "Earth Conference I." In addition, I want to congratulate the members of SCOPE (the Student Council on Pollution and the Environment) and the Athens Ecology Group for their selection of timely and interesting topics for Earth Conference I.

I should like to make my initial remarks somewhat broader, but related to, the effects of energy production by making a few comments about the role of the University in our efforts to become better managers of our environment. I prefer to speak in terms of managing our environment rather than talking about an environmental crisis. The environmental crisis can be described more as a "creeping crisis" in contrast to a sudden and dramatic crisis such as an explosion, a tornado or an earthquake. This is both an advantage and disadvantage. On the one hand, it gives us time to work out better management methods but on the other hand, it is more difficult to make the public and the lawmakers aware of the problems and willing to do something about them.

Let us be very candid about the role of the University in managing the environment. The University does not have the resources nor should it neglect its major function of providing educational opportunities to solve the problems of our environment. But this does not mean that the University should not be concerned about better management of our environment.

At the Argonne Universities Association Conference on Man's Environment which was held in July, 1969 and which some of you attended, the role of the universities was discussed by several speakers. Dr. Powers pointed out that there is an extraordinary amount of talent in the universities and the question is how this talent may best be brought to bear upon the urgent national problem of learning how to manage our environment to increase the well-being of people.

Dr. Rene Dubos, of Rockefeller University, stated that the most urgent role of the university is to sensitize students to the fact that their social concern will be wased if it is not based on scientific technological knowledge. I have emphasized to our engineering students the need for them to have social concern and I want to take this opportunity to emphasize to the rest of our students the importance of Dr. Dubos' statement that their social concern will be wasted if they do not have the knowledge on which to base constructive action. It is relatively easy to talk about our problems, to get emotional about issues and to criticize present methods of operation. It is much more difficult to go through the drudgery of getting enough education and information to work out constructive ways to manage our environment.

I am not talking about just technological knowledge. We are faced with a very complex problem which will require skills in the social sciences, economics, government, law, medicine, planning, communication, science, history, engineering and others. But this is exactly what the University has to offer and should be its major role—that is to turn out graduates who have social concerns and who also have the knowledge to do something constructive about them.

The complexity of the problem is a matter of considerable interest to many of us at Ohio University. The traditional approach has been to teach or to do research in various areas of specialization. Of course this is important, but hardly anyone is teaching and very few are studying how the pieces relate to one another and man to his total environment. Dr. Dubos states that we cannot solve the environmental problems of our society because in most cases knowledge of the interplay between man and his environment is either inadequate or totally irrelevant.

At Ohio University, we are proposing the establishment of a Center for Environmental Studies which would be based on the systems approach to the management of our environment. Experts from many disciplines would work together to identify the interrelationships among the subsystems which must all function together for effective management of this environment. This would get away from the "piece-meal" approach to solving the problems which sometimes leads to the situation where the solution to one environmental problem creates a worse one somewhere else. The University has the resource of talent to identify these interrelationships so that action-oriented programs can be initiated by the appropriate government or social agency to solve the problems. I believe that this is the most appropriate role of the University.

Mr. DOBSON. Thank you very much, Dr. Savage. Adlai Stevenson once suggested that we continue on this planet by virtue of the love and care that we give to it. Through our structures there are so many ways that we can provide that love and care. Through our tax structure our government tries to provide something; we may take issue, they may provide something else. One of the things with which we have been provided is SCOPE, the Environmental Protection Agency's Student Council on Pollution and the Environment, which has funds for activities such as this—to help us learn about problems that beset us and how to better participate in the resolution of those problems. I would like first to introduce the national representative of the Student Council on Pollution and the Environment, Lance King, from Washington. Dave Guthrie is the representative for the Ohio Basin region from Columbus. Dave Guthrie.

Mr. GUTHRIE. On behalf of the Student Council on Pollution and the Environment, I would like to thank everyone for coming tonight. Several months ago when Ed first approached me with the idea of holding a conference such as this, possibly a continuation of a conference that SCOPE had sponsored at the University of Kentucky, in Lexington, on November 21, I was excited about the idea, not only because of its implications for electric power, but also in terms of needed public knowledge about surface mining.

I won't elaborate on this point, you'll hear enough about it within the next two days to be more than content. SCOPE was created last year by former Secretary of the Interior Walter Hickel, and we were first an agency in the Department of the Interior and we have just recently been transferred to the Environmental Protection Agency. We believe that a conference like this is satisfying the needs of environmental education, which is one of our primary functions. I am sure some good will be achieved, not only from the standpoint of education concerning aspects of strip mining, but also in developing public awareness, a sense of community and its relation to the environment. The key is a sense of community and everyone must work together to achieve the ends of environmental protection. Thank you.

Mr. DOBSON. Thank you, Dave. As you know, if you have a program, we will have four presentations by individuals and a fifth presentation of a mixed-media slide and tape program, with which I think you will be very impressed. But now, as we move into the program, it is a great pleasure to introduce a Congressman from the State of West Virginia who has been most active in environmental matters, one of the men who led the vote in the House to defeat the SST in the most recent decision and a man who now has introduced in the House a bill which would abolish strip mining of coal. Many of you know that West Virginia had such a bill on the state level defeated in this session. We are here these two days to look at some of the reasons it was introduced. And here now the Congressman who has introduced a bill that would ban strip mining of coal across the nation, Ken Hechler of Huntington, West Virginia.

PRESENTATION: "THE NATIONAL ABOLITION OF STRIP MINING," THE HONORABLE KEN HECHLER, MEMBER, U.S. HOUSE OF REPRESENTATIVES, HUNTINGTON, W. VA.

Fellow Abolitionists! (Applause.) You know, you can't really believe strip mining, until you have seen it. You can't believe until you have seen the bellies of the hills ripped open, and the guts poured down into the ugly gullies. I want to run through a few slides to give you an idea of what this devastation looks like. Later in the evening, and

I hope you will stay for the very last part of the program because it is really terrific, Dr. Ted Voneida and his very able crew from Case-Western Reserve have a very outstanding slide show which depicts what is going on in Belmont, Harrison, and some of the other counties in Ohio that are getting ripped and gouged to pieces by the Gem of Egypt, Big Muskie and some of these other huge earth-moving machines. Sometimes I think maybe George McGovern and Birch Bayh ought to ask for equal time with the Big Muskie.

Now I want to flip through these slides first before telling you a little bit about the fight on the national scene. These are some scenes along Bolt Mountain, Raleigh County, West Virginia, along a highway which was built by the state at a cost of about a million dollars a mile. There are very few people who live along this highway, but there is a heck of a lot of strip mining going on and the coal trucks use this highway. It was built between Three Forks on Logan County, and Bolt in Raleigh County. If any of you play the guitar, you could easily develop a song about what has happened between Three Forks and Bolt in southern West Virginia. You can see all these deep cuts through the hills, the spoil dumped over the sides, the high walls, scars that can never be reclaimed. The best type of reclamation that money can buy can't cure a high wall. The high wall will be there forever. The slipping and the sliding of the spoil, threatening peoples' homes below, is a constant danger. When the spring rains come, people live in fear of landslides and floods in the strip-mined areas. "Zip" Little is here from the Izaak Walton League. Zip knows Bolt Mountain. Not only does it ruin just the aesthetics, but all this stripping around the edge of the mountains takes away the opportunity for wildlife to survive. Sometimes I even wonder how tame life survives.

NO REAL RECLAMATION

There are very few homes in this area any more. The population of West Virginia has declined 6.2 percent in the last ten years. That has many effects including redistricting your present Congressman out of office, but that is the least of the damage. All through this area the depredations of the strippers have been carried on. Much of this area they say has been reclaimed. But you can't see very much real reclamation there. Flying over the devastation is often the only way we can figure out exactly what the strippers are doing. When they run in their big jack hammers and their end loaders, their big trucks, their blasting, and the gouging with their big machines, they say it is necessary for the economy of the state. They say it is necessary to provide jobs. They ask me whether or not I, as a United States Congressman, am trying to do away with jobs. Jobs? Four or five thousand jobs maybe; jobs that are transferrable to highway construction, to housing or public works. But I say if we had ten million men under arms at the close of World War II on the federal payroll, did we say let's keep the war going in order to keep those jobs and people on the payroll? No, we put them to constructive work. So we have to put the strip miners to constructive work. I am not impressed by either the job argument or the economic argument. The economic argument is that it is necessary for the economy of the area to have strip mining. But strip mining is short-term gain, and future generations suffer in long-term loss.

Earlier this week, in the town of Harlan, Kentucky, where many bloody coal mine wars were fought a generation ago, a newspaper columnist named Ralph Smith made perhaps the most inane, or insane, commentary on strip mining. Speaking at a public forum on strip mining, Mr. Smith suggested that Kentucky ought to promote strip mining as a tourist industry. "It is something you don't see everywhere, Mr. Smith suggested. Now silly though this suggestion may sound, it really isn't the bottom of the barrel. The Vice-President of Consolidation Coal Company, James D. Reilly, speaking before the American Mining Congress in Pittsburgh, in 1969, brought the audience to its feet, cheering, with his statement that "Those conservationists who demand a better job of land reclamation are stupid idiots, socialists and commies who don't know what they are talking about. I think it's our bounden duty to knock them down and subject them to the ridicule that they deserve." Richard Kelly of Hazard, Kentucky, founder of the biggest stripping company in eastern Kentucky, recently declared, "The good Lord put that coal there to be mined. He left it up to the genius of mankind to develop the technology to get it out. And strip mining is the best way yet," he said. Ford Sampson, head of the Ohio Coal Association, has stated, "Are we going to cut off the electric power because some guy has a sentimental feeling about an acre of coal?"

STRIPPERS RACING AGAINST THE CLOCK

Later Dr. Voneida will give you some figures. 60 percent of the entire acreage of Belmont County or 200,000 acres out of the 346,000 acres of the total land in Belmont County have been sold, leased or optioned to the strippers. From Cincinnati to the east central border of Ohio the strippers have moved in and they are racing against the clock in fear of legislation which will limit their scalping of the land. Again, what is their defense. This afternoon I saw a very beautiful colored booklet. It is published by an organization euphemistically entitled "The Mined Land Conservation Conference". It is very expensively printed in glowing color. It includes a photo of the map of Ohio and it says "Larry Cook, Director of the Ohio Reclamation Association, a coal industry-financed conservation group, depicts the hundreds of lakes already formed by strip mine operators. Similar lakes have been developed in other states. "Of course, this is part of the tremendous well-financed public relations campaign that is being put on by the strip mine operators. They spent one hundred thousand dollars in the State of West Virginia to defeat that legislation which Secretary of State "Jay" Rockefeller, State Senator Si Galperin and a group of courageous legislators were sponsoring. Incidentally, "Jay" Rockefeller has the best description that I have ever heard on the effect of strip mining. He calls it, ". . . like a knife slash through a painting, leaving its ugly trademark." But this money is being spent in newspaper ads, on television and radio programs, in beautiful multi-colored brochures, in an effort to make you believe that strip mining is not really harmful; in fact, they contend it really improves the land. Why, look at all these wonderful fishing lakes. Look at these blue lakes, this lush greenery, good fishing, level land for airports, places to dump your garbage, land fill, places for parks. The amount of money that is sunk into so-called reclamation and restoration in order to make a photo for a brochure would be uneconomical to use in order to improve all stripped land. So, the selling campaign is on. It is almost like the "Selling of the Pentagon"—that television program. One lady called my office about it the other day and asked, "Isn't there a law against the Defense Department's selling the Pentagon?" So, I referred her to Vice President Agnew's office. (applause)

ENVIRONMENTAL COSTS PASSED ON TO PUBLIC

Stripping! Why do people keep on with this stripping of the coal? Well, it is the easiest and the cheapest way to get coal. The coal companies also are afraid not only of the restrictive legislation that we might pass, both at the state and the federal level, but they are afraid that the Federal Coal Mine Health and Safety Act, which makes conditions safer and healthier for underground miners, might raise their costs in underground mines. All of this has combined to produce a tremendous boom in strip mined coal. But I also want to emphasize, and this is an important point most people don't realize, that strip mined coal is a lot cheaper because the environmental costs are passed along to the public. We pay them. And there are depredations of our environment future generations will pay for because they won't have the land and the resources to enjoy as we once did. I don't quite understand this principal of public policy, my friends. We have public service commissions which regulate the prices public utilities charge us, yet there is no effective public service regulation of the damage which strip miners impose on the community when they ravage the environment in order to produce the coal used by those public utilities regulated by the public service commissions. It seems to me that is a kind of double standard, and we must take account of these terrible environmental costs which are being imposed on the public and future generations.

Of course, since the early days of the frontiersmen and pioneers it has been part of the ingrained American spirit that man must conquer nature. Free enterprise has encouraged an attack on nature with the assumption that our land and resources are inexhaustible. Congress and the state legislatures are filled with men and women elected through the economic power of those who profit by perpetuating this frontier spirit, continuing to rape the land while passing on the costs to future generations. The short-range gains are tremendous for the strippers. Let me give you one or two examples. Testifying before the Ohio legislature last month, Professor Samuel M. Brooke of West Virginia University estimated that return on the investment of a strip mine he studied in northern West Virginia was 102 percent, and in southern West Virginia, 126 percent. Professor Brooke found that profits of $5,170 per acre from strip mining were over 100 times the value of land for agricultural use. Of course, as I pointed out, these profits are only transitory. Sooner or later the land will be destroyed—completely. Sooner or later the land will look like the surface of the moon and it will be too late, or too expensive, for reclamation or restoration.

The efforts that are now being carried forward in Columbus are important in highlighting the destructive character of strip mining and the steps which must be taken to protect the environment for the future. Conferences like this are very vital in order to stir people to action. The bill that I have introduced into the House of Representatives, HR 4556, has the support of several Ohio members of the House of Representatives.

I would like publicly to congratulate Congressman John Seiberling of Akron and Congressman Charles Vanik of Cleveland for their support. But it is up to you, the students at Ohio University, to contact other Congressmen and urge them to come to the support of the bill to abolish strip mining. We already have sixty-five co-sponsors in the House of Representatives. This is one-seventh of the House. That's a pretty impressive figure. We had a great breakthrough on Friday when Senator Gaylord Nelson of Wisconsin, the originator of Earth Day, phoned and said he was going to introduce the bill in the Senate. Senator McGovern is going to co-sponsor it. Those of you who are supporting particular presidential candidates, get those candidates on the spot to support the bill to abolish strip mining. And get your own Representatives. A lot of people ask me, "How is this bill doing?" The answer lies with you, because this bill can only advance if there is sufficient public pressure.

Senator Clinton Anderson made a very significant statement after the SST vote. He

said, "I read my mail." Everybody reads their mail. People-pressure can change their minds. It is up to you to get the legislators off the fence. The amount of public interest and pressure will determine whether this legislation will get through.

WHY FEDERAL LEGISLATION IS NECESSARY

I have far more hope for effective legislation at the Federal level than at the state level for several reasons. Number one, this will impose uniform standards from state to state. It won't put one state at a competitive economic disadvantage. A state which enacts a strict law will not see the strippers pull up stakes under economic threats, move on and carry on their depredations elsewhere. Unlike the Nixon Administration bill, administered by the production-oriented Department of the Interior, my bill will be enforced by the Environmental Protecton Agency. EPA has, under the leadership of Mr. William D. Ruckelshaus, gotten off to a pretty good start in its control of air and water pollution. I think it would be more effective to have the national news media focusing the spotlight of public attention and national concern on whether or not that law is going to be enforced. Any law is only as good as its enforcement, and I am afraid to say that the state strip-mine laws have not been enforced. Furthermore, the bill suggested by the Nixon administration is a rather toothless effort to regulate strip mining. It gives the states two years to submit plans to the federal government on what each state proposes to do about strip mining. Then at some indefinite future date beyond the two years, if the federal government does not like those standards it can propose its own. This is very vague, and what this does is simply encourage the strippers to keep pressing and rushing to gouge out more of our precious land before they are checked by legislation. So I think that Federal legislation is necessary, which provides a definite abolition date six months after the enactment of the bill, and which puts the enforcement power in an agency that has already proven itself to be an effective regulatory agency. The Departmet of the Interior, the agency into which the President wants to put the regulatory power, is primarily a management agency. It manages lands and resources, and it is primarily interested in energy and in production. I dicovered this in connection with the coal mine safety fight. You cannot expect a department that wants to encourage the production of more and more coal and other forms of energy to put a high priority on the protection of the men and the environment. It is a production agency instead of a protection agency.

I remember the day of the Farmington tragedy on November 20, 1968, someone called up the Department of the Interior to get a little line on what had actually happened at Farmington. An Assistant Secretary of the Interior on the phone responded, "Don't criticize the Consolidation Coal Company. It's a fine company. Don't jump in half-cocked on this situation. This is a good mine. It produces 9,200 tons a day." So, I am saying that you cannot put control for protection of human beings and environment in an agency that is primarily devoted to production rather than protection.

There are several reasons, ladies and gentlemen, why I feel very encouraged about progress toward success of this bill. The most encouraging thing is the UMW president Tony Boyle and Carl Bagge, the president of the National Coal Association, are both attacking the bill. If they completely ignored the bill, it would indicate that they are not at all worried about its passing.

Just a word or two more about the bill itself. I have given you the broad outlines. It not only provides a complete ban on all strip mining operations within six months, but it virtually bans all underground mining of coal in national forests by making it impossible to carry on any underground mining which may damage or destroy any area of the forests or the natural resources thereof. (applause) It would prohibit any underground or surface coal mining in areas of the national wilderness system. In addition to abolishing strip mining, it would provide 90 percent federal funding to be matched by 10 percent state funding for the recovery of past strip mined areas. It would finance reclamation of only those areas approved by the Environmental Protection Agency. Now, I am not very optimistic about the extent to which this could be done thorough. As I have said, I don't think that there is such a thing as very thorough reclamation or restoration. But there are certain areas where perhaps the streams are not quite as acid, or where on level land it is possible to do some reclamation. The bill (H.R. 4556) also provides for citizen class-action suits, and it protects employees who notify the Environmental Protection Agency of violations and who testify regarding the enforcement of the act from being discharged or discriminated against.

HOW TO MOBILIZE SUPPORT

But the whole question of how far this bill is going to get, again, rests with people like you . . . the letters you write . . . the contacts that you make. Let me give you one little example. One weekend I wrote a series of letters to newspapers around the country and got a tremendous reaction after these letters were published. I began to get mail in from places like Brattleboro, Vermont and Wausau, Wisconsin, saying, "I read your letter to the editor and I contacted my Congressman saying to get on that bill." Now, if I can do that as an individual, what could several hundred people like you do, around the Nation, contacting the newspapers and the people who are in a position to do something to protect our land and our environment? I certainly hope that this Earth Conference 1 is going to produce a little action instead of just talk. And I hope that it will produce a good deal of determination to go out and fight to protect the environment instead of simply sitting back and sponging up information.

You know, Ed didn't mention this, but because of the fact that I have been redistricted out of office, I am going to have to polish up my academic credentials a little bit. I am pleased to have this opportunity to come up here, even though some of my remarks may not be interpreted as constituting complete academic objectivity. Nevertheless, I have a very strong feeling which I have developed in Congress about the nature of compromise. When I was teaching political science at Columbia, Princeton and Marshall Universities, I used to have little seminar groups. We would take a hot issue, get five people working on one issue, and their job was to come up with the best compromise among the differing opinions. I used to tell my students that politics is the art of the possible, and the essence of the legislative process is compromise. There are some issues, however, and this I think sincerely is one of them, where you have to stand on conscience instead of compromise. You cannot compromise an issue that involves the destruction of the environment for ours and for future generations. (applause) There can be no compromise on the fundamental truth that it is the obligation of government to protect the resources which belong to all the people. There cannot be any compromise on strip mining.

And that is the way I stand, of course, without any "if's", "and's", and "but's", for complete abolition. I think that you have a challenge in this conference to bring out the facts on strip mining, to see what it has done to our environment. But don't forget that you have an action challenge when this conference is over if you're going to protect this great land that we love Thank you. (applause)

DOBSON. Thank you very much, sir. I know you are rushed and that you have to leave. We are very sorry that you have to go. But, I would like to share this with the audience before you do go. It is very interesting to note that after voting against the SST, the Congressman has done more than just speak, he acts. Tonight, he will drive to Pittsburgh and take a train to Washington, paying his respects to our need for public transportation. I expect those of you who stay through this conference will participate in the action against strip mining we have heard proposed this evening because you will learn much from the men, and from Mrs. Mattox, who will speak to you tonight and tomorrow. The Congressman does have time for a few questions.

Question. After the Fourteenth Amendment was passed, it took about a hundred years before action was taken on it. What is your suggestion, if your bill is passed, to take some action on it in the states?

Mr. HECHLER. It is very, very important, of course, when a law is passed that it be adequately enforced in the states. I gather that is the thrust of your question. I have confidence that if we can generate enough public support behind this legislation to pass it that we will have the necessary public support in back of the Environmental Protection Agency to enforce it. I do not want to be over confident because I know it is going to be a long fight through the courts by those who want to try and delay the application of this legislation. I have confidence that if we can carry the flag to the summit of the hill and pass the legislation, then we can get it enforced.

Question. Congressman Hechler, I know you were involved in the race between Jock Yablonski and Tony Boyle. Of course, we all are familiar with the results. I was wondering, in your opinion, what has happened with the United Mine Workers Union and do you see any potential for change?

Mr. HECHLER. Yes, I do see great potential for change within the United Mine Workers. There is an organization known as Miners for Democracy which is led by a group of individuals, including the late Jock Yablonski's sons, Chip and Ken, Lou Antal up in District Five, and Mike Trbovich and various others that are trying to pick up the banner from Jock Yablonski and carry it forward. You probably noted in the papers that there have been a number of indictments and court actions against Tony Boyle. These are only the tip of the iceberg of what Tony Boyle and the UMW hierarchy have done in corrupting the union, and I predict more will come out which will result in a complete reform in the United Mine Workers and hopefully, make it a real union again. All I am trying to do is make it a union that will stand up and fight for the people who mine coal instead of apologizing for the management. (applause) Miners for Democracy supports my bill to abolish strip mining, and it is symbolic that Tony Boyle is against my bill.

Question. You mention the Ohio Congressmen who are behind your bill. I notice they are from Cleveland and Akron. What is the reaction of the Congressmen from the coal country?

Mr. HECHLER. There are five Congressmen from Pennsylvania who are co-sponsoring my bill, and I would regard anybody in the State of Ohio as coming from coal country because there is a lot of coal in Ohio. I am proud of the active support of John Seiberling and Charles Vanik.

Question. What about Clarence Miller?

Mr. HECHLER. I don't want to talk about other Congressmen, because they are capable of speaking for themselves. It seems to me that the Constituents of the Congressmen are more effective in influencing the Congressmen than a fellow Congressman. So,

I say that any of you who are interested in any other Congressmen, why, get in touch with them directly.

Question. Wouldn't it be possible for individual counties or townships to outlaw strip mining through zoning laws?

Mr. HECHLER. Well, it is possible to perceive, but this is a very slow, agonizing and piecemeal approach and it simply means that the strippers are going to move on to those counties that have not passed zoning laws. This is why I feel that a federal approach which is accomplished at one stroke is a much more fair and uniform method and a much more effective one.

Question. Will your bill include mining such as the iron ore deposits in the Mesabi Range?

Mr. HECHLER. It only covers coal at the present time. I felt I was biting off a pretty big amount right there, so I didn't cover anything else but coal. I don't cover phosphates, gold, stone or other forms of stripping. It does cover the Black Mesa Indian lands which I think you are going to hear a good deal more about in this conference.

Question. Do you have something in the future planned for other forms of mining?

Mr. HECHLER. Yes, I think we ought to work together on that. Let's surmount this hurdle first.

Question. Yes, I would like to know if there are national lobbying organizations supporting your bill?

Mr. HECHLER. Yes, they are right here. There are several very active organizations, some of which are present here at the conference, and I hope to hear a little additional support from some of them like the Izaak Walton League, the Sierra Club, the Audubon Society, the Black Mesa Defense Fund, and many others like Friends of the Earth, Environmental Action, etc.

Question. Have you, personally, or any of your fellow Congressmen, considered the gassification of coal after the abolition passes?

Mr. HECHLER. I think gassification of coal is going to come eventually, and we are making pretty good research progress toward it now. I think we have made a lot of good progress in that direction.

Question. Would you promote it in the House then?

Mr. HECHLER. I certainly would. I have always voted for the necessary research funds to carry forward research in gassification of coal. If there are no further questions, I certainly want to thank everybody here for the sharpness of the questions that were offered, and hopefully, for the necessary support for this legislation. *You* really are the key to determining whether or not this legislation succeeds and whether or not we can protect our environment for future generations. Thanks very much. (applause)

PRESENTATION: "WHAT ENERGY CRISIS?" WILLIAM BEALE, M.S., ASSOCIATE PROFESSOR OF MECHANICAL ENGINEERING, OHIO UNIVERSITY, ATHENS, OHIO

Mr. DOBSON. The next speaker on our program is a local resident who holds a Master of Science degree from Cal Tech in gas turbines. Not long ago he gave our Ecology Group a talk on the SST. He has worked for NASA and for Convair, and he knows quite a bit about the problems we face in the consumption of energy. He is working on a solar engine, and he is very interested in the future of alternative methods of energy production. Associate Professor in our Mechanical Engineering Department, Mr. William Beale.

Mr. BEALE. Thank you very much, Ed. I really want to express my appreciation to Ed Dobson for giving me a chance to blow off a little steam on a subject on which I have steamed for a long time. He happened to encounter me one day, and for some unknown reason knew I was an anti-SST man. Right off the top of his head he said "You're going to give a talk at this conference and your subject is 'What Energy Crisis?' ". I said "Fine, I'll take it." So here I am.

I would like to start by throwing in something on the other side of the coin from the talk that we just heard on strip mining. You have seen the costs of strip mining. You have seen the pictures. I have seen them. Those who have flown over Kentucky, Tennessee, where I was born, or the eastern part of Ohio, or West Virginia have seen the costs of strip mining. What are the benefits from strip mining? Look around this room. What do you see? Well, you see lots of people, but what I am looking at are the lights, and what I am hearing are the fans. The lights and the fans are driven by electric power. I counted the number of lights and multiplied a few numbers together, and if I am not too wildly far off in my estimate, we are burning about 15 pounds of coal per hour to maintain the lights and the ventilation in this room. That is a very rough estimate.

This is the substance of our civilization. We have to have some source of power to do the things that we do. So we do in fact have some benefits and we have to recognize them. If we want to do away with strip mining or if we want to ameliorate the problems concerning strip mining, we have to consider what we are going to do either to maintain our energy consumption as it is, or reduce it, which may be a definite possibility.

Now this room is consuming about 5000 watts. But then most of you probably don't know what a watt is. Well, I'm going to show you what a watt is. This stone is a weight that I found on my workbench when I came out here. It just happens to weigh a kilogram, which is 2.2 pounds. It is a Sears and Roebuck grindstone. Now if I lift this kilogram one meter high, which is roughly three feet, once a second, I am generating power at the rate of 10 watts. If I am going to keep up my 10 watts worth of power I have to lift this thing all the time like this. That is 10 watts. Well, this room is burning at this moment roughly five thousand watts. Now it could be 10,000 watts easily enough, but I'll put it as 5,000 watts. In other words, in order for me to do the power that this room is consuming, I would have to lift 500 grindstones once a second twenty-four hours a day to keep this room going. That's what 5,000 watts are, or five kilowatts.

A good strong man, working at a good steady pace and at a rate that won't kill him but will certainly make him feel tired, can develop about one hundred watts-worth of power. That is about what it takes to run a gardenhose-worth of water. A very strong horse can work at the rate of one kilowatt, 1,000 watts or ten men. That is much more than a normal horse. The horse that was used to rate the horsepower was only putting out 746 watts. Each one of us in this room is using on the average, for all purposes, approximately 1,200 watts of electric power, night and day. Where do these watts come from? They come from the coal mine. The coal goes into the Poston powerplant; the Poston power plant burns the coal under a steam boiler; this produces steam; the steam turns the turbine; the turbine turns the generator, and the generator shoots the juice into our refrigerators. That is the train of events behind most power production in the United States. I was amazed to discover, incidentally, that a number of intelligent people think that a light bulb is hung on the wall like a picture and does not connect to *anything* else in the world. It is just like a Rembrandt to them. There it is, and it hasn't anything to do with the Poston power plant or pollution or the strip mine. Well, this is wrong. It has a great deal to do with all those things.

Now, what do we use all this power for? We use it for our refrigerators, making piggy banks, air conditioners, power shoe polishers, electric carving knives, hospital lights when we get our appendix taken out, for everything that we wear and everything that we do. An automobile, let us say, weighs 4,000 pounds of steel that came from a process using a very large amount of electricity, not only in putting the car together in the automated plants, but in making the steel, mining the ore, transporting it and so on. Electricity runs through our entire lives, our entire way of life, everything. To give you an example, a television set can burn anything from 30 to 300 watts, depending upon whether it's a small transistorized set like the one I own, or a great big color television set like the one you own. Mine burns 30 watts and yours burns 300 watts. A toaster burns 2,000 watts, approximately; an air conditioner 2,000 watts very roughly; a water heater 4,000 watts; a full-house air conditioning system maybe 10,000 watts. As many of you will point out to me later, these things are only running part of the time. True, but it all adds up to about 1.2 kilowatts, 1,200 watts per person in the United States, night and day, being used. That is about one-tenth, very roughly, of *total energy* consumption in the United States. It follows that 12 kilowatts per person total energy consumption includes not only the electric generation, but the transportation, the heating, the process industry heat and so forth that largely comes from coal. So the strip mines are working hard, not just to make a mess, but to give us the things we want, the things we think we want, and the things that we don't want but can't figure out how to stop getting.

Now all this electricity comes from fuel of some kind, roughly about 50% coal, 8% oil, 20% gas, 15% hydro power, and only 1% from nuclear power. It is interesting to note that we only have 1% of our power coming from nuclear power today. In 1990 approximately 20% of our power will come from nuclear power plants. The coal-burning power plants are predicted to be consuming even more coal in 1990 than they are today by a very large amount, but their percentage amount will be less because of the enormous growth in the consumption of power in every aspect of our economy. We are doubling our energy consumption in electricity every ten years! I think it is interesting to note that we are not getting any power from the wind, we are not getting any power from the tide, and we are not getting any power from geothermal sources of any consequence, a few thousand kilowatts here and there. Geothermal power means the power that comes from steam in the ground, of which there is a very large amount. We are not getting any power yet from the sun, of which there is a huge amount but, unfortunately, scattered rather thinly. If we want to use it, we have to concentrate it somehow with mirrors, lenses, or something. But it is possible except for a small band of crackpots of whom I am one, and, we aren't even trying.

We are not getting any power from hydrogen fusion, which many people talk of as being the ultimate source. The hydrogen fusion power source, incidentally, is the equivalent of the sun. That is to say if we can contain the sun's reactions here on earth in some sort of power plant, we can get a very large amount of energy.

This country is using 34% of the world's electric energy right now, and we are using about one-seventh of the *total* energy in the world. As a result of all this, things are getting a little out of hand. That is where the energy crisis comes in. The usual worst example is New York City so I might as well pick that. You have all heard the stories of New York City: the brown outs; the capacity of the generating system being very near to the demand rather than, say, being 25% ahead of it, as the companies would like; the delays in the production of the power plants as a result of squabbles with people like you over siting and so forth. As a result of this

New York City is running on the razor edge of a disaster. They predict that this summer they are going to have only about 10% excess capacity, and if one of their big generators goes out, which it very well might, they will be behind capacity and will have to do something rather drastic, like cutting off power to certain areas and so forth. The delays in the repair of these very large thermal power systems incidentally are a result of the fact that no longer do they have simply a winter peak in production. It used to be that the major consumption of power occurred in the winter time. The summer was a relatively slack time, and they could tear down some of their machines then to make repairs. Now there are two peaks, a peak in the winter, a peak in the summer. The peak in the summer, of course, is due to the fact that air conditioning is a great success. Appliance companies are selling more air conditioning and are advertising it more and more. Therefore, the demand is running right up to the capacity to produce.

We are being brainwashed to buy the quickest, the cheapest, hence, the less efficient gadgets available, for instance, power companies are buying gas turbines, in order to produce enough power. An oil burning gas turbine can be put on the line much more quickly than a steam powered plant or a nuclear plant. The gas turbine is relatively smaller, it can be slipped in somewhere where nobody will notice, and it can generate large amounts of power in units scattered around the city. Unfortunately, their thermal efficiency is rather low. I might make a couple of remarks about thermal efficiency. A power plant does not take a piece of coal, burn it, release the heat in it, and turn all that heat into electricity. It only turns *some* into electricity. If you burn a pound of coal you get heat from it. Only a fraction of that heat can be converted to work. The rest of the heat released from burning the coal goes into the river, or into the air, or into the lake, or into the city, depending on where we put it. So the thermal efficiency of a normal power plant is between 30 and 40 percent. That is, you only get 1 unit of work for every 3 units of heat. The thermal efficiency of a gas turbine power plant is less than that. This simply means that for a given amount of energy produced we burn more fuel in these gas turbines than in the steam power plants or the nuclear power plants. And, that fuel has to be specific. It is more difficult to burn coal in a gas turbine than it is to burn diesel oil or natural gas. So there is a fair amount of panic these days associated with getting more power and finding the right kinds of fuels to use. After all, the utilities are a little sensitive to people like you who might criticize them for burning coal containing a lot of sulphur, for producing SO2, and in the right atmospheric conditions saturating you with sulphuric acid, a nasty thing to do. So there tends to be a bit of a shortage on low sulphur fuels.

There is not only a problem in generating capacity, there is also a problem in transportation of the fuels to the sites for use. Incidentally, with regard to the thermal pollution problem, the heating of the rivers and so forth, we may produce 30% of the heat as electricity, as we do, for example, in the Poston power plant. But ultimately *all* of it is turned into heat. What happens to the electricity that goes into these lights and these fans? It all tends to heat up the building. In fact, the ordinary 100 watt bulb puts out only 5 watts worth of light, and 95 watts of heat. We may be dumping 2 units of heat into the river or, as in the case of the Poston power plant, into the air, for every unit of electricity we create, but we are dumping that other unit of electricity into Athens as heat. If Athens is like Los Angeles, which is the only city for which I have numbers, we are putting into Athens about 5% of the solar energy that strikes Athens as a result of our energy usage, electric and otherwise. That tends to heat up Athens 5% more than the sun would. In 10 years we'll be putting 10% more heat than the sun into Athens and tending to heat up Athens 10% more than the sun would. In another 10 years it will be 20%, and so on. Pretty soon, of course, we will incinerate Athens. (laughter) That is an obvious absurdity, but it is something to think about. Let us say that in a row of houses man #1 feels it is getting a little warm, so he buys an air conditioner to pump the heat out of his house. This is the way air conditioners work, incidentally. The heat from your house is dumped into the little space between your house and the next guy's house, which gets a little bit warmer. Then man #2 buys and air conditioner and dumps his heat into the little gap between his house and the first man's. Then #1 has to buy a bigger air conditioner, and then #2 has got to buy a bigger air conditioner, and pretty soon both of them are mad from the noise these air conditioners make and the outside is too hot to live in. This is an actual experience of a friend of mine, who may be here in this room at the moment.

So, we have a little bit of a problem here. We would like to keep the world nice and clean, but we also like electricity. Indeed we do! We are using more all the time. So the problem, as Pogo said, is with us, at least some of it. There is also the great argument on the sites. Power plants are stinky, very stinky indeed if you happen to get into one near the exhaust stack. They are dangerous, too, if they happen to be nuclear power plants, although I think the danger of the nuclear power plant is a little bit over-rated. It is nothing compared to a nuclear war, for example, if you want to think of something dangerous.

All this is a little puzzling to me actually, this power demand, and for this reason I was pleased to find it was a little puzzling for lots of other people, too. When I began to look in the library for sources of facts and figures to throw out to you tonight, I discovered that lots of other people were puzzled too. The people at Cal. Tech. have a new environmental sciences group which is headed by a very competent man who used to be gungho on re-entry body problems; Mach 5, Mach 9, things coming through the atmosphere, ionizations occurring on the nose cone and all the sort of thing. He is now spending the time on environmental studies. The same thing is happening elsewhere. Some very eminent men at MIT who also used to work on missiles and such are working on environmental problems. And all of them, more or less at the same time, myself included with these august persons, began to wonder, "Gee, is it really *right* that we should be using four times as much electric energy in 1990 per person as we're using now? I am not living in abject poverty, so, what am I going to be doing in 1990 to require four times as much energy?" It is hard to believe. So, I started to check into this thing. The first thing I did was ask my wife for the electric bill and discovered to my complete astonishment, and that just shows how unaware we all are, that my electric bill is $10.00 a month. That turns out to be 100 watts per person in my house! Right then I began to think, "Hey, something is a little bit fishy." So, I multiply that by three, which is a guess at the conversion factor between the amount of energy used in your house and the amount of energy used for making the clothes you wear, the slide rule you have in your pocket, and all these other things hanging on to you or vice-versa, that require energy to be produced. It turns out that my family is using 300 watts per person. This is a very rough order of magnitude estimate. My family is using 300 watts per person at a regular rate. The average of the United States is 1,200 watts. Somebody around here is being a pig. (laughter) They are using four times, if my arithmetic is correct, what I am using, and I am not living in poverty. Incidentally, I am using ten times as much energy as many people in Europe, so I am a pig, too. Often, I wonder about all this. Is it really necessary to go on with this approach to infinity in the consumption of electric power, not to mention the energy for driving cars and so on?

It just seems to me a little bit weird that this 1990 projection could be true. In trying to find justifications for it I have come across an astounding prevalent attitude which strikes me as ludicrous. A very highly placed official in our government made this remark: "If tomorrow we were to suffer a cutback of 30% in electric consumption, it would mean the collapse of Western civilization."! He means that I am a collapsed civilization, you see, because I am already cut back much more than 30% from the normal! I don't feel that I am collapsed in any way. I am in pretty good shape, but the people who would build the future think differently. Many of you will say, "Oh well, the problem is that they are jamming it down our throats. It is really not that we're such a bunch of pigs, they're pushing it to us very, very hard indeed." And they are. If you read *The Athens Messenger* you can see advertisements for the total electric home, the clean home. The clean home is not very clean at all when you consider that the Poston power plant and its strip mines are very dirty. And for every unit of heat the electric company burns in their power plant, you only get one-third of the unit of heat to heat your house. So it is not only not very clean, it is also very inefficient.

Yes, it is easy to blame these people for selling it at us too hard, so I'm going to do it. Here is what the vice-chairman of the Board of the Executive Offices of the General Electric Company says, with regard to energy consumption, rate of increase, and so forth: "Electrical load in this country since the turn of the century has grown five times as fast as population, three times the manufacturing productivity, two and a half times total energy usage, and two times Gross National Product. What a record!" Then he goes on to say, "Few other industries face such a spectacular array of growth opportunities. Any one of these opportunities—home heating and cooling, automation, process heat, electrical living, industrial air conditioning, urban and inter-urban transportation, lighting up the whole outdoors (that's what I'm worried about), any single one of these opportunities would put the gleam of action in an enterpriser's eye." It would!? (laughter) Continuing, "If we press our electrical advantages, other aggressive competitors offering other forms of energy and other solutions will not pre-empt our places in the world of the future. There is no task more urgent," he says, "for the executive in the electrical business today than expanding the base of his business through aggressive market development." Well, that's very interesting. Then he goes on, "Looking at some of the forecasts and projections, one might be inclined to sit back, brush off the current problems as temporary, and pronounce with some smugness, 'We'll get our share.' But that's not the way this industry was built in the past. It is not the way we, the industry, will continue to develop in the future. Will that great vision come true? It will if we work at it, you and I, and everyone associated with this industry, if we work at it everyday."

What are we going to do, work at it? I'll give you a few examples of the way I'd like to work at it. For one thing, regarding thermal pollution, the abnormal heating of the rivers and the lakes, et cetera, there are many things we might ask the electrical companies to do. Here are some things we might ask them to think about rather than aggressive sales techniques. Instead of dumping the waste heat into the river, which is usually a bad thing to do, they could con-

sider cooling towers, the great big things which release the waste heat into the air instead of the river. Isn't that almost as bad as heating up the river? Actually it isn't, the air being a more diffuse mass which dissipates the heat even more rapidly. The usual response of the power company is, "Now look here, this will increase the initial cost of our power plant. We can't afford to do that. We can't increase first costs. We have to give that consumer a minimum cost kilowatt." So, after sitting in the library a while, I discovered this astounding fact. If they did, in fact, use cooling towers rather than the Ohio River, and did not disrupt the life of the bluegill, and instead disrupted the life of the chickadee or whatever is flying over the cooling tower, perhaps less disruptive ecologically speaking but not as safe as recycling the heat, they would change my electric bill from $10.00 a month to the fantastic level of $10.25 a month! So, I might suggest that they try it out. I can also point out that the $10.00 fee I am paying per month for my electric bill is very much too small. It is *very* much too small. The cost/benefit ratio is much different from that. I would be very pleased to spend $20.00 a month for the electric services I am getting and hopefully have the mining companies and the electrical companies do something more sensible than rip open the hills the way they do. Of course, the justification for strip mining is economic. It is the easiest way to get cheap coal. This poses a threat to me personally, as a matter of fact, because I live on a beautiful piece of woodland outside of town that has a coal seam about one inch thick about forty feet beneath my house.

There are a number of other things we could do. We could ask them to think about alternate ways of generating their power. Nuclear power, obviously, is one. Fusion power is another, and a very good one, too. We could ask them to do lots of other things. We could ask them to think about solar energy; we could ask them to think about geothermal energy. By "think about," I mean invest lots and lots of money in it. The investment in all these things is trivial today. It is not impossible, although it is certainly not easy, to get power from the sun in large amounts. Although it might sound like a very weird scheme to you, I assure you that it is technically feasible to make a very large satellite which would collect solar energy, generate electric power in space, beam the electric energy down to earth, collect it in antenna fields and shoot it into the cities. This is definitely possible and has been posed very seriously with much scientific basis to the proposal. Instead, the power companies and the United States government are rushing pell-mell into the relatively inefficient nuclear power plants they are promoting at the moment.

We could do a lot of things right here at Ohio University. At this point I will proceed to, perhaps, deeply annoy a number of people who might be associated with the University. Those of you who enter any of our buildings, I'm thinking at the moment of the brand new Alden Library, have probably noticed that it is either way too hot or way too cold, not by small amounts but by very large amounts. When I walk into the library I discover that I must peel off practically everything I am wearing in order to stay alive. I asked the librarian why she didn't turn down the heat. She said, "God, I wish I knew how!" She's helpless in the grip of this monster that is frying her to death. (laughter and applause) In the decrepit old engineering building which I presently inhabit the same thing is true. There is no way I have been able to discover for modifying the amount of heat soaking into the chairman's office in the Department of Mechanical Engineering, or into my office. It is too hot **all the time in** the winter. In the summer when it gets beastly hot outside the standard procedure for the janitor is to run around and open all windows in the morning, so he can scoop up all the hot air during the day, and then quickly shut them at night to keep all that hot air inside so we can swelter the next day. So he is a peak picker! He is picking off the peaks of the temperature and jamming heat into the building, then keeping it shut so he has a maximum temperature building. If you look at temperature during the course of a day, it is sort of a sine wave—it is up and down, up and down. It goes up to 90 and down to 60, and then up to 90 and back to 60. Wouldn't it be better to open the windows when it's 60, grab all that cool air and keep it in the building? Then during the day when it's 90, keep those windows shut? Everybody would be moderately happy without air conditioning.

There are so many things we could do, and I am speaking now not of the power plants but of us as individuals. A friend of mine remarked that his heating system and air conditioning system got into a fight with each other. The heating system would decide it was a little too cool and jack the temperature up, and then the air conditioning would decide it was a little bit too warm and put the temperature back down. They pulled and tugged at the temperature, using kilowatt after kilowatt in fighting each other. My friend didn't know what to do about this. So, he just let it go, and the next month he got a fantastic electric bill. This lack of understanding besets many of us. We are wasteful of electric energy, extremely wasteful. Rather than simply try to pass bills against strip mining and lament the absurdity of the advertising which is trying to jam all this electricity down our throats, we could be doing very many more things. For example, it is safe to assume, that most of the young men in the room want to buy an automobile, a jazzy automobile that accelerates from 0 to 60 miles an hour in 12 seconds. This is a pretty good acceleration rate for anything but a hotrod. Assume there are two choices. Here is where you can come into the picture. You can buy either of two cars. I am not going to name them. This information comes from Consumer's Reports. One car weighs 4,500 pounds and, reasonably enough, it costs $4,500; the other car weighs 2,230 pounds, and it costs $3,500. It is not as good a buy in dollars per pound as the first one, which will turn a lot of you off immediately. It costs a thousand dollars less though, and it weighs 1,300 pounds less. 1,300 pounds represents that much less electrical energy and that much less strip mining in West Virginia or eastern Ohio. Think of it that way: not just the dollars per pound, but what it means in terms of the environment. Remember, both of these are pretty hot, jazzy cars. They both have the same interior room for passengers. The one that costs $4,500 is four feet longer than the other one and a foot wider. They both have the same acceleration. The bigger one gets 14 miles to the gallon on a steady trip, and the other one gets 26 miles to the gallon on a steady trip. Which do you pick? A lot of you will say, obviously, I'm going to get the one that gets 26 miles to the gallon, weighs 1,300 pounds less and costs a $1,000 less. But strangely enough, when the American people go out and buy a car, it very often turns out to be the car offering sheer size. Somehow Americans associate bigness with an advantage, and we see it all the time. When we buy the air conditioner or the refrigerator we get the one that has the most jazz on it; in one form or another, and we expend more energy. We burn up more coal. We do all of these things to gain essentially nothing but the deterioration of environmental quality.

After you have graduated from the university and are married, you may buy a house. Are you going to look at just the first cost of the house, which is what a very large percentage of the people do? Are you going to look not at the first cost, but at the cost effectiveness, to use the ghastly military term, or the benefits/cost ratio, and what it does to the environment? For example, are you going to buy the house that has no insulation and an electric heating system because it is much cheaper than the house which has very good insulation and a gas-fire heating system? That will be the choice that you have to make.

Well, here is what I am personally interested in doing. I am a gadgeteer. I like to think up gadgets. That was what I was born to do, and I think up gadgets all the time. Lots of other engineers are in my position of constantly thinking up gadgets. I want the chance to think up a few gadgets that conserve rather than expend power. I would like to use solar energy to heat the hot water in my house, rather than fuel oil; I'd like to make cars that carry people 40 miles on a gallon of diesel oil rather than 12 miles on a gallon of leaded gasoline. I'd like even more to work on transportation systems like the gravity tube train that uses less fuel than any automobile. I'd like to design houses that are comfortable and don't require much energy to heat or cool. I'd like to work on lights that put out 90% of their electricity as light rather than 95% of it as heat, as the 100 watt bulb does. I'd like to make a gadget that turns on the light when you go into a room, and turns it off when you leave. I'd even like to work on a sales pitch to get people to *not* want to light up the whole outdoors. But you must give me and the other engineers *a mandate* to do these things. The present powers that be aren't interested.

The electric power companies, as far as I can see, are not the least interested in selling you a refrigerator that would consume half the electric power of the one you already have. It is definitely possible to make such a refrigerator. It wouldn't mean any reduction in your standard of living in any meaningful sense. It would give employment to all those poor fellows who aren't making SST's, for example, and it would do something beneficial for the world. What must happen is that there be a market for this thing. You must say, "Yes, I'm willing to pay $30.00 more for the refrigerator. The refrigerator costs $250, I'm willing to pay $280 for a refrigerator that uses less electricity. The reason such an appliance is not sold now is that old first cost. That is the dominant feature in a man's mind when he looks at the refrigerator. So buy the one that is a little more expensive.

Getting back to the automobile example, if you are interested in lots of performance and an excellent ride, don't buy a big sloppy car. There are small well engineered cars that are shorter, lighter, have plenty of zap, but may be much more expensive. The reason that thing is expensive is *not* because it has scooped the iron ore from the Mesabi mine fields, not because it has used up all the coal in southeastern Ohio to produce it, but because somebody has done a lot of thinking to put it together. The cost of that car is not the things that break the environment. So, I would urge young people not to merely lobby against strip mining but to consider the actions in their own lives that will have an effect. I urge the government, the power industry, and the energy industry in general to spend much more time and money thinking about alternate possibilities rather than rushing further into a vast, echoing chamber of demand which they have largely, not completely, created.

I'm going to stop here and hope there are some questions. I want to toss in one final note. Young people have always impressed me. I think one of the great virtues of our situation today is that the young people are a lot more aware than the older people, and I have a couple of examples. I

have three marvelous children who never cease to amaze and please me. Just a couple of days ago I encountered a thing which could be the motto for the coming generation perhaps. My eight-year-old son broke the shoelaces on his sneakers. Naturally he tossed the shoelaces into the wastebasket. He then went downstairs to the shoelace source, pulled out two more shoelaces and stuck them in his sneakers. My nine-year-old daughter, saw this. She grabbed those shoelaces out of the wastebasket, and she put a little note on them.

She has a picture here of the heinous crime of his throwing away the not sufficiently used up shoelaces. On the other side she wrote a variation of a very old theme and it is what I recommend to you. It says: *"Want not, waste not."* (laughter and applause) Now I'd like to hear some questions. O.K.?

QUESTION. Is the transfer of electrical energy through overhead high tension wires an efficient method?

Mr. BEALE. Yes, it's more efficient than putting it in the ground, unless you want to go to very expensive techniques. That's a good question, however. It's like the one about the cooling tower. I mentioned that my electric bill would go from $10.00 to $10.25 if the electric power generators did not dump their heat into the rivers, but instead put it in the cooling towers. With regard to the transmission systems, if the power companies were willing to accept the need for underground rather than overhead transmission lines and went forward with the necessary research, it would increase my bill from $10.25, assuming they've already got the cooling tower, to maybe $11.00. I'm very willing to accept that cost, too. These are rough numbers, and I will probably be refuted by someone else.

QUESTION. Do you have any idea how much electricity is consumed each year in the United States?

Mr. BEALE. Well, you take the number of 1.2 kilowatts per person, and multiply it by two times 10^8 people. So that's 2.4 times 10^8 kilowatts. That's a lot of watts. I think those big numbers don't mean anything. What you have to look at is the individual consumption. Again, I want to emphasize that the individual consumption comes not only from the electric energy used in your house, but also from this University, the Ford engine plant in Cleveland, and all the other industrial things that are being done for you. Everything that you wear, everything that you use for transportation, everything that you eat, all the medicines, all the training, everything is associated with electric power. You have to recognize that. Obviously, you can't expect that we stop the production of electric power. It is far too great a good to stop. The message I want to get across is that it is doubling every ten years is just not necessary. It looks that way to a lot of people who have looked into the subject.

QUESTION. What would your cooling tower do to the atmosphere?

Mr. BEALE. It would dump a lot of water vapor into the atmosphere, and a lot of heat, too.

QUESTION. Would that cause any kind of atmospheric change?

Mr. BEALE. Yes, it would make a mighty muggy situation down wind of the cooling tower.

QUESTION. You made a number of comments on nuclear power. I assume that you were commenting on nuclear reactors. I was just wondering what the difference is in the radiation given off by a nuclear reactor and the radiation given off by this building?

Mr. BEALE. The radiation given off by a nuclear reactor, inside the reactor, is very fierce indeed. It could destroy you in a very short period of time, but it does not get out of the nuclear reactor in any significant amount. The radiation in this room is essentially light-weight radiation, the kind of radiation from a radio transmitter or the sun.

QUESTION. But outside of this building, when the sun is shining there is a lot of radiation. Is that the same kind of radiation?

Mr. BEALE. No, the stuff that hurts you is particle radiation, X-rays and so on. The nuclear power plants are carefully contained in very strong concrete structures which are designed, hopefully, to contain the worst possible accident. That is to say, in case somebody goofs, or some machine inside the control system makes a mistake, the nuclear reactor will simply melt and be doused by solutions designed to prevent an actual explosion. All this mess then occurring inside the reactor would be contained in this large pressure vessel. That's what that characteristic dome is. When you look at a nuclear power plant you see a big concrete dome. That concrete dome continues underneath, too. It is a very strong structure, and it holds the radiation in. There is a small amount of leakage from the nuclear reactor if there is an accident. I certainly don't want to accept the AEC without any criticism, but the AEC assures us that this is not particularly dangerous. I think I will agree with them until evidence is forthcoming to the contrary.

QUESTION. Is the nuclear reactor a very good source of power for the future, perhaps?

Mr. BEALE. Well, the nuclear reactors are limited in the same way that the coal plants are limited, that is by the source of fuel, the amount of reactors you build, the mining mess, and waste heat. The amount of energy available in the coal, in the uranium, in the hydrogen in the oceans, is essentially limitless. You can think of it that way. You can get as much as you want. But that is not what I am concerned about, which is what happens to our society. What happens to my world when you get as much as you want? That's the question. The Indians were denied their food source by *the* killing of the buffalo, and then they themselves were annihilated. Their way of life was in the way of the people who were moving in. As something like that is happening today, I don't want to exaggerate this point but I feel myself to be sort of like the Indian. I am living on relatively low energy consumption in a very pleasant environment out in the country, and these energy pigs are starting to rush over me. If the consumptive society goes on and on, more highways, SST's more 25-foot long automobiles, my way of life is doomed. You might appropriately remark that by the time this gets to me I'll be dead anyhow. But I'd like to think it would be possible for other people to live my sort of life in the future.

QUESTION. You stated that one percent of the power used today comes from nuclear reactors, and by 1990 it would be twenty percent. Do you feel that this is normal progression? If not, what seems to be the problem? And why wouldn't we have more nuclear power by 1990?

Mr. BEALE. You mean more than twenty percent? (Yes). The power industry is stretched to the limit to produce these power plants. They are running at a very high rate of speed to develop, to site, and to put into action this twenty percent of the 1990 load. They are working at a very rapid pace.

QUESTION. That would be normal, or good, progression?

Mr. BEALE. Yes, that means they are working very hard. The power companies are indeed working very hard to produce more power all the time because the consumption rate is going up so rapidly. But remember, nuclear plants are also associated with pollution and are dependent on an oil-based economy. I want to add one other thing. If you have an exponential progression of this kind, doubling every ten years, it makes a very great difference whether you double every ten years or every twelve years in the actual amount of power that's produced. These numbers get enormous in a very short period of time. Right now the power people are assuming that we are going to double our use of power every 10 years. It takes a long time to make a power plant. So, they have to start their plants now. And if the people like you do *not* consume twice as much power, their power plant people will start *pushing* you to do so, otherwise they will not be able to recoup their investment. I personally hope that we will be able to realize this wasteful way of life, and show the world how to live better on *less* of everything, rather than live *worse* on more and more. We can do it, but right now not many people want to do it because almost everybody is very *uninformed* and very careless. We must inform them and they must care. Then we can do it.

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Mr. DOBSON. Let me remind you of the importance of writing to our legislators. The people who we need to touch at this point include Representatives Charles Kurfess, whose address is available at the table; Ken Creasy, who is the chairman of the Environment and Natural Resources Committee in the House; Senator Robert Stockdale, Chairman of the Highways and Urban Affairs Committee and Senator Clara Weisenborn. Those four people, in particular, need letters in support of the strong legislation which we will be discussing tomorrow. Although she is very convinced that strip mining needs to be controlled, Senator Weisenborn needs letters because she is the prime sponsor of Senate Bill 58, which has been assigned to the Highways and Urban Affairs Committee. Senator Weisenborn needs good support throughout the rest of the state when her bill goes into the committee hearings.

Everything you have heard tonight is, in a sense, revolutionary. We are defining "revolution" tonight, and we are not talking violence. We are talking something that many people have known for quite awhile. It has to do with caring. Young people know quite a bit about caring. Young people are quite sensitive to whether or not they are being cared for by institutions and individuals. Young people then, are quite qualified to speak of caring for the environment and of acting in constructive, perhaps revolutionary, ways. Now, a talk about the "Pollution Generation Gap" by a high school student from Belpre, Ohio, Stevan Needham. (app.)

PRESENTATION: "POLLUTION GENERATION GAP," STEVEN NEEDHAM, HIGH SCHOOL STUDENT, BELPRE, OHIO

Ed mentioned a revolution. It is an ecological revolution and, for it to exist in our society, it has to exist in each one of us. If revolution begins with youth, we cannot revolutionize only the society which already exists. If youth can develop greater environmental consideration among themselves, we will have this revolution for the ecological crisis we face. Here is a quote from Senator Gaylord Nelson. It explains very well how many of us feel: "The institutions we have created are destroying the livability of the whole world, and the young people know it. They may not articulate it well, but they sense it and they feel it." Young people have not been around long, and we have not participated in society. We are still forming our social habits. Hopefully, during this conference even, young people will become emotionally involved with the environmental crisis. It is not yet an issue to all of us. It

is not like fighting for peace and freedom, which are humanly beautiful. Yet the first achievement on our list should be to save the environment and sustain our existence on earth. Freedom and peace are not possible unless we have an environment in which to sustain these ideals. Many politicians are beautiful because they consider environment an issue, and they get down to earth and work at it. But more than that, environment has to be considered emotionally. People look into their hearts. That is where caring comes from.

If you look at our homes, the millions of homes including shacks and tents in the overdeveloped countries such as America, you will find electric power and some other utility like water or gas. The previous speaker, Mr. Beal, told us some of the reasons for the electricity crisis that we face now. There are so many luxuries which we consider necessities! This causes some of us to think that any revolutionary approach to reducing our consumption will cause suffering. Perhaps we should choose to suffer a little bit. We should ride bicycles more because transportation, is the major source, 60 percent of air pollution. If we could ride bicycles on asphalt paths alongside the paved roads, the unpaved county roads and so forth, we could ride bicycles from town to town. People who are driving do not want bicycle riders on the street. They have thrown beer bottles and other tokens at us. Maybe special paths would help change things a little bit.

A couple of years ago, Russell Train challenged youth to consider the environment, and it is the most worthwhile challenge because there is a generation gap in fighting pollution. I have met this many times in my personal war against pollution. In the high school, for instance, I was trying to arrange an assembly. There was a speaker coming from the Ohio Public Interest Action Group. Our principal said he was glad I was in the war against pollution, but then he said the people of that area, which is Belpre, a very small town, very conservative, were really sick of the pollution fad. They have seen films and heard speakers, but that's all. To him that was a lot. We have been seemingly informed to do something, but informing people will not do any good unless it sparks some action. There is no way to spark action if you see a film, go home, and say you know it all. This happened several other times in trying to get a program started in my community. The people say, "Well you are awfully young." They give us this hash over and over; but we have to appeal to the older people, so I am appealing to them to consider their youth. What we often cannot put into words, older people must. Someday we will be able to articulate our feelings much better. Then, when it is our society, hopefully it will be a society more coordinated with the environment. Perhaps we will recognize our connection to the environment and not try to separate ourselves and look out into the smog while wondering what the other poor creatures are doing.

Everyday there are more people in the world demanding luxuries. I am challenging the older generation too. We need your assistance very much to help us get started. Will you stop and think of the need to change? I have been very hoggish in the way I used electricity, the way I burned trash in the back yard, and in thousands of things I have done wrong since I was born. Now I am trying to change myself. It is very hard because of existing society. It is very hard to evaluate yourself until you are a part of society. We don't want to create any chaos. We are thinking in terms of survival of the species, and we must all act together. Youth can spark this revolution and carry it through. Hopefully, by the time we are the older generation and our children have their society, the environment will be suffering no more devastation such as strip mining. There is a quote from *Ecotactics*, which is the Sierra Club book for environmental activitists: "You can't be serious about the environment without being a revolutionary. You have to be willing to restructure society." Thank you. (app.)

Mr. DOBSON: Steve sat down in a hurry. Are there any questions? Okay. I left out someone in mentioning the letters to be sent. Senator Oakley Collins is our local State Senator. He is a strip miner, and he has said to me and to the League of Women Voters here in Athens that his constituency mail is of no matter to him. In spite of his indifferent approach, I think it behooves us to be positive and to snow him under with constituency mail asking him as a humanitarian to report a strong bill out of the Highway and Urban Affairs Committee. He would be assured of reelection if he did so.

Our next speaker will tell us something of the impact of strip mining in Ohio. He will be followed by a group of his own students who have done something rather incredible, something that I think Ken Hechler will have in Washington when his hearings come up on the abolition of strip mining. This professor studied zoology and his Ph. D. is from Cornell. He spent some years at Cal Tech. and is now associate professor of anatomy and biology at Case-Western Reserve University. Dr. Theodore Voneida. (app.)

PRESENTATION: "STRIP MINING IMPACT IN OHIO," THEODORE VONEIDA, PH. D., ASSOCIATE PROFESSOR OF ANATOMY AND BIOLOGY, CASE-WESTERN RESERVE UNIVERSITY, CLEVELAND, OHIO 44106

Thank you, Ed. A great deal of work goes into a conference like this, and I would like to express our gratitude to the ecology group here in Athens and to SCOPE for making it all possible. First, a few minor points relative to the presentations you have already heard this evening.

I agree with everything that's been said, especially the fact that our hope lies in the young people. I like to think sometimes that I'm younger than I am, and I see my children thinking the way I should have thought when I was their age. They have the right ideas, it seems to me. I like to believe also that I have been at least somewhat instrumental in helping to form some of these thoughts which they are developing. It's very exciting for an adult to be living in a world which is being looked at so seriously by younger people. I enjoy and remain in teaching for that very reason.

Mr. Hechler mentioned Larry Cooke, who, as you probably know, is Executive Director, or whatever title he holds, of the Ohio Reclamation Association. That's a very fancy sounding name, for it's actually the lobby organization of the coal industry in Ohio. You might be interested in knowing that Mr. Larry Cooke has just been chosen Forester of the Year, or Sportsman of the Year, by the Ohio Sportsmen's Association. I think that's a great honor. He's a real sport. Perhaps we should write to the Ohio Sportsmen's Association and thank them for that. Mr. Cooke told a reporter in Cleveland that he didn't like to be thought of as a lobbyist, but rather as a public relations man. "My job," he said, "is not to influence legislators, but to educate them so as to prevent trouble later on." It's a trifle frightening sometimes.

I was going to entitle my talk 'Less Power to the People," but I became concerned that it might be misinterpreted. When you consider the situation carefully, however, you soon come to realize that that's what we're really talking about tonight. Power-energy-fuel; where it comes from and how it's used. The value of this conference, I believe, lies primarily in the fact that it provides us with an opportunity to take a very serious local problem, such as strip mining in Ohio, and put it into an overall perspective. It is essential at the outset that we recognize what the basic problem is, namely, that we are running out of power. This problem is especially acute today because of two factors: One is the tremendous increase in the number of people—the population explosion. We have that to deal with and, of course, one could devote the entire conference to a discussion of that problem alone. The other factor is that there is a tremendous *demand* for energy. As Mr. Beale has pointed out, the energy demands are increasing logarithmically, and we've been sold the idea that we need all sorts of complex gadgetry, from great oversized cars to electric can openers and electric shoe polishers. There is an almost religious commitment in this country to over-selling a product.

The sophisticated persuasiveness which typifies the activity of many advertising companies is closely akin to brainwashing. They play on all of our weaknesses. You'd better have an air conditioner in every room of your house, for if you don't, someone down the street is going to beat you to it. We see it all around us. Look at the 11 o'clock news and see how far behind you are if you don't have an electric shoe polisher. How have we handled this situation? Let us assume for a moment that you are the president of the board of a major power corporation, whether it's Continental Oil, Peabody Coal, or any one of a number of other such companies. You know that there is this tremendous demand for your product, energy. In addition to that, you have the capability of increasing that demand far beyond the necessary limits by utilizing the very sophisticated advertising agency that you have at your disposal. You have sociologists; you have economists; you have psychologists; probably even a few Ph.D.'s floating around. But you also have a tool which makes everything else look like greasy kid stuff, and that is television. This extremely powerful tool adds a dimension to your oversell capability which staggers the imagination. Finally, and almost incidentally, you have the answer to all the problems that you are helping to create because you just happen to have an inside corner on the power market. You are capable of fulfilling this great "need" for all the megawatts of energy to run all the gadgets which you've told the people they must have. All that is necessary then, is to get this energy out of the earth, and (for a small fee) you will provide those people with all the power they desire. You have at your disposal highly automated equipment which can open the earth's surface to great depths. In an average surface mine operation the highwall may range up to 200 feet. In Wyoming there is one 2,000 feet high, but that can't be considered as typical—yet. You can literally move mountains to get this energy out, as we have seen in Kentucky and West Virginia, where entire mountains are cut in half, or indeed eliminated. You are, therefore, not only making a great deal of money for your stockholders, you are at the same time providing an invaluable service for all these people who think they need all these gadgets which are cluttering up their houses and highways. You are underselling the European coal market because very strong surface mining laws have been passed in Europe, with the result that your (American mined) product can be sold for less. This subsidization of the power companies by the American taxpayer is not only costing us millions of tax dollars, it is also contributing greatly to our own power crisis. If we need the coal here, why are we shipping it to Europe and Asia? Could it be that profits are the determining factor? In many cases, the return on the dollar in surface mining is well above 100 percent. Would you, as president of the board of a large power company, want to change all this? You'd better not, if you

also want to remain as president of the board. Doesn't it appear, therefore, that the coal companies are actually *contributing* to the power crisis, rather than helping to alleviate it?

There is only one problem in all this. The problem is how to deal with this tremendous race for energy. The fuel problem is obviously a serious one, and it isn't a new one by any means. Wars from time immemorial have been fought for oil and coal reserves. This race for energy coupled with recent technological advances which make it possible to get the energy out of the earth at very, very rapid rates is resulting in an ecological disaster, the effects of which we have not begun to understand. Surface mining in Ohio has been going on since 1914, but the problems it creates today are of a different order of magnitude than those it created fifty years ago because of the very great technological advances which have been made during that period. There are shovels up in Belmont County which take 200 tons of earth with every bucketful. The dragline, *Big Muskie,* has a bucket which will house, simultaneously, three Greyhound buses. The cab is wider than an eight-lane highway. These are operated by a few highly trained men, so that relatively few jobs are provided by these massive operations. Their destructive capability, however, truly defies the imagination.

The only reasonable conclusion which can be drawn from all this is that the power companies have taken full advantage of the demand for energy by stepping up their advertising campaigns and increasing their output (and profit) at the expense of the land, water, and future generations. There is another, somewhat more subtle, effect here, which must be considered very, very seriously. The fact that power companies are presently capable of fulfilling energy demands by the rapid removal of fossil fuels from ever dwindling reserves has resulted in a false sense of security. The effect of all this is that very little is being spent on research which must ultimately provide the answers to our energy crisis. These answers are complex, but the problem can be solved. It will require, however, much, much more attention than we have been hitherto willing to admit. Several alternates to fossil fuels have already been proposed—the use of solar energy, the utilization of steam deposits deep in the earth, nuclear fusion, and others. These admittedly have limitations and drawbacks, but unless we are willing to fund research of this sort, we will have to continue to pay the much greater price of environmental sacrifice. There are dozens of people around, like Mr. Beale here this evening, who are dying to look for new ways of producing energy, and for better ways of utilizing and transporting energy. But they aren't being funded; grants are being cut off. The government is not putting money into this sore of research, which is very badly needed. Of course, the power companies and the coal companies are not putting money into it either. It would, indeed, present a rather serious dilemma to them if we did, tomorrow, come up with a new, self-regenerating source of power. We *need* to start looking for better means of providing power. Those fossil fuels which lie under the earth and which are being taken out at such tremendous rates have been there for a very, very long time. We're told that we've got to get them out quickly. My answer to this is that they won't go away. They'll still be there in two or three years or several hundred years. Perhaps someday we'll *really* need them, and we don't want to get caught with our coal down. I would suggest that we start our search for new power sources instead of being so anxious to get all these fuels out by destroying the earth and the people who live on the earth in the process. In short, I suggest that we slow down a bit and take a look at what we're doing, and what the long term results will be.

Now, I like to exemplify some of the general points of this thesis with a few examples of what is happening in Belmont County today, which is by the way, not atypical of that which is happening all over this country. You'll hear tomorrow about the crisis in New Mexico and Arizona—the destruction of the Hopi-Navaho reservation there. I've read a great deal about that, and I'm very interested in hearing about it first hand. The area is being destroyed by the Peabody Coal Company, whom we all know in Ohio. Strip mining is ripping off parts of the Canadian Rockies in British Columbia, parts of Montana, Wyoming and other areas of the west are also being stripped. So it is a national problem. Don't get the idea that it's a state problem, or that it effects only Ohio, West Virginia and Kentucky, Pennysivania or Indiana, though these states have been very hard hit. I want now to refer specifically to an area which my students and I have studied rather intently for the past six to eight months. I speak of Belmont County, Ohio, which was at one time a very picturesque region typified by gently rolling hills and many hardwoods—maples, oaks, and others, which are presently being turned under the earth or burned and eliminated from the surface of the earth. The resemblance to a lunar landscape is often cited. It is truly reminiscent of a lunar landscape in many parts of Belmont County, and I think we can demonstrate this in some of our slides. If you drive up to the area just behind Hendrysburg, Ohio; up State Route 800, and look at what's happening there, you'll see the Gem of Egypt with its 200 ton bucket-capacity shovel working twenty-four hours a day, 365 days a year, except for repairs. It is, by the way, powered electrically, with the result that it is quite silent when it operates, except for the crunching of the earth that it chews up. It creates highwalls over 200 feet straight up and down.

It indiscriminately dumps the spoil back with no regard for geologic strata. The effect of this on future plant growth is, in some cases, severe. The final cuts don't have to be backfilled, according to the present very weak Ohio law. As a result, we have hundreds of high walls which you can see if you go up to Belmont County or any of the twenty-eight counties in Ohio which either are being or have been stripped. This massive destruction which we will show you in the slides results in acid drainage and the leaching of minerals into the streams, into the lakes and into other valuable surface water. This causes a tremendous pollution problem, part of which we have documented in our study of Piedmont Lake. In addition to that, I want to point out another problem, which is perhaps more serious than any of the others. The problem to which I refer is the loss or very great reduction of water retaining capacity of the soil. The use of massive shovels, along with heavy dynamite blasts, so loosen the soil that the water literally runs right through, carrying with it, by the way, many nutrient materials which are highly toxic to plant and animal life (including humans). We found manganese, for example, in concentrations high enough to be totally inhibitory to plant growth. We're running more studies now on the effects of these substances on plant growth, and it is becoming quite clear that most plants just won't grow under these conditions. We can only guess what the long-term effect of this will be, but we really no longer have the excuse of saying that we don't know what *might* happen. We have our Dust Bowl to look at. There are vast deserts in other parts of the world which were once lush and exotic junglelike areas with a great abundance of plant growth. A county engineer from Southeastern Ohio told us recently that Belmont County would soon be a desert, and that we might just as well accept that.

In addition to the reduction or loss of water retaining capacity of the soil, and the related loss of wells, there is also severe erosion of the land and the great reduction in population which is now beginning to show up in these counties. Animal life tends to be less diverse or to disappear entirely from these areas. Most of us don't appreciate the importance of animal life to our own life cycle. If you go to heavily stripped areas, talk to the people. They will tell you that there are no longer any animals around; birds and foxes are gone; very few deer remain. Mr. Acton, who has lived in Belmont County for many years, told us about "his" turkey buzzards, which he used to sit and watch while they circled near his farm. "That may not seem very important to you," he told us, "but you know, it was very important to me. I watched them," he said, "and I did a lot of thinking during those hours. They're gone now, I haven't even seen a redbird."

In addition to the destructive nature of strip mining on the land and on the animal life, we must consider the effects of all this on people. Certainly the effect on the people is a very severe one. We are told not to think about that in our legal system. I've gone to lawyers and talked about some of the problems which people are suffering in Belmont County, and I always get the same answer. Our legal system is designed to sue for property damage. If you can show a broken foundation; if you can show a cracked wall, you have a case. We could easily do that, of course, but to sue for personal damage, now that's something else. There is very little precedent for it. It would be difficult indeed to sue for personal damage, even if the people in the area had sufficient funds to hire a lawyer. The effect on the people is a serious one, but we're not geared in our courts to take care of it. That means we are encouraged not to worry about the effects on the people. I firmly believe, however, that in any consideration of ecological balance, you must include people. We are a part of the ecology. Go to Belmont County and talk to anyone, particularly the farmers. Some of them are afraid to talk. Others will talk; they are getting desperate. I mentioned at the hearings in Columbus two weeks ago that when people get desperate they do desperate things. I referred to the fact that in Kentucky they are already beginning to shoot at bulldozer operators, and showed a picture from the *New York Times* of a human barricade across the road, blocking a great long line of coal trucks. If you back people up against the wall and threaten their existence, they're going to fight. You say, "Why are these people fighting? Why are they so concerned?" All you have to do is go up there aand look, and you'll see why they're so concerned. You'll see why if the legislators of this state of this country do not start to respond to what is happening to our people, there is going to be violence. Again we will hear the voices: "Why is it happening? Why are these students doing all these terrible things?" There is very good reason for it.

The stories are always the same when you talk to the people from heavily stripped areas. The Starrs are a good example. They built their house eighteen years ago, on a little rise, with a beautiful view out across the valley. Egypt Valley *was* a very beautiful valley, for those of you who remember it. That house is totally surrounded by stripping operations. Look out their front window, and you'll find the beautiful view of a high wall, 200 feet, straight up and down. They're starting to reclaim very quickly now because the legislature is in session and there is a good bill pending—House Bill 125—which has enforcement built into it, and which requires good reclamation. As soon as good legislation appears, there is always a lot of scurrying around here and there to cut down on the acid flow into the lakes, and to do a superficial facelifting of stripped land which has

been untouched for years. The other day there were thirteen bulldozers lined up side by side in front of the Starr's house. It looks smooth now, except for the highwall which is still there, and which will remain there forever, and the strip pits which are still there, just over the edge, where you can't see them from the road. Get off the road a little way and walk—those of you in the audience who represent the coal companies, take your families out there. If you have children, take them along, and let them walk through the fields and trip over the deep furroughs which aren't visible from the road or from the air. Let them stay there for a little while and talk as we have, to some of the people who live there. I spoke to a man in Hendrysburg last October who told me that he had recently watched two dogs chasing a deer, and that he had seen all three of them go off a highwall. He later found all of them—dead, at the bottom. People are in danger, too, of falling off high walls. People drown in strip pits. I don't want to belabor this point. The fact is that these people are in serious straits. They have no legal recourse. They don't have money to hire lawyers. They don't know their legal rights, such as they are.

I attended a small meeting last summer, in which Mr. Ralph Hatch and his lawyer met with several farmers who had lost their wells as a result of the stripping operations. One man, who has five children, asked what he could do about the fact that he no longer had water. He was informed that he would need legal counsel, but that even if he obtained legal counsel, it would be very difficult to *prove* that Hanna Coal was responsible for the loss of his well. He got no more satisfaction than that from Hanna, and as of October, he had hand-carried six thousand gallons of water. Then the Hendrysburg Fire Department started to bring water in a tank truck and dump it into his cistern. Another man's feed business has dropped off by 50 percent in the last year. There are no farmers around to buy the feed. The population of Kirkwood Township dropped from 800 to 500 during the last census period. That is a tremendous drop, and most of those leaving are young people. No medical professionals will move in, so there is a growing medical problem in most of the stripped areas. The schools are deteriorating. The roads are being broken up by heavily overloaded coal trucks. Roads paid for by taxpayers' money are blocked off. Route 100 and a number of other roads in Belmont and Harrison Counties have been blocked, in order to facilitate stripping operations. Ironically, the few people who do remain are paying higher taxes for all these broken roads, strip pits, high walls and eroded lands. They are paying higher taxes because there are fewer people to pay the taxes.

I would like to speak briefly now to the two studies we recently carried out in Belmont County, My students worked very hard on these studies, and they are well documented. Unlike some of the reports which have come out relating to Piedmont Lake, we list our methods. The studies can be repeated, therefore, and I would encourage anyone to do so. It is impossible to repeat them exactly as we did them because already lots of changes have been made. We have seen limers suddenly rejuvenated, but you can still find many of the areas which have not been changed. Some of the statistics are rather interesting; highly acidic water, for example, continues to run into the lake from "reclaimed" areas. Some of the other data reported in this study have been referred to above. The second study, a socioeconomic assessment of Belmont County, reveals some of the hidden costs related to strip mining and the tax base. The downward spiral of the tax base in Belmont County is almost entirely due to surface mining. Add to that the fact that reclamation which is carried out many years after the mining has taken place will be done at the taxpayers' expense, and will cost many times what it would cost if done concurrently with the mining. House Bill 125 would require that the reclamation equipment follow 300 yards behind the stripping operations. This is going to save the taxpayers' money. You go in, get the coal, and get out. Don't come back; and start reclaiming immediately. It seems that if you must have stripping this is a rather worthwhile thing. Well, I don't want to go on here much longer, because I do want to get into the slide show. I would like to read a brief résumé of my thoughts on this entire situation:

I believe that present-day strip mining operations are resulting in ecological destruction which we are unable to assess adequately, or to properly evaluate. This lag between the effect of stripping and the evaluation of it results primarily from the great technological advances which have taken place over the last decade. That is a very critical point. I mentioned the use of shovels which handle over two hundred tons of earth per bucketload, with larger ones to come. These are causing changes which are not simply quantitive, but rather, qualitative. It is these qualitative changes which we must start to recognize and to deal with. Strip mining not only reduces our valuable land and water resources, it has a severe effect as well on very large numbers of people, most of whom have no recourse but to appeal for help to the very companies which have caused their problems in the first place.

The economic effect of strip mining is such that a few people benefit greatly, mostly stockholders who have never seen Belmont County, let alone talk to the people who live there. They are the true outsiders—the stockholders in Chicago, New York, San Francisco, wherever—who don't give a damn about Belmont County, except to make fantastic profits from it. Those people benefit greatly from strip mining. A few others benefit through jobs, but they are a very few when you consider that only 400 to 500 men are employed by strip mining in Belmont County, with a (declining) population of 80,000. In West Virginia, only one-half of one percent of the state's total labor force is directly employed in surface mining. *Most* of the people, I submit, benefit not at all. Other industries don't move into actively stripped areas, so potential jobs are not realized. There is a severe shortage of medical professionals in all these areas. The schools decline in quality, and for all this, the few who remain must ultimately pay increased taxes to compensate for general long-term reductions in the tax base. The present Ohio law is a very sad remnant of a bill which was introduced by the late Senator Ed Sargus in 1965. You might be interested in asking people in Belmont County what happened to Senator Sargus. People have interesting stories to tell about that. And we now have a law which was amended over seventy times as a result of its getting into the wrong committee (or the "right" committee, depending on whose side of the fence you happen to be). We are faced with a similar situation today. We have some reasonably good bills in committee right now, and there is a big fight going on as to whether or not these bills will be reported out of committee without being watered down into the sad remnants of the '65 bill. I think it's up to us to pressure the Congressmen at the state level, to push these bills hard and to vote for them in their present form.

I suggest that surface mining is destroying a great deal of this country, and it is destroying a way of life which has been lived by families in Belmont County since the late 1700's. It is destroying a whole way of life, and it is destroying the land in ways which we don't begin to understand. This kind of destruction of the land and the people is un-American. I'd like to suggest that some of the coal operators who are performing these un-American acts be investigated by the House Un-American Activities Committee. I'll end with the words of Woodie Guthrie, who truly loved this country, and who wrote prolifically about it: "This land is your land, this land is my land, from California to the New York Island." It *is* our land, and we must start realizing that, and doing something about it. We don't even have to assume an increased cost of electricity. Just reduce the profit margin by a few percentage points, and you have tremendous reclamation. We're supporting a good bill here for reclamation in Ohio because we feel that it is an important stopgap measure. It must be done, and done fast. The raping is going on at a tremendous rate up in Belmont, Harrison and other counties, as well as close to Athens. It will soon begin in Gallia and Lawrence Counties. We are supporting that bill, and we're supporting it strongly, but we realize also that a national bill is needed. I would strongly urge you at the same time you are supporting the state bill, to get behind Congressman Ken Hechler's bill. Write your Representatives and Senators in Washington, and support that bill, because the only way we're going to stop this total destruction of the land and the people by surface mining is to pass a law that will put a stop to surface mining, so that generations to come won't have to pay for what we have done. Thank you very much. I shall be happy to answer questions. (app.)

Question. Recently we've read in the local newspapers that the coal operators have taken out options on thousands of acres in Meigs County right down the road. Am I correct in understanding that that operation will be largely surface mining? Secondly, the thing that concerns me is that, I think some of the descriptions in the paper indicate the people are receiving this news in something of a boom spirit, a great return of economic wealth to Meigs County. Could somebody clear this up for me?

Voneida. Perhaps, someone else can tell you more about it. I read it in the papers, too. It seems to me it is a typically crass move by the coal company. Here we are right in the middle of legislation on strip mining and a lot of interest is being aroused and so on, then right in the middle of the hearings it is announced that here is a whole new area that is going to be surface mined. That is one of the most arrogant things I have ever seen. In addition to that it is announced, if you read the same article I read, that this vast operation is going to provide no less than seventy-nine jobs. That is what it said in the newspaper article I read in Cleveland; "no less than seventy-nine jobs." I don't call that an economic boom, and if you look at what has happened in West Virginia and Ohio, you see anything but an economic boom. You see counties which have gone down, down, down and they're left with a lunar landscape into which no industry is going to move because there is very little water remaining, which industry needs badly. I cannot believe that this would be an economic boom. If people believe everything they're told by the coal operators, perhaps they can be persuaded that it is going to be an economic boom. Frankly, from what I have seen of surface mining, it does not represent an economic boom, but quite the opposite. Seventy-nine people are getting jobs! I don't think that's an economic boom.

Question. It does represent an economic boom, of sorts, to those people who sell their properties to the coal companies, doesn't it?

Voneida. Alright, that's a very good point. The question is "It may well represent an economic boom to those people who have land to sell to the strip mine operators; that is, those few people who own farms having

coal under them will make quite a bit of money. Indeed this has proven to be the interesting case; in some situations. I have likened this in a sense to blockbusting, which we often see in the cities. A strip operator moves in and buys one farm for a high price. I certainly don't argue with the farmer who sells that farm for a high price. It is a lot of money. The man who lives next to him is certainly going to hear very soon that the strippers are moving in, and he knows what happens when that occurs. It would seem to me that he would be willing to sell his farm for maybe a little less than the first man sold his. As a matter of fact, this can be documented. The third farmer, who now sees himself surrounded by strip pits, highwalls and so forth, knowing full well what has happened in all other counties it's happened in, is likely to be willing to sell for even less. I could imagine that there would be a rather downward spiral in property sales because of the effects of the strip mining in the surrounding area. Nobody wants to live in a strip pit. However, it is true for the few people who do have property to sell. There will be a short-term economic boom. Many people, interestingly enough, are refusing to sell. I know people up in Belmont County who just won't sell their farms. They just say, "Nothing is worth it. Our children have to live in this world." I have some really beautiful letters which I can describe only as beautiful letters from people in Southeastern Ohio who have farms which they won't sell. These people have written to me in Cleveland. One lady wrote to me and said, "Any of your students can come and live in our house this summer while you continue your studies in Belmont County. Our house is open to people who love the land, and there's a garden to eat out of." That was nice. She opened her house to these young people, and she underlined "rent free." So, we may just take her up on that. We get a lot of letters like that. These people said they absolutely would not sell their farm, although they are being strongly pressured to do so.

Question. Does the pending Ohio legislation have any effect on federal land, such as the Wayne National Forest.

VONEIDA. Yes, there is a clause which states that, depending on the decisions made by the Board, there would be certain areas in which stripping would not be allowed. It would have to remain a certain distance, though I don't remember exactly what that distance is, from those areas. It is not specifically defined as federally owned lands as I recall. I do have quite a few copies of the bill with me, plus an analysis of the bill, and I'll be glad to go through that with you. We can probably answer your question very specifically. I think it is within a one-mile distance from these areas that stripping will not be allowed.

Mr. DOBSON. Zip Little would like to answer the question about the national forests.

VONEIDA. Oh, yes, Zip Little from West Virginia, Southeast Representative of the Izaak Walton League of America.

LITTLE. I'm afraid I'll forget this tomorrow, so I want to tell you something. I think the Wayne National Forest comes under region nine. This would be out of Milwaukee, and Jay Cravens is the regional forester. You people from Ohio that he should answer to should write him and tell him that Ted Schlapper, the regional forester in Atlanta, has told his district foresters not to issue any strip mining permits on the forest under his control. Now that would be several states, including the Carolinas, Kentucky, and Virginia. I do believe we are on the master study, on the clear-cutting issue, in West Virginia. I think that you really should get on Milwaukee and ask why one regional forester is doing this? If they are strip mining on the Wayne National Forest, why are they being permitted to do that? Thank you very much.

VONEIDA. Thank you.

QUESTION. You alluded to fear on the part of people in Belmont County to speak. Are they being intimidated? What is it that's causing this fear?

VONEIDA. In all honesty, I don't think they are being intimidated. They will tell you stories about others who are intimidated, right up to legislators. Whether or not these stories are true, one isn't sure. But you get the same story from every person. Perhaps intimidation has gone on in the past, as it has gone on in other states. I honestly don't know any cases right now where people are being intimidated. However, some of these people do work for strip mine operators. That is their livelihood. There are four or five hundred people in Belmont County who work for strip mine operators, and they know very well that if they should say something they are likely to lose their jobs. So they just won't speak. But there are many hidden reasons; people who have lost their wells, for example, won't speak because they live with the hope that the coal company might drill them a new well. This, of course, is highly unlikely, but it is an important hope if you have no water.

QUESTION. Biologically, when you reclaim land is there any way you can reclaim the water? Can you clean up the acid that has been drained into it?

VONEIDA. You mean clean the water before it drains into a lake?

QUESTION. No, once it has drained into the lake. Let us say the land wasn't reclaimed immediately. A year later you decide to reclaim it. There has already been acid drainage. Is there any way to correct the problem then?

VONEIDA. That becomes a very serious problem as we know in the case of Lake Erie, for example, which many would say is a dead lake already. There is fantastic nutrient drainage into the lake, and then you begin to get changes in aerobic and anaerobic relationships. We arrive eventually at what is called a dead lake. The longer we wait, the more difficult it is to restore. Trying to alleviate some of the problems before the water gets into the lake is best. The best answer is to stay far enough away from these lakes so that you don't get the drainage in the first place.

QUESTION. Can we start the reclamation process while we are stripping the land?

VONEIDA. Yes, that is ideal, to start reclaiming concurrently with stripping. It can be done, and it is being done in Europe.

QUESTION. What happens when you hit a natural stream? If you are surface mining and you hit a natural stream, your acid drainage begins at this point. You have to start to reclaim it or your problems get a lot bigger.

VONEIDA. Yes, that is a problem, and I cannot answer it. That is one of the reasons I am strongly advocating at least a temporary ban on surface mining until we can do some extensive studies and see exactly how to solve these problems, or if indeed they can be solved. Until we know that we won't be able to approach it in any intelligent manner whatsoever. We will resort to stopgap measures such as these ridiculous liming devices that throw lime in the water to neutralize the acidity. Unless we stop and let people like Dr. Ahmad and other good geologists and biologists look carefully at what can be done, I think we're going to be in much more serious trouble than we are in today. On Lake Erie we may soon be able to walk from Cleveland to Detroit, and we won't need any spiritual guidance.

QUESTION. It upsets me and I don't have enough faith in the American system to think that list of people I'm going to write is going to do any good. All this talk is too passive because right now machines are stripping. We should blow up these machines. That would cause a hell-of-a-lot less violence than what they are doing right now to all animals, including us. I cannot see blowing up a machine as violent when compared to running out all the animals or seeing a deer and two dogs run over a 200 foot highwall. Man, I am really upset. (app.)

VONEIDA. I know how you feel. I really do. I have been up there for a long time, climbing around in those strip pits, and listen, I know how you feel. I gave up letter writing a few years ago on the Vietnam mess.

I gave it up, but I guess maybe I'm a copout. I started it again. Anyway, I was over in Columbus at the hearings. I looked around the room and I saw the strip mine operators sitting back there with smug, cynical looks on their faces, winking at each other. It made me sick. But I saw some of the legislators who were starting to respond, or I think they were starting to respond. I just ask you to give it one more chance. There are guys who operate those shovels who have kids. Give it a little more time. It's worth it. Nobody wants to blow up a shovel operator. I don't.

Mr. DOBSON. Is Jack Loeffler in here? John, is Jack out there? Well, Jack Loeffler is from the Black Mesa area where the Indians are being ripped off. He has an outlook on this thing, and I wish he were here now to share this with you in relation to your question. Jack has been through a lot of things since dropping out back in the 1950's. He has an outlook that he will share with us tomorrow, and I hope you can make his rap. I wish he were here now to deal with your question because it is a good question. If you could have made the hearings this past week and, from my point of view, seen the committee expose a couple of opponents of the legislation who didn't know their stuff, one guy hadn't even read the bill, I think you would have felt good. At least the committee members in the House who are dealing with the bill now are on their toes, and I think they understand what you are trying to say. I think they are sensitive to that.

VONEIDA. I think it it time we get on to the slide show. I want to thank you for listening to me and the others tonight, and to encourage you to come back tomorrow because this is only a beginning. Some of your questions will be answered tomorrow. If you think it's bad here, man, you ought to see what's happening out there on Black Mesa. I would like to introduce very briefly Mr. Grier Graff, an architect from Cleveland who has been working with us and who will introduce the slide show. The students who have worked with me on this have spent a tremendous amount of time, thousands of hours taking pictures, developing them and putting this thing together. Several of them are in the back of the room. Jim "Sparks" Neely has the earphones on, and Grier's going to tell you a little bit about it so you will know what to look for. Grier Graff.

Mr. GRAFF. Ed suggested that a few of you on the edges would want to move in. These screens are facing the projectors and not the wings of the auditorium. You could probably see a little better. The slide show deals with two areas for which we felt a very deep concern. The first area is the effect on the land, and the second area is the effect on the people, or what is happening to the culture of southeastern Ohio. The totality of the situation is what we are trying to show in this program. We are using two screens. Some of the slides have facts printed on them. All these facts can be documented. With the slides will be music on tape. There is a speaker in the back of the auditorium. Some of the things that you are going to see are over-burden (which is anything that lies above the coal seam that must be removed to get at the coal), active mining and the creation of spoil banks and high walls. The enormous equipment, which, as Dr. Voneida mentioned, is qualitatively different from that used eight to ten years ago, the small

drag-lines and the miniature power shovels that were used in the early operations of strip mining. This stuff is huge! An article in the Columbus paper within the last week and a half says that Hanna Coal is opening a new mine in Gallia County which will produce 750 thousand tons of strip mined coal a year, enploying only seventy-nine people. That should illustrate partially how enormous the equipment has become. You will see reclaimed land, some of which you might not be able to tell from active mining. Signs in some of the slides will often help you identify reclaimed land. You will see water pollution in two areas: strip pits which have lovely blue and green hues caused by copper and aluminum and other ions in the water. They are very heavily polluted. The streams often look muddy, and there is almost always acid mine drainage present. The other things you will see are effects on the lives of the people. You will see how close to the homes the shovels and other equipment come, the loss of wildlife habitat, houses shaken by blasting, cracking of foundations, blast holes left unused and open (these holes are 18 inches in diameter, and children can fall into them, even most of us could fit into them). Just before we see the slides I would like to express a special thanks to Dave Guthrie and to SCOPE for a grant that made this and the small slide show which we had set up down in the lobby before the program possible. Thank you.

PRESENTATION: "CONTROL OF ACID FORMATION AND MINE DRAINAGE," MOID, U. AHMAD, PH. D., PROFESSOR OF HYDROLOGY AND GEOPHYSICS, OHIO UNIVERSITY, ATHENS, OHIO

Thank you, Mr. Dobson. I am grateful to SCOPE and the Athens Ecology Group for inviting me to give this talk.

Before we turn off the lights, I want to show you the samples of coal which I have collected from the Athens area. This coal is oxidizing. You can see the white substance. This was lying in my office. If we pour a couple of drops of water on this coal, we could collect acid water. This is the pyrite crystal which is responsible for all this acid problem. This is a clay model in which I have shown a coal outcrop. We obtain coal by removing the overburden or going in horizontally. May I have the lights off? I will show you the slides, please.

This slide shows Appalachia and the streams which are polluted due to the acid discharge. About 13,000 miles of streams are polluted by the acid mine drainage in Appalachia. Many of them are not able to support the fish life. Figure 1 shows the streams polluted in southeastern Ohio. The polluted streams have pH less than 6. The water we drink is about 8 pH. The Hocking River watershed is polluted, and part of it is completely dead like Monday Creek and Sunday Creek. The Hocking River passes through Athens, and if you take U.S. Route 33, you will meet Monday Creek and Rush Creek on the way to Columbus. Collect a few samples of water and you will find acid. Because of this, there is no fish life there. Racoon Creek is another dead river. The Muskingum River is also polluted, but the industry is helping us a little by dumping an alkaline discharge and making it not so acidic as it might be. WQO have calculated that the Hocking watershed alone is producing 500 tons of acid every day.[1]

In the central states where the topography is flat, area strip mining is practiced. The contour strip mining is common in hilly southeastern Ohio. We remove the overburden in order to obtain coal. In the past, they did not have such big machines and could not remove much overburden, but they followed the outcrop and tunneled out the coal for miles inside the hills. This is known as drift mining and is classified as underground mining. Drift mines are producing acid discharge. This is an unnatural spring which has been created by drift and auger mining. This has caused havoc in many parts of Appalachia. Why it is happening? I showed the pyrite to you. This pyrite combines with oxygen and water (which is everywhere in water vapor form), and it produces sulphuric acid and ferrous sulphate. By a little complicated mechanism we can get ferric sulphate. We are concerned with the sulphuric acid. This acid can react with anything, like clay and sandstone, and it produces a lot of salts. The net results which we will see in the pollution, are acid, sulphates, iron, hardness, aluminum, arsenic, copper, manganese, sodium, potassium and recently we have observed mercury also.

Is there a typical acid discharge? No, and there is nothing typical in geology or hydrology. However, Table 1 shows four common types of mine drainage compared to drinking water.

The first class is called the Acid Discharge, where the pH is very low and neither fish nor any life could survive. Look at the acidity, sulphates and iron. Then let us see the extreme side where it is said that there is no acid discharge, for example, in parts of Belmont County. It is not that anybody has done anything. Nature has been very kind there. There is some limestone which neutralizes the acid, but it is polluted water. There can be some fish life due to favorable pH, but look at iron, and if that is not there, look at the sulphates. We could not drink that water.

Why it is happening? We are after the coal which contains sulphur. Remember that the pyrite content is generally not reported with the sulphur content, but sulphur content is related to the pyrite content.

There is a pyritic sulphur (FeS_2), and there is an organic sulphur. We are not very much concerned with the organic sulphur at the moment in our problem, although we are to some degree because the higher the sulphur content, the more the coal produces sulphur dioxide when it is burned.

There is pyrite content in the rocks stripped in Pennsylvania. The overburden contains little or no pyrite. Generally, the pyrite content is very variable, and is very difficult to predict. This coal is very good and we go after it. We are not worried about the shale in the overburden. This is what we have to watch. It contains 6 percent pyrite. Once exposed, it will start oxidizing and produce sulphuric acid. There is a classical example in Ohio—the Sheban mine, which produces havoc when it discharges acid water into the Meander Creek, which feeds the water of Youngstown, Ohio. They have impounded the stripped areas. This is only about seventy acres, and half of it has been reclaimed also. Yet the land that has been reclaimed is producing the worst acid discharge in the area. Here is the reason. The pyrite content above the coal is 1 percent. This is the part they call the acid sandstone, and this is what is causing the havoc in that area. They covered it up and reclaimed it. They have put lime and six inches of manure. There is a nice pastureland. It has been dammed, but still it produces enough acid to kill fish life almost every year. They have not been able to stop the acid production yet. Let us see why.

TABLE 1.—MINE DRAINAGE CLASSES

	Class 1 acid discharges	Class 2 partially oxidized and/or neutralized	Class 3 oxidized and neutralized and/or alkaline	Class 4 neutralized and not oxidized
pH	2–4.5	3.5–6.6	6.5–8.5	6.5–8.5
Acidity, mg./l ($CaCO_3$)	1,000–15,000	0–1,000	0	0
Ferrous iron, mg./l	500–10,000	0–500	0	50–1,000
Ferric iron, mg./l	0	0–1,000	0	0
Aluminum, mg./l	0–2,000	0–20	0	0
Sulfate, mg./l	1,000–20,000	500–10,000	500–10,000	500–10,000

	Upper limit (parts per million)
Drinking water standards:[1]	
Lead	0.1
Fluoride	1.5
Arsenic	.05
Selenium	.05
Chromium	.05
Copper	3.0
Iron and manganese	.3
Magnesium	125
Zinc	15
Chloride	250
Sulphate	250
Phenol	.001

[1] Total solids desirable, 500; total solids permitted, 1,000 (pH 8).

Note: Cost of cleaning class 1 water by yellow boy capacity 240,000 per day, $1.00 for 1,000 gallons.

Source: Ronald D. Hill, Mine Drainage Treatment, State of the Art and Research Needs, WQO Cincinnati Ohio.

Let's look at this particular strip mining problem. This is what the configuration is before anything is done. There is the sandstone which may or may not contain pyrite and the shale which probably will contain pyrite. There is water in the sandstone. You could put a well down here and sometimes you may find a spring. Watch this point here. There is water in the sandstone above the coal and it is generally of good quality water.

This is the water the people use in the rural areas all over southeast Ohio and all over Appalachia. It is used by those who want to support a little farm. And what happens? We try to obtain the coal. The water level which was probably here is immediately depressed. The water seeping from the high wall is depressing the water table. No wonder you have heard the complaint from some guy living up there that his water well has gone dry. In no other part of the world can you find someone who is deprived of water just overnight like this! How would you feel if your taps were turned off without any notice? This is what happens.

Man decides to remove an overburden containing the pyritic material, which may vary from 1 to 20 percent or whatever may be the situation. These rocks were very well compacted over millions of years. The soil which has been built up over thousands of years is destroyed overnight. Then we create the spoil bank and want to do something with it.

Before stripping, the rain water goes through these sandstones. There may be a water table there, and there may be good quality water because the salts have been leached out over millions of years. If you

[1] Stream Pollution by Coal Mine Drainage in Appalachia (Cincinnati, Ohio: FWPCA), p. 157.

drill a well here a good water supply is generally obtained. After stripping, we put this overburden upside down, but whatever way it is put won't make much difference. A large quantity of pyritic material is exposed.

The theory so far has been that if you cover the pyritic material, put some vegetation here and grow some nice trees, no acid water will come out. This theory is not right. We can disprove this old philosophy. It says that by reclaiming the land, putting some manure and soil, you can get a good quality water. But once you have exposed the pyritic material, the air can get into this spoil bank no matter what you do. Pyritic material buried at a depth of 600 feet in Arizona is still oxidizing. We have been able to measure the temperature anomaly due to oxidation of this pyrite.[2] Those who are familiar with geology and hydrology know about the zone aeration and can very well understand that just like we breathe, the earth also breathes. The water and air can go through the rock. Even if you put the clay over the pyrite, it will break up or fracture sooner or later. It is just a matter of time. An investigation was done in Kentucky. The U.S. Geological Survey published a Professional paper 427–C recently and the pyritic material was deeply buried. For two years they did not get the acid discharge. After two years as they had predicted, the acid discharge came. The same thing happened in Sheban, but it is not so well documented. There are other documentations such as at Elkins, West Virginia. For the Environmental Protection Agency, Ron Hill has done some work in that area, and they put a lot of money into it. They covered these materials. They did a wonderful job of reclamation, and they studied the water quality before and after reclamation. The acid, the iron, and the sulphates are still coming and will continue to come as long as the pyrite is there. As a matter of fact when you plant, the roots allow the water to percolate more readily. Until the pyrite is leached out, it will continue to oxidize for generations to come.

There is another problem: drift mining and auger mining. In these mines we also expose pyritic material. Water from overlying rocks percolates through it. Thus good quality water comes out bad. We have tried to seal some of these. Documents show that in the 1930's there was an extensive program for sealing these mines. They thought this would cure the problem. We have been trying to do air sealing. With apologies to those who are concerned with these experiments, it is not possible to make a rock airtight. The result is that no single technique has yet been discovered to stop the acid production from these drift mines and dog-holes. The acid drainage has been coming now for fifty years and probably will continue for another 100 to 200 years or as long as the pyrite is there. I have suggested a solution: by discharging the water from the rocks above the coal into a lower aquifer, bypassing the mine, under the concept of "weeping well."[3] This method is yet to be tried. In this concept of the weeping well the water from the rocks above the mine is taken down to the lower aquifer. How else can we solve the problem?

Some other methods have been suggested. You have seen the problem of thousands of streams which are polluted. We have been told that neutralization is the trick! We are told this will remove the acidity, the iron, aluminum, manganese, and that it will increase the pH. But we have a problem of disposing the sludge. Again, we need more power if you want to do that! Reverse osmosis, electrodialysis, distillation, ion exchange, crystallization, all these methods would require the disposal of sludge, and we do not know where to put it. In any case let's see the cost of it. This is roughly $1.00 per thousand gallons, leaving out the capital investments which we have not calculated. This is where we stand as far as controlling the acid mine drainage. Could we have lights, please?

Let us look at another problem—mercury and coal. Unfortunately we have found that the cinnabar, the mercury sulphide, the most important mercury mineral, is associated with this pyrite. Fifty-five coal samples in Illinois were examined and they found the mercury at about .2 parts per million, and they have even obtained the same results from the coal samples in Ohio. (Illinois State Geological Survey No. 13, Feb., 1971). The Michigan Department of Natural Resources has reported that the coal in Ohio contains about .5 parts per million. Therefore, it appears that coal found in the United States contains mercury which may vary from .1 to 1 part per million. Strip mining and drift mining expose large quantities of coal and pyrite. This mercury finally goes into our streams and strip pit ponds. In Guernsey County samples were taken from the bottom of the strip pond, and WQO found mercury from 1 to 10 parts per million. This analysis was done by WQO. So we know that there is mercury associated with the coal, and some of it is going into our strip ponds, our streams, and if it is burned, it goes into the air and then falls into our water sources and other parts of the environment. The calculations have been made that roughly every year we are releasing 5,000 tons of mercury into our environment from fossil fuels, the greater part of it in the U.S.

SUMMARY. Let me try to summarize what I have said because some of it is a little scientific. Most of the stripped lands contain pyrite and, even if deeply buried and the land properly reclaimed, would continue to produce acid discharge or low quality water for generations to come. Large areas of the stripped lands could not supply good quality water. Rural water supplies are being threatened by stripping. Surface water supplies in large areas of Appalachia are already polluted by the acid discharge. Ponds and streams are being polluted by mercury, which is associated with coal and pyrite. No effective method has yet been devised to stop the acid production. If we continue coal mining uncontrolled, allowing strip mining and drift mining due to our electrical demand, we will damage the rest of Appalachia. Our future generations will find neither fresh surface water nor ground water. We still have time to figure out some solution. Thank you.

QUESTION. There are two essential concepts which are floating around. Their source is largely in the coal industry; those are restoration and reclamation. The people with whom I am familiar and work with in West Virginia suggest that restoration is impossible. What you are saying right now suggests that even reclamation is doubtful. Is that correct?

AHMAD. We will be able to plant as many trees as we want. We could do this in the desert also. I have seen it done in the desert. As we know in Minker's Run, although the Wayne National Forest Service is very efficient in planting trees, they have not been completely successful. There are areas where, due to the nature of the pyritic material of the soil, it may be very difficult to do a proper reclamation. Even if you do the reclamation, the land would continue to produce an acid discharge. The ground water would be polluted, and we will be polluting the surface waters for generations to come as long as all the pyritic material is not leached out.

QUESTION. You had a list of about six kinds of reclamation up there and I only knew the first one.

AHMAD. These are the techniques like neutralization, distillation, and ionic process. These are different techniques where you take acid water and try to clean it. You can put some alkaline in it, soda ash, and you will create some salts. You will increase the pH, and you would be able to raise fish there, but it would still have the sulphates which we will not be able to drink. The best method which we could apply probably is the distillation. You just heat the water, condense it, and that will be pure water. Then the question comes about where are we going to put the waste from this process? If we decided to use this method, where we are going to put these plants? Are we going to set them all along these streams in every niche and corner of the country? If we do it, we would need more power. Then we will be in the vicious circle which we will never be able to break. Is it the solution? I leave this question to you.

QUESTION. I heard they do not have this problem in Europe. What is happening there?

AHMAD. In England if you cut a tree, you are in trouble. Here you can destroy the forest and nobody bothers you. There is some stripping in England but most of it is underground mining. In Germany there is much strip mining but the overburden does not contain much pyrite. Also, they have developed excellent methods to reclaim the land.

QUESTION. I do not fully understand the problems of acid discharge. Why does it not occur in England?

AHMAD. Here most of the coal is mined above the surface drainage and the overburden contains pyrite. If it is exposed to air and moisture, it would produce acid drainage. We may have similar situations in England or Germany. There is some acid discharge but its magnitude is very small.

PRESENTATION: "STRIP MINING CONTROL IN OHIO," RICHARD LANCIONE, ATTORNEY, BELLAIRE, OHIO

I have been talking to so many groups favorable in their reactions toward what we are trying to do that I may tend to get even more informal than I should be with you. I understand from talking with Ed and Dr. Voneida that this group generally has had a very good presentation and has been very responsive up to this point on the problems that we have in Ohio. As Ed said, I am known as the son of A. G. Lancione, and I don't mind that. I am sure that a lot of the young people in the audience are still known as the son of whomever their parents might be. But I feel that by a lucky accident of fate I am in a position to be a little bit more effective than most people in my approach as a citizen to the legislature, and I have no inhibitions about taking complete advantage of that position. I talked about four hours with Dr. Murphy from the Ohio State University College of Law who made our presentation to the legislative committee and talked that matter over with him. He felt that I should be taking advantage of it and I should be frank about it. I have been accused of having a conflict of interest, and my father has been accused of having a conflict of interest because of my involvement with this committee that we call CCASM, Citizens Concerned About Strip Mining. If there is a conflict, I think it doesn't parallel Mr. Oakley Collins' conflict, so I'm not going to worry about it at all. (app.)

You have been told what strip mining is. You have been told where it takes place. But I don't think, up until now, anybody has talked politics to you. I am involved in politics, have been, and politics has been a part of my life as long as I can remember. My father first ran for the Ohio House of Representatives in 1946 and at the tender age of six I was staying up listening to the election returns. So I know what politics is in Ohio, unfortunately. The law right now is obviously inadequate. We have opinions from our Attorney General that have tied up the present

[2] Geothermal Gradients, Recent Climatic Changes, and Role of Sulphide Oxidation in the San Manuel District, Arizona. (T. S. Lovering Economic Geology, Vol. XLIII, Jan. Feb. 1948).

[3] *A Hydrological Approach to Control Acid Mine Pollution for Lake Hope* (Groundwater, Vol. 8, No. 6, Dec. 1970).

director. I see Mr. Gebhart here in the back, that have tied him up so that he can't enforce the law, as it is on the books today. We had a situation down in Belmont County where they sent an investigator down. A strip miner had come too close to a road, he was arrested, and it made big headlines. He probably got $10,000 worth of coal out of that extra strip. He was fined $100 and he probably would say "I'd do this every day of the week." At any rate the law, as it is presently set up, allows these guys to go in and strip the land, leave the land unreclaimed and untouched for great lengths of time. When they do come back they leave what Dr. Riley from Kent State University said he didn't see anything wrong with, the high wall. This is what they leave: the beauty of the high wall and a 'gently rolling contour' interrupted by large boulders, tipples, rusting equipment, and acid drainage. So, at any rate, I will explain briefly, how the bill got introduced.

In Belmont County, we have approximately an 80,000 population. We have had strip mining in Belmont County for a good number of years. Our county is two-thirds leased to coal operators; out of 384,000 acres over 200,000 are presently owned or leased to coal operators. We have the fifth largest county in acreage and quite a few communities. When you take out the acreage occupied by our cities and you say over 200,000 acres for stripping, there is not much left of Belmont County that is not going to be stripped.

In the last few years as cheaper coal became economic to mine, the doctors and professional people in the county who had $30,000 or $40,000 homes saw their landscape disappearing and began to be disturbed at all hours of the night and day by the blasting that goes on. They saw the reservoirs that supply water to the City of St. Clairsville, for instance, becoming endangered. The beautiful country roads that they drive came almost to the point where you can't drive on them at all. Huge deposits of mud built up and the roadways are breaking up from the heavy trucks. Often when a coal truck comes down, it is like a game of chicken to see who gets off the road. If you are facing a coal truck coming down one of these township or county roads in Belmont County you have to get out of the way. There is not enough room for a car and a coal truck. The people who became concerned called a meeting about a strip mining down in Bellaire and had about 150 people show up. From that group of 150 people, about 75 signed up to actively participate in a committee to do something about strip mining. That seventy-five people has grown to well over a hundred actually signed up and working down there now. We formed a legislative committee with three people. These three happen to be a housewife from Dillonville, Ohio, a stockbroker who lives in St. Clairsville but works in Wheeling, and myself. The girl's name is Carol Malesiak, the fellow's name is Howard Kelly, and we worked a long, long time on this. We took the laws of West Virginia, Kentucky, Indiana and Pennsylvania, and we took the so-called law of Ohio. At our first meeting we threw the law of Ohio out the window and started from scratch.

Some people have asked us why we formed a new division to handle the enforcement in the procedure we set up. This was because we started from scratch. The law was so bad that you just couldn't work with it. With the aid of my father I took advantage of my position as son of the minority leader. We had a bill drafted through the Legislative Service Commission, and we had it introduced. Then we picked up twelve sponsors in the House. A. G. Lancione didn't introduce the bill alone. He introduced it with six other Democrats and five Republicans. These people had to have a little bit of courage to put their names on this bill in the first place, when you figure the amount of money the coal industry is already spending and is going to spend in trying to defeat this bill. So, the bill was introduced. We have had proponents' hearings. I have been told by lobbyist experts down there, and I have been in the hall so much they think I'm a lobbyist, that the proponents did one of the best jobs on the presentation before committee that they had ever seen. One of the most professional jobs! This group of amateurs who are concerned about our environment got up and did a heck of a job. We had volunteers. We had a fellow come in to testify from Washington who usually charges about $200 an hour for consultation. He ended up paying his own hotel bill, and didn't charge us for that. I don't know whether we have accomplished reimbursing him for his airplane fare or not. We spent from $200 to $300 on all of our proponents' testimony. This was meals and rooms and in most cases not including mileage. People drove there. Guckert and the others from Pennsylvania came in on their own, not even in a state car.

We are now in the opponents' testimony. They are doing a fairly poor job in their presentation. The first man they had testify was a fellow from New York who had not read the bill. He was a consultant who talked about our power output needing to increase four fold by 1990. The next opponent was a biology professor from Kent, and by the time he finished speaking he was the proponents' best witness. (app.) I enjoyed the way he approached the audience. He started kidding about the generation gap. He was talking down to the kids and trying to explain why he was even there instead of talking to the committee. He had to feel a little guilty talking in the presence of the college youth there.

Now I'm going to tell you about politics in Ohio. The people who started pushing this thing down in Belmont County were young. I almost am the oldest of the group that called the first meeting and started organizing this committee. There is one older fellow, he is 32 and I am 29. We called the first meeting and have been working together. We got a terrific response from people from 18 to about 34. They are the work horses, particularly the girls who are calling the meetings and getting the work out. The first reaction I got from a politician was from my father who said, "For Pete's sake don't get involved in that issue, it'll kill you." He said, "If you ever run for office, you're dead." I said, "Well, first of all I'm not going to get involved in it unless I get support from the people back here. And secondly, I don't care if I ever run for office." So, I don't have that much to lose. Besides, my father is 64 years old, and if he does run again, which is doubtful, he has the name built up so that I don't think that I'll be hurting him. So, that was his first reaction. Then we called the meeting and a lot of people came and we decided to put the work together. We started contacting people across the state, like Ted Voneida, who gave us a great amount of help and encouragement. We now have contacts at most of the major campuses in the state, and many other contacts. Then the bill was introduced. The second reaction that I got from a politician was, "You can't do it. It'll never get through. It'll never work. Give up. It's too tough." The reason they say it is too tough is because it is going to cost the coal operators about 50¢ a ton more, and profit is not a dirty word in the State of Ohio, believe me. In fact, profit is the only word in the coal industry. So when you talk about 50¢ a ton and you talk about a 300-acre farm and the amount of tonnage they get out of that 300-acre farm, they can afford to spend, and I am sure they have a budget for this little legislative thing several hundred thousand dollars or more. I didn't appreciate what we were getting into. I have been involved in politics, but I didn't appreciate what the lobbyists would do, what the legislators would do, or what the Ohio Sportsmen Association, their sportsmen league, would do. Larry Cooke is really a nice guy. I'm just so glad that they gave him that—forester of the year. I'm being cynical, of course.

We could have gone the demonstration route. In fact, it was discussed at the very beginning. People came into the first meeting and said, "Let's go lay down in front of the coal trucks," or "Let's go put a little charge in the Gem of Egypt and put it out of commission." And we, as a group, decided that about the only thing we would accomplish would be having people put in jail, and that any chance of a bill going through would be destroyed by that type of activity. So, we decided to go the system route. Now, after all we have accomplished, our local newspaper editorializes that it's all phony, all fake, and we are not going to get any substantial change in the law. Albert Dix is the editor of the *Times-Leader*. He said this in an editorial, and he owns about seven newspapers. This is the same guy that has written editorial after editorial telling us that we cannot resort to violence, we can't go to the streets, we can't try to stop things physically, we have to go through the system and use the system. So, we are trying to use the system. We have a bill introduced. We have good sponsors in the House and in the Senate: The next committee meeting is Tuesday, April the 13th. We are getting information to all the members of the commitee; they are well informed; they know the law; they know the bill; they can ask good, intelligent questions, and they do.

They pick up the phoniness as in the professor from Kent, right away. A group of young people has contradicted the irony of some of the older politicians and the older power-structure people in the State of Ohio. We have not gone to the streets, which they tell us not to do, but we have gone to the legislature, which they tell us isn't effective. So we face trying to be effective in the legislature. Just to give you the odds, there are twelve, full-time, well paid lobbyists representing the coal operators. Twelve of them are out there, eight hours a day, five days a week, and in the evenings, taking these guys out to dinner, entertaining them, talking to their constituents, against all of our paid lobbyists, numbering zero. We have none. We have twelve sponsors who have probably over 2,000 bills with which they are supposed to be concerned in the legislature. The main sponsor is also the minority leader and has a terrific time-consuming job. The coal industry has millions of dollars of income and great assets. They can throw in $90,000 for the Ohio Reclamation Association and not feel it. O.R.A. is their lobby, their official full-time paid lobbying group. The employees of the Ohio Reclamation Association have secretaries that do their typing, run off fine copies of all their material, while we have to go to church basements and borrow mimeograph machines to get our stuff out. Everybody that I talk to wants to help, and they want to know how they can help. A small amount of money is only enough to pay expenses. We have a small amount, we have about $300, I think, in CCASM, and we have promises of about $500 from other organizations that will help out. This is money we can use for paying travel expenses for those who can't afford it on their own. So money, unless we had $20,000, is not an issue and we're not going to shoot for $20,000. Twenty thousand dollars—we could open an office, get full-time personnel and all that stuff, but we don't even consider it. So how could they help? I know how hard it was for me when I was in school, and a lot of you are here in school, how hard it was for me to write letters home. I hated to write letters; if I wrote a letter once a month it was kind of like Christmas at home. I understand the girls are worse than the boys. Maybe there

are a lot of girls here who will find it very hard, but the thing that I hear in the halls at the legislature is, "I've been getting letters on this. I think you guys have a good chance of getting a good, strong bill through."

Representative Voinovich, who is the vice-chairman of the Environmental and Natural Resources Committee is a Republican. He told me in the halls after the last meeting that he thought we had a good chance to get a good, strong bill through. I asked him about what letters he had been receiving, and he said he had received personal letters. He said everybody has been receiving letters. This is how you can help. You have to write letters to these guys. You have to talk with your friends back home. Maybe you have a doctor that you still go to back home, or your dentist, your parents, your friends, high school friends. The first time you talk to people who don't know anything about strip mining, it's like what happened to the group that was picketing up in Cleveland to outlaw stripping. Everybody thought they were trying to shut down Short Vincent Street and the strip joints down there. They don't know what you are talking about. But once you explain it to them, and you can do it on the first time fairly simply by referring to the destruction on the hillside by an atomic bomb or something, generally the people will agree that something should be done.

Now there is something else about politics, and this will all tie in together later, and that is that some Republicans in the House of Representatives have let it be known that they cannot allow our strip mine bill, House Bill 125 with a majority of Democrat sponsors on it to pass. The reason? There are obviously several members, Republican members, of the Ohio House of Representatives, who would like to run for governor the next time. They do not want to be susceptible to the charge that they weren't in favor of the strip mine bill. In fact, they want to be able to hold up to everybody this law and say, "I was a major sponsor on this environmental issue."

That is when they are talking to the garden clubs. When they are talking to the Ohio Sportsmen's League, they will talk about how they did not allow gun control laws to be passed. But environmental issues are big issues now. So, they let it be known that House Bill 125 is going to die in committee or on the floor or someplace, and they are going to introduce their own bill, and they have. It was introduced just last week, and it includes clay, sand and gravel and limestone mining, which, I agree, should be covered by some strip mining law, but not the coal strip mining law. Maybe clay is similar enough, but coal is a different story from the type of mining done for limestone or sand and gravel, because pit mining is just a big hole, while strip mining along the contour goes right along the hillside, taking it off cut by cut. So, the rules and regulations that make sense for coal mining do not make sense for these other types of mining. Also, they used the old law to start with. They did not change it as we have and approach it in a way that would include all the operation and reclamation. They still approach it as the old law does, basically from an inadequate reclamation standpoint. Some Republicans tell us that this is the bill that is going to pass. If it does, there are going to be some people once willing to try the system who are not going to listen to me talk about not going out in the streets anymore. I am not saying that as a threat. I am saying that as a fear because I know people who are so emotionally up-tight about this thing, who feel so personally involved in the devastation of the earth by this process of strip mining, that they are not going to sit still if this bill doesn't pass. There will be amendments to this bill.

There will have to be amendments to this bill because there are some mistakes in it. But people are not going to sit still for this bill dying in committee and a partisan bill coming out so that the Republicans can use it for partisan politics to run for governor. But that's where we are in Ohio! That is Ohio politics. We have made the strip mine issue the biggest issue to face this legislature. When I say we, I include all the people across the state who have been helping us. We can stop stripping, and we must be able to work within the system, or we are going to have a different form of government someday. So, I urge you to contact your representatives, one way or another. If you hate to write and you can't do it, when you go home, call them. Call your friends and have them write the legislators a letter. Just so you can't use the excuse that you don't know where to write, I have about fifty rosters of the Ohio House of Representatives with the names of all the members of every committee. If you are interested in having one of these, raise your hand. This young lady will pass these out to you. I will leave some on the table. If you think that this commitee has done a lot of work up until now, you are right. We have done a heck of a lot of work. But now the work really has to begin. Those who have been working will have to redouble their efforts. Those of you who have not been involved, if you really give a darn for this thing, now is the time. Maybe the system doesn't work, I don't know, but we are going to have to try our darndest to make it work. It is going to take some personal effort on your part. You are going to have to make yourself do it. I understand, Ed. that you have facilities here for letter writing in the back of the room.

I'm optimistic that we have gotten this far, and I'm pessimistic right now because the Republicans introduced that bill. We knew it was coming, but we had hoped it was stopped. The political situation in the State of Ohio is poor. We don't get a good reaction from the elected representatives when contacted by their constituents. It has been said on both sides of the aisle that if a vote were taken in the State of Ohio on the strip mining issue that our side would win 99 percent to 1 percent, and yet we don't know if we can get 51 percent of the Ohio House of Representatives. So, please, we need you now, so do it. Thank you. (app.)

QUESTION. Is it important to keep strip mining and the associated jobs for your economic base?

LANCIONE. Economically, and that's a subject in itself, it appears that the loss in job income would be offset by the continued levels of the tax evaluation of the properties and the other opportunities that remain because the land is still there. I'll give you a real quick example. We have dairy farms, producing farms. They say that all the land being stripped hasn't been used for five decades. That is baloney, pure, unadulterated, and I'd use a stronger term if it was not a mixed crowd. The fact of the matter is that we are losing some of our best land. One dairy farm that I personally know about was making $60,000 profit a year. It was about a 500-acre farm. The guy will get half a million dollars for the farm. He will take his half a million dollars and go to Florida, the coal operators will come in and strip it, and the money will go into the corporation. Belmont County ends up with a piece of land that is devalued, ugly, and nobody wants to live there or around there. So the economics, as far as I'm concerned, are entirely on our side.

QUESTION. Since reclamation may be impossible, given some of the previous statement by Dr. Ahmad, shouldn't we ban strip mining?

LANCIONE. We discussed this as an alternative also, and it appears to us that at this juncture in the State of Ohio that it is just not possible to pass a bill to outlaw strip mining. Perhaps in another couple of years it will be. We can't wait a couple of years in Belmont County. In a couple of years Belmont County is going to be one darn poor place to live. Although many of us, maybe a majority of us on CCASM, would like to call it the Concerned Citizens to Abolish Strip Mining, we don't feel that is a politically realistic alternative right now. As far as supporting it on the national level, sure. I think that we can. But I don't feel effective on the national level at all. There is a possibility, and we are working on it in the legislature, to get a moratorium on strip mining to allow a study period of several years. We think there will be an amendment introduced. If it gets a good response, we'll support it and stick to it, and try to get it through. But right now we don't think it has much chance.

QUESTION. What's going to happen to the bill in subcommittee?

LANCIONE. It depends on who is appointed to the subcommittee. The chairman, who is a Republican, Kenneth Creasy, will appoint the subcommittee. If the policy has been made in the Republican party to kill House Bill 125, we will know at that time. The subcommittee may be made up of as few as three, more likely five, members. When we find out who those five are, they are going to get mail, I hope, like they never thought they ever would in support of this bill. So, we'll know then. Now let me say this about Ken Creasy. He told me that he felt that the professor from Kent, Dr. Riley was the best witness for the proponents. And, he told me that the crowd, in getting a little bit noisy when Riley was speaking, underestimated the legislators' ability to see what was going on. Riley, obviously, was totally committed to the strip miners, I would tell that to him if he were here. He refused to give on valid points, and he had not even read the bill before he testified against it. How can you be against something when you don't know what it is.

QUESTION. Would you support a citizen-initiated referendum if your bill does not pass?

LANCIONE. I would certainly participate in any type of movement for a referendum if this bill didn't pass. But I have to add quickly that I am not going to cross that bridge until I come to it. Those of your who support us, I would like you to not cross that bridge yet, but use your energy in this matter now. Let us try to get it through this way first. If this bill doesn't pass, or if it gets through the House but is tied up in the Senate, we are going to have to counsel with Ed Dobson and Ted Voneida and other people across the state and make a decision as to how we are going to act. Then we are going to call on all the people in the State of Ohio to help us do whatever we feel we have to do. I don't count anything out at this point as far as what we have to do in order to get a good strong bill through.

QUESTION. You mentioned the bill proposed by Mr. Welker, which is a very weak bill and which is a very bothersome thing. It is the miners' bill, there is no question about that. Is it true that if the Republican party in the State of Ohio, and Mr. Welker is a Republican, sends out the word to its legislators, the legislators who are Republican will vote the party line, or policy, even though they might be in favor of your bill? Would they be obliged to follow that party line? That would be a devastating thing to House Bill 125. I would like to know how we can handle that.

LANCIONE. It absolutely kills the bill. The political makeup of the House of Representatives is such that we have forty-five Democrats to fifty-four Republicans. Obviously, they can control whatever they want. If Charles Kurfess says, "This is policy; vote for the Welker bill: vote against 125." Our bill is dead unless we can get to individual Republicans. The only excuse they might have would be in saying, "I am sorry I can't follow party line on this. If I do I'm dead in my district." We must make them believe that. That's what we have to do if they make this policy. We have to let them know that we are going to watch the way they

vote. We are going to publicize the way they vote in their district. This is what we are going to attempt to do in the next week, through CCASM, by sending letters to all the members of the House and Senate.

QUESTION. When is the next hearing and would it be worthwhile for people to go over to that hearing? I know a lot of the strip mine people go to those meetings, and a lot of us have been going, but when is the next hearing and how do we get there?

LANCIONE. The next hearing is April 13, Tuesday, at 8 p.m. in the Ohio House of Representatives in Columbus. They start at 8 o'clock and they end at 11. You could get back here by one or so in the morning. You would be pretty darn tired. Is it worthwhile to go? Man, the strip miners have outnumbered us in every hearing but one. Yes, it is worthwhile to go, and it is also worthwhile to let people know that you are there. I don't mean by making noise in the committee meeting, but simply by your presence and the way you're dressed. They know that the guys with the cigars in their mouths and the suits on are the strip miners, and the young people sitting there with casual clothes on are there because of their interest in the environment. (app.)

QUESTION. Have you analyzed the Welker Bill? And can we get copies?

LANCIONE. We intend to do that. I don't have the house bill number. It usually is not printed right away. It takes about a week to ten days for the bill to get printed. House Bill 125 is out of print which is another good thing for our side because this makes it one of the big bills in the House. They told the committee members at the last meeting to hold on to their copies because they can't get them another one. By Thursday of this week I will have a copy of this bill, and we will begin analysis of it immediately to send out to the legislators. I am very disappointed that it was introduced because it does make the situation much more complex. The bill we wrote is fifty-four pages long. It is complex. If you have a copy of it and you read it, you will find out how complex it is. Now, we have to not only talk for that one, but against another one. The human mind can only go to a certain complexity, and I'm afraid we are getting to the limits. This may be their tactic. It is a lot simpler to go into the old law and amend it than to come out with a new law.

QUESTION. Is there any possibility of a massive reaction by the coal people if an abolition bill goes through in Ohio?

LANCIONE. That is one I hadn't considered yet, and I don't know if I can intelligently answer it. I imagine that the miners might decide to go to the streets. This happened the last time when Ed Sargus introduced his bill in 1965. He was physically threatened. We started out with a broad enough base that no one has been physically threatened up to this point. Some have been offered substantial employment benefits by coal companies. I can't understand what they might be trying to accomplish by those offers, but needless to say not every one can be bought by the coal industry. (app.) Initially, of course, I don't think there is any chance of that ever being introduced at this point. I would like to see a bill introduced to restructure our state legislature, and I would think that it might get a fairly good reaction across the state from anybody who ever tried to work through it because it's really gangbusters. Thank you. (app.)

Presentation: "The View in Kentucky," Mrs. Alfred E. Mattox, *Chairman, Strip Mine Committee, Cumberland Chapter, The Sierra Club*, Louisville, Ky.

The view in Kentucky depends upon who is speaking. To the three main gubernatorial candidates it is political hay. To the conservationists it is a rallying cry. And to the apathetic public it is something happening in a far distant place that concerns them little, if at all. There appears to be a consensus among all the current candidates that strip mining, at least in eastern Kentucky, is a major if delicate issue. Both Democratic candidates have been sympathetic to critics of strip mining. Both have been sufficiently vague so as to avoid any intense wrath from either conservationist or coal operators. The Republican candidate has the enviable position of no primary opposition, and he sits on his throne at public hearings and says nothing. Conservationist see the issue as a spreading cancer on the land, water and people of Kentucky. Fifteen years ago the idea of saving Kentucky from the ravages of the coal digging cranes was spawned. However, the unenforced 1954 statute was seen to be inadequate. By 1966 an aroused citizenry pressured the state into adopting a law labeled the toughest strip mine act in the nation. Nevertheless, after five years it is evident that 1966 law has fallen far short of its promise. Even where it is being strictly enforced the natural evironment is coming out second best. Kentucky strip mining has increased and the damage has continued.

Eastern Kentucky is a steep land with heavy rainfall—up to fifty inches a year in some places. When you dig up tons of loose dirt on a mountain side, it washes down. As one geologist who stood on a newly stripped and sliding mine stated, "They are arguing over the old and the new laws and they are forgetting the law stated by a man named Newton a long time ago." In western Kentucky vast areas are being stripped for the third time, leaving the top soil so intermixed that subsoil and rock that it will require a human lifetime for the earth to again support good vegetative cover, and then only if the coal operators will invest in the latest hydroseeding techniques and fertilizer and replace the reserved topsoil back on the recontoured land.

Perhaps the greatest concern of conservationists is the destruction of our waters. It has been said that if strip mining continues, the water supplies of over half of the people of the state will be rendered unfit for either human consumption or industrial use. We must then either abandon the region or pay the astronomical costs of trying to reclaim the water. Acid and silt are the by-products of strip mining and the extent of the problem is enormous. FWQO has data showing 12,000 miles of degraded streams from mine acid drainage in eastern Kentucky alone, and this is in an area of low sulphur coal. It comes from both deep and surface mines. The problem is compounded by abandoned deep mines and orphan banks that continually pour acid into our streams and on our lands. But the most vicious effect of strip mining on our streams comes from silt. A recent study by the U.S. forest service in Kentucky showed streams on strip mined sites carried as much as 46,000 parts per million of suspended sediment, compared to a maximum of 150 parts per million in adjacent unaffected forested watersheds. New slope reduction methods have eased the problems of slides but have increased the area of the land disturbed by 25 percent, creating as much or more erosion. Silt destroys the stream and drastically alters aquatic life. Life in affected streams is being choked out or chased downstream into larger waters. Donald Batch, an Eastern Kentucky University instructor studying stream life, said that the welfare of insects and salamanders does not stir up much public sentiment, but in the food chain they are the very basis for higher forms of life.

Coal is claimed as the billion-dollar bonanza based on 125 million tons at $9 per ton average. It is Kentucky's biggest cash resource. Yet in the seven largest coal producing counties, per capita personal income ranges from about $1,100 below national average to almost $2,000 below. Very few local economic benefits accrue from the extraction of coal as evidenced by the lack of public services, the welfare rolls and low educational attainment in these counties. A severance tax has been advocated by many groups, but by others it has been termed as a license to mine. Employment by mining in 1969 was put at 24,546, but only 5,260 of that number were employed in surface mining. Underground mines provided more than twice the jobs per tonnage produced than all surface mines, and more than three times the jobs of strip mines. Strip mining in Kentucky generally does not hire the out-of-work deep miner, but employs imported workers from surrounding states whose skills lie in road building and construction work.

Almost half of Kentucky's coal production came from strip mining in 1970. Twenty-three thousand acres were put under permit for surface mining compared with 13,000 in 1969. This is a 77 percent increase in one year. The small, irresponsible operators flock to Kentucky to make their quick profits and leave. During the summer of 1970 permits were issued to over 100 new operators.

In Kentucky there are two ways to harvest coal says Dr. Wayne Davis, Professor of Zoology at the University of Kentucky. It can be taken in such a way as to provide employment and wealth for the people of the coal bearing regions while protecting the land, water, and homes and providing revenue for the various state, county and local governmental units; or it can be removed in a manner that destroys the land, homes, highways, wildlife habitat and water resources and in such a way that it costs the people far more than it returns in revenue. Incredible as it may seem in this apparently civilized state and nation, the latter method is used to produce an ever greater portion of our coal.

VONEIDA

Question. I have a question that has been bothering me more and more as I look at your slides. The more we get into this problem, the more devastation we see. And the legislators are not responding. Letter writing is good, but it became very clear to me as I watched your slides that Kentucky, Ohio and West Virginia once were extremely beautiful. We are trying to do what we can, but it is time for direct cooperative action. Why couldn't we do something like band together, those of us in Kentucky, Ohio and West Virginia, and form a group such as Appalachians to Stop Stripping. You can put the initials together if you want. A group like that, a thousand people from Ohio going over to join a thousand people from Kentucky with a thousand people from West Virginia and march right down there to the TVA plant or into a strip mine. If a little old lady 86 years old with a shotgun on her knee can be responsible for getting a law passed, what could three thousand people do marching over there and saying we are going to sit in this lousy pit until you stop it. (app.) Blacks were sitting in the back of buses in the South until some woman got courageous enough in Montgomery to stand up and say "I am going to sit in the front of the bus." Maybe we had better start sitting in the front of the bus, too. We have to take some direct action one of these days, and I think the time is now. Work on the bill, yes. Try to get laws passed, yes. But there isn't time anymore. You have a good law in Kentucky and look what has happened. It makes me sick.

MATTOX. Right. Let's talk further.

QUESTION. Shouldn't we push for a total national ban on stripmining?

MATTOX. I agree. Very soon the national Sierra Club will come out for a total ban on strip mining. They will help us produce a battle cry books, films, whatever we need, besides giving the support of a national organization behind this bill, proclamation, or resolution. There just isn't any more time. We have wasted many, many years working on laws and regulations. I just don't believe anything will be done unless we have abolition. This is what we want, this is what the

states need, and the so sooner we can get together and accomplish this sort of action, the better off I think we will be.

QUESTION. Do you get the worst acid from deep mines? I don't know much about acid drainage.

MATTOX. Nor do I. Dr. Ahmad?

DR AHMAD. In deep mining we go below the water table and have to pump out the water. This at times would be acidic water, there is no question, but this could be treated. There are laws to control this. As long as we are operating, we could treat this, and once we stop mining this water would not be coming out, and the water table would cover the acid-producing material. But in the drift mining or the strip mining we have no control. It is coming all the time. So this is one big difference which we should remember.

QUESTION. Then you can control the deep mine acid?

AHMAD. Yes, if it is above the water table or if it is above the drainage. Sure.

QUESTION. Why don't we consider all surface mining?

MATTOX. Yes, let's lump it altogether and refer either to surface mining or underground mining. Surface mining is the term the operators use because it sounds so much better than "strip mining."

(Rest of the questions answered by others)

QUESTION. Of the acid drainage that we are getting today, how much of it is coming from underground mines?

AHMAD. There is some acid water coming from the underground mines, but we are getting most acid water at the moment from the strip mining discharge. Several places where we are deep mining, there is an acid discharge. This we can control through treatment. Strip mining, drift mining, and the other surface mining are all responsible for acid drainage. If we want to solve the problem, we will have to tackle it as a whole.

DOBSON. In the hearings Bill Nye, the Department of Natural Resources Director, suggested that House Bill 125 be strengthened to abolish auger and drift mining. Here is Zip Little from West Virginia, from the Isaac Walton League in West Virginia.

LITTLE. Recently I came across some very, very tragic information in southern West Virginia. In southern West Virginia the water supply for human consumption is very scarce. In the last two weeks some members of our local chapter have found that a lot of the water that the people are drinking is coming directly from drift mines and is highly acid. There are water treatment operations, if you want to call them that, that are supposedly pumping this water to a tank on top of a hill for treatment. We found that it is not going there. It is coming down to a pond, and the people are using this directly. In some instances we found that one coal corporation was retaining four dollars and something a month from the miner's pay to cover his water supply treatment costs. What is this doing to the people's health? One man said to us, "You know, we have kidney disease like you people have colds."

QUESTION. Can anyone tell the trace metal accumulation and what might be the effects of elements released by strip mining?

Dr. PERRIN. I don't pretend to be an expert in trace metals, I have to become one because I am a site visitor for the NIH on trace metals study. But selenium, as you know, is one of the paradoxical elements. It is required by certain animals and toxic to other animals. It is capable of producing in experimental animals such as chicks the most horrible malformations. It is capable of producing in certain sheep malformations know as cyclopia, which are unbelievable and in which they have a single eye and abnormal brain. But these are very high quantities. What we don't know from trace metals studies are the effects of small amounts of trace metals over a long period of time. We have known a great deal about mercury since the time of Hypocrates, and of course mercury is supposed to be a metal which was used for the treatment of syphilis and a good many other bizarre disorders since the earliest times. You have known about diseases said to cause the falling of teeth, the falling of bones and the loss of hair. I didn't lose my hair that way, but someone suggested it. The important thing in conjunction with a moratorium on strip mining is a rather rapid intensification of studies on the effects of trace metals in the diet of man and other animals upon longevity, malformations, fetal survival, health and the induction of malignancies and chronic disease. We are beginning to worry about the effects of trace metals upon the hardening of the arteries. We are worried about the effects of trace metals upon kidney stones and chronic renal disease. I think these things are very mute. The problem, of course, is that our information is rather trivial, except in rather limited areas. Selenium, manganese, sulphur, certain quantities of iron, mercury, arsenic, cadmium, and a number of other trace metals have been implicated in human disease. But these have to be much higher doses than are currently available. What happens when a person takes in a certain amount of water containing mercury, or milk containing mercury, over a long period of time? I don't know. Many of us aren't milk drinkers anymore. Since the big strontium 90 scare even kids aren't milk drinkers anymore. That particular alarm has decreased rather strikingly, since testing has more or less been limited.

PRESENTATION: "POWER, POPULATION AND THE MYTH OF PROGRESS," DAVID BEDAM, PH.D., PROFESSOR OF PHILOSOPHY, ST. LOUIS UNIVERSITY

All environmental activists are familiar with what might be called the "blank wall" syndrome or the "yes, but . . . " syndrome You are talking to someone about a particular environmental problem. Maybe it's the population situation. You make what seems to be the painfully obvious logical deduction that, while we don't know *which* variables will become the limiting ones, or precisely *when* it will happen, we do know that in a finite world population growth will have to stop *sometime*. The person, who seems otherwise intelligent, replies, "Yes, but maybe we can live under the earth or the sea, or cover the whole earth with a mile-high building, or (and this is the ultimate technological fantasy) build a fleet of rockets and shoot the excess population into space. If you point out that, even if feasible, such measures only buy a little more time, you are flooded with more technological fantasies. You might as well be talking to a blank wall.

Those of you who have been working on strip mine control are no doubt familiar with the "blank wall" syndrome. No matter what you say, you are likely to receive an answer like this, "Yes I know that strip mining destroys the land, but don't you know that we are facing an *energy crisis?*" That's the magic phrase. "Energy crisis!" It builds haul roads and pipelines (maybe) in the frozen arctic, it dots the landscape with smoke-belching power plants and grotesque transmission lines, and it causes us to destroy 150,000 acres/yr. by strip mining in the United States.[1]

Some people talk of using other energy sources. This will be helpful in the short run, but as the Committee for Environmental Information in St. Louis has pointed out, regardless of the choice of fuel the present magnitude of growth in the electric power industry will exceed the capacity of the environment to absorb its wastes. Even if all the conventional problems of chemical and radioactive pollutants are solved, the ultimate problem will be the disposal of waste heat.[2] Or perhaps the sheer physical space for generating plants will be the limiting variable. No one knows for sure. But we do know that *something, sometime* will turn out to be the limiting factor. That's what we mean by a finite world.

Indeed we do have an energy crisis. But the crisis has two components: (1) inadequate energy production especially during peak consumption periods and (2) increased demands for energy. Those in the power industries would like us to believe that only one of these components is manipulable, i.e., the rate of energy production. They like to treat the demands for energy *as a given*—something outside the control of man—thereby evidencing a curious ignorance about the role of their own advertising departments in creating that demand.[3]

The strip mine problem is a particularly dramatic aspect of this general energy crisis. And I believe to understand the role of energy in human affairs is to understand the heart of the general environmental crisis. The fundamental purpose of this conference will be frustrated if we concern ourselves too much with solving the first component of the energy crisis by looking for alternative power sources. These will be helpful in the short run but in the long run we must analyze the second component, the skyrocketing demand for power. And environmentalists by definition must be concerned about the long run.

I suggest that we can analyse the crisis in terms of three interlocking factors: (1) the quantity and quality of the technology of the industrial revolution; (2) the world population increase; and (3) the myth of progress with its infinitely expanding expectations and its ecological ignorance.

First, we must avoid the simplistic error of being anti-technological. Senator Jackson described the anti-SST movement as "anti-technology." I think he was basically wrong. This may have been responsible for some of the opposition but for most it was a question of the *kind* of technology which the SST represented. It was a question of the social purposes to which we put technology. In fact, one of the most oft-repeated suggestions was to put the nation's engineering resources and skills to work producting an improved mass transit system. The evolutionary perspective also warns against being "anti-technology." Man has made himself in large degree by the elaboration of his tools. Man's evolution and the evolution of tools are only understood as mutually influencing each other in a complex feedback system. But man's advantage, his increasing ability to make and use tools, is also his disadvantage, his increasing dependence on these tools. There is no way of considering man apart from technology. But no one, whether industrialist or environmentalist, should forget this Janus-faced character of technology.

Man slowly and painfully built up a complex system of interacting with nature through these tools. The results were not always happy; we read of the ecological disasters which overtook some of the ancient civilizations and of the exploitation of large mammals by the North American Indians.[4]

But man was relatively puny and nature was elastic and forgiving. In modern European society, however, many forces were at work changing this ancient standoff. It culminated in the emergence of industrialism with its new energy basis: the exploitation of fossil fuels.

It was first coal and later oil that fueled this revolution. Since 1800 the energy available to industrialized nations has increased 100 times. The energy consumed by industrial nations in 1860 was the equivalent of 135 million tons of coal. Since then the rate of increase has been 4% per year. And it is now 5% per year. Even at the 4% rate by the year 2000 we shall need 4 or 5 times the amount of energy we now consume. The global ecological problem comes into focus if we put man's energy consumption into the perspective of his total residence on earth. Scientists express the total amount of energy

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consumed over a long period of years in terms of a unit called Q, which is equivalent to 10^{18} BTU or 37 billion tons of coal. From prehistoric times to 1850 mankind consumed an amount of energy equivalent to 6 to 9 Q, and from 1850 to 1960, 5 Q. R. J. Forbes, an historian-archeologist of technology, estimates that we shall need about 100 Q in the next century. Assuming that our total proven reserve of fossil fuel is 100 to 200 Q, we could, at the present rates of consumption, use up in a few centuries the fossil fuels which were formed over many millions of years. Furthermore, some scientists believe that these fossil fuels should be saved for use in the petrochemical industries rather than burning them as fuel.

The problem becomes even more disturbing when we consider the energy gap, or that 33% of the world's population consumes 82% of the world's energy production. An average South American uses only 7½% of the energy that you and I do. An Asian uses 2½%. Or another way of looking at it: an American uses 2500 times as much energy as he did 200 years ago, which means that, in terms of the common energy source of antiquity, we each have some sixty slaves at our disposal. This energy gap is increasing and cannot but increase the social and political instability of the international community.

We are using fossil fuels at an explosive rate with no guarantee that some day there will be no need for them. What must we say then about strip mining methods, such as the use of horizontal augers, which leave as much as 80% of the coal locked in the mountains?[5]

We who are beneficiaries of modern industrial society have hardly begun to analyze the impact of human affairs of this vast increase in energy consumption. A very provocative recent attempt at such an analysis can be found in Howard Odum's book *Power, Environment, and Society*. One of Odum's important points concerns the relationship between power and population. The most obvious thing we can say is that an increase in population leads to an increase in the demand for power, but Odum argues that the population explosion itself is fundamentally due to the increased availability of power.

Populations respond to cheap, high-grade energies with increased reproduction and survival which in turn accelerates demand. Many features of our culture and political life are presently geared to this acceleration—for example, the oil depletion allowance which encourages oil development by tax exemption. Such circular stimulation is called positive feedback and mathematically produces exponential shaped growth curves . . .[6]

Odum gives an example of how industrialization produces abundant food and thus stimulates population growth in a fascinating section called "Potatoes made partly of oil". The increase in available energy is used to build and power farm machinery and to manufacture agricultural chemicals. This has led to a great increase in food production but we must ask if the *percentage* of the world's population which is living on an inadequate diet has decreased since the new sources of energy production produced the new methods of agricultural technology. Those who defend the production of even more energy to feed even more people must reflect on the role which increased energy production plays in the stimulation of population growth. Obviously the only way to break this vicious circle is to implement rational methods of birth control, not keep producing more power.

These exponential increases in power and population have their intellectual counterpart in the modern idea of progress. For most of us the idea of progress is one of the givens of human existence. It is the intellectual milieu in which we live. The idea of progress has become perhaps the controlling idea or working faith of modern European culture. But it is a relatively recent idea. Ancient civilizations were dominated by cyclical conceptions of time which were incompatible with the idea of progress. The Middle Ages abandoned these cyclical notions for a linear or historical conception of time. But it was not yet the modern concept because the idea that man was only a temporary resident of this temporary world, with his true destination in a supernatural world, did not encourage any ideas of progress on this earth. Certain heretical sects, called Chiliasts, however, did talk of the establishment of a future thousand year reign of Christ on earth. History was seen as progress toward that future happy state.

Some scholars see the development of the modern idea of progress as a secularization of that Chiliastic position.[7] In the 16th and 17th centuries the idea that man could make progress in the scientific understanding of nature began to open up exciting new horizons. 18th century Enlightenment thinkers saw the possibility of social and moral progress based on science and reason. By the 19th century we see ambitious schemes purporting to describe the workings of an inevitable "law of progress" operating in all spheres of human and natural existence. The writings of Hegel, Marx, Comte, Mill, and Spencer, amongst others, set out to prove the existence of this "law of progress". These thinkers saw no limits to the potential expansion of the powers of man. In the 19th century the idea of Progress became the working faith of the majority of the educated classes. The optimism of the times was perhaps best symbolized by the Great "Crystal Palace" of the London International Exhibition in 1850–1851.[8] There ideas found particularly fertile ground in the New World. The feeling of leaving behind the mistakes and limitations of the European past and making a new civilization in the vast virgin continent of North America manifested itself in our sweeping goals and projects: conquering the wilderness, exterminating the Indian, and promulgating the doctrine of "Manifest Destiny".

We are beginning to see that the idea of progress has functioned as a myth in our culture. Like all myths, it served to unify our conceptions of ourselves and of our place in nature. It inspired us to undertake great projects and motivated us in the difficult times. It was for a time a useful myth and helped us to build a new civilization. It was successful in evolutionary terms because it was adaptive in helping us to occupy new ecological niches. But now we are coming to see that it is no longer adaptive and is in fact helping us to destroy the very habitat upon which our lives and our culture depend.

Still the myth has a very strong grip on our culture. Sometimes those who consider themselves to be the most "hard-headed" and "practical" are the most firmly in the grip of this myth of progress. The gentlemen of your local utility are probably among its most dedicated believers. The historical background of the myth helps explain its influence in our society, but it is going to be hard to break the habit of invoking the myth of progress. It is such an appealing myth. This myth appeals to our deepest psychological insecurities, our feelings of meaninglessness and powerlessness. The psychological foundations of the appeal of the myth of progress can be described in terms of Jean-Paul Sartre's analysis of man. Sartre believes that man, fundamentally, desires to be God. That is man wants consciousness without risk and security with the consciousness to appreciate it. For Sartre, this leads to the conclusion that man's existence is absurd because he desires this self-contradictory state. I would rather say that Sartre has analyzed a pathological condition. I think that the promoters of unlimited power production are pondering to this deep seated human self-contradiction of modern man. Power can provide the "good life" which is at once an intense experience but at the same time without risk.

The myth of progress might be called the myth of infinitely rising expectations. It is destructive psychologically because it tells the individual that he can expect increases in power and satisfaction without limit. It is destructive ecologically because it ignores the limits of the earth. It promotes what every psychiatrist and ecologist recognizes as a disease: uncontrolled logarithmic growth rates. And the physiologist recognizes it as a disease too. He calls it cancer.

What went wrong? Is it wrong for man to want to improve himself? Of course not. But the presently accepted idea of progress has three features which make it no longer adaptive: (1) the belief that progress is somehow inevitable; this fatalistic belief is expressed in the popular phrase I heard this morning on TV: "You can't stop progress"; (2) the habit of judging progress in terms of the mere consumption of material goods and power; (3) the idea that any kind of progress can go on without limit.

A viable concept of progress would (1) emphasize that it is man himself who decides the future direction of society and not some kind of fatalistic "law of progress"; (2) re-interpret the idea of progress in moral, social, aesthetic, (these are the areas in which we should be striving for progress), and intellectual terms; and (3) recognize that the limits of human psychology and earth's ecology eventually impose limits upon any progressive trend. Unless we can re-interpret the idea of progress and bring our population growth and energy consumption under control, mankind may turn out to be what ecologists call a "pioneer species". Raymond Fosberg explains that most organisms occupy a very definite, usually rather restricted, position on a scale that ranges from the pioneer types who inhabit raw newly available habitats to the so-called "climax" organisms of mature stable communities.

An important distinction separating these types is the duration of their occupancy of a habitat. The pioneer exerts a strong effect on its habitat and tends to change it relatively rapidly, soon rendering it unsuitable for its own further occupancy. The climax organism, on the contrary, does not bring about or further such change, but lives in such adjustment with its environment that it is able to occupy it relatively permanently without serious modification. Indeed, such organisms may even tend to stabilize their environments and maintain equilibrium with them indefinitely . . .[9]

Fosberg comments that as a species we have it within our power to fulfill the role of either a pioneer or of a permanent climax species. Modern man seems clearly to be following the role of a pioneer species.

Let me close with a story about some friends of mine. These individuals were rather small but also rather amazing. I am referring to the bacteria which I used to cultivate in test tubes. Their energy and optimism never failed to amaze me. Many times I took a few cells and placed them in a tube of fresh growth medium. They had a brand new world to exploit. And they exploited it with vigour, wading into the virgin forests of amino acids and turning them into the forest's products of protein, digging in the mines of carbohydrates, burning them for energy and dumping the waste acids into their little environment. Their population expanded at logarithmic rates. Progress had come to this cozy little world. But alas, it was only a little world. Within a few days there were no more amino acids or carbohydrates. And there was no place left to dump the waste CO_2, acids and alcohols. Some of

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the more optimistic bacteria probably urged the colony on, saying that there was lots of space at the top of the tube. Some cranked up their flagella and swam to the top of the tube, but it seemed the acid wastes had penetrated even there. Some talked of escaping the tube into outer space; others pointed out the technical dangers and difficulties of such a plan, especially the desecrating effect of the atmosphere on non-spore forming bacteria. Meanwhile the growth had stopped and then a population decline began as more and more bacteria began to sucumb to their own toxic wastes. In the end the liquid of the test tube cleared as all of the dead cells settled to the bottom.

This little scene has been repeated thousands of times in bacteriology labs. But you might say, we have nothing to worry about; men are not microbes. Such a scene could only happen in a test tube. In that cozy little world. In that finite world. Thank you. (Applause.)

FOOTNOTES

[1] George Laycock, *The Diligent Destroyers*, (Doubleday, 1970), p. 133. By 1980 5,000,000 acres will have been damaged.

[2] C.E.I., "The Space Available," *Environment, 12*, (2) March, 1970, p. 2–9. See also P. & A. Ehrlich, *Population, Resources, Environment*, Freeman, 1970, 53–58. You are all familiar with the ads promoting "total electric living". One utility has taken a different tack, however; on February 19, the San Diego Gas & Electric Company ran an ad in the *San Diego Union* which called for conserving energy. See *Environment Action Bulletin, 9*, (12) March 20, 1971, pp. 4–5.

[3] Plato described the devastation of Attica because the destruction of the forest *Critias*, 110C–111D. See C. J. Glacken, *Traces on the Rhodian Shore*, (University of California Press, Berkeley & L.A., 1967), pp. 120–121. On American Indians see Peter Fa *Man's Rise to Civilization*, (Avon Books, New York, 1968), pp. 248–252.

[4] R. J. Forbes, *The Conquest of Nature: Technology and its Consequences*, (New American Library, New York, 1968), pp. 79–81.

[5] Laycock, *op. cit.*, p. 138.

[6] Howard T. Odum, *Environment, Power, and Society* (New York, Wiley. Interscience, 1971), pp. 51–52. The increase in energy production is, of course, not the only factor involved in the modern increase in population; others would include improved methods of sanitation and medicine.

[7] See Ernst Benz, *Evolution and Christian Hope* (Doubleday, Garden City, New York, 1966), pp. 61–63 and C. G. Von Weizsacker, *The Relevance of Science* (Collins, London, 1964), pp. 171–172.

[8] William Barrett, *Irrational Man* (Doubleday, Garden City, New York, 1958), p. 122.

[9] Raymond Fosberg, "The Preservation of Man's Environment," *Proceedings 9th Pacific Science Conference*, 20 (1958), pp. 159–160.

PRESENTATION: ENVIRONMENTAL RESPONSIBILITY IN APPALACHIA, GROVER C. LITTLE, JR., SOUTHEAST REPRESENTATIVE, IZAAK WALTON LEAGUE OF AMERICA, KENOVA, W. VA.

I want to congratulate the Athens Ecology Group, Scope, and certainly the participants who have preceded me on the program. I am not trying to flatter anyone, but the people whom you have heard probably are the most knowledgeable people on the subject of environment . . . and certainly the most capable people in making a point. I am sure that you are learning a lot from this, and, I hope, being motivated to some action.

I would like to make a confession. I prepared a talk, wrote it in longhand and finished it at midnight on Saturday night. It was really good, for me. Then I ran off and forgot it, but I am glad, because everything in it has already been covered, and I really would have been stuck. In talking "off the cuff" we are more apt to say what we should say rather than trying to rationalize what people may want to hear, or alibi ourselves out of personal commitment.

If there is any one reason why I came to this seminar it is because the proposal said that this is not going to be just another commercial . . . it is going to be *Action Oriented*.

If you will give credit for having the courage, I will pass along a joke from a "square" to the college community. I read this in the Reader's Digest sometime ago, and it has stuck in my craw ever since. It was in the laughter section, and it might be funny, but it has a good point. It seems in the Pacification Program in Viet Nam that we were trying to help develop within the agriculture program certain species of cattle. The Vietnamese wanted the very best breeding stock that the United States could send there. So our agricultural experts searched all over the country until they found the prize bull. Of course they found it in Texas. So they sent the prize bull to Viet Nam to be in the Pacification Program for breeding stock purposes. When the bull arrived there, a corral was built, and they put the bull in with a number of heifers. All the experts and technicians gathered around trying to encourage the bull to carry out his commitment. He just bowed his head very nonchalantly, he seemed not at all interested. So finally they decided that there was just one thing left to do, and that was to send back to Texas for the owner . . . and this they did. The owner flew over to Viet Nam, walked through the crowd of technicians and professionals surrounding the corral, climbed up over the fence, walked out and looked in the bull's eye. Then he whispered something in his ear and walked away. He no more than climbed over the fence before the old bull got aggressive and the heifers took off in every direction, the bull pursuing. As the owner started to walk away, everybody began grabbing him and said: "Wait a minute. We are all professionals, and we tried everything in the world. What did you do to that bull?" And the rancher said: "Nothing. He misunderstood the whole thing. The damned fool thought he was sent over here as an advisor!"

Quite frequently when we are at these seminars, we all develop into advisors. Obviously, the point is that we need action from each one of us. We need to become activists, not just speakers. When you leave here, determine that you are going to do your own thing, no matter how small, to improve the environment. That is what our being together today is all about. It gets right down to the individual. Somebody always has to keep the store open, and that is the point I want to get across more than anything else.

I sense from this conference that we are seeking a new concept, a new philosophy. Essentially we are entering the age of environmental justice. One of the things that we are learning about environmental justice is that the devastation from strip mining exceeds the right of mineral ownership. . . . I believe all of us are in agreement on that point. I think this whole thing is based on my not being allowed to affect my property without considering my neighbor.

I would like to follow up one of the morning talks concerning the bill now under consideration by the Ohio Legislature. I haven't seen the bill, but I have heard from various sources that it is a very good one. I sincerely hope that it passes during this session of the legislature and, in the process, is not weakened. It is very common that conservationists who have been involved in the strip mining issue, from a legislative standpoint, often overlook something just as important as the bill itself . . . that is the provision for enforcement. Enforcement provisions are called rules and regulations. This you must pursue following passage of the strip mining bill. Rules and regulations implement the law. If you have a strong law with weak rules and regulations, you may as well have no law. The rules and regulations provide for putting what's on paper into practice. So, when your law passes, visit your Department of Natural Resources, the Reclamation Division and whoever else may have a hand in it . . . insist that the strongest possible regulations be drafted. Contact people who know about the weak points to watch for and the strong features that must be included in order to have strict enforcement of the law.

Here at this seminar, I have been asked frequently why the bill to abolish strip mining in West Virginia failed. It was suggested by some that environmental groups were weak in their efforts or the bill did not have enough popular support. Obviously, since it didn't pass, it certainly did not have enough support. Support means many things. One can work quietly, one can stir up groups and motivate them to action, one can . . . in his own area . . . get people involved . . . in the barber shop, in the restaurant and the beauty shop This is support, and we had a lot of conservation and environmental people doing these things. Active lobbying we were short on, yes. For many of our people, this was their first effort lobbying in the legislature. But out of the West Virginia furor over the strip mining issue came the fact that as one walked the streets, during the heat of the strip mine fight, a person who never before thought about the environment, a person who never thought about strip mining stopped to talk. The subject was strip mining. No matter where one went, people were encountered who wanted something done about it. Ninety percent of the people said that they wanted stripping abolished . . . and the remark "They are tearing West Virginia apart" was heard everywhere.

The public awareness effect that came out of our effort in West Virginia cannot be measured in terms of regulations or words in a law. The fact is that the groundwork has been laid with most responsible citizens in our state, and we can say with confidence that the future for strip operators in West Virginia is a bleak one.

The effort put forth in our state is going to be of tremendous help to you in Ohio, to you in Kentucky, Tennessee, Mr. and Mrs. Jarrett from Indiana, and all the other fine people with whom I have met in the halls and talked.

In the West Virginia strip mining fight just terminated, the students let us down. I am sure that Norman Williams, seated in the audience, who serves as Acting Deputy Director of the West Virginia Department of Natural Resources, agrees with that statement. Now, they may throw me out the next time I speak at a university or college back home, but I think not. I think that you can always level with students. The student action was too localized and in most areas did not exist. The greatest student effort came from West Virginia University in Morgantown. I know of no real action around Marshall or Concord or Morris Harvey. There could have been considerably more interest expressed by the students. It might have made the outcome a different one, or at least a closer decision, in the legislature.

I am not criticizing any particular student group, but I am pointing out how much you are really needed as individuals and as organized groups.

There are three concepts I would like to impress upon you: involvement, pursuit and time. We need to become acquainted with them if we ever hope to be successful in our efforts to contain strip mining in Appalachia.

Now, involvement . . . we are involved here. By attending this conference you are involved. But without pursuit, it means nothing. Pursuit means action. So involvement, then pursuit, then the other element . . . time. If you don't have the patience to dig in, the time to sacrifice, to give of yourself, or if you want to start at a level

that you don't understand, that is over your head, you are going to be of little help! There are many things that need to be done locally, such as a student sitting down and ferreting out information that can be valuable to conservation groups, to your legislators and to the public. And there's no better time to start seeking our help for passage of the Ohio Legislation to control strip mining. Begin now to gather information that will assure strong rules and regulations to implement that law.

In his message to the 89th Congress, former president, Lyndon Johnson remarked: "We see that we can corrupt and destroy our lands, our rivers, our forests and the atmosphere itself . . . all in the name of progress and necessity. Such a course leads to a barren America, bereft of its beauty and shorn of its sustenance." Appropriately enough, these words can be found on the cover of a report by the Department of the Interior entitled "Surface Mining and the Environment." When we see the ripping apart of the earth, the destruction of our mountains and our watersheds, we are indeed living and witnessing an epic of tragedy. Strip mining makes a mockery of our every effort to provide sound conservation practices and a quality environment for our region.

A young forester, who flies quite a bit, recently said: "You know, I am discouraged. I feel like giving up." And he is only twenty-seven. He said: "Let me tell you what I have just seen. On one watershed I saw a one hundred foot highwall and advanced stripping. Looking across the steep canyon I saw a massive clearcut area, and a little bit further, so help me, they were dredging the bed of the river . . . and there were two saw mills working the daylights out of themselves and contributing much pollution to the stream." Four destructive elements on one watershed, none of them seeking to find the environmental impact each was having on the watershed. Collectively they are destroying it. So, not only is strip mining itself destructive, but when combined with all the other denuding factors, a watershed is destroyed. Their arrogance compounds their stupidity in their dealings with mother nature.

Environmental responsibility is all encompassing, peoplewise. It includes you and me. Every individual attending this conference must recognize that we are, in varying degrees, responsible for the degradation of our environment, either by commission, submission or omission. We are a part of a society that is living "high on the hog" to the extent that in order for us to have all all the electricity *We Think We Need,* a beautiful region is being ruined and plundered, and its people subjected to an environment unfit for human beings. Such devastation and neglect to the land and people of Appalachia is a blight on the conscience of America.

As conservationists, as organizations such as my own and others long established, we have failed miserably in our efforts to stem the tide of environmental degradation. Too often, in the past, we have tried to isolate one little river we wanted to save, or one little wilderness area, a plot of ground or my own "Greenbrier Mountain Retreat." We try to save one tributary in a river basin. This is wrong. We must learn the entire river basin. We must establish basin priorities so that we know when and where to respond. True, we must be concerned with the only part left that is still beautiful, but we should be sensitive to the region and not necessarily to our own parochial interests.

It would be nice to be able to say that our government agencies have truly responded to the public need . . . that they have truly represented us and protected our rights against the invasion of the polluter and ravager. But, alas, too often this has not been the case. Let us mention a few instances where agencies have not had the will to protect the public interest or were simply, by choice, representing special interests instead.

The Interstate Compact called "Orsanco" was created in 1948 to clean up the Ohio River and its tributaries. But from the beginning it was doomed to failure because the weakness is in the structure itself. Each of the eight states participating has individuals representing a state agency and industry. Theoretically, the public's interest is protected by the persons representing their state agencies, but in practice, this, most often, has not been the case. You and I, the public, have been left out in the cold. Consequently, twenty odd years later we have the once "Beautiful Ohio" being classified, by authorities, as one of the ten filthiest rivers in America. Certainly we may have improved the quality of the Ohio River and some of its tributaries since 1948, but new contaminants are growing. Strip mining is escalating at a maddening pace; the Ohio Valley is becoming even more industrialized.

Last year, in my home state of West Virginia, conservationists and other groups along with concerned individual citizens engaged the U.S. Forest Service in a controversy over the clearcutting of timber on the Monongahela National Forest. If you followed the reports of the news media, you will recall that this furor was as bitter as the strip mine issue. Our organization led the opposition against the Forest Service's plans to establish even-aged management (which is a fancy term for clearcutting) as the timber management system on the Monongahela National Forest. We charged that they, the forest service, were yielding to commercial interests to the extent that other values of the forest such as fish and wildlife, recreation, watershed protection were being sacrificed. That the Forest Service later admitted that such was the case is a matter of history and a credit to them.

Essentially, the Forest Service was a victim of all the accumulated frustrations of an angry people. For we in the tortured hollows of southern West Virginia, where the land has been and is being raped by the strippers and we breathe the polluted air of the Kanawha Basin, and the foul waters of the Ohio and Kanawha Rivers we drink and ugliness is all around us. So where do we look for inspiration, for retreat, to commune? Obviously, the mountains, the beautiful mountains! We were determined that the beauty of the Monongahela would not fall victim to the power saws of the loggers.

I do not want to carp too much about beauty. In Appalachia however, we hear so much about Food Stamps that, to outsiders, we have taken on the posture of a people so poverty-ridden that a belly full is the remedy to all our ailments. However, just like the people of all other regions, we too have a soul, and it too needs nourishment. That nourishment we call natural harmony and beauty. In no instance can we use more appropriately the saying "Man does not survive by bread alone." You students must know this. You are young, and you are entitled to an "America the Beautiful." So don't ever be afraid or too timid to stand up to whatever threat and say "You are not going to destroy the beauty of Ohio, Kentucky, Tennessee, etc."

The handwriting of the strippers on the mountain sides of Appalachia documents, in many instances, the failure of our state agencies to bridle that industry. Nowhere in the annuals of resource management has public protection been so neglected as has been the case with some state reclamation agencies in our region. And too often in the past a restraining hand from the Governor's office has been an albatross around the neck of dedicated resource managers who otherwise would have been more effective in their efforts to control strip operators.

In published opinions of various authorities, including attorneys, there is very little that can be added to improve the West Virginia Law. These opinions were established during the bitter dispute concerning strip mining in the West Virginia Legislature. The consensus is that the lack of enforcement is the real culprit.

Some of these enforcement officials will tell you that we are asking the impossible of them in many instances. They say that in mountainous areas the devastation will continue regardless of enforcement efforts because the terrain cannot handle strip mining. I certainly agree. This is the reason why I believe we should abolish strip mining. However, the West Virginia Law has a limitations section known as Section Eleven, which if strongly enforced would have prevented much of the environmental damages that have occurred since the adoption of the 1967 Act.

I would be unfair in my criticism of these governmental agencies if I did not add these additional comments. In the case of Orsanco, I recognize that ineffectiveness was due most often to weaknesses within some individual states and that some of their officials are as grieved as we over the lack of progress towards cleaning up the Ohio River. In my references to the U.S. Forest Service I'm also cognizant of the fact that in most instances this agency has responded favorably to our arguments concerning the Monongahela National Forest. Then, too, we applaud their efforts to prevent strip mining on the forests in some of their regions.

In reference to governmental agencies, here too, public apathy plays a major role in the cause and effect of poor resource management. Resource exploiters tread the carpets of our natural resources agencies, while you and I have stayed away. In effect, we have surrendered our interest in our environment to the exploiters. By our neglect we have indicated to our agencies that we care little what happens environmentalwise.

I have talked long enough. But since we have focused so much attention during this conference on strip mining, I would like to conclude my remarks by reading a part of a statement presented by our West Virginia division at a public hearing in January in the West Virginia Legislature. Note, please, the various concerns expressed in the statement about strip mining in West Virginia. For the sake of time, I will omit the first part dealing with our identification.

In 1967 standing here before you the Executive Director of our state division made a passionate plea in behalf of proposed legislation that would, hopefully, put an end to the ravages of strip mining in West Virginia. I well remember one of the remarks from his statement that is well worth quoting here today. During his address he stated: "Surface mining in West Virginia can be either a blessing or a damnation, depending on the quality of reclamation and the degree of compassion exhibited by the operator toward the land and the people." Four years later we have returned with a mouthful of ashes and with the conclusion that strip mining for the most part is a damnation to the land and people of West Virginia.

In the name of a questionable practice called reclamation, productive only in the eyes of the industry: and in the name of a questionable claim that a major economic contribution is being made to our state, we are seeing results that are short-term gains for a relatively small percentage of our people while leaving behind long-range detrimental effects on our resources and to the people, foremost, who are left with an empty, depressing and purposeless environment. We must at this moment ask ourselves if we can justify to the future generations such a "churning of the bowels of the earth" that in effect dims man's desire for dignity and his chances for a decent living as well as social and spiritual enhancement. In our

opinion, any hopes for a productive life for the major portion of our people are being "trapped and destroyed between the dozer and the shovel."

Some may say that my words are too emotional and lack supporting facts. If it is emotionalism, then I must say that I have company. In 1966 in his initial statement to his Surface Mining Task Force, Governor Hulett C. Smith opened by saying: "The rape of West Virginia has occurred." After four years of escalation by the strip mining industry, is not the word "rape" still appropriate? Then no longer than September of the past year, through a release to the Associated Press, and in regard to strip mining in West Virginia, Governor Arch Moore remarked: "When you fly over West Virginia and view the devastation it makes you want to cry." In a flight over the mountains of West Virginia, any discerning observer would express similar outcries . . . for it is clearly evident that the damages sustained by the land, and thus by the people, are almost beyond belief.

Section 11 of the present West Virginia act is headed by the words "limitations." I would like to quote the first two paragraphs of the "limitations" section:

The Legislature finds that there are certain areas in the state of West Virginia which are impossible to reclaim either by natural growth or by technological activity and that if surface mining is conducted on these areas such operations may naturally cause stream pollution, landslides, the accumulation of stagnant water, flooding, the destruction of land for agricultural purposes, the destruction of aesthetic values, the destruction of recreational areas and the future use of the area and surrounding areas, thereby destroying or impairing the health and property rights of others, and in general creating hazards dangerous to life and property so as to constitute an imminent and inordinate peril to the welfare of the state, and that such areas shall not be mined by the surface mining process. . . . Therefore, authority is hereby vested in the director to delete certain areas from all surface mining operations.

The above presents some questions:

(1) How do we put back a mountain that has been destroyed by multiple seam mining? And why haven't these areas containing multiple seams of coal been deleted from strip mining permits?

(2) The governor stated that he wants to cry when he flies over West Virginia. . . . Is he aware that "Section 11" of the law exists? Thousands of West Virginians are asking, where does the governor stand?

There are many angles that we could discuss about strip mining in West Virginia. We could discuss the West Virginia Law, the lack of enforcement of the law, the lack of "intestinal fortitude" from various directions to stand up to industry, multiple seam mining, aesthetics, etc. But we must be honest and state that in discussing them we would pass over the real issue . . . for the real issue, in our opinion, is the overwhelming power of the industry to follow whatever course they choose to set on their compass. This leaves the average individual powerless and we hold faint hopes that anything can be expected from enforcement standpoints now or in the future.

I have spoken here today with words of despair about strip mining in West Virginia. It is our feeling that the great majority of West Virginians think that the future for West Virginia is a hopelss one unless strip mining is halted. Shall we make West Virginia the "sacrificial Lamb?"

PRESENTATION: "THE BLACK MESA CRISIS," JACK LOEFFLER, BLACK MESA DEFENSE FUND, SANTA FE, N. MEX.

Zip, you did a good thing. You said something very significant about commitment. I was born in West Virginia. I went to New Mexico about nine years ago, tried to get away from it all, and sure enough, guess who's there—the Peabody Coal Company. Well, it is another essay in disaster I have for you this afternoon, but I am going to try to make it something that we can all start to work on right now. "The Black Mesa Crisis" is the name we have given to a state of jeopardy that is occurring throughout the entire Southwest. Now I don't know how many of you have been to the Southwest, so could I see a show of hands from those that have been to the four corners region states? A significant number. The Southwest, for those who haven't seen it, is not a barren wasteland like Los Angeles would have everybody believe; it is actually a series of plateaus increasing in elevation eastward to the Rocky Mountains. It is very beautiful. The Southwest has places like Canyonlands, the Grand Canyon, homelands of several Indian groups, and many people who are becoming aware of man within the context of time. This is the setting for the "rip off" of the Southwest.

Right now, seven big coal-fired power plants are being constructed there to provide electricity for Los Angeles and Las Vegas, Phoenix and Tucson. The devastation being incurred is astoundingly complete. For example, the one power plant operative since 1963 in Farmington, New Mexico, puts out more smog in a day than is poured into the air in Los Angeles in the same period. After all these power plants have gone in, we will have a meteorological situation affecting about 100,000 square miles which will resemble the Los Angeles Basin from the standpoint of air pollution. The pollution, which happens in three different forms, definitely relates to strip mining. There is particulate matter which is the stuff you can see. That is not the worst stuff by a long shot. There is sulphur dioxide, and as Ted Voneida said last night, "When it comes down in rain, it is usually in the form of sulfuric acid." Then there also is NO_2 released which, when it mixes with moisture comes down in the form of nitric acid. And something chemical happens when SO_2 and NO_2 react in the sky and still another acid forms. So we are on a very heavy acid trip in the Southwest right now. (Laughter.)

What this does to vegetation, to human lungs, and to water is just incredible. There isn't much vegetation in the Southwest, but what species are there play important botanical roles and are very nice to see. Now, the sulphur affecting vegetation around Farmington is already apparent and can serve as an indication or what is going to happen all over the place. The entire canyon country, which includes Grand Canyon, is just about to get totaled, whether it be from SO_2 emissions or whether it be that you sometimes can't see from one side of the Grand Canyon to the other these days. I saw that happen just last June, and that is distressing. Sometimes the smog comes in from Los Angeles, sometimes it comes in from Farmington, but you can bet your boots it is always coming in some quantity from somewhere. That is grim in itself. We are going to destroy the atmosphere of a whole network of national parks and recreation areas, the places where we go to return to peace and dignity. For the Southwest is one of the last places where one can go to experience just a little bit of solitude and be able to see 100 miles in a given direction and feel as part of the flow of life.

We have talked about the air, but what is happening to the water is very frightening. The Colorado River watershed ultimately drains into the Colorado River which is still making the Grand Canyon. It flows to Lake Mead near Las Vegas, then down to the Sea of Cortez in Mexico. The power plants dump their wastes eventually into the river. Strip mines produce acid and increase turbidity in the watershed. The Farmington plant, for example, affects the San Juan River, a tributary of the Colorado with a confluence at Lake Powell, which used to be Glen Canyon before the Bureau of Reclamation destroyed it. The results are pretty devastating. Much sulphur gets into the water, and a salinity increase occurs. By the time the water gets down to the lower Colorado, to the Imperial Valley of southern California, the produce-basket for California and much of the West, the water is almost unusable for irrigation purposes. Yet that is not where it stops. It flows through five little Indian reservations. Then the river, which does not understand such things as national boundaries, flows as a brine into the Mexicali Valley in northern Mexico, where the people once used it for irrigation of productive lands. Because the water is now so saline and full with chemicals, this single instance of water flowing from the United States into Mexico has created the largest bone of contention between the Mexican government and our own. So it is not just a local situation. It is a perfect portrayal of the archaic nature of national boundaries. We have really goofed. By we, I mean our culture that allows this process to continue. That is only part of the water problem.

The Southwest, in several large specific areas, has an annual rainfall of eighteen inches. That's not very much rain at all. That's very little rain. There is a strip mine on Black Mesa which will be the biggest coal strip mine in the world. It occurs in an area within 100 square miles which the Peabody Coal Company now has mining rights. The coal is transferred from that strip mine to a power plant 273 miles away through a pipeline eighteen inches in diameter. The coal is reduced to particles of three-quarters of an inch or less. Then it is collected, mixed with a large amount of water, flushed through the tube and collected in Bullhead City, Nevada. Now, in the arid Southwest, where does one get that much water? Peabody Coal Company did it this way. They drilled holes through the Hopi Indian Reservation to the water reservoir underneath the ground. The water is pumped out today at the staggering rate of 2,200 gallons a minute. No two hydrologists agree as to when or whether the Hopi springs are going to run dry. If they do, they could go in two years, in five years. At Kayenta, a little bit north of the Hopi reservation on the Navajo Reservation, the wells are already beginning to go dry.

The strip mines that have occurred in the Navajo reservation, like the one at the Farmington power plant, have destroyed the area. The company tried to reseed it, they say. Well, what grows there now is tumble weeds. It has the formal name of Russian Thistle. And is it ever thistle! When the winds pick it up it just rolls all over the place. Sheep can't eat it, nobody can do anything with it, all it does is catch on the bumpers of cars moving down the road, maybe scraping off a little bit of paint. Russian Thistle does nothing as far as anyone knows, that's any good at all. It is not suited to hold what is left of the topsoil. When the spring winds hit, and in the Southwest they hit, it all blows away. There are days when you can be driving down the road with a nice paint job and 100 miles later you don't have one anymore. This is what happens when high winds hit sandy areas after strip mining.

The strip mining that began about a year ago on the Black Mesa is not just reducing the land area to complete chaos. In order to get to the coal the bulldozers don't stop at a person's home. Navajo Indians don't live in houses quite like we do, they live in mud huts. I have lived in one, and they are kind of a gas when you come right down to it because you don't have to work so hard to keep it together. But when you are in one and see the bulldozer coming and you get out and watch it leveled, that is kind of heavy. This has been done to a lot of families. There is no place to relocate these families on the

Navajo reservation. In 1860-something when all the Navajos were forced to walk back from where they had been forced to by the United States Army, there were about 4,500 left. Well, the Navajos really know how to reproduce, and somebody is going to have to get on them because they are up to 200,000. And they have population problems. They cannot afford to lose any of their land. Even that is not the basic question.

The Southwest is presently an essay in every form of degradation occurring within the context of the environment that you can possibly imagine. It has air pollution, par excellence, water pollution, absolute exploitation of existing water resources which are minimal, land devastation; the power lines that go through what used to be the photographer's paradise completely mar anything that is left of an aesthetic. All of these things are contributing to total cultural disintegration. In the Southwest we have the few ethnic groups left in this country that have maintained their integrity. Those are the Hopis, the Navajos, perhaps the Apaches, and a few other Pueblo Indians living along the Rio Grande. But for the most part we have managed to wipe out the cultures of the indigenous people of this country. They were here first, but we won't get into the philosophic question as to displacement of peoples over conflict of culture. But now we are down to the last two or three cultures out of who knows how many hundreds existed prior to the coming of European culture. Contained within some of these Indian Cultures are infinitely higher peaks of what I consider civilization than we've ever shown. The Hopi Indians are extremely civilized; their social system functions with precision, and they have a point of view so sophisticated that unless you are a Hopi you cannot understand it. And the Hopi cultures are about to die.

When I had lived out there for quite some time, I began to wonder exactly what is the Hopi point of view as much as Loeffler can understand it. So, I was very lucky and very honored the other day, about three weeks ago, to be invited down into a kiva at Hotevilla, which is in a very traditional part of the Hopi reservation. And fifteen old long-hairs came in, men of about seventy, people who are reaching their philosophic prime as far as the Hopis are concerned, people who had achieved the age where you can finally call yourself old enough to have a basic understanding of the way it is in the world. They gave me their point of view, and it is impossible to try to convey, but I'll try if I may. First of all, they say it is impossible to convey in the English language what the Hopi philosophy is, because as we can see, those of us who speak both Hopi and English which I do not, "we do not think alike." But, inasmuch as we are trying to tell you something, here is what we think we can tell you. You asked us what is Mother Nature. Mother Nature is everything that is natural. Everything is natural excluding what we have imposed upon America today and the rest of the world. Everything that was there before the coming of man is natural. But more than that, the most important part of what Mother Nature is to the Hopis is the power and the energy that holds it all together." Now according to these old men, who are very sophisticated when you come right down to it, if you begin to violate or fool around with any part of that which is part of nature, you disturb the flow of energy so that strange things begin to happen—drought, strange wind storms, the prayers for rain don't work like they used to, sickness, human minds begin to fill with sickness—things like this. Catastrophy begins to occur.

The Hopis have hit on a point that I would like to emphasize. The Hopis have epitomized something that, for me, hits very close to the most important part of what is happening in our cultural crisis right now. The Hopis do not think of themselves as being separate from nature, but our culture does. Our culture has been working very diligently toward a mastery of nature. This cannot happen. We cannot master something of which we are a part when we don't understand ourselves. We certainly have no understanding of the flow of nature. Right now we are only using one part of our brains, and I really question how well we are using that. We have become in the extreme what we think of as objectively oriented. We have based all of our recent appraisal, as Dave Bedan said earlier, on scientific or intellectual premise resulting in a masterful technology. We have become so apparently self-contained within this technology that somehow those other processes, those subjective or intuitive or whatever-you-want-to-call-them processes that the Hopis still have, seem to lie hidden far beneath some level of our consciousness, so that we are only proceeding with part of our minds. Now to illustrate this, and this may be a poor example but it certainly impressed me, there is an old man, a Hopi with whom I share a friendship. His name, too, is Jack. He is about the funkiest guy I have ever met. He is about sixty years old. He loves to eat fried chicken, and he loves to laugh. But every year he does something very important. The Hopi Indians have a ceremony called the Snake Dance. They have to preface the public part of it with many days spent in the kiva, which is the hole in the ground. When they come out, they take a big basket of rattlesnakes and dump it in the plaza. Most of us get a bit skittish at that point because rattlesnakes can kill. Jack, who is the snake priest at Hotevilla, selects a rattlesnake buzzing at him, holds it up, strokes it with an eagle feather and the snake goes limp. Jack wraps the snake around his arm, and he and that snake become as one for many hours. Something happens, I don't know what it is, but I know that I couldn't do it. And I know that most of us could not. The point is not just the act of being able to do it, but why is the communication happening in the first place. There is a very significant thing that the Hopis manifest in the Snake Dance. Sure, it is animism; what's wrong with animism? Some people really get it on behind animism. You know, these people have a sense of balance that we fail to comprehend.

The "rip off" of the Southwest is called the Black Mesa Crisis mainly because Black Mesa lies in just about the geographic center of all the power plants that are happening simultaneously. The "rip off" of the Southwest is happening to support Los Angeles, Las Vegas, Phoenix and Tucson. They are the primary recipients of the 15,000-plus megawatts of electricity that are to be generated from coal taken from one of the last big low-grade coal deposits left in the United States. The reason these plants were constructed, or are to be constructed, in the Southwest is recent legislation making it illegal for fossil fuel plants to be constructed in Los Angeles County. No plant constructed in Los Angeles County can emit more than ten pounds of fly-ash or particulate matter into the air every hour. Ten pounds an hour! The Farmington plant emits over 2,500 pounds an hour. We are ruining a living environment existing in geologic time to feed energy into cities that exemplify the cultural trend that is responsible for ecological devastation. We are taking one of the last places left in this country that is still somewhat intact, and we are literally scooping up the life-blood of this place and channeling it into something that epitomizes what we think of as healthy, beneficial progress. At our present rate of development this form of progress can only result in a literal dead end.

What do we do? Well, first of all, we have to understand one thing pretty clearly, and this is the hardest part to understand. I have been thinking about this for a few years whenever I was sitting out on top of a remote fire lookout or living in a hogan. Our culture is motivated by many, many factors. Some of the major ones are: our concepts of economics, our concepts of technology and industry, and our concepts of political structure. This is the basic interaction that causes our culture to flow—economics, technology, industry and the manipulative political structure that facilitates the process. But our present experience says that it doesn't seem to be quite working right now. We are in a complete environmental crisis from one coast to the other. So, obviously, we must have a re-evaluation, and this re-evaluation must spring from a fresh frame of reference. Our environmental crisis, which has finally become a part of the American collective psyche in the last year or so, is the one single crisis that hits close to home for absolutely everybody. It is the one single focal point which can possibly bring our complete culture together on a given question. I believe that is true because if we don't do something very soon, the next decade is not soon enough, we are going to lose it all. We are in bad shape right now, and many people are becoming aware. We have to shift from our unquestioning acceptance of our progress-culture and assume a point of view which is cohesive and realistic, one centered on the environment. We must create and accept an environmental imperative so completely that it lies in the heart of every single one of us. If we don't do that we are going to die. It is that simple. It has nothing to do with ideologies anymore. It is a literal fact that if we continue as we are, we have had it.

How do we do this? This is a good question. We have a completely multi-faceted culture right now. We are so splintered that it is hard to look at the person sitting next to you and tell if he is really a "brother" or if he is not. Well, we all are, whether we know it or not. But we all think differently right now. We are all motivated by different ideologies which cause us to do things in different ways. If we assume that the environmental imperative is the one thing that can pull us together and is also our single hope for salvation, then we begin to function as Zip encouraged us a little while ago. We no longer just sit around, we become active. We become extremely active in any way we possibly can, whether it is supporting Congressman Hechler or looking about for a different area of concern, documenting it, trying to figure out viable alternatives, and then committing oneself to do it. Environment is the one single factor that could bring us together right now, even that is doubtful. However, we must try. We must start looking about for alternatives.

If we look in the Southwest for positive alternatives to generating power other than by burning coal and wiping out an entire landscape, airscape, waterscape and culturescape, there is the possibility that we might find something in the way of geothermal potential. It turns out that the Mohave Desert in California and the Northern Sonoran Deserts in Mexico have a fantastic hot spring capacity. Hot springs are indicators of geothermal potential. Several articles recently appearing in research from Stanford University and the University of California at Riverside seem to indicate that there lies beneath the surface of those two deserts potentially 20,000 to 30,000 megawatts of electricity annually for an unlimited amount of time, or conceivably four times the amount needed to generate New York City's power needs. Geothermal potential has been used in Italy since 1904. In tapping the geothermal potential we immediately eliminate the hazards of the first few processes of fossil fuel-fired power production. Coal must be mined and burned under the water sucked up from the river to make the steam that turns the generators and makes the electricity. For geothermal power a number of wells are drilled into hot springs at some

depth where the water vapour is about 500 degrees. Then it is brought up by pipe, and there is a purification process that reduces the mineral content (usually hot springs water is hard with minerals). At this point the steam is at about 400 degrees. Then it powers the generators which produce electricity. After the process, the water vapor cools to about 250 degrees.

It is then recycled into the earth, and in the earth's ovens it heats up again. Theoretically, this can go on almost forever, and nobody thus far, to my knowledge, has discovered anything that says you can't do it that way. That is fairly good ecological planning with regard to power needs. This can occur in California eliminating the need to build coal-fired plants in other states. Geothermal sources are being researched very thoroughly in the state of Washington, where there are also hot springs. There are hot springs in Arkansas, but I don't know if they are the workable kind. The Mexican government without any help whatsoever from the United States has constructed in Cerro Prieto a geothermal power plant, and it seems to be working very nicely. The Magma Incorporation, from L.A., is presently building a geothermal plant near Reno, Nevada; and on the success of that plant they will determine how many plants will be constructed in the Southwest.

We keep escalating our power needs to such an extent that they are experiencing phenomenal growth rates. We use more electricity by far than we need. Mr. Beale said last night that it is very possible to get a refrigerator that is $30 more expensive because of a device that will reduce power consumption. Take any factor of your daily life! If we would even learn to turn off the lights we didn't need! We have to become conscious. This is one means of participating in the environmental flow. When we become conscious of our use of energy, we no longer take it for granted, and we must not take it for granted. We have to think about it when we use it. We must begin to think in terms of not raising our national need for energy 8 percent every year, or ultimately we will run out of means of cooling the generators for that much electricity without creating ecological havoc. And since geothermal plants can be constructed, it is no longer quite necessary to use the fossil fuel plants. We must not continue to harass the environment in support of a dying cultural trend. So if we do need an alternative for that particular area, and I wonder about that need, there is one sticking out like a sore thumb: geothermal power.

I have a few slides to show you. I meant to show these at the beginning of the program, but I got going.

This first slide prefaced the particular trip for gathering the following slides. This is the area in question. This is Farmington, New Mexico. West Associates is going to build a plant a few miles away at Waterflow, New Mexico. This is Page, Arizona, where they are constructing the Navaho plant. Here is Lake Powell. This is the Kaiparowitz plant which will be constructed. It is going to be a monster plant making 7,500 megawatts happen, and there will be another one up here at Huntington Canyon, Utah. This is also a major plant. The Mohave plant is the one at the other end of the Slurry Line from Black Messa, which is right here. The Hopis live here. This is the Navaho reservation. Here is the Colorado River and here is where it goes into Mexico. This is the Mexicali Valley where the farmers are getting brine for irrigation. The last plant in this particular complex is here near Las Vegas. These power plants comprise the network that we are presently very much concerned about. They are providing electricity for Southern California, Las Vegas, Phoenix and Tucson. Almost none of it goes east. I might mention that I have a little ranch right here and that is one reason I am so concerned. That is the Farmington power plant—2500 pounds of fly-ash per hour. According to people on NBC–TV, this plant is the world's worst stationary polluter. I just wanted to show a few slides portraying what a strip mine or a power plant does in the Southwest. This doesn't include all the units by the way, they have since constructed a couple more, so it is even worse now than it was then. There is a plant from across a nearby lake. And there it is again. The lake is suddenly filling with noxious stuff that kills everything. You will notice way off in the distance Ship Rock. Ship Rock is an important place from the standpoint of Navaho mythology. There was a time when a monster lived on top of that rock. It was a monster-eagle sort of a thing, and it threatened everybody who lived in the Southwest. So, the Twin War gods got together. The Twins were two culture-heroes of the Navahoes, and they slew this great monster. Now it is interesting that just a few miles away this new monster has come.

The Navaho Mine is a 35,000 acre strip mine. That is the way it looks to the guy that runs the machine. This place is the mythic heartbeat of America. There is Ship Rock again, and off in the distance to the right of Ship Rock is the plume. This is in Monument Valley, which is truly one of the most beautiful places in the world. Monument Valley is in the northern part of the Navaho reservation and is desperately threatened by the entire catastrophe. It's a beautiful place. It is so heavy, man, that I can't camp in there. This pollution is happening at the Farmington plant, and this is where we are nailing them on the 1899 Refuge Act, make us $2,000 richer. This is flowing into a settling pond, and the settling pond flows into the San Juan River. It is fouling the river to such an extent that when I first moved to the Southwest I would drink out of it, but I wouldn't for the world now. That is the way it looks. That is my partner sitting up there on top, Jimmy Hopper. He is a person you can count on. The San Juan River goes north from Farmington, flows through the Goose Necks and joins the Colorado at Lake Powell. The San Juan has its head-waters near Pagosa Springs somewhere in Colorado.

That is the old "goo" that is sort of lying along the edge of the river. These are the power lines that extend everywhere through the Southwest. That, by the way, is Needles. That is the Needles power plant. That is where the slurry terminates. The coal mined on Black Mesa comes to Needles and to the Mohave plant. It is interesting the way they color their stacks, according to a statement in the *Arizona Republic* at the beginning of this mess. Of the power plant at Page, the people designing it said, "Why those smoke stacks will be like pieces of sculpture that will enhance the beauty of the landscape." And so these smoke stacks are now regarded as beauty tubes.

Strip mining on Black Mesa. The Peabody Coal Company says, "We will make this mesa even more useful than it was before." There is Ralph Selina, an old Hopi man, watching shrines being ripped up. But Ralph knew this was going to happen when he was a child because the Hopi prophecy says, "Destruction is imminent." Four years ago David Mononya, another old man, told me that we have nineteen years to go. This is the way the Hopis look at things. Ralph is a beautiful person. He weaves, he thinks, he lives in a state of beauty, and he is appalled at what is happening in Black Mesa. There is Thomas Banyacya; some of you may have heard of Thomas. Thomas is the interpreter for the Hopi traditionalists and a very wise man. Here he is again, very introspective mood. This is the reseeding of the Navaho Mine. This is not a dead dog, it is a pregnant dog in Cerro Prieto. This is where the Mexicans have a geothermal plant. It is not a big plant, but the Mexicans are doing something. This is steam, not smog. This is one of the means they have of getting it together. I don't really understand the whole process, but it seems to be working. And this is where the juice goes. It is possible. Thank you very much. (app.)

PRESENTATION: "NUCLEAR ALTERNATIVES," EUGENE V. PERRIN, M.D., ASSOCIATE PROFESSOR OF PEDIATRICS, PATHOLOGY, REPRODUCTIVE BIOLOGY; CASE-WESTERN RESERVE UNIVERSITY; CLEVELAND; DIRECTING PATHOLOGIST, BABIES AND CHILDRENS, RAINBOW, HEALTH HILL HOSPITALS, CLEVELAND; OBSTETRICAL PATHOLOGIST, UNIVERSITY HOSPITALS; CO-CHAIRMAN, CONSERVATION COMMITTEE, SIERRA CLUB OF N.E. OHIO; COORDINATOR, PROJECT SURVIVAL, CMRU ATTENDING PHYSICIAN, FREE CLINIC

A villager was boasting about the piety of the town's rabbi. "Believe me" he said earnestly, "my rabbi is so saintly he fasts everyday in the week except Saturdays and Sundays." "Just a minute," said his listener "I saw your rabbi eating just this morning and I've only been here a few days. Why don't you stop lying." "Lying, who's lying? You don't really know my rabbi! What you observed was a demonstration of his modesty. The only reason he ever eats on weekdays is to hide the fact that he's fasting!"

Here is our problem. It is difficult not to be distracted by confusion, masses of data, conflicting views of experts, bloated and pious claims of environmental wisdom by so-called conservationists and by the producers of power, goods or services.

This is an exceptionally difficult area. I am of several minds about it. I have been involved in some intervention suits in licensing of nuclear power plants, and Ed, I and some of our colleagues have been involved in nuclear education seminars. I think the problem is my no means solved. I am not categorically opposed to nuclear power, but there are many questions that have clearly not been answered. I am not a nuclear engineer or physicist. My education has been largely in biology and medicine and my work has to do with developmental abnormalities and cancer in children. Clearly we recognize staggering problems which have been solved not at all though tackled by the best meaning people. I am told by the preceding speaker, who has handed me a most interesting document from the TVA, that although reclamation of spoil banks left by stripping poses problems, about half of the 500,000 acres stripped for coal in eastern U.S. has been "reclaimed" as required by state laws, mostly by reforestation. The reclaimers believe that to be the answer. Similarly the Atomic Energy Commission, in promoting and licensing some extremely elaborate nuclear power plants, believes that its construction of the plants may, itself, solve the problem. They are going ahead as if all the problem had been solved.

To comprehend the issue of nuclear power, we must have a little background. Everyone acts as if there is an inevitable if not desirable geometric increase in population and energy use. In the last five years of the century, it is said that we are going to use as much fossil fuel as we used in the previous years of existence of man on earth. This is said by everyone as if it must occur.

ELECTRICITY GENERATING RESOURCES

[In percent]

	1968	2000
Coal	51.9	30.2
Oil	7.0	5.5
Gas	23.0	4.8
Nuclear	.8	52.5
Hydro	17.3	7.0

Source: P. 321, testimony of H. Perry, reference 4.

We are dealing with fossil fuels that have taken millions of years to produce largely by

vegetable and some animal matter. These fuels are used inefficiently, and a staggering amount of waste is involved. By waste I mean that for every kilowatt of energy produced there are two and sometimes three kilowatts of thermal energy produced and dissipated, thrown away as if this were the only thing to do with it. This is not to mention the loss of gaseous and some valuable liquid by-products. As an alternative, it poses the sorts of issues which have been raised by the Alaskan pipeline, by spills, by by-product problems. Gas produces relatively fewer pollutants, but gas is a scarce natural resource. One of the ways of producing gas, by using modified atomic bombs, has produced radioactive gas. Nuclear power now produces less than 1 percent of our total energy consumed. The nuclear industry is not necessarily composed of bad guys. It is composed of people some of whom do not have what Jack Loeffler called the understanding of the continuing of man as of nature and not against nature. They think nuclear power is a necessary alternative. Frankly, it isn't clear to some of us that we have any others. In this country we aren't using hydroelectric power properly, and part of hydropower making, of course, is in damning streams which may produce some undesirable ecological effects. In some parts of the world, hydroelectric plants produce over half the power, as in Switzerland. In the United States it is conceivable that one third of our power can be so derived, using every possible hydrosource.

The electric energy requirements as projected by the electric utilities show a staggering increase in the next twenty years from 1.52 to 5.9 trillion kilowatt hours. They will have to meet 1,051 million kilowatt hour peak demands. Fossil-fueled steam capacity will have to increase by a factor of 2 and nuclear capacity by a factor of something like 45 to 50. The capacity dependent upon cooling water is going to increase by a factor of 5. No one mentions the quantity of cooling water available will be exceeded by the amount of cooling water necessary. In other words, if we have about 1,250 billion gallons of surface runoff water in this country the power cooling need will be in excess of that by the year 2,000.

ELECTRIC UTILITY REQUIREMENTS AND SUPPLY, 1965-90

	1965	1990
Energy requirements (trillion kilowatt-hours)	1.52	5.83
Peak demand (million kilowatts)	277.0	1,051.0
Total installed capacity(million kilowatts)	344.0	1,261.0
Hydroelectric capacity (million kilowatts)	51.4	83.0
Pumped storage capacity (million kilowatts)	3.6	65.1
Internal combustion and gas turbine capacity (million kilowatts)	16.2	42.1
Fossil steam capacity (million kilowatts)	261.2	562.0
Nuclear capacity (million kilowatts)	11.6	509.0
Capacity dependent upon cooling water	272.8	1,071.0

Source: Abridged, p. 56, testimony of John N. Nassikas, ref. 4.

The assumption is this: every need is going to be increased in intensity from the magnificent lighting of Las Vegas to unnecessary air conditioning or lights left on all night in hospitals where cleaning women work late. People don't turn out lights. Water is not turned off. The problem is not electric toothbrushes, it is the whole philosophy or the lack of ecoethic behind the misuse of electric energy. Further, it isn't merely local chochmes, i.e., the San Diego gas and electric company, it's the president of Con-Ed who said that one of our first priorities is a decrease in the total use of energy, and then went back to his office and turned on his air conditioner, which is really badly needed in New York in November. In Cleveland we have many air conditioners, but the sun rarely shines, and it's almost never warm enough to require such luxury.

COAL RESOURCES

Most coal used goes for power generation. There is said to be an 80–1500 year supply, depending upon one's source and what kind of coal one is discussing. Peat and lignite, still in adequate supply, are high in volatile matter, ash and low infixed carbon. Various varieties of bituminous coal, with a range of by-products are largely mined in deep mines and open cast or strip mines. The problems of deep mines have to do with economics of mining, the expense of supporting structures, the limited life of mines and first and foremost the health of the miners. Chronic pulmonary disease plagues deep miners of all minerals, even under the best current conditions. Deep mining unlike strip mining, employs many thousands of workers in dangerous and unpleasant labor.

We export 600 million dollars worth of coal and almost as much petroleum and products. We have a major polluter in the form of the automobile industry, with over 11 million non-military vehicles (and sales of 24 billions of dollars) in 1968. In that year, motor fuel demand, both domestic and export, exceeded 1.8 billion barrels (Bureau of Mines Statistics).

GAS

There are many problems, both in the limited resources of natural gas and in the ways of obtaining isolated deposits with modified small fission devices (atomic bombs to you) has yielded radioactive products in gas. This problem is solved by diluting the gas so obtained with conventional gas. Burning gas is cleaner to be sure, and gas from coal yields many useful by-products but we are back to coal again.

What are the nuclear power people talking about? They're saying we have to have an alternative to pollutant producing sulphur rich fossil fuels. In the first place, their apprehensions are reasonable because of chronic bronchitis and possibly of emphysema, a disease of people over forty-five. Although total longevity has increased since the advent of antibiotics, improved public health and nutritional measures after the age of forty your life expectancy isn't very much greater than it was in 1906. In other words, the predicted increase in longevity in the last half of life is not continuing because chronic disease is taking its toll. One of the worst is chronic respiratory disease, not only chronic bronchitis, but probably lung cancer, and possibly asthma and emphysema. This is true in the first case even when smoking was eliminated. So, clearly, their statement is correct. We have to change the sulphur oxide pattern. How do you do that?

Control of sulfur oxide emissions

A. Low sulfur fuel (coal, oil, reused oil) as mined.
B. Reduced S in fuel by process.
C. Remove S from stack gases.
D. Dilution with high stacks.
E. Mine mouth generation, rural.
F. Increased efficiency of power plants

Magnetohydrodynamics

G. Reduced use of power.
H. Alternatives.
Gas.
Hydro.
Geothermal.
Solar.
Nuclear.

You mine low sulphur coal. You recycle used oil, which is preferentially priced out of the market by legal tariffs, but it is low in sulphur. You reduce the fuel before you burn it by another process. You selectively mine the low sulphur coal which is hard to come by, Hanna Coal tells us as they burn their coal behind the medical school, producing great plumes of smoke, which no one says they can do anything about. They say there is no low sulphur coal to burn. You can add sulphur removing chemicals, and you can remove sulphur from stack gases. In the giant Southeastern power facilities it is inconceivable that those plants have scrubbers, either wet or dry, or electrostatic precipitators. Again, it has been shown that industry will not concede to public needs and public health concerns unless bludgeoned into it by law. Weak laws make pollution acceptable. Pollution with high stacks is a typical non-solution for as you know the old solution to pollution is dilution. But, of course, whatever you let go up has to come down. Therefore, it is no solution. Mine mouth generation is an interesting idea. In other words, instead of transporting coal, use the mine mouth as the source for power in rural areas. This means using deep mining with all its attendant problems. There are also hydro power, nuclear fuels, solar power and increased efficiency of power plants as possibly obtainable through magnetohydrodynamics, among other potential devices.

How do you increase the efficiency of use of fossil fuels? At the consumer level? Do not let major power producers or industry or government convince you that the major trouble with the environment is people. The term people pollution is an offense. It suggests that people are primarily greedy and that they have not been brainwashed into assuming there is only a consumer future, and it ignores the fact that we are the products of a commercial environment which has profited from our passive acquiescence. Power plant engineering might incorporate magnetohydrodynamics, and two or three other major kinds of increase in efficiency including the use of waste heat. Waste heat is used in many parts of the world for the heating of houses and factories. Waste heat is used in many ways unexploited in America. With magnetohydrodynamics the plant production of steam increases efficiency from 40 to 50 percent, with a decrease of heat loss in the condenser stack and turbine from 1.2 to 1.02 million BTU's, and of a loss in water which is also strikingly decreased.

Magnetohydrodynamics is defined as a high voltage potential obtained by placing electrodes in a very hot ionized and highly conductive gas stream as it moves through a magnetic field. This is not a new source of power, this is an increase in efficeincy using fossil fuels. I didn't mention the burning of solid wastes, as is routine in Europe, and the distribution of power through grids protecting against brown outs.

Now we go to nuclear power. Why nuclear power? There are several methods of obtaining nuclear power, two of which are in the model stage and have serious practical problems, and one which has actually undergone both experimental and practical examination. At the present time there are planned before the year 2000 between 200 and 500 nuclear power plants, most of them to be situated on a lake shore or river shore. They are beautifully engineered, assuming that the engineering standards as stated by the AEC, which come in huge, closely printed volumes, in fact result in protecting you and me from the event of failure if all the "fail-safes" fail. When in the past we have had major protective valvular devices rust, when valves are left open instead of shut, when poison fuel rod turn off systems fail to operate, one wonders if they are in fact fail-safe. Reliable authorities in the Atomic Energy Commission have suggested that we are not sure what will happen in large plants. Having looked at some of the preliminary safety reports (PSAR), I am very impressed by the number of fail-safes involved. What is radiation?

The kinds of electromagnetic radiation with which we are concerned are invisible, high energy particles, either electrons or neutrons. The important kinds of radiation

are the beta particles, released from the radionucleides produced by uranium fission and the deeply penetrating gamma rays. These are produced when an unstable atomic nucleus releases energy to gain stability or, in the case of X-rays, produced when high-energy charges particles impinge on a suitable target. When fast-moving electrons approach the coulomb fields around the nuclei of the atoms of the target material, these electrons are deflected from their path. The biological effects of such particles of variable energy is to produce ionization events or heat in tissue or fluids.

In terms of the number of atomic reactor plants completed and planned by 1969 fourteen were in action, four were de-commissioned, and one was out of action because of a failure, (the Fermi plant near Detroit, in which no one was injured). There is an extraordinary safety factor result, that is to say, that no plant had had a major accident in which "the public had been hurt." However, employees of the plant had been injured. It is planned by 1974 to have ninety plants. The David-Besse plant near Toledo, Ohio, will be finished and probably functioning by that time, along with a number of others. It is the largest plant to be built to date although other plants that will be larger are being constructed. It is an intermediate sized plant, of about 875 to 900 megawatts.

Roentgens are units of exposure of gamma radiations based upon the ionization that these radiations produce in air. Ionizations occur when the X-ray passes through a tissue or solution of dissociable compounds. Ionization events can also produce structural damage by breaking up chromosomes, by altering cellular metabolism and by producing heat. We largely deal with fractions of roentgens usually spoken of as millirads or millirems. Rad is the radiation absorption dose and rem is the radiation equivalent, numerically equal to the dose in rads multiplied by appropriate modifying factors usually equal to one, so that a rem and a rad are usually the same. A curie doesn't have to do with something passing through you like a ray, it has to do with something you swallow, like a radio isotope. Everyone has radio isotopes in him and we are surrounded by substances which are radio isotopic, emitting radiations. Now everyone says that the amount of radiation emitted by reactor plants is harmless because, after all, we are in a sea of radiation, aren't we? The answer is, "Who said that the sea of radiation is harmless?"

The biological half-life is short and the tissue dose is trivial. The concentration in food chains is problematic, however. The other common substance given off in tiny quantities is krypton-85, which does not metabolize as tritium probably does. Kr^{85} has a half-life of about 10.76 years and, with holding tanks, amounts to most of the remaining radioactivity. The gas is not metabolized and most of its effect, at present little, is to skin, not lungs. In addition, there are small quantities of long lived substances such as plutonium which have a half-life in the thousands of years and there are substances which have half-lives of minutes or weeks. Now clearly the substances which have half-lives of minutes or weeks and are part of fission reactions in atomic reactors, can be contained by holding the gases or holding the fluids in the tank until everything sort of cools off, and then proceeding to take these substances, can them, dump them, fuse them, somehow get rid of them in a place where they will not affect life, assuming this is possible. But by half-life, as you remember, you mean that at the end of the number given as a half-life, one half the substance will be gone. This does not mean that it is all gone, because you have to have another half-life before half of that is gone, and so on and so forth.

How is power produced? By fission reactors in which you have a miniature atomic bomb contained within a thick reactor chamber, surrounded by a thick dome of reinforced concrete with safety factors such as a huge pump of water which drains down into the reactor chamber in case there is an accident, and which is enough to cool it for a matter of several days. There are sprays which also act to damp down the heat. The spray as a fail-safe may be useless (Science, May 1971). There are sudden shut-off systems which stop the reaction, and all this to do what? To do the same things you do when you burn coal. It is to heat water, to make steam, to turn a dynamo, to generate electricity. The reactor which is thought to be the safest is the pressurized water type. Pressurized water reactors are closed reactors which require a great deal of coolant. There are a number of such reactors going; the largest functioning being about 300 megawatts. Breeder reactors do not exist as a commercial possibility at the moment. Fusion reactors are, as a matter of fact, such an extraordinary technical problem, requiring tens of millions of degrees of heat to perform their function, that there are at the present time no functioning models available, although research is going on apace. The suggestion has been made that we stop spending so much money on the building of fission reactors because there is no energy crisis, if you believe that, and spend the money on fusion reactors which are thought to be free from the problems of radioactive emanations. The problem appears to be, however, that neutron bombardment of surrounding molecules may themselves produce radioactive substances which will decay at the customary rate. Those are the realities.

A fission reactor is the splitting of atomic nucleus, usually U-235, of which there may be from forty to fifty years supply in this country. There are uranium supplies in many other countries, including South America, Asia, Africa, Soviet Union and China, but they aren't very likely to let us have any. Also plutonium is a substance which can be fissioned and there are other substances which are fertile, such as U-238, which can be bombarded in a breeder reactor to make new fissionable substances. But here you are dealing with another limitation in energy. Remember, we have the heat barrier. Only so much heat can be produced or the temperature of the earth will be seriously raised, in addition, of course, is the carbon dioxide barrier which is something very problematic, in which the green-house effect is involved and most of you know about this. There is the cooling water limitation, and there is the limitation of the amount of fissionable material available.

The breeder reactor, as I mentioned, is when one surrounds the reactive U–235 with a layer of fertile material, in other words, substances which can be made into fissionable material, they are bombarded by neutrons and U–238 is turned into fissionable plutonium, or thorium, into U–233. Plutonium is actually metabolized and it is experimentally capable of producing lung cancer. The amount of emanation is extraordinary and its half-life is extremely long, well into the thousands of years.

The fusion reactor is thought to be the hope of the future. When asked about this, representatives of the AEC will tell you that the hopes of having a fusion reactor are anywhere from five years to 150 years. But again, people have said if the money being spent upon the building of the fission reactors is spent upon research in the efficient burning of fossil fuels and the development of fusion reactors, that perhaps we can hasten this date, assuming that fusion reactors are, indeed, safe. Several light nuclei usually react between four protons, or hydrogen nuclei, or the combination of two deuterium nuclei to form helium, combine to form heavier atoms. Pound for pound this produces eight times as much energy as does fission. Unfortunately the reaction has to proceed at extremely high temperatures, approximately the temperature of the center of the sun. This is not impossible. A fusion reactor has actually worked for a few seconds in experimental laboratories. Apparently the amount of deuterium available in the oceans is sufficient to last for the next billion years. So fusion reactors may be possible according to reasonably competent authorities. Remember, the AEC is probably a lot more trustworthy than coal operators and oil magnates. Nuclear engineers, although they tend to communicate poorly and to be somewhat chauvinistic are more reliable and perhaps more interested in environmental concerns than people in the coal industry and the federal power commission.

LIMITATIONS

Plant safety. It is interesting that every time one discusses the plant safety problem, engineers get very indignant. If you think that industry is indignant at environmentalists, you have to see what happens when a nuclear engineer is approached by an environmentalist, such as myself, who is obviously not an expert on nuclear physics or nuclear engineering. They have a very proprietary interest and clearly feel that the burden of information is on their shoulders. The fact is that the Price-Anderson Act suggests that there is a serious problem in the view of insuring the safety of nuclear plants. The Price-Anderson Act supports the insuring of accidents from a single fission plant explosion in this way: underwriters of insurance will only insure nuclear reactor accidents to the tune of about $83,000,000 per accident. The government has been asked and has acceded in supporting insurance to the tune of another half billion dollars or more. Now, insurance underwriters clearly are not interested in going out of business. Apparently they know something we don't know. Even if this isn't true, the fact that this has been allowed to happen suggests that the government has decided to take a hand in preventing lack of public confidence in the safety of fission reactors. Plant safety remains the least of the problems, however, the next are those of emissions.

We have over the last seventy-five years decreased the maximum permissible exposure to X-ray by a factor of ten almost every decade. At first we decreased the emissions by a factor of ten because we did not know what they did. We had no idea what they did. Then we decreased by a factor of ten to prevent burns, because as you remember, Madame Curie and her husband and Becquerel and the others carried radium and uranium around in a tube in their pockets. And then we decreased it by a factor of ten because we were concerned about the production of skin cancer, and then about the production of bone marrow damage, and then about the production of malformations. We are now down to a level well below one rad or one roentgen, to the point where the maximum allowable dose is approximately 170 millirads per year. Now the emissions, it is stated, in a safe plant, all other things being equal, will not give anyone a dose of larger than five millirems per year at the boundary of the nuclear fission site; if you go fifty miles away this will decrease by a factor of ten to fifty. The questions asked by Gofman, Tamplin and Sternglass, three opponents of nuclear power plant proliferation at our present state of knowledge, is "Do we know anything about the effects of low doses of radiation sufficient to even have a feeling about this?" And everyone says, "Well we are bathed in radiation." The reply is, "Yes, and we have a reasonably high cancer rate. How many cancers are caused by radiation?" Experimentally with radiation we can cause skin cancers, lung cancers, and

leukemia to mention a few. We have natural experiments. We have the bombings of Hiroshima and Nagasaki. We have the radium dial painters who used their tongues to point the brush which they then dipped into a solution for painting watchdials.

Individuals received large quantities of X-ray to the thymus during the unfortunate era in American medicine in which the thymus, a gland having immunological function, was thought to cause obstruction of the breathing apparatus of little babies. Finally we have persons treated for rheumatoid spondylitis and mothers receiving pelvic X-ray during pregnacy. In all cases there has been clearly an increase in the incidence of cancer. At Hiroshima and Nagasaki there has been an increase in leukemia and certain other cancers. The radium dial painters have, after a long period of waiting, developed bone cancer. Little children who have had their thymus radiated have in a number of cases, with doses over 125 roentgens, developed cancer of the thyroid. Now we want to know whether or not, in fact, this is in addition to the cancers already caused by background radiation. Can we calculate the number of rems or rads which would double the already existing incidence of a cancer? Here is where Gofman and Tamplin suggest that to answer this question is impossible, but in lieu of an answer we must decrease the dose by a factor of ten. According to Dr. Alvin Weinberg, the FRC–AEC are about to do this now for nuclear plants. The problems of nuclear plants include fissionable material limitation, radiation emission, coolant water, heat production, and finally, waste disposal. We do not know enough about low doses of radiation, except that 15 million mice have been sacrificed in the hopes of finding this out. Drs. William and Liane Russell at the Oak Ridge Laboratories have worked on mice for a number years, especially in the low-dose level, but mice live eighteen months and have eighteen months of cellular exposure. Men live seventy-two, or eighty years, so we are talking out an entirely different cellular universe. Latent periods are very important because the time between exposure, whether it is utero, or seminae, or the egg, or five generations of sperm back, and the time of the appearance of the malformations of the cancer, is critical. It is thought although controversial that the younger the person the shorter the latent period. Even more interesting is the issue of healing of damage especially in ovaries.

Waste disposal is another major concern, along with the low-dose problem. Some very unimaginative methods of waste disposal have been thought of, namely, earth filtration, chalk rivers, big tanks, caves, putting waste in a big metal box surrounded by concrete and dumping it into the ocean. Apparently no responsible commercial laboratories have ever done that, but some of the research laboratories have. I have a wonderful idea. If you take all the cups which are made of plastic and that are used by the environmentally conscious people at environmental meetings, and all the interminable and immortal aluminum cans, and all the nuclear wastes and place them into a large spaceship shaped and painted like a Campbell's soup can and shoot it into the sun, that might get rid of the wastes. But there are apparently no realistic solutions except for the long-term tank storage and the storage that you have heard about recently in Lyon, Kansas, i.e., of fused concentrated waste canisters in a deep salt mine, which shows only that the nuclear energy people are very concerned about the disposal of these wastes, some isotopes of which have half-lives of 2,000 to 20,000 years. The trouble with waste disposal is that you have to take it from somewhere to somewhere else, and that heat emission from such radionucleides is enormous and not clearly manageable.

Furthermore, fission plants have another problem. The uranium rods have to be reprocessed at regular intervals between a year and eighteen months because when they become "foul" the reaction is altered. We also take the concentrated coolant material which is in direct contact with the fission rods, carry it in trucks and trains to a reprocessing plant where the uranium is cleaned to be restored to the owners, and where some of the radioactive isotopes are either used or disposed of. This means driving on a concrete road with all the possibilities of accident and damage, in oversized trucks, in casks which are apparently radiation proof and damage proof, to take them from Livermoor, California to Buffalo, New York, where the only active reprocessing plant was for awhile, and assume that everything will be all right. In the Nuclear News of July, 1970, the statement was made flatly that no large casks exist at the present time in industry. It also says they are not sure they can get oversized truck permits for travel—it begins to sound like oversized coal trucks again, doesn't it?

Many AEC nuclear power proponents with whom I have met, are Sierra Club, Isaac Walton League, Audubon members, many of them very much upset about strip mining will probably submit that they are willing to give money and even testify as scientists about strip mining. They are very concerned about the effect of sulfur oxides, hydrocarbons, particulates and photo-chemical secondary pollutant substances upon lungs of man. I really have no great argument with many of the AEC people, except that some of them appear to be duplicitous in saying there is no problem when, in fact, they have not been able to answer many of our questions. They say that the plants cannot explode. I have to take that upon faith because of the engineering competence of the individuals involved, because of the multiple fail-safes which, if calculated, give you an incidence of about one in 10,000 to one in 100,000 of anything happening in a plant. Even then, they say it is not a matter of blowing up like a bomb, it is a matter of releasing a certain amount of Iodine 131. They dispose of the Iodine 131, they say, by spraying while they cool with a solution of water containing sodium thiosulfate which binds the iodine. They say we are going to have a large cask full of potassium iodate tablets, and will give this cask out to all the employees, and then drive all round town in the affected area and pass out bottles of potassium iodate, because if you are already saturated with iodine, your thyroid won't take up any more. Now Iodine 131 in certain doses can clearly cause thyroid cancer. They are concerned about that. They say that emissions in relation to background isotopes produced by coal can be controlled and are trivial. They say that isotopes are produced by the burning of coal. Some of these isotopes have relatively long half-lives, some have short half-lives. They are contained within the coal and they are released with that material which goes out through the stacks. When material put out through the stacks contains Kr^{85}, and some of the other Krypton isotopes which are very short lived, the operators can hold the emissions for a given time until the amount of significant emissions is minimal. This can be done in a fossil fuel burning plant. Furthermore, the amount of material put out by at least two of the existing nuclear reactors is considerably greater in krypton, in terms of number of micro-curies of isotope involved, than have ever been put out of fossil fuel plants. But both, they admit, are relatively trivial at the planned dose.

Thermal pollution is a very complicated subject. At the Yankee plant in Connecticut it is stated that thermal pollution has been shown to increase the yield of fish. The answer is that certain fish, in fact, thrive with high temperature waters and among those are catfish. If you do not like catfish you are not a true southern Ohioan, or northern Kentuckian. This is not the issue. I am sure some aquatic species do thrive in the presence of warmer waters, but the algae shift from the harmless kind of algae to a blue-green when the temperature is raised a certain number of degrees. Isotopes incorporate more rapidly in algae, algae grow more rapidly, certain species in the food chain do not survive, such as tiny shrimp, bacteria and other biota in warmer waters, and apparently the whole cycle of life is changed by a change in water temperature of as high as 15 degrees, which is what has been planned by some of the nuclear power plants until people insisted that cooling towers be installed. Now some of these plants dump the cooling waters in ponds, some others use wet towers in which you creat a fog because the water cascades down the side and evaporates forming a fog under some conditions. From Port Clinton, which is a nice little resort town near Toledo, the super highway to Chicago is going to be heavily laden with fog at certain times of the year because of a wet tower which cost $9 million, instead of a dry tower which is like a radiator in that the water is contained within pipes and is blown upon by fans, from which there is no fog created, because that tower costs $15 million. The total number of mills per kilowatt of energy added to the bill is trivial when amortized, as good businessmen do, over a long period of time.

Supposedly wastes are carefully handled and stored, but we have never had to deal with wastes of the kind and quantity that we have to deal with here. We have an enormous backlog of waste stored in tanks at some of our major reactor sites. These tanks have to be frequently inspected, they have to be earthquake proof and they have to be changed from time to time because the tanks are altered by the corrosion of salts formed in solution by the radioactive isotopes. Furthermore, they believe that technology will keep up with fissionable fuel crises. Now one thing that Dr. Bedan from St. Louis said, and also some of the other speakers have alluded to, is that we have to deal with stopgaps. Clearly we have to change our consumer patterns and our ways of life because these are merely stopgaps. Everyone in the nuclear power industry admits that if all the nuclear energy sources are going, the amount of Kr^{85} and tritium that will be produced will no longer be manageable unless one has totally safe plants if one has the same planning with fission reaction as at the present time.

Now I have tried to present some of the AEC view. I do not doubt that I do not know very much about radiation in low doses. What about the other opponents? Scientists, conservationists, citizen groups, activists, some hysterical and not hysterical ladies and gentlemen, have opposed the AEC, and you have to be at one of these licensing hearings to see with what contumely one is treated when one gets up and says, "I am not a nuclear engineer." Their faces get set in the most interesting expression of infinite patience with the idiots who are about to tell them something. I do not believe that they mean to do this, but I think there is an enormous proprietary feeling, as there is on the part of any citizens group interfering with a group of so-called experts. I do not deny that they are experts. Gaps in the past fail-safe performance, despite safety records, suggest that there is a question in plant safety. The emissions add to the total number of cancers if you believe Gofman and Tamplin. Now the people who oppose Gofman and Tamplin say the following: One, not all cancers have a doubling rate at which a certain number of rads will double the amount of cancers appearing. Two, it is not clear what percentage, if any, of the cancers that we already have are due to radiation. Because, as you see, if you live in southern Ohio, your radiation dose is about 120 millirems per year. If you live in Denver it is

about 240. If you live on the sands of Kerala in India, your dose is sometimes up to 12,000. There are smilar places in Brazil. Now, Gofman and Tamplin say, "Aha!" You are about to tell us there is no doubling in the amount of cancer in those areas. But the total increase in cancers would be about 3 percent because the doubling rate varies with each cancer. Nobody knows whether the 3 percent increase can be picked up because most of us do not report things very well at autopsy on death certificates or when one does a surgical operation." Ernst Sternglass said something very interesting. He has been in Athens recently. Dr. Sternglass once was a Westinghouse radiation physicist. He is now a professor of radiation health safety at the University of Pittsburgh. He has said that since 1935 there has been a decrease in fetal mortality up until the time of testing of the first atomic bombs. At that time there ceased to be a decrease in fetal mortality. From '35 to '40 the decrease was apparently due to improved health standards. He says the slope has actually been existing for many, many years because increased health standards were beginning to occur back in 1850. He said that some of the falling off of fetal mortality could be due to antibiotics. Some of the decrease in fetal mortality could be due to the introduction of penicillin, immunization and the improvement of the kinds of food babies are given. But why, he asks, does the fall off of fetal mortality cease in spite of these new additions during the times of the testings of the hydrogen bomb? And, in fact, if you would look at the statistics, there are questions which have not been completely answered.

On the other hand, with all due respect to Dr. Sternglass' sincerity, we had recalculated his statistics to his latest paper and they are not significant in terms of the numbers of deaths in a given county adjacent to a fission reactor plant, as opposed to the number of deaths in counties where there is no fission-reactor plant. The second thing he forgot to do was correctly calculate the wind direction and speed. This has to do with something atomic power proponents fail to mention. They say that if you are standing at the edge of the nuclear plant, you may be exposed to 5 millirems at the end of a year, and, that people who live in that general area are exposed to about this dose level. On the other hand, the upper limit is actually 500 millirems. They promise five, they only guarantee 500. Within the plant the upper limit is not 500, but 5,000, so that the workman is a guinea pig, as is so often the case in plant environmental exposures. Now, they say, "Listen this is not an X-ray going through you, this is tritium in the water, and it is Krypton-85 in the air you breathe. If there are other noble gases or halides that are released, for whatever time they are releasing their alpha and beta rays, they are within you for the short period of time. It is not as if it is passing through." This is their statement and only partially true. Dr. Sternglass, therefore, in his various statistical evaluations, has left himself open to doubt. Nevertheless, his statement is that there are up to half a million babies who will not make it to term because of the effect of small doses of radiation, above and beyond background radiation. He believes that most of this was due to fallout from nuclear testing and he suggests that with increased numbers of nuclear reactors, even releasing small doses of radiation, will expose the general population to about 170 additional millirems per year per individual. His work is up to question. As for life shortening, we can clearly show this to exist in experimental animals, but with larger doses than are involved here. Repair of radiation damage is an unknown in low dose problems, but the longer and the lower the time and dose, the more likely repair is to take place.

We can show that aging is increased physiologically and biologically by radiation, but in much larger doses than those to which you would be exposed by a nuclear power plant's normal emissions. Thermal pollution, as I mentioned, alters spawning patterns, fertility, survival of spawn, algal growth, rate of incorporation of radio isotopes, and also is wasteful, as it is also indicative of profound inefficiency which with "topping" magneto-hydrodynamics at fossil fuel plants is about 50 percent, in nuclear fission reactors is about 32 percent, and in fossil fuel plants is about 40 percent.

The waste problem and reprocessing has not been solved. Transportation is a danger. Fusing these hot radio isotopes in glass and burying them in salt mines is something that the people of Lyon, Kansas are frightened about. Deep well disposal is unthinkable since deep well disposal clearly involves the water table. Ocean disposal is out because the salts will corrode through both the concrete and the steel casing and that quantity of radio isotopes would be a serious detriment to the survival of deep-sea life, eventually get in the food chain, and we would be dealing with long-lived isotopes in the fish we eat. Background radiation is about 100 to 120 millirads. It comes from the woodwork and stone in the walls. Stone is much worse than wood may I add, but it also comes from wood. It comes from cosmic rays, and it comes from within, from substances which are normally radioactive. From fallout, as of four years ago, we received 7 millirads per year. Fallout has greatly decreased since the testing bans.

Medical X-ray is a major offender or has been until recently. A single chest X-ray at your favorite hospital will receive about 100 mrem, and of this about 0.4 mr to testis or 0.07 mr to ovary or fetus. A portable film in a mobile chest unit may yield 4–6 times that dose and a common kidney test such as an intravenous pyelogram may give 5,000 to 8,000 mrem, with 486 mrem to testis; 1,290 to ovary and 3,210 to fetus. We can use diagnostic X-ray more discriminatingly and also improve and monitor our machines with image intensifiers and other engineering devices.

We are concerned with linear relationships and threshold phenomena. The former refers to a straight line relationship between dose and effect. The latter refers to a level of irradiation or medication below which no visible effect is manifested. The straight line effect varies with the plot and the technique. The failure of the line to meet the union of ordinate and abscissa may be a mathematical characteristic rather than a natural phenomenon. The threshold phenomenon deals with infrequent events made somewhat less infrequent and to test well would require more animals than conceivably available under present circumstances.

We have no information on the lower end of the curve for mice below 5–10 r. We seek an end-point, e.g., doubling of the incidence of spontaneous mutation of a gene, appearance of a cancer, appearance of cataracts, chromosome breaks or incidence of malformations in litters of radiated mothers.

It is vital to know whether there is a doubling dose (a dose that doubles the incidence of any of the phenomena above) for any given mutation, cancer or defect, so that one might estimate what percent of the doubling dose might be reached with any given exposure and then multiplying this by the population at risk to estimate the number of persons involved.

It is very important to know this because you are going to be bombarded with information of this sort. Some of the power companies have decided that fossil fuels are no good. Some power companies have decided they really want to make a change, whether or not they are responsible enough to see that there are serious problems. They are, in fact, not initiating the issue. They are following the advice of their experts, their engineers and managerial people. They want to know.

Here is an example of lethality plotted against X-ray dose. (Fig. 1) The line appears to project downward indefinitely and strikes a point right about here. But you notice the levels are very high. So generally we are dealing with a biological phenomenon about which we know the following: Levels much above 100 rads delivered at a certain rate produce definite kinds of changes. Levels much below 100 rads produce much fewer changes and so, statistically, much below 5 to 10 rads we do not have enough information to do more than speculate.

The radiation standards that were established were established in a very conservative way. Gofman and Tamplin think that they are not conservative enough. They believe that one must not trust what the International Committee on Radiation Protection says, or what the Federal Radiation Commission says, or what the AEC says, as they base their levels on nothing. No data. It is peculiar, they say, but no one has recognized the fact that there is a doubling dose for all cancers. Doubling dose was reached, not by 5 millirems per year, but by multiplying 5 rems per year by the 30 years you live until you get your cancer, or the fifty years or the seventy years, because this in fact is the dose required to induce this neoplasm. They think the risk is of the following: there are something like twenty cases of leukemia estimated per million exposed persons. Well, the individual, they say, has a fifth order risk. A few years ago, MacFarlane Burnet, the great biologist, suggested that there are now seventeen cases per 100,000 of leukemia in the population. There used to be seven. What is the increase from? Seven out of the seventeen may have to do with fallout. (This was when testing was active.) The rest has to do with environmental changes. And now the level has gone down to about eleven. Clearly, many people believe that radiation doses, even relatively small ones because the total fallout danger was small, but the accumulative dangers apparently were great in leukemia and also in thyroid carcinoma. In the case of uranium miners, lung carcinoma was found to be a very serious and well known radiation-induced cancer.

Strip mining is an obscenity, clearly. Deep mining victimizes the workers. We have not as yet achieved the situation where inspection of mines has been sufficiently effective to yield a mine in which men will not die of silicosis and black lung disease, about which we do not know very much structurally, but we know a good deal in terms of physiology and epidemiology. We do not have solar power, and I am told that solar foils have been invented which are miles and miles wide, 0.0001 inch thick, will float in space and produce enormous problems in management and storage. Solar power, obviously, is impossible to use in northern Ohio because the sun never shines. Other sources of power that increase the efficiency of fuel are things we talk about but do not spend any research money on. We can do space R and D and increase streamlining of automobiles, and we can investigate and develop newer and better ways of flavoring food, but we have not the time or the desire to find alternatives which won't themselves pose problems as bad in the terms of the survival of man as nuclear power may be.

Do I believe that nuclear power is a serious danger? With the exception of the possibility that Gofman, Tamplin, Pauling, Lederberg and Sternglass are right, and the unsolved problem of nuclear waste disposal, I think we may be in for several generations of nuclear power. The fact that we are the monopolizers of the goods of the world, i.e.,

that 7 percent of the world uses from 40 to 85 percent of the world's resources. Here one is supposed to conjure up a group of angry South Americans, Africans and Asians descending upon Detroit, Michigan to rip off the Cadillacs and to Shaker Heights to occupy the homes of the anxious rich. That sort of thing isn't easily conjured up. Research and policy decision is desperately needed in the area of changing our entire consumption pattern; the effect of chronic low dose internal and external radiation upon long-life species, not mice, is necessary. I greatly respect Drs. William and Liane Russell, but they are not dealing with people, they are dealing with mice.

Action is needed now. The petro-chemical industry, the pesticide industry, the coal industry have the most eloquent and competent lobbies in the world. They are not fools. They are not evil. They are shortsighted, and they are wrong. Clearly they are tied to the automobile industry, which has had to be bludgeoned into accepting safety and emission control standards. The pesticide industry is carefully tied in. It is not a matter of abolishing automobiles and abolishing pesticides, it is a matter of intelligent use and conversion from general, blanket-type all but apodeictic uses to specific uses. It is all a matter of suggesting that maybe electrical power properly produced can cut down on all kinds of serious pollution problems, such as electric cars for in-urban use and perhaps gasoline-powered cars or battery powered cars for inter-city use. The steam car (Rankine-cycle engine) also has to be considered and is by no means out of the question. Then, of course, electrical power production becomes primary. An increase of electrical power production of some 40 percent should produce some 28 percent decrease in total weight of emittants, given the best stack controls.

What of our national policy? The national policy appears to be as disorganized as was described in our approach to strip mining. You and I, as conservation-conscious people, belong to Friends of the Earth, the Sierra Club, the Izaak Walton League, the Audubon Society, the Nature Conservancy, and all the other organizations. Both activists and thinkers, have never decided what our consistent goals must be. We attack each situation as if only crises require solutions. That is the way much of America's foreign policy has been. There has never been a foreign policy, there have been attempts to attack each situation at it arises. One of the current questions raised about Vietnam is that the powers have begun to divide all of Indo-China's shores in terms of exploitable oil. The Alaska pipeline may be impossible. As you know there was a recent pipeline accident in the Soviet Union like that predicted in Alaska. The Russians apparently used reasonably good engineering standards, very similar to ours. The spill problem is intolerable. It has destroyed a staggering number of wild birds, seals, fish, and reclaimed oil has been economically discriminated against. The oil lobby has been very effective in blinding us to alternatives.

Limited supplies, pipeline leaks, and the use of atomic bombs to mine and incidentally to contribute to radioactivity of natural gas is intolerable. Intense research on reactor safety, power needs, fusion feasibility, and similar phenomena are very necessary. We have to decide how to intelligently transport fossil fuels. We must begin to concentrate upon power transmission. As you know, one of the great dreams which is feasible in model is the cryogenic transmission phenomenon. Now can you imagine piping that energy by the use of tall transmission towers from Arizona and New Mexico to Las Vegas and Los Angeles? Can you imagine what terrific line loss there is? In using cryogenic transmission which is not cheap as refrigeration apparatus is required every mile, the idea is that when you get close to absolute zero Kelvin you have no heat loss and thus absolute conductivity. Is it a dream? When man has his back up against the wall, one can't invoke "dreams" and complain about "expenses." If we can spend something like $450 billion in five years on defense, clearly we can begin to expend money on surviving. Controlled beam power transmission has to be investigated, and the whole plasma beam area has to be tried. Fuel efficiencies, thermal electric or thermionic cells where you induce a far higher current in the fuel cell than the ordinary efficiency would suggest, hydro, solar, and geothermal sources, all are of vital importance.

Therefore, I have a feeling that the fight has to go on, scientifically, sociologically, morally. One cannot fink out by saying nothing can be done. One cannot fink out by saying that people are lazy. An acquaintance came up to me recently and said, "Do you know, you environmental people are destroying business. You are the worst thing that has happened to business because, you know, people can't change. People can't stop using automobiles. People can't stop using air conditioners." The answer is "The hell they can't."

Thinking that each new environmental concern takes away from yours is also wrong. If you are on your white horse of concern, bearing your informed lance of righteousness and riding along, (many people in this room probably are), and you see an enemy in the form of racial injustice, poverty, in the form of putting women down or putting Indians down, you fight the injustices as they appear. The misused environment is one of the many, many intolerable injustices which almost always ends up with those already victimized being further victimized. This is why environmentalists have to be activists. This is why scholarship has to end up with action, and this is why such conferences are important. Thank you.

DOBSON: There is at least one question. I think one of the microphones, at least, is working.

QUESTION: What about the David-Besse plant siting?

PERRIN: There's a serious problem. If you talk to some of my colleagues in nuclear engineering, they regret the fact that the plant was sited there. Plant siting is a major problem. Where the hell do we put it? Someone has described a good plant site as a place which has abundant water, is not too far away from the place where the electricity is supposed to be delivered, is far away from a place where there are people, is far away from a water source that it can destroy, and is far away from an area that it can spoil with contaminations. Therefore, there is no place we can put nuclear plant. Clearly, there isn't any place. I think that the west end of Lake Erie is a very poor choice for the following reasons. It is a spawning area. It is one of the few spawning areas on the west end of the lake. Too, the hydro engineers tell me very clearly that the statements made in the PSAR about mixing of warm water and lake waters are not necessarily correct. They are going to have a wet cooling tower. The wet cooling tower is going to cut the water tempertaure down so that in the mixing area it is 15 degrees higher than it was when it came out, but it's going to be down to a degree and a half after the mixing area has passed. But the statements about what mixing goes on are very controversial. What Dr. Lee said, is not the same thing as is said by other aquatic biologists. So I feel that there is some evidence that they have chosen the wrong site.

They also took a portion of a wildlife area, although they gave some areas of swamp for another wildlife area. Three, I have the preliminary report from the AEC. The plant site is ten miles from an ordinance testing center. It is ten miles from a bomb testing area used by planes from Selfridge Field using aquatic targets. They quote, "We have been promised by the various armed forces officials that they will not go outside of the expected range. They also say that no missiles, no armored tank shells, and no dud bombs have ever been found outside of the area. Further they have never had any misses." Well, I don't believe all those statements because I just don't think people know that much about their misses. However, it is true that short of an extremely large tactical atomic weapon, the shell of the David-Besse plant is engineered to withstand any such shells, it so happens. Another problem is that it is in an area where earthquakes have been recorded. However, the highest earthquake recorded level is 5 units in that part of the state and they are engineered to withstand shocks up to 7.5, which is good. In other words, the AEC is not unaware of its failings. They are also the first to admit that radiation causes disease. They are also the first to admit that thermal pollution is a problem.

What bothers me is their solutions to the things they admit are true. Clearly, I don't think the David-Besse plant is ideal. If you say, would you rather have such a plant or strip mining, I don't know. Would I rather have one kind of disease or another? At present, if one believes the AEC, it is an answerable question.

Apparently we are going to have nuclear power because we cannot, apparently, solve without most stringent laws and the most rigid, almost draconian punishments, the fossil fuel problems. Clearly, if we are going to fine Cleveland Electrical Illuminating or Con-Ed a hundred dollars for a violation, they won't give a damn how many times you fine them. They don't even care about the bad publicity. After all if you don't like what they're doing, go to their competitor. What competitor? If you don't like what the telephone company does, go to their competitor. There is no competitor. Too, I think that the power industry may be tired of fighting the coal battle. The low sulphur standards for coal have been made so stringent in New York City that there is no coal available at that kind of low sulphur level. Now where to site plants? Some of the plants in New York City are clearly planned to be built within the city's boundaries. That is pretty staggering. You need at least 10 to 100 acres around the plant. Some of the proponents have said that we are going to use the warm water to make greenhouses and raise vegetables; we are going to have it as an amusement park for children. And then they are asked, "Would you want to live there?" And they said "Sure." And they are actually going to have some of their plant engineers live within the plant area. So all these peculiar contradictions exist in the statement. Ask them to lower the standards from 500 to 50 mrem as the upper limit and they say that they can't because they might want to change something and the dose level would leave them inflexible. So clearly there's a contradiction between intent and practice. Any other questions?

QUESTION. Discuss the cooling towers to be used in the Davis-Besse plant.

PERRIN. The cooling techniques are carefully engineered. The dry cooling method has been the least tried. That is one in which you have water running through pipes and a fan blowing on them, essentially. That is reasonably effective, I understand, in pilot there are some smaller models. It is more expensive, however. It adds between 8 and 9 mil per kilowatt hour to the bill. The wet cooling towers are highly effective but produce a mist and a fog. The cooling ponds are fine, except there must be a 1,000 acre pond, and several of them. There are other methods

which are equally effective but all of them add to the bill. The dry cooling tower is much more effective and would probably cut down the temperature of the water emitted to 5 degrees above that at which it was taken out of the lake. But they are all reasonably effective, considering that you are limiting your standards in every case. I think it is probably unwise to accept limited standards giving the mixing characteristics of that end of the lake, but they are reasonably effective given the standards within which they operate.

QUESTION. I'd like to underscore what I think, the speaker has properly identified as three principal problems in the use of nuclear power: (1) the reduction of emissions from the plant itself, (2) the transportation of nuclear waste and finally (3) the containment of radioactive wastes.

PERRIN. The AEC is quite protective and they feel that they are doing an extremely good job. You are dealing with people who have made every effort within what they consider to be reasonable standards to solve their problems. If you belong to the American Nuclear Society and receive their journals, all of these problems come up. They put out the "Nuclear News", which is quite readable and not terribly technical for those of you who are not physicists or engineers. They have twenty-five and thirty-five page supplements on technical data having to do with thermal pollution problems, having to do with light water reactors, fuel recovery, transportation, all the other major issues. They are not unwilling to discuss these matters and I think they are in fact willing to admit that there may be errors in their calculations, but due to the best information they have, they think the light water reactor as currently engineered is safe.

Question: Are we spending money for research in the correct way, e.g., for improved fossil fuel burning rather than for fusion?

Perrin: Would I rather see the money used for fission fuel plants or the other way? Or should we use it on research in the creation of nuclear plants? If I believed that fusion was, in fact a safe and feasible method of producing power, I would rather do the research on fusion. The two questions that are asked by radiophysicists have to do with neutron bombardment of surrounding elements and the production of new radio isotopes which are just as dangerous as those you are trying to contain. I do not know if this is fact. Do you know this as fact? I'm not sure.

Question: Discuss fusion reactors.

Perrin: Would I mean fusion here? Yes. Fusion reactor. Right. Well, the amount of money spent upon fusion research is trivial. It is in the matter of scores of millions as opposed to the billions that have been spent upon fision reactors. Do I think that we can make fossil fuel burning sufficiently efficient to warrant expenditures of staggering amounts for research? In terms of time and feasibility I think we had better spend some of our money on the efficient use of fossil fuels because it is not clear that fusion reaction is going to occur tomorrow. In other words, from the time of planning to the time of building of a fission reactor is rarely less than six years. The time of research perfection and building of a fusion plant cannot be less than 10 years, given the most optimum kinds of research results. We have already said repeatedly that it will be too late for Ohio, Kentucky, and West Virginia if we do not do something about strip mining now. We have repeatedly said that we are breeding a race of pulmonary cripples working in the deep mines. We have repeatedly said that we are going to have Alaska raped if we do not do something about the oil problem. So clearly we are going to have to work with the fossil fuels at the same time. Unfortunately, there is not any choice, but I think we must spend money on fusion. This might very well be the answer to limitless energy except, of course, for the heat barrier problem which has not been answered at all.

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APPENDIX 1

(Overall efficiency)

	Percent
Fossil fuel plants: (15–20% waste heat out by stack, rest via condenser to cooling water)	38–40
Proposed fossil fuels with magneto-hydrodynamics topping cycle	53–59
Present light water reactor	30–32
Proposed advanced nuclear reactors	39–43

ADDITIONAL COSTS FOR COOLING

[Investment cost for 1,000 megawatts-thermal; in millions of dollars]

	Fossil plant	Nuclear plant
Once through, no controls, to fresh water river or lake	Baseline	
Once through, no control, into salt water	2 to 3	3 to 5.
Cooling ponds with recirculation (1,000 acres needed)	4 to 6	6 to 9.
Wet cooling towers, most heat loss to atmosphere via evaporation, with production of fogs, mists.	5 to 9	8 to 13.
Dry cooling towers, heat transfer, to atmosphere without evaporation, fogs or mists. Large fans, no water loss.	Possibly 20	Possibly 25.

LIQUID RELEASES ON A DESIGN BASIS FROM A PRESSURIZED WATER REACTOR

	Half-life	Annual release from waste disposal systems (uCi)	Condenser discharge concentration (uCi/cc)	Maximum permissible concentration (water) unrestricted area total body (uCi/cc)
H^3	12.3 years	5.68×10^{9}	3.8×10^{-6}	5×10^{-3}
Sr^{90}	27.7 years	.44	3.0×10^{-15}	4×10^{-7}
Co^{60}	5.2 years	4.27	2.85×10^{-13}	1×10^{-4}
Y^{90}	64.8 hours	.51	3.4×10^{-15}	3
I^{131}	81 days	8.65×10^{3}	$.58\times10^{-11}$	2×10^{-6}
Cs^{137}	27 years	5.15×10^{3}	3.43×10^{-12}	2×10^{-6}

Note: And a number of others.

GASEOUS RELEASES ON A DESIGN BASIS FROM A SIMILAR REACTOR

	Half-life	Annual relase from holdup tanks (Ci)	Max permiss conc (air)
Kr^{85}	10.4 years	6,000	3×10^{-7}
Kr^{87}	78 minutes	(1)	2×10^{-8}
Xe^{133}	5.27 days	5,500	3×10^{-7}
Xe^{135}	9.2 hours	(1)	10^{-7}

1 Negligible.

WINCHESTER, CONN., CELEBRATES BICENTENNIAL

HON. ELLA T. GRASSO

OF CONNECTICUT

IN THE HOUSE OF REPRESENTATIVES

Monday, June 21, 1971

Mrs. GRASSO. Mr. Speaker, the town of Winchester in my district is currently celebrating its bicentennial anniversary. Beginning with the Incorporation Day ceremony on June 3, splendid festivities will mark this grand occasion throughout the summer reflecting the pride which is shared with all the people of our State.

Winchester is steeped in rich tradition and blessed with industrious citizens who reflect the strength and vitality of our Connecticut heritage. Since the early Winchester citizens built little shops alongside the tumbling mountain streams around the town, manufacturing has played an important role in the growth of this hardy community which now boasts a population of over 10,000. Farming, too, was a prosperous occupation in the early days, following the hunting exploits of the great Chief Waramaug who brought his braves here in search of food. The rich soil provided nearly all the essentials for a self-sufficient farming family, including the ingredients for homemade soap.

The study character of the town's people was demonstrated by their courage and strong will during the difficult rebuilding period following the devastating flood of 1955.

Life in Winchester, past and present, reflects the hopes and sorrows and opportunities of towns throughout America.

Now, as in many communities across the land, Winchester has become more sophisticated, as well as more complicated. New schools, new businesses, new roads and new homes are impressive evidence of Winchester's accomplishments and dreams fulfilled as the town enters its third century.

Still, the past and the tradition that goes with it are preserved and enriched by townspeople conscious of their heritage. Thus the bicentennial celebration is a very special time indeed, as the town of Winchester and the city of Winsted make known their achievements of the last 200 years. From the bicentennial ball to St. Joseph's Church bazaar, from the antique flea market to the Winchester Center Historical Pageant, a bit of gallant history lives again, stirring old memories and enchanting young hearts.

This is a particularly proud time for me, too, since it is my privilege to be Representative in Congress for the good people of Winchester during this fine hour when the past is prolog to new opportunities and new achievements.

POLITICS AND THE WAR

HON. JOHN J. DUNCAN

OF TENNESSEE

IN THE HOUSE OF REPRESENTATIVES

Monday, June 21, 1971

Mr. DUNCAN. Mr. Speaker, a recent statement on the editorial page of the Knoxville (Tenn.) Journal says the disclosure of a secret study on the Vietnam war will be embarrassing to many. I would like to share with my colleagues what the newspaper had to say on this matter.

I include the article as follows:

POLITICS AND THE WAR, JUNE 16, 1971

One of the more revealing points of the previously secret study on United States involvement in the Vietnam war was its reference to Johnson Administration decisions for an all-out bombing of North Vietnam at a time when the Democratic Party was severely criticizing Republican presidential nominee Barry Goldwater for openly suggesting the same tactics.

The study has been obtained and published by the New York Times in support of its editorial policies, which have been generally dovish. There is a squabble over whether the Times violated security laws, but none of this dispute alters the basic facts as revealed by the study.

The period under discussion was late summer of 1964 in the very heat of that year's presidential campaign. Readers will recall that Democratic candidate Lyndon Johnson, who only months before had ascended to the presidency after the assassination of President John F. Kennedy, played down the Vietnam War in his campaign speeches.

Republican candidate Goldwater, on the other hand, responded with frank answers when asked about his concept of how the war should be handled. Goldwater recommended taking the war home to North Vietnam in the form of heavy bombing strikes. Democratic campaign managers exuded pure shock over this suggestion and repeatedly cited this Goldwater reply as evidence that he was unfit to hold the nation's highest office. Those who closely followed the campaign will recall vividly the slick television commercials which emphasized Goldwater's "bombing" statement.

But now the utter hypocrisy of it all glares forth.

Goldwater, who frankly told the American people what he would do, was defeated. Johnson, who was secretly planning all along to do what Goldwater suggested, was elected.

The secret plans were made after Johnson administration advisers—then consisting largely of old Kennedy clan members—had reached a consensus that air attacks against North Vietnam should be launched.

Revelation of these plans lays bare what probably amounts to one of the most blatant deceptions ever foisted off on the American public in the name of partisan politics. Clearly backers of LBJ led the American public astray in their effort to win the 1964 election.

Now, curiously enough, many of those same individuals who advised all-out bombing in 1964 are among the foremost counselors of total, immediate withdrawal today. Again, we suspect, their motives are more attributable to partisan politics than to informed statesmanship.

Disclosure of this study which pointed the way to massive U.S. involvement in Vietnam will prove to be highly embarrassing to many present-day doves.

THE 30TH ANNIVERSARY OF THE RUSSIAN HEGEMONY OVER THE BALTIC STATES

HON. JAMES A. BURKE

OF MASSACHUSETTS

IN THE HOUSE OF REPRESENTATIVES

Monday, June 21, 1971

Mr. BURKE of Massachusetts. Mr. Speaker, this week, during the 13th observance of Captive Nations Week, I am pleased to be joined by more people around the world this year than ever before in calling attention of free people the world over to the continued sorry state of affairs in the Baltic. The world just cannot afford to forget the plight of these people. We must avoid letting time make memory grow dim and forgetful. The frustration grows worse with each passing year. All we seem to be able to offer the millions of people in Europe living in the satellite countries is our sympathy. But, there is value in this sympathy, insofar as it keeps the situation of these people constantly before us. We must not allow a situation we have become used to to be sanctified through mere passage of time. Time cannot make legitimate what was wrong and outrageous in the first place. More than two decades of foreign domination have not given Soviet claims any legitimacy. Resignation is not the same as acceptance by those so dominated. We should not be tempted to condone what we know the majority of those living under this domination refuse to condone.

The facts are that in balance the years of foreign domination display incredible insensitivity to the wishes of the local populations. Opposition has been systematically discouraged and, on rare occasions, when it rears its head has been ruthlessly trampled and condemned. But, each fresh outbreak should remind us of the irrepressible human longing of the captive nations to one day govern their own destinies free from foreign influence. This last year, we have witnessed the spectacle of the Polish food riots, lest anyone think that the captive nations have lost their interest in influencing their own destinies. More than anything else, these riots pointed out for all to see the wide disparity between the quality of life in Western and Eastern Europe which has widened, it seems, with each passing year.

So, let us renew our commitment to these diverse nationalities that one day they will enjoy once again their lost identities and let us do so in the certain knowledge that the spark of such feelings still exist and have been kept alive in the harshest of environments. These sparks of human dignity must be kept alive. We cannot afford to let them die out for lack of interest.

REVENUE SHARING PROPOSAL

HON. JOHN D. DINGELL

OF MICHIGAN

IN THE HOUSE OF REPRESENTATIVES

Monday, June 21, 1971

Mr. DINGELL. Mr. Speaker, the Reverend Lloyd Ewing, executive director, Region V Citizens Council, 155 West 16th Street, Indianapolis, Ind., recently sent me a copy of a resolution and a supporting statement expressing opposition to the President's revenue sharing proposals.

So that my colleagues may have an opportunity to be aware of this resolution and supporting statement, I ask unanimous consent that the texts of same appear at this point in the CONGRESSIONAL RECORD:

RESOLUTION

Whereas: The Demonstration Cities and Metropolitan Development Act of 1966 created the Model Cities Program; and

Whereas: The Act provides for five full years of implementation; and

Whereas: The Act requires concentration of effort, widespread citizen participation and comprehensive planning; and

Whereas: The proposed Community Development Revenue Sharing Bill destroys the identity of the Model Cities Program and potentially can end the Program; now therefore be it

Resolved: That the Model Cities Program not be folded into the proposed Community Development Revenue Sharing Bill and the Congress of the United States guarantee that each city under the Program be allowed five full years of implementation at full Funding.

ERWIN FRANCE,
President,
National CDA Directors Association.
FRANK LOMAX, III
President,
Region V CDA Director Association.
REV. LLOYD EWING,
Executive Director,
Region V Citizens Council Model Cities.

We the citizens of Region V Citizens Council and Region V Community Action Agency would like to renumerate our opposition to the Revenue Sharing Bill in its present form being presented to congress.

1. The bill in no way protects the rights and give the assurance of involving citizens in planning with local and state governments. The ways and mean to bring about urban changes, using federal monies which belong to all people.

2. The act of giving federal monies to local government without guarantee protection for seeing that these monies are used to benefit the poor, disadvantaged and all citizens regardless of race, color or creed is in direct violation of the constitution of the United States.

The major cause of urban deterioration today is the gross neglect of local government using it's expertise, with the citizens of the community to work constructively in solving their needs.

I would like to quote the words of the Honorable Mayor Richard G. Lugar of Indianapolis, Indiana in his address to the International Conference on Cities.

1. "Reconcilation in our cities and peace in our world are reasonable and attainable objectives; however the mayor said he would contend that the defensive strength of the United States is vaporized by unsolved urban dilemmas. "So much energy is now being dissipated in emotional drains ranging from gnawing insecurity to acute hatred of others in a community that much less energy remains to pursue national and international objectives than most national leaders suppose."

The problems facing most urban areas of the world will not be solved simply by the expenditure of vast amounts of money or the creation of "new cities," the mayor charged.

"Pumping money into old governmental structures or relying excessively on the emergence of many new cities defies reasonable expectations of monies which will be available to meet various urban crises, and simply does not represent a realistic urban policy for the future."

Admitting that most citizens in all countries "express little confidence in the competence of local leadership, he suggested this situation exists because "most talented citizens of cities show little desire to assume political leadership except in sheltered, behind-the-scenes roles.

"The talented and the wealthy," he said, "have too often not only used their mobility to change residences but they have changed the location of their businesses, their capital funds and, worse still, their loyalties and areas of dedicated service.

"Nothing short of the best, of the best men and women we have available will bring rebirth to cities, will reorganize and refurbish them".

We the citizens of Region V Citizens Council and Region V and Region V Community Action Agency boards wholeheartly agree with those statements; yet we go much further to point to them one by one as the need for guaranteed protection and assurance in The Revenue Sharing Bill the rights of all citizens.

1. The gnawing insecurity and the emotional drains that are causing not only local communities but national insecurities can only be solved by the total involvement and planning of all citizens in the local communities working together.

2. That by pumping monies into old government structures without new ideas, changes brought about by the process of involving the citizens whose lives are affected does not represent a realistic urban policy for the future.

3. Truer words where more than saying most citizens express little confidence in the competence of local leadership. The talented and the wealthy show little desire to assume political leadership except in sheltered and behind the scene roles.

If the talented and wealthy are only interested in local leadership except for sheltered and behind the scene role, where does this leave the other citizens of the community?

If talented and wealthy use their mobility to change residences, their businesses, their capital funds, their loyalties and dedicated services, what about the rest of the citizens?

The answer is the rest of the citizens are left out of local government involvement, planning and use of local government services. The rest of the citizens are left to carry the burdens and problems of local government without benefits.

This is why citizen participation and citizen protection in The Revenue Sharing Bill is a must. That is why Model Cities funds, OEO funds must not be part of any Revenue Sharing monies. That is why Model Cities should have its full five (5) years of implementation.

To assure that all citizens of local communities have the opportunity to become the best and to bring about the desired rebirth of our cities, citizen participation, citizen expertise, and citizen protection is a must.

The citizen of this great country has always relied on the Federal Government for the assurance of their rights. We are once again at that threshold. We are beseeching you to not leave the destiny of millions of our citizens to the hopes, whims, indecisions and the unconcerns of local government, without written guidelines and policies for their protection.

We the citizens of Region V Citizens Councils working in coordination with the Community Action Agencies in Region V sincerely appeal to your faith in our constitution in believing that this is truly a government "Of The People, For The People, and By The People."

REV. LLOYD EWING,
Executive Director,
Region V Citizens Council.

JOSEPH A. KLIMECZKO, CAPABLE LEADER OF OUR YOUTH

HON. THADDEUS J. DULSKI

OF NEW YORK

IN THE HOUSE OF REPRESENTATIVES

Monday, June 21, 1971

Mr. DULSKI. Mr. Speaker, as we travel through life, there are individuals we meet who make a special impression upon us.

In my case, one of those individuals was Joseph A. Klimeczko of Buffalo, N.Y. I knew him well for his endless devotion to the task of helping others.

In a day where there is a crying need for guidance and understanding of our youth, Joseph Klimeczko was an outstanding example of a man who found his way into the daily lives and activities of hundreds of our young people.

The Catholic Youth Organization—CYO—has had varied success over the years, but it had spectacular success in Buffalo where Joseph Klimeczko was involved from the parish to the diocesan level.

He is remembered in particular for his work with our youth, but we cannot overlook his other dedicated work as well. I refer to his many other day-in, day-out efforts for his church including its continuing charitable activities.

Mr. Speaker, Joseph Klimeczko was a young man of 51 when he was taken from us a few days ago. He fell ill in 1969 and was forced to retire from his job, but he never retired from his enthusiasm for his work with people—especially young people.

As part of my remarks, I include two articles from weekly newspapers in Buffalo:

JOSEPH KLIMECZKO, CHURCH AND COMMUNITY LEADER DIES

Joseph A. Klimeczko, 51, died last Tuesday in Deaconess Hospital after a long illness. Mr. Klimeczko was active as a Roman Catholic Layman at the Parish and diocesan levels.

A lifelong Buffalonian, Mr. Klimeczko was president of Holy Apostles SS. Peter & Paul Athletic Club, a club which he headed for the past 18 years. In 1961 he was named a life member and in 1966 he became an honorary life member.

Mr. Klimeczko was also chairman of the Holy Apostles SS. Peter & Paul Parish Catholic Charities Appeal annual drive since 1939.

In 1959, he served as vice-chairman of the drive.

He also served as chairman of the parish's steering committee and has been a trustee of the parish since 1951. He was a member of the St. Anthony's Society and past president of its Holy Name Society. In 1961 he was named the parish Father of the Year for service.

ORGANIZED BOWLING PROGRAM

In 1944, Mr. Klimeczko organized the diocese's Catholic Youth Organization bowling program. He has served as diocesan bowling supervisor of the group.

The late Most Rev. Joseph A. Burke, former bishop of the Diocese of Buffalo, awarded to Mr. Klimeczko the Deo et Juventute Award (for God and youth) for his enthusiasm on behalf of the youth of the diocese.

In 1967 he was honored by the Catholic War Veterans for his service to the church. They awarded him their For Home Award. For his volunteer service to the church he was awarded, in 1970, the St. Joseph the Worker Award by the diocese.

Mr. Klimeczko was also a member of the Bishop's Board of Governors, the Diocesan Youth Advisory Board and the Diocesan Council of Holy Name Societies.

In 1970, the Am-Pol Eagle named him its Man of the Year, for his community service.

Mr. Klimeczko was a Fourth Degree member of Buffalo Council 184, Knights of Columbus, and a member of the Cordova Caravan, Order of the Alhambra of the Knights of Columbus.

ILLNESS FORCED RETIREMENT

In 1969, Mr. Klimeczko retired as senior draftsman in the Engineering and Gearing Dept. of the Westinghouse Electric Corp. in Cheektowaga due to illness. He was employed by that company for 24 years.

Westinghouse presented to Mr. Klimeczko its Citizenship Award in 1959. He was a member of the Westinghouse Salaried Employees Assn. and Westinghouse Credit Union.

A graduate of the former Technical High School of Buffalo, Mr. Klimeczko was a member of the Parents Guild of Bishop Ryan High School and of Elmira and Canisius Colleges. He also belonged to the Polish Union of America Group 257.

He was the beloved husband of Helen B. (Klawitter), father of Antoinette, Christine and Michael, son of Joseph F. and Catherine Klimeczko Sr.

Funeral services will be held on Saturday at Holy Apostles Peter and Paul Church. Interment will be in the family plot at St. Stanislaus Cemetery.

WHO CARES

(By Jim Mosey)

In September, bowling entries will be mailed and brought into the Youth Department as usual.

In October, CYO-CYAC bowling will begin as usual.

It will begin its 28th year but not as usual. Something will be missing; or more precisely someone will be missing. Joe Klimeczko, Mr. Bowling, will not be there. The soft-spoken, very efficient, mild-mannered giant of a man, the bowling supervisor extraordinare will be missing for the first time in 28 years.

I met Joe, for the first time, less than two years ago as he lie in a hospital bed just recovering from major surgery. I was amazed by the man's fortitude and acceptance and completely taken by his simple charm. In the next 20 months or so I got to know him better and found my first impression to be correct.

A winner of the "For God and Youth Award," Joe exemplified what an award recipient should be. His work with and for youth cannot be questioned. Yes, something will be missing in bowling this season; the fortress, the strength, the backbone.

Someone will be missing. Joe Klimeczko, a man, has left us for now, but I'm sure Joe will be bowling alongside many people this year and for years to come.

Requiescat in pace . . . He Cared.

CRUSADE TO SAVE LAKE SUPERIOR

HON. MARVIN L. ESCH

OF MICHIGAN

IN THE HOUSE OF REPRESENTATIVES

Monday, June 21, 1971

Mr. ESCH. Mr. Speaker, a former Michiganer, who now resides in Potomac, Md., Mrs. Verna Mize, has launched a crusade to save the lake she loves—Lake Superior. Her interest in the lake's preservation began in 1967 shortly after she and her husband returned from a vacation on the Upper Peninsula. Since then, she has spent over 3,500 hours contacting Government officials and collecting signatures for a petition to the President to keep the waters clean. The following articles by Mr. Saul Friedman of the Detroit Free Press and Roberta Hornig of the Washington Evening Star accurately describe her praiseworthy efforts on behalf of the environment.

I include the articles, as follows:

CRUSADE FOR LAKE SHE LOVES

(By Roberta Hornig)

In mid-1969, Mrs. Verna Mize of Potomac, Md., carried two bags of rocks picked from the shores of Lake Superior up to Capitol Hill and handed them out as paperweights to Midwest congressmen.

Last summer, she spent her two-week vacation collecting signatures in Houghton County, Mich., and turned a petition with 5,182 names over to the White House, hoping it would reach President Nixon.

In April, she testified as a citizen witness at a congressional hearing.

Over the last year she also talked to four governors at the governors' conference here; visited William D. Ruckelshaus, administrator of the Environmental Protection Agency; and went to the offices of the President's Council on Environmental Quality, several other government agencies, and a number of senators and representatives.

She estimates she has written between 2,000 and 3,000 letters to citizens groups, reporters, newspapers, scientists, federal, state and local officials, and spent 3,500 hours as part of the crusade she started four years ago, long before fighting pollution was a popular cause, to save Lake Superior, her favorite waterway, from pollution by a lone but extremely powerful industry.

"You know, President Nixon has repeatedly called for saving the Great Lakes. Sometimes I feel like I'm carrying out the President's expressed desires more than the people being paid to do so," she said the other day in an interview.

Mrs. Mize, a government secretary and wife of a retired Marine officer, seems an unlikely crusader. She is rather prim, polite, kindly and middle-aged.

She is, however, outraged that anyone would dare dirty the world's largest fresh water lake, "the lake that has been my love since I was a toddler."

"Goodness, we drank it. We swam in it. I was probably christened in it," she says.

Mrs. Mize's headquarters for her campaign is in an enclosed back porch, overlooking a garden in her modest home. There surrounded by files in cardboard boxes, rocks from the lake shore and bottles full of its putty-colored water, she writes her letters and plans her next moves.

Her crusade on behalf of Lake Superior began in 1967, shortly after she and her husband returned from a vacation on Michigan's Upper Peninsula.

She was bragging about the lake being drinking-water clean when a friend told her it might be in trouble—from wastes emptied into it by Reserve Mining Co., a huge iron ore producer at Silver Bay, Minn., owned by Armco and Republic Steel Cos.

Reserve daily discards into the lake about 67,000 tons of taconite tailings, or finely ground ore wastes. The company says the tailings do the water no harm. The federal government, after six enforcement conferences—the first in May 1969—has decided Reserve is a polluter.

Mrs. Mize reports that, when she first learned about the company, she assumed no one else knew about the dumping or it would be stopped. That's when she began her letter writing and visits to government officials.

PETITIONED PRESIDENT NIXON

"I found I wasn't getting any action from officials," she mused. "Very polite thanks, but nothing happened."

Last summer she decided her individual appeals had done no good and that she might have more luck if she "appealed in the name of many people."

She drafted a petition to Nixon that read: "We the undersigned, respectfully and urgently request your speedy intervention to rescue Lake Superior from the ravages of taconite tailing degradation at Silver Bay, Minn., by the Reserve Mining Co. Pure Lake Superior is eminently worthy of your personal attention. We appreciate the concern for the Great Lakes you have already voiced, and we earnestly ask that you stop Reserve's use of clean Lake Superior for its own free private dump! Please, Mr. President, save 'the clear transparent water . . . the shining Big Sea Water' for us and for posterity."

With a dozen petitions, each with room for 20 names, she left on a two-week vacation for her native Houghton County believing, she says, that she could get 100 signatures.

She quickly got many more than that.

While between planes in Chicago, she began chatting with a fellow passenger and told him about the petitions.

"What are you going to save it from, the man asked, and I told him," Mrs. Mize says. He signed, as did others in the waiting room. When she got on the plane, other passengers signed, and when she arrived in Houghton County, the passengers told friends waiting.

By the next days, news of the petition had spread through the county by word of mouth. Mrs. Mize says that within 24 hours she had a volunteer crew to help collect names. The volunteers included university students, storekeepers, laborers, tradesmen, school children and a 76-year-old former mayor.

She ran out of petitions and had to get copies made, a job the Chamber of Commerce gladly did for her.

"People in every walk of life not only signed but volunteered to circulate the petitions. Businessmen asked for copies to put in their shops. They were everywhere . . . from bars to a Bible camp," she reports.

"This couldn't possibly have happened unless people cared."

When she came home, she had 5,182 names, and she sent the petitions to the White House. In reply, she received a note of thanks.

The taconite tailings still go into Lake Superior, but Mrs. Mize said the crusade may yet end successfully.

She has high hopes that action will result through the Environmental Protection Agency, which on May 2 sent Reserve a 180-day notice to come up with an alternate plan

for getting rid of its wastes. An interim meeting between the company and the government is set for Thursday.

[From the Detroit Free Press, March 22, 1971]

THE PRICE OF POLLUTION

Even if one were to use only economics as the standard by which the Lake Superior operations of the Reserve Mining Corp. are to be judged, it is difficult to rationalize the mercy being shown to Reserve over its dumping.

To continue to permit the Minnesota plant to foul the waters of Lake Superior is not merely bad ecology and bad aesthetics. In the most fundamental sense, it is bad economics. This, oddly enough, is the way it often is with ecology: the hard-nosed entrepreneur types are the most impractical of all for the long run, and the "nuts" are the ones who have economics on their side.

If we may digress for a moment, consider how much earlier, short-sighted commercial exploitation of land in Detroit did to insure economic decay today. In our rush to maximize short-term profit, we destroy the basis for long-term gains.

So it is with the ruination of splendid Lake Superior. We ought to revere the waters of the lake because it is so beautiful, because it has inspired men to poetry, because of a reverence for the world as it was bequeathed to us.

We ought, yes; but even if our souls are so dead that they cannot stir in anger over what is being done to the shining Big-Sea water, we cannot tolerate it on the most mundane level.

The fact is that we are piling up bills for ourselves that we cannot pay. How will we finance the cleaning up of the mess we are making? There was a time in America when we could assume that our profligacy would not catch up with us in our own lifetimes and probably not in our children's lifetimes.

No more than we be so charitable about the implications of our wastefulness. The bills are coming in. The bonds to pay the debts accumulated over the last two or three generations are being issued. The most efficient and productive society on earth has achieved its ultimate efficiency in the corruption of the earth.

Well, the clear implication is that we will have to pay, and we cannot—even in our most cynical, profit-oriented perspective—justify what Reserve is doing to Lake Superior and what others are carrying even further in the immediate Detroit vicinity. The bureaucratic doubletalk is not good enough. For our money's sake as well as our souls', we must end the destruction of the lakes.

[From the Detroit Free Press, Mar. 15, 1971]

PLEASE, LET US HEED SUCH NUTS

(By Saul Friedman)

WASHINGTON.—Verna Mize will not like this. She does not want to endanger her modest government job. She does not seek personal publicity.

So let it quickly be said that she has done absolutely nothing to embarrass her employer, to violate government regulations or to detract from her work. And the publicity she seeks is not for her benefit.

It is for her girlhood friend—Lake Superior, a vast and beautiful expanse that the Indians, with their instinctive wisdom and their humility toward the things of nature, called "Gitche Gumee," or "Great Water."

Verna Mize came to see me on a cold, rainy Saturday when she would have been better off in her comfortable home in one of Washington's suburbs. Like someone appealing on behalf of a loved one, she asked: "Will you help me save Lake Superior?"

A couple of years ago she might have been indulged, and ignored, as a well-meaning nut. But lately, nuts like Verna Mize—sweet ladies, long-haired lawyers and our own children—have been doing more good for all of us than the rational, parlorizing liberals who take the measure of their enemies with fondue forks. We should all be such nuts.

Verna Mize said she wished to put a stop to the pollution of Lake Superior by the Reserve Mining Co., a huge iron-ore producer at Silver Bay, Minn., owned by the Armco and Republic steel companies.

For nearly 15 years, over the objections of environmentalists who were ahead of their time, Reserve has been dumping millions of tons of ore waste into Lake Superior. Two years ago, as conservation became politically chic, and when the other Great Lakes were already dead or dying, virtually everyone agreed that the dumping into Lake Superior should stop. Around here, however, agreement does not necessarily mean action.

"In those two years 40 million tons of waste have gone into the lake," Verna Mize said. "And it's still going in, 67,000 tons a day, every day."

She could see in her mind's eye that unending waterfall of gray gunk hitting the lake, as if beating it to death.

In naming the lake, the white men meant to show only that it was superior to all the other lakes, not to the men themselves. They presumed they could demand that it submit to their embrace. The Indians, content to simply live with it, used to call its waterfalls "Laughing Water." Now, the white man's waterfall at Silver Bay brings Verna Mize to tears.

Like the Indians who found God in living things, she says: "That lake has a touch of the divine."

Prim, brown-haired and middle-aged, with a nasal Midwestern twang, Verna Mize was born and raised in Houghton County, in Michigan's Upper Peninsula. And although she and her husband, a retired Marine, do not live there anymore, they return on vacations to see the lake.

"My love for the lake goes back to when I first saw it as a little girl, and the sight of it made me cry," she said. "Now, on vacations, when we drive around that bend where you can see the lake for the first time, I still get goose flesh."

She was there in 1967, sitting in a boat with a friend and saying how wonderful it was that at least one lake was left where you could dip out a drink of clean water. He told her she would not be able to do that for long. And when she asked why, he took her to Silver Bay.

If she could have jumped in and held back that waterfall, Verna Mize would have done so, even as the risk of her life, I think. Instead, she began a lonely crusade to move the Washington bureaucracy to action. And it became an obsession.

She has written more than 2,000 letters to politicians, scientists, newspapers, reporters, federal, state and local officials, and anyone else who could help. She cajoled congressional staff members to spur their bosses to action. She unearthed facts from obscure journals to make her case. And she even submitted a well-thought-out plan for disposal on land of the ore wastes.

Last summer she spent her vacation going from town to town in the Upper Peninsula getting more than 5,000 signatures on her own petition to the President to save the lake. And she carries with her, wherever she goes, a bottle of water from the lake at Silver Bay. It looks like dirty milk, and she uses it in her appeals.

In one recent week she spoke personally with the governors of Michigan, Wisconsin and Minnesota, when they visited Washington, and with William D. Ruckelshaus, the head of the new Environmental Protection Agency.

Like senators and congressmen who have heard her appeals, the governors and Ruckelshaus could not refuse Verna Mize their pledges of help. And for the first time she has begun to think she will win.

If she does—and even if she doesn't—let this column be a medal for Verna Mize. There are so few victories these days.

[From the Detroit Free Press, Mar. 14, 1971]

MINE WASTES PERIL LAKE SUPERIOR

(By Saul Friedman)

WASHINGTON.—Each day now, by the shores of Gitche Gumee—the Indian name for Lake Superior—67,000 tons of gray, powdery iron-mining wastes are dumped into the Big-Sea-Water.

Since 1956, millions of tons of the waste—called taconite tailings—have gone into the lake from the Reserve Mining Co. plant at Silver Bay, Minn.

Despite assurances by the company 15 years ago that the tailings would sink, they have been found in the water supply of Duluth and in the lake off Marquette, Mich., hundreds of miles away.

As early as two years ago, a federal study found that the taconite was clouding the lake, increasing algae, killing fish food and newborn salmon and trout. Last week the latest in a long line of studies concluded the taconite tailings should be dumped on land. The Environmental Protection Administration seems to agree.

But in a classic example of federal-state bureaucracy and pollution politics, an EPA source said it will be months before the agency moves to save the lake.

"We cannot promise action before the end of the year," said an EPA spokesman. He added that he did not know what action would be taken.

Conservationists have become so concerned about the future of the lake that the magazine of the Audubon Society suggested that it may soon be called "Lake Inferior."

"There is dire trouble on the horizon of this last clean Great Lake," the magazine said. "If we find one lake which to date has escaped its fate as a public dumping ground, we hasten to fill it with the refuse of our civilization and leave it polluted as a monument to progress. Lake Superior, you were a gem."

Lake Superior, with 31,820 square miles of water surrounded by nearly 3,000 miles of shoreline, is the largest lake in the country and the second largest in the world. It contains one-twelfth of all the fresh water on earth.

Its future is of special concern to environmentalists, not only because it is the last of the clean Great Lakes. It also flushes the other Great Lakes, all of which are contaminated, and they cannot be brought back to health without Lake Superior. If the biggest of the lakes should die, the four others would be irretrievably lost.

Lake Superior suffers from the wastes of hundreds of factories, towns and homes along its shores. But the biggest dumper is the Reserve Mining Co., which is jointly owned by Republic and Armco steel companies.

At Silver Lake, Reserve processes the iron-bearing taconite taken from its mines inland at Babbitt, Minn. Because the iron is embedded in the taconite, the ore is crushed into a fine, talcum-like powder, and washed. The iron is then extracted by magnets and the rest of the ore is dumped into the lake.

The process uses 350,000 gallons of water a minute, and for every ton of iron ore extracted, two tons of waste—tailings—are dumped in the lake in a huge, endless, brackish, gray waterfall.

Each year, Reserve produces about 11 million tons of iron pellets at its plant, which means about 22 million tons of waste go into Lake Superior. The waste contains tons of copper, nickel, zinc, lead, chromium, phos-

phorus, manganese and also silica, iron and arsenic.

In Michigan and Wisconsin the law requires that mining wastes be dumped on land. In Minnesota, where the mining companies have great influence in the Legislature, dumping in the lake is not against the law.

Nevertheless, all the Minnesota mining companies, including those extracting taconite, dump their wastes on land—except Reserve, the first and the largest of the taconite miners.

So far the company has successfully delayed and resisted costly requirements to dump its tailings on land—with the help of the federal and state governments, the Army Corps of Engineers, and the anti-pollution bureaucracy.

Reserve's original permit to dump was issued in 1948 when the Corps of Engineers rejected local fears of pollution. Permits were reissued without hearings in 1950 and again in 1960.

The last permit was to have expired Dec. 31, 1970. But at the company's request, the Corps of Engineers extended it indefinitely—again without a hearing. That helped touch off pressure for a closer look at taconite wastes and the Interior Department commissioned a study in 1967 headed by Dr. Charles H. Stoddard, the department's regional coordinator.

The Stoddard report was completed by December, 1968, but its findings were suppressed, partly as a result of pressure from Rep. John A. Blatnik, D-Minn., now chairman of the House Public Works Committee. Blatnik is a conservationist on environmental problems elsewhere. But Silver Bay and the Reserve Mining Co. are in his district.

Portions of the report were leaked to the press, including its conclusions that Reserve's operation was polluting the lake, that it was the only mining company dumping into the water, and that it should be stopped.

By the time the report was released to the public in April, 1969, it merely suggested the taconite dumping be kept "under continuing surveillance." However, it also said the taconite was damaging the delicate ecological balance of the lake and ruining the cold, clear waters.

Reserve's spokesmen (one of whom had been hired from the Interior Department) and Blatnik belittled the Stoddard report. But other scientists working for Minnesota, Michigan, Wisconsin and the federal government agreed with its findings.

As a result of the report, the federal government, in May, 1969, convened the Lake Superior Enforcement Conference, a meeting of state and federal officials to determine what should be done about Reserve.

Murray Stein, chairman of the conference, says in retrospect it has been a cumbersome and ineffective device in ending the pollution of Lake Superior.

Five months after the first conference, Minnesota proposed another study—to be done by Reserve. The conference suggested that Reserve return in six months with a proposal to reduce—but not stop—its dumping.

Reserve's own study confirmed it was spoiling the lake. But the six months it had to come up with a solution was extended to 15 months. When it was submitted Jan. 14, Reserve proposed this instead of dumping the tailings into the lake, it be permitted to pipe it beneath the water—like sweeping it under a rug.

Reserve insisted that the tailings would remain at the bottom and form a reef to protect the lake.

The Lake Superior Enforcement Conference created another committee to study the Reserve proposal and last week the committee rejected it and recommended to the conference that the company be required to dump its tailings on land.

The company calls this requirement impractical and says it would cost $150 million. The U.S. Bureau of Mines puts the cost at about $7 million.

The Environmental Protection Administration is about to give up on the conference and take matters into its own hands. But it is moving slowly, though at any time it can order Reserve to stop its dumping in 180 days. Even the Corps of Engineers, under the 1899 Refuse Dumping Act, could file charges against Reserve, but has declined to do so.

On the contrary. Lt. Gen. Frederick L. Clarke, chief of engineers in Duluth, assured the company that the corps, which must decide whether to issue a new permit by July 1, is "trying to weigh the economic aspects of the Reserve Mining Co. operation against the deleterious effects that are alleged with respect to the lake."

And under no circumstances, Clarke added, would the corps force Reserve to shut down—even temporarily.

NOISE AND THE CONSUMER—THE NOISE DISCLOSURE ACT

HON. WILLIAM F. RYAN

OF NEW YORK

IN THE HOUSE OF REPRESENTATIVES

Monday, June 21, 1971

Mr. RYAN. Mr. Speaker, one of the prime reasons that the level of noises has increased so greatly over the past few decades—having doubled since 1955—is that the consumer has been unable to take noise into account as a factor when considering the purchase of a product.

Therefore, I have introduced legislation to insure that the consumer would be able to obtain reliable information in regard to the noise generated by a product he might buy. This legislation—the Noise Disclosure Act—H.R. 6988 and H.R. 6989—requires that all mechanical and electrical equipment transported in, sold in, or introduced into interstate commerce must have affixed a label or plate disclosing the product's operational noise level. The only items that could be exempted from this requirement would be those products which the Administrator of the Environmental Protection Agency finds to have an operational noise level "so low as to be negligible" and as to which "information with respect to such noise level will not be of value to the consumer."

Thus, a consumer would have the necessary information available to choose not only the quieter of two automobiles or pneumatic drills, but the quieter of two electric razors or hair dryers.

Such a labeling requirement would serve to stimulate the development and marketing of products designed with quiet in mind as well.

Thirty-four Members of Congress have joined with me in cosponsoring this legislation. They are:

Bella S. Abzug (N.Y.), Joseph Addabbo (N.Y.), Herman Badillo (N.Y.), Nick Begich (Alaska), Mario Biaggi (N.Y.), Jonathan Bingham (N.Y.), Frank Brasco (N.Y.), Phillip Burton (Calif.), James C. Cleveland (N.H.), Ronald Dellums (Calif.), John G. Dow (N.Y.), Don Edwards (Calif.), Ella T. Grasso (Conn.), Seymour Halpern (N.Y.), William Hathaway (Maine), Ken Hechler (W. Va.), Henry Helstoski (N.J.), Louise Day Hicks (Mass.), Robert Kastenmeier (Wis.), Edward Koch (N.Y.), Robert Leggett (Calif.), Abner Mikva (Ill.), Parren Mitchell (Md.), William Moorhead (Pa.), Claude Pepper (Fla.), Bertram Podell (N.Y.), Charles B. Rangel (N.Y.), Thomas M. Rees (Calif.), Robert Roe (N.J.), Benjamin Rosenthal (N.Y.), Edward Roybal (Calif.), James Scheuer (N.Y.), John Seiberling (Ohio) and Victor Veysey (Calif.).

At this point I include in the RECORD an article from the May 22 edition of Business Week magazine outlining some of the efforts being undertaken to produce quieter home appliances.

I also include an article by Bruce Ingersoll published in the June 21 Washington Evening Star on the rising levels of noise in the home and its effects.

There also follows an article by Catherine Houck from the June 21 New York magazine detailing measures that the consumer can take to deamplify the noise in his home:

[From Business Week, May 22, 1971]

A PITCH FOR THE NOISELESS HOME

It will never make the top 40, but *The Quiet Dishwasher*, produced by General Electric Co., is already a big hit with the company's salesmen. The record is orchestrated with one of the latest Hotpoint dishwashers to show customers how quietly the new model runs.

The $7-billion appliance industry, once concerned only with convincing housewives that their machines really could churn away that grease, grind up messy garbage, crunch ice for Saturday's party, is beginning to respond to consumer screams for more quiet in the home. Faced with the prospect of federal legislation, plus the acoustically thinner materials in newer homes, most appliance designers are turning to sound damping and insulating tricks to muffle their products. In a market that has moved 1-billion units in the last decade, the stakes are high.

The stakes seem high for the consumer, too. Though many researchers argue that definitive data relating noise to health is lacking, some experts claim that noise from certain appliances may be linked to such medical problems as nervousness, fatigue, and increased blood pressure. Others believe household noise, while not directly associated with hearing damage, might aggravate the tendency toward hearing loss among workers who spend eight hours in a noisy factory. They also say that the racket from today's plethora of wonder appliances may help to cause accidents and a breakdown in communications and family relations in general.

The problem. But the biggest worry is simply that the modern housewife finds noisy appliances irritating. Although different people are bothered by different noise levels, researchers note that generally sound is bothersome at 70 decibels, or just above normal TV volume. A University of Wisconsin research report suggests that appliance noise should not exceed 70 decibels. Yet many of the appliances measured in the study, including vacuum cleaners, blenders, disposers, and vent fans, did exceed that level. Paul Tope, senior research engineer for Whirlpool Corp., puts it another way: "When you pick up the telephone in the dining room but you can't talk to your party because the dishwasher is going, then it's time to get concerned."

To get a marketing edge, most appliance makers have already started tackling the problem on the corporate level. Mitchell Nasser, GE's manager of engineering for dishwasher and disposer products, explains: "Before, we simply didn't want ours to be the noisiest machines in the industry. Now we're shooting for the quietest." GE is constructing a massive $500,000 sound laboratory in Louisville, Ky. solely for its appliance group. Westinghouse Electric Corp. also has a cor-

porate sound control program for consumer products to supplement efforts on the divisional level.

Improvements have already been made. Westinghouse, for instance, boasts that its new Continental line of air conditioners is the quietest on the market because the noisy components are placed outside the window (presumably becoming the neighbor's problem). Whirlpool claims it has cut noise from its clothes washers in half with soft rubber mounts that isolate vibrations from the motor. Disposers can now be ordered from most manufacturers with an optional glass fiber sound shield, which considerably tones down their normal ear-piercing level, sometimes as high as 100 decibels, or roughly equivalent to the roar from a power mower. Many companies now wrap their dishwasher tubs in glass fiber, which, along with changes in motor design and mounting, has reduced noise appreciably.

Doubts. But some manufacturers still question the importance consumers place on quietness. The Hoover Co., which for years has promoted its vacuum cleaners with the slogan, "It beats, as it sweeps, as it cleans," thinks some noise is a marketing asset. "We have hung our hat on the noise from the rotating brushes in our products," observes J. E. Duff, director of research. "It's sort of a trademark."

Duff contends that the sound of a Hoover triggers visions of carpets being sucked miraculously clean by a powerful machine. He says that while the company does work to eliminate truly objectionable noises, partial noise reductions are not that salable. Hoover once test marketed a cleaner on the basis of its quietness. No sale, at least not on that pitch. Yet, it recently introduced a cleaner with a power drive nearly three times as loud, and that has become one of the company's hottest new products.

Some manufacturers see the Hoover philosophy as outmoded. "Ten years ago, it would have been difficult to sell a 20% noise reduction," says Richard Donegan, general manager for dishwashers and disposers at General Electric, "but you sure can sell that today."

Another GE manager, Hans Spauhaus, says: "When the industry first introduced a dishwasher, the housewife was glad just to get her hands out of the greasy, hot water. She didn't look to such peripheral things as noise. Now the consumer is telling the manufacturer to spend more money making this thing quiet."

Others agree with Duff. They feel that claims of quietness will continue to fall on deaf ears until sound ratings are set and products labeled according to their noise output. Recently, the industry approved standards for measuring air-conditioner noise, but as yet there are no plans to put such measurements on labels.

Last February, President Nixon proposed legislation that would allow the new Environmental Protection Agency to require noise ratings on appliances it believes too loud. Several similar bills now sit in Congress. Alvin Meyer, acting director of EPA's Office of Noise Abatement & Control, speculates that such labeling might ultimately require the manufacturer to divulge not only how loud an appliance is but also to what extent it interferes with speech. If communication is seriously impaired, "manufacturers aren't going to want to stick that on their products," notes Meyer.

Part of the problem, manufacturers claim, is the consumer himself. They contend that he demands compactness and power in appliances, and that both are likely to make more noise. "The refrigerator was very quiet 15 years ago," says Russell Fox, Westinghouse research director for consumer products, "then we began adding icemakers and frost-free freezers." Eventually, say the manufacturers, the consumer will have to choose between quiet and convenience.

COST

Ultimately, the cost to stifle noise may prove to be the limiting factor. Noise control has already added about $10 to the price of the newer dishwashers, and making the machine virtually noiseless could tack on another $20 or more. Some appliance manufacturers believe the consumer is not ready to pay the premium.

A few of them suggest that builders should share the responsibility—and the cost—for quieting the home. In home construction today, "building materials have been minimized, and the house itself is becoming a good transmitter," says F. Ryder Amthor, manager of Westinghouse's Consumer Products Development Center. Walls have become thinner, he says, and floors are often so flexible "they become drumheads."

Builders disagree. Bsides, they say, with building costs spiraling, few buyers would pay for acoustic improvements. Their argument is hard to dispute. About two years ago, a major supplier of glass fiber tried to sell consumers on the idea of a "quiet room" that would cost only $100 more to build. But nobody bought.

"In today's market, builders are looking for ways to save money, not new things to spend it on," says Joseph Melchior, executive vice-president of the Cleveland Home Builders Assn. "If there is a list of things builders have to worry about these days, noise pollution has got to be on the bottom."

[From the Washington Evening Star, June 21, 1971]

THE DIN HITS HOME

(By Bruce Ingersoll)

MADISON, Wis.—Noise may be breaking up families, driving spouses out of the house and widening the generation gap.

In this era, when there's a power tool and appliance for every domestic task, Dr. Jack C. Westman, professor of psychiatry at the University of Wisconsin, says he believes that any idea that the home is a place of peace and quiet has vanished.

Another long-cherished belief—that husbands and wives communicate, that parents and children sit down and talk together—is being shattered by stereophonic sound and television sets, he says.

In tape-recording sounds in 17 Madison homes, Westman discovered that members of these families spent, on the average, only 20 minutes a week talking to one another.

"This included very simple command-and-response communications between parents and children," he said.

Westman is not about to pronounce the art of conversation dead, but it certainly isn't practiced in the U.S. home as often as one may think. Noise—usually defined as unwanted sound—undoubtedly interferes with communications and frustrates conversation, he said.

"Togetherness at the supper table is hampered by household noises and by the general tenseness fanned by the daylong din," Westman continued. Hearing is involuntary, he said; although our bodies can adapt amazingly to noisy surroundings, adjustment exacts a toll.

"We don't understand that noise makes us less efficient, less effective and more tense," he said. "Instead, we scapegoat. We take our tensions out on each other. Mothers yell at the youngsters. Parents bicker."

Working-weary husbands, he said, are coming home to bedlam and to spouses who are showing the "tired-mother syndrome."

"Tired" mothers have all the symptoms of combat fatigue, he said. Having undergone a noise bombardment all day—running the vacuum cleaner, quelling quarrelsome kids, using the electric mixer—they are short-fused, depressed, done-in. Their heads throb, their stomachs churn.

Having an extremely active child around doesn't make a housewife's day any easier, added Westman, who is director of the University of Wisconsin Medical School's child psychiatry unit. Such a child, he said, is easily distracted, flounders in school and can be touched off by the slightest noise. One child in 10 is like this, he said.

"Noise spurs the child into obnoxious behavior," Westman explained. "He makes aggravating noises. This provokes the mother. She cracks down. The end result—a vicious circle of mutual annoyance."

Westman said the problem is that mothers feel "overwhelmed" but don't know quite why. It's the racket—a factor that only psychiatrists and a handful of environmental designers have taken proper note of, he added.

With the proliferation of household appliances in the last decade, the average U.S. kitchen can be as noisy as a boiler room, he maintained.

The garbage disposal, electric mixer, high-speed blender, vent fan on the range, knife sharpener and wall exhaust fan all can create more than 70 decibels—enough to constrict arteries and raise blood pressure, creating stress.

The whir of the blender and the wall fan's roar is loud enough (90 decibels) to make a housewife visibly blanch and her pupils dilate. At this noise level, the adrenalin gland works overtime. Muscles are tensed and nervous energy is squandered, university researchers said.

It is no coincidence that more accidents occur in the kitchen than anywhere else in the home, they said. Noise, Westman stressed, impairs efficiency and makes for carelessness.

"Appliance manufacturers have found that noisy devices sell better because they sound powerful," one researcher said. The public must be alerted to the hazards of noise so as to create a consumer demand for quiet appliances, he maintains.

[From New York magazine, June 21, 1971]

BUYING QUIET

(By Catherine Houck)

Noise causes the skin to pale, muscles to tense and pressure-building adrenalin to shoot into the bloodstream; it can lead to hypertension, constricted blood vessels and dyspepsia; it causes rats born of noise-polluted mothers to be more obtuse at learning maze patterns than rats born of mothers enjoying peace and quiet; it prevents dreams, and sleep specialists warn that people consistently deprived of dreams develop hallucinations, psychoses and homicidal impulses. One would suppose, given these circumstances, that quiet would be dear to the heart of everyone and noise an affliction dealt with at the dawn of civilization. No such luck. The din has, if anything, amplified.

While we are far from the day when noise can be regulated as easily as room temperature, there are, nonetheless, many sensible things you can do in your apartment to deamplify.

Probably the most common noise problem in New York is street noise—horns, trucks, the general seething mass of the populace on the move. One of the happiest investments, therefore, that a prosperous New Yorker can make is soundproof windows. Steel Glide Manufacturing Corporation (101 Park Avenue, 683–1723) makes such "city-proof" windows. Prices start at $130 for a 36-by-54-inch window. Steel Glide will install windows in one room on a two-week trial basis, and if you aren't satisfied will remove them at no cost. Handsome and individually custom-fitted, these windows are guaranteed to keep out 70 to 90 per cent of all city noise (throughout the entire frequency spectrum), keep out dust and soot and provide thermal insulation—cityproofed rooms require less

heat in winter and stay cooler in summer—a great advantage when Con Ed rations electricity. They can be installed with a special Fiberglas ventilation unit ($35) to keep out noise and dirt, but allow a flow of clean air. The windows are also supposed to be burglarproof.

For the less prosperous, the Sundial Shade & Glass Corporation (1491 First Avenue, 734–0838) installs storm windows beginning at $25 for a 3-by-5-foot window. Framed in corked, interlocked aluminum, they come with two glass panes, one of which slides up over a screen for summer, and are fitted airtightly over the outside of your present window. Storm windows cut out much city noise, and provide thermal and dirt insulation.

Another source of rage and frustration in New York is the thinness of walls. Your neighbor's noise is either airborne sound (a baby crying) or impact sound (a baby banging the floor with fists like sledgehammers). Airborne sound—tinny radio babble, telephones, lovelorn cats, for instance, as well as voices—are all wall problems calling for insulation.

The best value for the least money is inch-thick cork, which owes its insulating qualities to its time in the factory pressure cooker. Dry air trapped in cork's cellular structure by heat deadens sound.

Cork comes in cases of 1-foot-by-3-foot sheets, at $18 a case, and two cases will do a 9-by-12 wall. It is a simple do-it-yourself project—easy to cut and easy to adhere—but should your flesh not be willing, AAA Decorative Cork (1909 66th Street, Brooklyn, 236–0764), which sells every kind of cork product imaginable, will install it for you at 60 cents a square foot, or approximately $60 for a 9-by-12 wall. Cork is virtually indestructible—stains can be removed with mild detergent, pieces accidentally torn away can be glued back and patching is invisible; nail holes will rapidly reseal themselves, a charming characteristic for art collectors who like to rearrange with each new acquisition. "It is easy to paint—not nearly as absorbent as it looks," says Leslie Stern of Cork Textures, Inc. (16 East 52nd Street, PL 8–0585), one of the world's large importers of cork. Cork can also be bought at any lumberyard.

A doubly effective measure is to glue or nail half-inch thick, sound deadening board ($5 for a 4-by-8-foot sheet, cut any way you want, at Canal Lumber Company, 18 Wooster Street; or at Butler Lumber, 220 West 14th Street), and glue the cork to that.

If you have a really staggering noise problem from next door you might have to do something more radical, such as building a second wall; acoustical contractors like Jade Acoustics Corporation (45-15 21st Street, Long Island City, 729-5690) will build you a guaranteed soundproof Fiberglas-and-sheetrock wall for $2.25 a square foot. Or if you have always had a yen for a brick wall, mason Sal Calcagno (232-7622) will build you one for approximately $4 a square foot, if you have an elevator. It is wise, however, before considering any such extreme measures, to have a talk with an acoustical consultant. An engineer from the architectural acoustics firm of Bolt, Beranck and Newman (101 Park Avenue, 683–8144) will come to your apartment and advise you at $20 and up an hour.

Doors are another source of airborne sound. Metal sheeting ($4.50 door-size at the hardware store) nailed to the door holds both sound and burglars at bay. (*Lead* sheeting will keep out radiation in case of atomic blast.) Cork is good on doors as well. No amount of insulation will keep sound from leaking under or over the door; rubber gasketing is of utmost importance. For $2 at the hardware store, you can buy a strip of metal with rubber on top which, when attached to the floor under the door or the doorframe on top, makes an effective sound-and-draft resister when the door is closed.

Airborne sound from below is perhaps the most difficult to deaden. Thickly padded carpets will help, both by muffling and, more important, by preventing *any* exterior sound that has managed to become interior sound from being amplified. Smooth hard surfaces are highly reflective and often bounce back 98 per cent of the sound that strikes them, which means that where there are no sound-absorbent materials sound will build to a higher level and subside more slowly, as in a gymnasium. Conversely, the reason the world seems subdued when it is snowing is not because there are fewer people afoot but because snow is soft and porous and absorbs sound. In any serious campaign for quiet, it helps to indulge in soft fuzziness, whether it be rugs, upholstered furniture or drapes.

Impact sound—sound transmitted by vibrations, such as stereos—is easiest to muffle at the source. It would be more effective, for instance, to buy your overhead neighbor a thickly padded carpet than to hire an acoustical contractor to build a double ceiling for $200 or $300. And acoustical tiles do a good job only at what they are designed to do—prevent the sound you make from traveling up to annoy your neighbors. The most common noise vibration problem comes, of course, from callous music aficionados grooving on their thousand-dollar crockery-rattling stereo speakers. A simple remedy is to put thick carpet remnants or foam rubber padding—a cut-up typewriter pad, for instance—under the speakers. It won't cut down on Mr. Music's super-duper sound but it will keep the vibes from traveling through the building.

For those who don't want to spend a penny on their lousy apartments, a happy alternative is sound masking. Hammacher Schlemmer (145 East 57th Street, 421–9000) sells sound conditioners for $19.95 and $25, as well as a new three-sounder (rain, surf and white sound) for $65. I have become so addicted to my $19.95 model that I can't sleep without it. Acoustical experts at Bolt, Beranek and Newman, however, point out that a good quality radio, preferably the radio component in your stereo system, will do much the same job. You simply tune between stations, adjust volume and fiddle with the base and treble until you get a soothing effect, and *voila!* White sound. If your television has been gathering cobwebs you can enlist its aid. It is the picture on a non-channel that grates; if you cover those dancing electrons, adjust the volume control to taste and give yourself five minutes to get used to the idea, you will find that a television set makes a very efficient surf roar.

Sometimes a combination of masking noise and ear plugging is effective. Norman Dine (33 Halsted Street on the Plaza, East Orange, New Jersey) will sell or mail you a pair of acoustical earmuffs, satisfaction guaranteed, for $10.95. And there is a new product—Flents Quiet-Down—which has the advantage of not putting dents in your head while you sleep. This brand of Swedish wool will not muffle voices, but does considerably deaden high and low frequencies; if you blanch and quiver in subway stations you will welcome it. It is not yet available in drugstores but can be ordered from the factory—$1.25 for a pouchful of enough fiber to make eight to ten pairs: Flents Products Co., Inc., 103 Park Avenue, New York, New York.

Don't forget that you have been buying quiet for years with your tax dollars. When tactful requests or crazed pleadings get you nowhere, you still have your rights as a citizen. If you would like to see the malevolent creature next door and her yipping Chihuahua behind bars, here is a quick rundown of New York City laws on noise.

Section 435–5 of the City Administrative Code prohibits the creation of any unreasonably loud, disturbing and unnecessary noise, including specifically: (1) sounding horns except for a good reason; (2) playing radios, phonographs or musical instruments, particularly between eleven at night and seven in the morning (*but anytime that it is loud, disturbing and unnecessary*); (3) keeping animals or birds which by frequent or persistent noise disturb the repose of any person in the vicinity; (4) use of any vehicle which creates loud and unnecessary grating, grinding, rattling or other noise; (5) blowing steam whistles except under certain reasonable conditions; (6) the use of practically any engine without a muffler to prevent loud or explosive noises; (7) the excavation, demolition, alteration or repair of any building except between 7 a.m. and 6 p.m. on weekdays, except in emergency; (8) the creation of excessive noise by a school, hospital or law court; (9) the creation of loud and excessive noise in loading or unloading vehicles or in opening and destroying bales, boxes, etc.; (10) noisy peddlers, and (11) the use of any drum, loudspeaker or other instrument to attract attention to any performance, sale or display of merchandise. Violation of these ordinances will surprisingly often rate action from your local police precinct. Their response, police say, depends on how busy they are with more serious complaints. They *do* respond, however, as soon as they can—and they *do* issue summonses. They expect a certain number of noise complaints, so don't be too timid to call.

Unfortunately, the problem is often more complicated than a simple disturbing-the-peace complaint. One New Yorker, an ex-actor, Robert Alex Baron, couldn't do anything about the noise generated outside his apartment by a battery of five air compressors and dozens of jackhammers and rock drills operating for ten hours a day five days a week, because the noise was *legal*. Traumatized by the experience, he quit his job and founded Citizens for a Quieter City (150 Amsterdam Avenue at 66th Street, 355–6206), the local volunteer organization for quiet. They are the people responsible for quieter garbage collection, for most of the recent attempts of anti-noise legislation and for persuading manufacturers to try to produce quieter construction equipment. If the aims of this organization were carried out, the stopgap measures discussed here would not be needed.

Should you be harassed by a cacophony similar to Mr. Baron's which seems beyond the police, or if the police don't seem interested in your peace of mind, call 966–7500, the Central Complaint Office of the Environmental Protection Administration. They in turn will relay the complaint to the Bureau of Noise Abatement. The Bureau works closely with the police and, if there is any possible illegality, will ask the police to respond. If the noise is legal, such as construction site noise or a discothèque before eleven o'clock at night, the Bureau exerts "moral persuasion"—letters and phone calls to shame the offenders into public responsibility.

"Above all," says Robert Bennin, director of the BNA, "if you have a noise problem, don't shrug your shoulders and say nobody will do anything anyway so why bother. Noise pollution is only now being recognized as a problem and it *needs* citizen involvement."

Finally, you can be desensitized against noise. "The most sensible place to deal with unwelcome sound is inside your own head," says Lynne Gordon at the Hypnosis Center of New York (160 West 73rd Street, TR 7–2113). She maintains that through self-hypnosis you can learn to become unaware of noise. It is, after all, an attitude; one man's noise is another man's music. Self-hypnosis, she says, is nothing more than learning to use the concentrated power of your own mind to respond positively rather

than negatively. Miss Gordon, an established hypnotherapist who has studied and taught throughout the world, charges $25 for the first session, and $15 for continuing sessions. Some people, she says, respond almost immediately, while others take several sessions. Her enthusiasm is compelling, and she maintains that she can help almost anyone.

One last radical resort for those who have tried everything and thrown up their hands in despair is Industrial Acoustics' (380 Southern Boulevard, Bronx, 292-0180) ventilated all-purpose portable soundproof room at $2,500 and up. It cuts 99.5 per cent of all sound, leaving the last .5 only in case something happens outside that you should know about, such as a bomb going off. In spite of the fact that the room is only portable on a fork-lift tow truck. Industrial Acoustics executives report that business is "going very nicely."

HEALTH REFORM

HON. DONALD M. FRASER

OF MINNESOTA

IN THE HOUSE OF REPRESENTATIVES

Monday, June 21, 1971

Mr. FRASER. Mr. Speaker, the need for health services was aptly demonstrated at the health-care hearings which I held in Minneapolis. Two surveys of health-care need in our city were presented.

The first, prepared by Charles Deagan in cooperation with the Lutheran Deaconess Hospital, focused on the Indian population in Minneapolis. Mr. Deagan is chairman of the Indian health advisory committee of the hospital and is actively pursuing ways to improve health care for Indian households in the Twin Cities.

The other survey was undertaken by Enos G. Butenuth who is the resident planner in the model city program. This survey focused specifically on the dental, hearing, and vision problems of senior citizens. The following are copies of both surveys:

REPORT

This is prepared for a report by Mr. Charles Deagon at the hearing on Saturday, February 27 1972 called by Rep. Donald M. Fraser, at the Heritage Hall, Minneapolis public library.

The inner city hospital is adversely affected by its location. Its problems are compounded by this location, causing physicians to move to the suburbs, population decline, and the well recognized problems of poor housing, disadvantaged persons, high crime rates, vandalism, such problems threatening the hospital's very existence.

As a result its patient population is not able to pay for services which become more costly because of a decreasing census.

The hospital relies more and more on categorical aid patients with a fixed formula reimbursement for its income. Approximately 70% of our revenue is derived from such patients. It cannot improve its facilities or build new ones because it cannot obtain capital for such development.

It can operate from categorical aid, but it can never generate capital to expand its services for facility to remain viable and service its community.

RECOMMENDATIONS

1. National health insurance must cover people at least to $6,000. Nixon's $3,000 is not enough.

2. National health insurance must include dental care.

3. National health insurance must include a wide range of alcoholism services including detoxification services, half-way houses, counseling services and early intervention services for the problem drinker. It should not pay only for the dying alcoholic with liver cirrhosis etc. But also for saving early problem drinkers.

4. We need comprehensive health care financing for Indian people immediately including both in-patient and out-patient funds.

5. We need more funding for facilities to be added to existing hospitals so that they can become comprehensive health care centers for Indian persons.

6. We need more Federal funds for development of new programs of entry into health employment and health careers for Indian people.

7. Federal funds for development and operation of health services would be channeled through a partnership of consumers and providers.

8. OEO health to become active in innovative health programs with minorities other than black.

9. That Indian health be forced to serve the Indian that has the initiative to seek employment off the reservation.

10. That every Govt. area office that serves Indians be responsible to an areawide Indian health board. That this board have authority in conjunction with Indian health in Washington, D.C. to determine policy in Federal Indian health programs.

HIGHLIGHTS

Selected Highlights of Findings Mpls. urban Indian Health Study. Two hundred and twenty five Indian households were interviewed and multi-stage sampling technique was used. The present section recapitulates some of the major findings of the study.

The median number of persons covered by health insurance in a household is 1.89.

In 31.16 percent of the households someone needs a job. 84.88 percent of the households have no money available for medical care.

The primary source of emergency care for three out of five respondents would be the Emergency Room of Hennepin County.

In almost 8 out of 10 households someone is judged to need dental care.

One out of three households with children attending school report school difficulties due to health problems.

Of those not on welfare 27.41 percent have a yearly income of $3,000 or less, 37.15 percent earn between $3,000 and $6,000, and 24.75 percent earn more than $6,000 per year. In 42.67 percent of the households no male 21 years of age or over is present.

The primary source of non-emergency care for two out of five respondents would be the Emergency Room or Outpatient Department of Hennepin County General Hospital.

94.21 percent of the households would like a health care clinic with Indian employees.

28.88 percent of the households have a car available during the day.

65.77 percent of the respondents do not have a driver's license.

49.78 percent of the households do not have health insurance coverage.

LUTHERAN DEACONESS HOSPITAL COMMUNITY HEALTH PROGRAMS

Progress report, Feb. 8, 1971)

LONG RANGE GOAL

LDH intends to develop comprehensive health services designed to meet the needs of special population groups located mainly within the Minneapolis Model City area.

The services to be developed include medical, dental, mental health, alcoholism, social and outreach services. The hospital also intends to develop new opportunities for employment in health jobs and new means of entry into health careers.

For technical services the hospital intends to utilize its existing departments (such as emergency, laboratory, radiology, pharmacy) and establish new departments, such as a Department of Dentistry, when necessary. The services of the hospital are and will continue to be readily available and useful, both for all Model City residents and for private physicians and their patients using the hospital. However LDH will develop new methods of assembling and delivering the services in a variety of formats relevant to the special needs of specific population groups within the Model City area. Already identified as target groups needing specially designed formats for the delivery of services are American Indian persons, disadvantaged families and senior citizens.

PRESENT STATUS OF COMMUNITY HEALTH PROGRAMS

1. *Model City Early Care and Emergency Care Program.* The LDH Emergency Department is operated on a 24 hour basis as a walk-in clinic for the immediate care of acute illness and injury. For persons living in the Model City area, this service is subsidized by Model City funds if other payment mechanisms are not available and the patient is unable to pay. The service has been in full operation since Jan. 12, 1971 and is now undergoing rapid escalation in number of visits by Model City residents. Visits to the Emergency Department by Model City residents for the four months from September through December 1970 averaged 210 visits per month. For January 1971 there were 336 Model City resident visits. February 1971 is developing at a rate that will probably exceed 500 Model City resident visits. It is difficult to predict at what volume the Model City resident visits will stabilize.

2. *LDH Family Health Program.* LDH was awarded a federal Mental Retardation Staffing Grant averaging $62,500 per year for four years with which to provide outpatient medical, dental, psychological and social services for 150 families who are residents of Model City. To be eligible for the program the family must have at least one child with a handicapping condition or a learning problem.

One goal of this program is to bring together in a cohesive unit the basic skills necessary for dealing with the multiple problem family and the troubled child who may have learning, behavior and physical health problems. The basic skills to be assembled include those of the child psychologist, dentist, pediatrician, general physician, social worker and outreach worker. Other specialized workers and agencies are brought in when needed. At the present time the program is in the process of (1) bringing all these basic staff skills from part-time to full-time status, (2) developing an organizational structure within which this multi-disciplinary approach can function effectively and efficiently and (3) developing effective relationships with other agencies who share responsibility for the problems of families and children, particularly the neighborhood schools, the juvenile court system, the welfare department and a variety of alcoholism and drug abuse services.

A unique staffing and organizational structure is being developed by the program. Three American Indian persons, called case managers, are responsible for bringing disadvantaged families into the program and then acting as the link between the health professionals and the families in arranging for services, in interpreting the needs of the families to the health professionals, and in delivering health information to the families. These three workers also act as the agents of the families in dealing with the schools, parole officers, welfare workers and other agencies and institutions. These case managers provide the administrative mechanism both for bring-

ing families into the program and also for assembling a wide variety of specialized services together in a package suitable for the needs of the individual family and child.

Another goal of the program is to develop a successful long-term relationship with a large number of disadvantaged families living in the Model City area. The present staffing grant covers outpatient services for 150 families. The enrolling and evaluation and treatment of these families and initial medical, social and psychological services for these families began in December, 1970. Dental services will begin in April 1971. Thus far approximately 20 families have been completely absorbed into the program and another 20 families are in the process of enrollment and evaluation. The initial group of 150 families is to be completely enrolled and under care by September 1971 at which time it is hoped that there will be funding for a larger group of families.

3. *Development of American Indian Health Programs.* Approximately 4000 to 6000 American Indian persons live in the neighborhood surrounding Deaconess Hospital. Because of this location, because the hospital needs to develop new sources of patients, and because the hospital is seeking new forms in which to fulfill its traditional role of serving the sick and disadvantaged, the hospital has made a special commitment to work with the Indian Health Advisory Committee in the development of health services for Indians. In June 1970 LDH employed Charles Deegan, a representative of the Indian community, to work as Community Health Advisor to the hospital in developing health programs for Indians. Originally it was intended that these programs would be developed in cooperation with the planning of the new Hennepin County General Hospital. It was expected that a satellite clinic designed primarily for the needs of American Indian families would operate at LDH as part of the system of primary health centers to be established by Hennepin County. At the present time the Hennepin County plan for a system of primary health centers is in a state of suspension. Therefore LDH has decided to take the initiative in working with the Indian Health Advisory Committee in seeking a federal grant for the development and operation of health services for urban American Indian persons. Cooperative links with Hennepin County will be explored at all points in this planning.

An interview survey of the economic and health care status of 220 American Indian families was completed in January 1971 under the supervision of Midwest Systems and Research Inc. This survey is now undergoing data processing. The survey material, together with other existing health data, will be combined with a statement of problems and proposals by the Indian Health Advisory Committee to form the basis of federal grant applications. Beginning in approximately June 1971 LDH and the Indian Health Advisory Committee hope to have grant applications ready for submission covering medical, dental, mental health, alcoholism and health education programs as well as programs in health employment and entry into health careers.

4. *Unwed Mothers Program* LDH in cooperation with Lutheran Social Service and the Department of Obstetrics and Gynecology of Hennepin County General Hospital conducts a program of prenatal clinics, delivery and postpartum clinics for unwed mothers. In 1970 the prenatal clinic at LDH cared for 356 unwed mothers, 277 of whom were delivered at LDH and 79 of whom were delivered at Hennepin County General Hospital.

5. *Minneapolis Health Department Children and Youth Clinic* The Minneapolis Health Department conducts a weekly clinic at LDH designed primarily to provide preventive medical care, health education and routine examinations for preschool and elementary school children from disadvantaged families living in the Model City area. Children from the LDH Family Health Program will be referred to this clinic for well-baby care and the LDH program will provide some psychological and medical services to children and families attending this clinic.

PLANS FOR THE IMMEDIATE FUTURE

1. *Alcoholism Programs* LDH hopes to participate with a federation of small independent groups in developing a spectrum of alcoholism services which together would constitute a complete set of services. Presently the Indian Guest House and the Indian Neighborhood Club on Alcohol and Drugs have been identified as potential partners in this planning federation. A group is now being developed which would sponsor a settlement house in a non-hospital setting for the care of intoxicated persons who are drying out. This settlement house would become an alternative for the jail for the care of persons picked up for public drunkeness. LDH would like to provide medical services including emergency services, outpatient services and inpatient services for persons with serious medical illness associated with alcoholism. LDH would also consider acting at the accounting and payroll agent for the other programs. At the present time a set of proposals for these several alcoholism programs is being assembled as a single package which will then be submitted to the Hennepin County Task Force on Alcoholism, to the Hennepin County Mental Health-Mental Retardation Board and to the state and federal governments for funding.

2. *Initial Phase of Dental Program* In April 1971, in the basement of the new Doctors' Office Building across from LDH on 24th Street, the hospital will begin operation of a dental clinic. The initial patients will be the children and parents enroled in the Family Health Program. Initial operating expenses will come from the Family Health Program staffing grant and from billings to the Medical Assistance Program. A dentist trained both in general dentistry and in preventive dentistry will be appointed as head of a new Department of Dentistry. This dentist, together with other part-time dentists, will establish approximately a 40 hour schedule for two dental operatories and will also establish a program of preventive dentistry working through the case managers to provide dental health education and preventive dentistry services to the children and adults enrolled in the Family Health Program. The dental clinic will also initiate a program of training for two dental assistants in its initial phase of operation.

3. *New Means of Entry into Health Careers* In March or April 1971 an American Indian person will begin work under supervision of the Community Health Advisor with a salary from a federal grant awarded to the University of Minnesota. This person will work with inner city youth and young adults, working through the schools and other channels, to provide information and counseling to these youth on means of entry into health jobs and into training courses for health professions, particularly at the University of Minnesota.

LONG RANGE PLANS

1. *Develop a Dental Program in Cooperation with the University of Minnesota* The initial phase of the dental program will enable the hospital to build up a group of families for whom it is the provider of preventive and restorative dental services. If LDH is able to generate a large enough volume of families for dental care, it is hoped that a larger dental clinic can be constructed which would provide teaching facilities for dental students from the University and would also provide a sufficient volume of patients to establish a larger training program for dental assistants and a program for training of dental laboratory technicians.

2. *Develop a Working Relationship with the Family Practice Program of Hennepin County General Hospital* LDH hopes to build the staff, organization and volume of patients in its Family Health Program to the point where it is a useful site for training of Family Practice residents from Hennepin County General Hospital.

3. *Develop Programs in Cooperation with the Community-University Health Care Clinic* LDH hopes to develop skills and services that complement or supplement those of the Community-University Health Care Clinic so that the two institutions can share services. For example, the 24 hour LDH Emergency Department and inpatient service are located just three blocks from C–UHCC and would provide a convenient place for adults and children to receive 24 hour acute medical or inpatient services.

4. *Development of Mental Health Services* LDH will work closely with the Model City program and other community groups in developing mental health services. LDH does not see its role in the treatment of the classical mental illnesses such as schizophrenia, for which other mental health clinics are available, but rather in assisting the community to organize such activities as alcoholism and drug abuse programs, services for learning and behavior problems of children, day care programs for children and recreational and counseling programs for youth and young adults.

SELECTED HIGHLIGHTS OF FINDINGS

Two hundred and twenty-five Indian households were interviewed and a multistage sampling technique was used. The present section recapitulates the major findings of the study and is structured according to the five headings used in the detailed analysis.

I. SOCIOECONOMIC ANALYSIS

1. 49.77 percent of the households receive welfare support mainly from the Aid to Families with Dependent Children program.

2. In 42.67 percent of the households no male 21 years of age or over is present.

3. In 45.78 percent of the households at least one person is employed.

4. Of those not on welfare 27.41 percent have a yearly income of $3,000 or less, 37.15 percent earn between $3,000 and $6,000, and 24.75 percent earn more than $6,000 per year.

5. The median number of years of school completed by all persons in a household who are 18 years of age or over is 9.89 years.

6. Of those not on welfare 15.04 percent own their home.

7. The median number of persons living in the same dwelling is 2.85.

8. 46.67 percent of all households have children who attend school.

9. 28.88 percent of the households have a car available during the day.

10. 65.77 percent of the respondents do not have a driver's license.

11. 49.78 percent of the households do not have health insurance coverage.

12. The median number of persons covered by health insurance in a household is 1.89.

II. MOBILITY PATTERNS

1. The median length of time lived in the present dwelling is 1.11 years.

2. The shorter the residence time period in the same dwelling, the lower the household income tends to be.

3. The median length of residence in Minneapolis is 8.95 years.

4. The longer the residence time period in Minneapolis, the higher the household income tends to be.

5. In 28.9 percent of the households a member over 18 years of age has gone to a home town during the past year for one week or more.

III. HEALTH CARE UTILIZATION PATTERNS

1. In 81.11 percent of the households someone received medical care during the current year 1970.

2. In one out of five households the most recent medical care was received in a private clinic or physician's office; in three out of five households it was obtained in emergency rooms or outpatient departments, and one out of five households went to government supported clinics or health centers.

3. When private transportation is available during the daytime there tend to be more private clinic or physician's office visits and less emergency room or outpatient department visits.

4. Almost all expectant women receive prenatal care and all receive medical care during delivery.

5. Generally medical care during pregnancy and delivery is received in the same city or town.

6. In one out of four households no one has received dental care in the last two years.

7. Two out of three visits to a dentist are for tooth extraction or tooth filling.

IV. SOCIAL PROBLEMS

1. Five problem areas were ranked in terms of their perceived importance and priority. The problem areas ranked first are housing (33.77 percent), clothing (28 percent), food (16.88 percent), medical care (9.77 percent), and education (3.55 percent).

2. In 31.16 percent of the households someone needs a job.

3. 84.88 percent of the households have no money available for medical care.

4. In 7.55 percent of the households someone was judged by the respondent to be in need of seeing a physician.

5. In almost 8 out of 10 households someone is judged to need dental care.

6. One out of three households with children attending school report school difficulties due to health problems.

V. ATTITUDES TOWARD HEALTH CARE SERVICES

1. Almost all respondents would seek emergency medical care in the Twin Cities.

2. The primary source of emergency care for three out of five respondents would be the Emergency Room of Hennepin County General Hospital.

3. Nine out of ten respondents would seek future non-emergency medical care in the Twin Cities.

4. The primary source of future non-emergency care for two out of five respondents would be the Emergency Room or Outpatient Department of Hennepin County General Hospital.

5. 94.21 percent of the households would like a health care clinic with Indian employees.

6. 84.44 percent of the interviewees would prefer free medical and dental care versus paying a small fee.

ESTABLISHMENT OF LDH DENTAL PROGRAM

LDH hopes to employ a dentist and to establish a dental clinic to serve both the children and adults who are being enrolled in LDH's new Family Health Program.

There are two sources of funds for the dental program:

1. *Payments on a fee-for-service basis either by patients themselves or from third party payment systems.* The major third party source now available is the Hennepin County Welfare's Medical Assistance Program. Approximately 90% of the children and 50% of the adults being enrolled in the Family Health Program are eligible for Medical Assistance.

2. *Federal and private grants to cover the cost of services provided to patients without funds and without third party coverage.* The Mental Retardation Staffing Grant budget includes 10% of the salary for a dentist and a dental assistant. This is the only grant money immediately available. However, the following other sources of revenue or services without cost are being developed:

(a) The Lutheran Medical Mission Association is hoping to provide volunteer dentists and dental hygienists to work on a short-term basis in the clinic.

(b) The Indian Board of the American Lutheran Church (or of LACUSA) will be asked to provide some funds to support this clinic.

(c) The Hill Family Foundation (and perhaps other private foundations) will be asked to finance the training of Indian persons as dental assistants and dental laboratory technicians by providing stipends for trainees as well as part of the salary of the dentist and technician who do the teaching. This will generate a certain amount of additional service.

(d) The University of Minnesota Dental School will be asked to recognize the clinic as a site for training of senior dental students, thereby generating additional services produced by these students.

(e) The Federal government will be asked for grants to subsidize dental services for disadvantaged families as well as dental training programs for disadvantaged young adults.

The program director will be a dentist with 13 years of experience in private practice. He will develop a fee schedule that is acceptable to the Medical Assistance Program and similar to that used by private dentists. He will develop a budget designed to cover dentist's and assistant's materials, and amortization of facility and equipment. The budget will be designed to cover direct operating costs of the dental unit plus a certain amount of indirect costs experienced by the hospital.

LDH DENTAL PROGRAM

A dental program with salaried dentists paid by LDH.

The Director of the Dental Program will have Department Head status reporting directly to the Executive Director and working with the Community Health Coordinator.

Staff

1 Part Time Program Director (Dentist).
1 Part Time Denist.
1 Full Time Dentist Assistant.

Need for Program

1. Survey made by Model City Health Committee of dental needs.
2. Senior Citizen Task Force.
3. Comments from citizens of area.
4. Pilot City experience.
5. Lack of dentists in inner city area.

Why?

1. Family Health Program grant.
2. Comprehensive Health Program for community.
3. Teaching Program — University of Minnesota.
4. Family Practice Program with Hennepin County General Hospital.
5. Attract additional patients to LDH.

How?

1. Federal funds through OEO and Indian Health money.
2. Paid by fees charged to patients—note reference on other pages.
3. Other sources of funds—those organizations listed on attached pages.
4. Experience of existing dental programs—Pilot City and private dentists—and shortage of dentists in inner city.

Lutheran Deaconess Hospital proposed dental unit

Capital expenditure	$29,950
Less recoverable expenditures	25,000
Total capital expenditure for dental unit that cannot be recovered	4,950

ESTIMATED ANNUAL OPERATING COSTS

Salaries

One dentist (full time)	$18,000
Less State Board of Health contribtuion	8,000
Total	10,000
One dental assistant (full time)	5,500
One secretary (one-third-time)	1,610
One secretary (one-third-time)	1,610
Fringe benefits	2,005
Total salaries	27,115

Supplies and expense

Per dental practice cost experience, other expense usually equals dentists salary.

Rent—including all utilities, housekeeping, maintenance, taxes, insurance, mortgage interest and capital amortization—1500 sq. ft. at 6.50 per sq. ft	9,750
Supplies	10,250
Total supplies and expense	20,000
Total annual operating expense	47,115

Estimated Revenue

The Hennepin County Welfare Department charge schedule will be used—90% of patients treated will be welfare receipents. If an average volume of patients can be maintained, the program will be self supporting.

In addition $1800 is available for dentists' salaries from Mental Retardation grant. (10%) Other sources being investigated are listed on attached pages.

DENTAL UNIT AND OFFICE AREA

Cost estimate

A. Construct a two-chair dental unit in the basement of the Doctor's Office/Apartment Building as per Naujahr, Drake & Sessing drawing No. 2, rev. 2/12/71. Provides for dental unit only, omits all work on west half of basement as well as Pediatrician's Examining Rooms & Consultation Room on North Side of East half. Also omits medical records area in west half of basement.

1. Work accomplished during construction of building in anticipation of locating a future Dental Unit in the Basement:

Center stairway, fireproofing and fire doors	$3,500.00
Underslab plumbing (backwater valve & rough-in for dental unit fixtures) plus additional sheet-metal work to provide for toilet exhausts and ventilation air for basement	1,200.00
Total, work previously completed	4,700.00

2. Additional work required to complete dental unit:

Relocate under-slab waste, water and utility lines to revised relocations	750.00
Patch concrete floor	200.00
Erect wood partitions, walls, ceiling, VAT flooring, doors, hardware, painting, etc	8,500.00
Complete plumbing work	2,500.00
Complete heating and air conditioning	3,500.00
Complete electrical work	1,800.00
Casework and millwork	2,000.00
Total additional construction work	19,250.00

3. Equipment and furnishings:

Dental chairs and equipment, dental instruments and furniture and furnishings	5,250.00
Central air compressor and suction units	750.00
Total, equipment and furnishings	6,000.00
Total, dental unit	29,450.00

B. Construct partitions along north wall of east half of basement to provide four offices. Note: *Does not* include rough-in plumbing for future lavatories, or provision for future conversion to examining rooms.

General contract work, including walls, ceiling, flooring, painting, etc	$1,500.00
Electrical work	750.00
Furniture and furnishings (provides for new furnishings. Can be considerably reduced if existing is used)	2,600.00
Total, office unit only	4,850.00

CLERKSHIP ASSIGNMENT

I. Definition of Problems: How can obstetrical service best be provided for patients to be served by Lutheran Deaconess Hospital recognizing financial and medical staff limitations?

II. Findings and Conclusions grouped according to Areas of Consideration:

A. MEDICAL STAFF

1. Nine individual doctors or groups of doctors supply 58% of patients to LDH.

2. The Bloomington-Lake Clinic supplies 28% of the total patient load.

3. Two Obstetricians of the Bloomington-Lake Clinic supply 37% of the total OB patient load and 60% of the private OB patient load: Total OB patients (897) minus LSS patients (317) equals private OB patients (572).

Conclusion

Any solution to the LDH OB problem should be sensitive to the hospital's dependency on the Bloomington-Lake OB/GYN specialists.

B. DEMOGRAPHY OF THE SERVICE AREA FOR LDH

1. LDH serves 45.8% of the hospitalization needs of the population of South Minneapolis with 27% of its patients coming from Longfellow and Powderhorn.

2. The Service Area immediately surrounding the hospital has a much higher rate (than the total population of Minneapolis) in the following vital statistics:

a. Infant Mortality: 33.7 (LDH Service Area) to 24.0 (Mnpls) per 100 population

b. Neonatal Mortality: 19.8 to 17.7 per 1000 population

c. Post Neonatal Mortality: 13.9 to 6.3 per 1000 population

d. Prematurity Rate: 103.0 to 80.5 per 1000 population

e. High Risk Mothers: 61.4 to 51.0 per 1000 population

f. No care before the Third Trimester: 26.3% to 11.9% of the total births

Conclusion

LDH has a continuing service responsibility to South Minneapolis and could attempt to improve the maternal and infant care of the hospital service area.

C. INDIAN HEALTH NEEDS IN PRENATAL AND OBSTETRICAL CARE

1. In 1969 there were 281 Indian births in Minneapolis and two-thirds of Indian mothers lived in South Minneapolis.

2. Dr. McCreary of Indian Health estimates that about two-thirds of the South Minneapolis Indian births could take place at LDH by using AFDC funds or Federal Grant money for Indian Health Care.

3. For a number of cultural and convenience reasons, Indian mothers would prefer to be cared for at LDH instead of General Hospital where most of them go now.

Conclusion

LDH should investigate the possibility of an Indian Prenatal Clinic.

D. GROUP HEALTH INSURANCE PLAN

1. A proposal has recently been made to Group Health by LDH offering them a special reduced rate for a normal delivery for their patients provided that Group Health will guarantee 400 deliveries to LDH each year.

2. Group Health presently sends 80% of its OB business to Mt Sinai Hospital.

Conclusion

The transfer of Group Health patient deliveries from Mt Sinai to LDH could guarantee LDH a minimum number of future deliveries for their OB service.

E. OBSTETRICAL SERVICE STAFFING

1. There could be a 33% increase in the number of deliveries in the LDH OB Service before additional staffing would be necessary due to the present low census.

2. OB departments traditionally have high standby staff costs.

3. The College of OB/GYN Specialists recommend that at least 1000 deliveries per year be maintained or the staff will begin to lose their special skills.

Conclusion

An increase in the number of deliveries would stimulate a better utilization of the Obstetrical staff and help maintain staff expertise.

F. CONSOLIDATION PLANS FOR MMCI HOSPITALS

1. In the MMCI Bicentennial Plan of 1968 a single OB unit "under the aegis of Lutheran Deaconess Hospital" was recommended for the future Medical Center.

2. The total patient days of Mt Sinai and LDH OB services could have been handled in the LDH 26-bed unit with a corresponding 75% occupancy rate.

3. Mt Sinai admits that its OB service needs at least 200 more deliveries per year to even justify the continuation of that service.

Conclusion

Were the Mt Sinai OB service to close down, this would be a logical intermediate step in the MMCI plans for the ultimate single OB service.

G. COSTS

1. In obstetrics, the major fixed operating costs are for staffing, and since staffing there is related to volume of service rather than available beds, the excess bed capacity is not as significant as the underutilization of staff.

2. The OB department is very expensive to continue on a quality basis:

Total direct and indirect costs for OB at LDH in 1970	$511,557
Total revenue from the OB service at LDH in 1970	367,975
Total cost in excess of total revenue for LDH in 1970	143,582

3. Delivery and labor room costs are significantly higher than the national average ($86.60 to $61.80) mainly due to the low OB census.

Conclusion

To continue to maintain quality care and service at a low volume, the unit costs of service must be significantly larger for the hospital.

II. Criteria for selection of Best Solution: The best solution should address the majority of the seven conclusions reached after an examination of the findings or at least address more of the conclusions than any other alternative solution.

III. Solution: Lutheran Deaconess Hospital should establish programs and affiliations with groups of patients and their representatives to insure dependable sources of future obstetrical patients for the hospital. This solution will address all seven conclusions in the following ways:

1. Convince Group Health to use LDH as their primary obstetrical service by guaranteeing them a set, discounted rate for all of their patients. (No. 4, 5, 6, 7)

2. Establish a Prenatal Clinic for the Indian Community and seek financial arrangements through AFDC and federal grants to enable these Indian mothers to deliver at LDH. (No. 2, 3, 5, 7)

3. Encourage the OB/GYN members of the Bloomington-Lake Clinic to participate in the staffing of the Indian Prenatal Clinic and/or the Group Health Plan. (No. 1, 5)

4. Establish a reduced, single price for all LSS patients of $375 for a normal delivery (up to a five day stay). (No. 5, 7) This fourth part of the solution was acepted by LDH administration on February 8, 1971 and the price reduction has been affected in anticipation that the new pricing policy will bring more of the LSS patients to LDH to deliver.

IV. Alternative Solutions:

1. Close the OB Service. This was rejected because it could not be reconciled with conclusion No. 1 and No. 6.

2. Combine therapeutic abortion with OB service. This was rejected because of the religious position of the Lutheran Church and because of the health needs expressed in conclusion No. 2. The hospital is interested in solving these health care discrepancies in its service area before the role of its OB service changes.

3. Relocate the hospital in a suburb south of Minneapolis. This solution was rejected because the Board of Trustees and the LDH administration have decided to serve the health needs of the inner city as identified in conclusions No. 2 and No. 3.

The solution is based on the premise that the number of OB patients for hospitals located in the inner city is diminishing and more and more of the physicians are relocating their offices in the suburbs in anticipation that the fertile female population (14–44) will increase in the suburbs. Consequently there will be increasing competition for the remaining OB business. If a hospital does not wish to close its OB service or to relocate in the suburbs, and yet it still wishes to maintain a number of deliveries to insure a quality service, guaranteed groups of OB patients should be sought. Three of those groups of patients are. (1) Group Health, (2) Indian Community, and (3) Clients from LSS. The inclusion of two or more of these groups in the LDH maternity and obstetrical program is essential to maintain the program at LDH.

HEALTH AS SEEN BY ADULT CITIZENS

The Senior Citizens health committee meeting in conjunction with the Model Ctiy Health Task Force has studied the "senior citizens health survey" and gathered information from the meetings of adult citizens with senior aides and Enos Butenuth resulting in the following report:

The elderly citizens are encompassed with fear from every angle of life. This situation alone threatens and affects the health of most every individual person. Distraction, indecision, insecurity, mental stress and fear are the maladies burdening all the elderly. This is just as painful physically as a broken arm or leg to many folk. If not immediately as a reaction some period later.

The greatest majority of the elderly have stated that their overwhelming need is for someone to call on them when illness strikes or when in need.

As physicians are so busy it is almost impossible to get one in these circumstances but once in a great while one is able to make a call. Therefore they were very enthusiastic about the Physicians Assistant idea when introduced. And we hope that this project can be developed into an active program as soon as possible.

An available nurse could also be very useful and welcome in situations such as these when no one else can get there.

A better "raport" with physicians, hospitals and agencies would be next in priorities. This should be explored further as to implementation.

Dental care and assistance is needed by more than 90% of the elderly population. Medicare is nil in this catagory. These condi-

tions alone could cause or implement and worsen over 50% of their ailments. If continually and not rectified will cause symptoms and ailments to develop into chronic cases or even death.

The feet after carrying a body for over half a century are bound to develop dozens of deficiencies. Corns, calluses, deformed joints and bones, muscle de generation and injuries, nerve troubles and many other problems have come into being with very few places to go to have them rectified or relieved. Podiatrists are conspicuous for their absence and unavailability. Then NOT enough MONEY to pay for these services when available and practically no assistance from agencies or government.

Eyes and glasses are a subject and topic in itself.

Hearing is another topic to be treated separately.

MODEL NEIGHBORHOOD HEALTH SURVEY OF THE AGED

SUMMARY

1. Purposes of survey.
2. Sampling procedure and result of sampling.
3. Findings of survey.

(a) Health problems, utilization of health services, barriers to utilization.

1. Dental problems.
2. Vision problems.
3. Hearing problems.
4. Mobility problems.
5. General medical problems.

(b) Suggestions for changes and improvements in health services made by elderly people.

(c) Socio-economic and environmental factors related to health problems and health service utilization.

DETAIL

1. Purposes of survey:

The Minneapolis Model Neighborhood Program wanted to determine among elderly people living in the neighborhood, the extent of certain health problems, what sort of health services the people were receiving, and what changes or improvements they would like to see in these health services.

The survey also attempted to identify socio-economic and environmental factors that might have an influence on the health problems and health services for aged residents of the neighborhood.

The survey also provided an opportunity to the first year dental students at the University of Minnesota who did the interviews to learn first hand about problems of elderly people in getting dental and medical services, and to learn something of the relationship between dental problems, medical problems, and environmental, social and economic problems among the elderly residents of the neighborhood.

2. Sampling procedure and result of sampling:

It is estimated that there are between 10,000 and 14,000 persons age 65 or over living in the Minneapolis Model Neighborhood. To study health and health-related problems, it is convenient to divide these elderly people into the following three groups:

(a) An estimated 7,500 to 11,500 people living in their own homes, in private apartments, and in boarding houses.

(b) Approximately 700 persons living in public housing high-rise apartments.

(c) Approximately 1,800 persons in nursing homes and boarding care homes.

The third group, the approximately 1,800 persons living in nursing homes and boarding care homes, is excluded from this survey. It is felt that the health problems and health service problems of these 1,800 people are more intensive and of a different type than those of the first two groups, and thus should be the subject of a separate later study.

Thus samples were drawn from two population groups, the 7,500 to 11,500 living in private housing, and the 700 living in public housing high-rise apartments.

PROCEDURE FOR SAMPLING THE PRIVATE HOUSING GROUP

It was hoped that a random sample of approximately 300 elderly people for interview could be obtained from among those living in private housing units in Model Neighborhood. To get such a group, the 425 blocks in Model Neighborhood were numbered and one-fifth of these blocks was then randomly selected. Using these 85 blocks as the sample blocks, it was then determined—by using 1966 records from the City Planning Department—that there were approximately 4,200 housing units in these 85 blocks. One-fifth of the housing units on each of the 85 blocks was randomly selected, and this group of 833 housing units thus represented a randomly selected 1/25 of all the housing units of the Model Neighborhood.

Between October 3 and October 25, 1968, the eight resident planners employed by Model Neighborhood visited these 833 housing units and asked if there were persons age 65 or over in the units, explained the purpose of the proposed interview, and asked if the persons age 65 or over would agree to be interviewed by a dental student during the next two or three weeks.

PROCEDURE FOR SAMPLING THE PUBLIC HOUSING HIGH-RISE APARTMENT GROUP

It was estimated that there were 572 high-rise public housing apartment units in the Model Neighborhood with approximately 700 persons living in them. It was hoped that by randomly selecting one-fourth of the units (143 units) approximately 175 elderly persons would be contacted, and that about 120 interviews might be obtained.

SUMMARY OF RESULTS OF SAMPLING

Result	Number of private housing units	Number of public housing units	Total
Housing unit vacant or demolished	67	3	70
Apartment building closed to resident planners (these were middle income or upper middle income apartment buildings)	90		90
No one age 65 or over living in the housing unit	314	1	315
No contact made with occupants of housing unit or else records of contact unclear	208	22	230
Persons age 65 or over living in unit, but refusing to be interviewed	56	22	78
Persons age 65 or over living in unit, but in hospital at present		3	3
Persons age 65 or over living in unit and agreed to interview	98	92	190
Total housing units in sample	833	143	976

In the 98 private housing units, 109 persons agreed to interview, and in 92 public housing units, 96 persons agreed to interview. Thus a total of 205 persons agreed to interview.

The first year dental students from the University of Minnesota were given the names, addresses, and telephone of those persons who agreed to be interviewed. A letter of introduction giving the name of the dental student was mailed to each person who had agreed to be interviewed. The dental students conducted the interviews between October 21 and November 8, 1968.

Among those 205 persons who agreed to be interviewed, the following outcomes occurred when the dental students attempted to do the interviews:

Interview completed, person age 65 or over	128
Interview completed, but person found to be under age 65	8
Refused to be interviewed even though an interview had presumably been agreed upon	47
In hospital	5
Out of town	3
Records unclear or unaccounted for	14
Total	205

In summary, the findings of this survey should not be taken as representative of the entire elderly population of the Model Neighborhood. In addition to the 128 persons age 65 and over who completed the interview, there were at least 125 persons age 65 and over who refused to be interviewed and additional numbers of elderly persons in the housing units of the sample whom were not contacted.

With such large proportions of the elderly population not participating in the interviews, it is not possible to project the findings of the interview to the entire Model Neighborhood population. Nevertheless, the findings are relevant to the 128 people who were interviewed, and to some unknown but substantial portion of the population with characteristics similar to these 128 people.

Among the 128 persons who were interviewed, 125 persons were recorded as being White, one person Negro, one person Indian, and one person Negro-Indian-White.

SEX DISTRIBUTION BETWEEN THE PRIVATE HOUSING AND THE PUBLIC HOUSING GROUPS

	Public housing	Private housing
Males	10	29
Females	50	39

AGE AND SEX DISTRIBUTION OF THE 128 PERSONS INTERVIEWED

Age group	Males	Females	Total
65 to 69	11	22	33
70 to 74	12	29	41
75 to 79	8	16	24
80 to 84	4	12	16
85 to 89	3	7	10
90 and over	0	1	1
Unknown but over 65	1	2	3
Total	39	89	128

3. Findings of survey:

(a) Health problems, utilization of health services, barriers to utilization of health services.

1. DENTAL PROBLEMS AND DENTAL SERVICES

The existence of dental problems

41 of 128 people said they have trouble with their teeth at the present time.

57 of 128 people said they have some teeth missing but not all teeth missing.

61 of 128 people said that all of their teeth are missing.

42 of 128 people said that they have a partial denture.

59 of 128 people said that they have a complete denture.

28 of 128 people said that they are having trouble with dentures.

31 of 128 people said that they have trouble chewing food.

33 of 128 people said that either their original teeth or their dentures hurt sometimes.

7 of 128 people said that the condition of their teeth keeps them from talking to people or from meeting new people.

Utilization of dental services

(a) "Where do you go for dental care?"

94 of 128 people said they go to a private dentist.

6 of 128 people said they go to the University Dental Clinic.

4 of 128 people said they go to General Hospital.

14 of 128 people said they go no place for dental care.

6 of 128 people said they don't know where they would go for dental care.

4 of 128 people gave another response.

(b) "When did you last see a dentist?"

45 of 128 people say they saw a dentist within the past year.

21 of 128 people say they last saw a dentist one to two years ago.

61 of 128 people say they last saw a dentist more than two years ago.

One person did not know when he had last seen a dentist.

None of the 128 people say they have never seen a dentist.

(c) "Are you getting all the dental care you need?"

97 of 128 people said "yes."

26 of 128 people said "no."

5 of 128 people responded "don't know."

(d) "If you had a bad toothache or denture trouble, would you

1. go to a private dentist as soon as possible?"

95 of 128 said "yes."

2. go to a hospital emergency room as soon as possible?"

4 of 128 said "yes."

3. try some remedies at home first?"

2 of 128 said "yes."

4. do nothing and hope the trouble goes away?"

9 of 128 said "yes."

5. don't know

11 of 128.

6. another response

7 of 128.

Barriers to utilization of dental services

(a) "If you didn't go to a dentist soon after you got a bad toothache or denture trouble what would be the reasons you didn't go?"

51 persons gave no reasons.

48 persons gave one reason.

16 persons gave two reasons.

8 persons gave three reasons.

3 persons gave four reasons.

1 person gave five reasons.

1 person gave six reasons.

Reason given	*Number of times reason was given*
Don't know any dentist	22
Don't have money for dental care	22
Don't know how to get a dentist at night or on weekends	14
Dentists don't take emergencies and it takes days or weeks to get an appointment	12
There is no one to take me to dentist and I can't get there alone	10
Not well enough to leave house or apartment to get to dentist's office	9
I could get out alone but no transportation is available	8
Use some other method of treatment or no treatment at all	8
Afraid to go to dentist	6
Another response	16

(b) "If dental care were convenient, and if you could afford it, how often do you believe in going to the dentist?"

49 of 128 people said they would go only when there is some tooth trouble.

25 of 128 people said they would go once per year.

31 of 128 people said they would go twice per year.

12 of 128 people said they don't know.

11 of 128 people gave other responses.

(c) "Is dental care too expensive for you to get?"

39 of 128 people said "yes."

(d) "Do you know a dentist you can go to if you need dental care?"

34 of 128 people said "no."

(e) "Are you afraid to go to a dentist even if you need dental care?"

17 of 128 people said "yes."

(f) "Can you get to a dentist's office by yourself?"

25 of 128 people said "no."

2. VISION PROBLEMS AND EYE SERVICES

The existence of vision problems

48 of 128 people said they have problems with their eyes at the present time.

19 of 128 people said eye trouble keeps them from reading.

1 of 128 people said eye trouble keeps her from getting out and going places.

12 of 128 people said eye trouble keeps them from driving a car.

1 of 128 people said eye trouble makes it difficult for her to get around the house or apartment.

122 of 128 people said they have glasses.

36 of 128 people said they thought they needed new glasses.

4 of 128 people have been told by a doctor or optometrist that they have glaucoma.

24 of 128 people have been told by a doctor or optometrist that they have cataracts.

Utilization of eye services

(a) "When you have eye trouble or need your eyes examined, where do you go?"

(126 people gave one response, 2 persons gave 2 responses.)

62 of 128 people said they go to a private doctor.

51 of 128 people said they go to an optometrist.

7 of 128 people said they go to General Hospital.

6 of 128 people said they don't know.

4 of 128 people gave another response.

None of the 128 people mentioned the University Hospitals.

(b) "When did you last have your eyes examined?"

50 of 128 people said within the past year.

19 of 128 people said between one and two years ago.

55 of 128 people said more than two years ago.

3 of 128 people didn't know.

1 of 128 people said he had never had his eyes examined.

(c) Among the 128 people, 48 persons said that they have some eye problems at the present time. Of these 48 persons with eye problems at the present time 18 were getting treatment at present, and 30 persons were not getting any treatment at present.

3. EAR AND HEARING PROBLEMS

The existence of hearing problems

(a) "Do you have any trouble with hearing at the present time?"

45 of 128 said "yes."

(b) "Can you hear people's conversation all right?"

20 of 128 said "no."

(c) "Can you hear the TV or radio all right?"

11 of 128 said "no."

(d) "Can you hear at church, movies, meetings or other large gatherings all right?"

22 of 128 said "no."

(e) "Can you hear on the telephone all right?"

16 of 128 said "no."

(f) Number of persons answering "no" at least once to (b) through (e.)

28 of 128.

(g) "Do you use a hearing aid at the present time?"

45 of 128 said "yes."

Utilization of hearing services

(a) "Where do you go to get help if you have hearing trouble?"

(126 people gave one response, 2 persons gave 2 responses.)

82 of 128 people said they go to a private doctor.

8 of 128 people said they go to General Hospital.

2 of 128 people said they go to University Hospitals.

9 of 128 people said they go to a hearing aid store.

6 of 128 people said they would go no place.

20 of 128 people said they don't know.

3 of 128 people gave another response.

(b) "When did you last see a doctor about hearing trouble?"

22 of 128 people said within the past year.

9 of 128 people said between one and two years ago.

28 of 128 people said more than two years ago.

65 of 128 people said never.

4 of 128 people didn't know.

4. MOBILITY PROBLEMS

The existence of mobility problems

(a) "Are you able to walk around as much as you want?"

39 of 128 people said "no."

(b) "Are you able to go outside of the house or apartment by yourself?"

5 of 128 said "no."

(d) "Are you able to get out of your bedroom by yourself?"

No one of the 128 said "no."

(c) Of the 5 who could not get outside the house by themselves, all said they were able to get out if someone else was with them to help them.

(e) "Are you able to be out of bed for more than half of the daylight hours?

1 of 128 said "no."

(g) "Do you walk without any aid from other people?"

3 of 128 said no.

(h) "Do you walk without using a cane, crutches, or other devices?"

13 of 128 said "no."

(f) "When not in bed, are you able to get around without a wheelchair?"

2 of 128 people said "no."

(i) Total number of people answering "no" at least once to (a) through (h).

13 of 128.

CAUSES OF MOBILITY PROBLEMS

	Among 57 people asked about causes of mobility problem	Among the 43 persons who expressed at least one mobility problem 33 were asked what caused problem	Although not instructed to do so dental students asked 24 of the 85 people without mobility problem for causes of them
"Do any of the following health problems keep you from walking as much as you want?"			
Foot trouble	14	8	6
Arthritis or rheumatism	31	19	12
Heart trouble	13	11	2
Shortness of breath	18	14	4
Dizziness	9	8	1
Weakness or tiredness	18	14	4
Paralysis	2	2	0
Fear of falling	7	6	1
Eye trouble	13	10	3
Back pain or lumbago	18	12	6
High blood pressure	18	8	10
A recent injury	9	6	3

Utilization of services for the causes of mobility problems

"Are you getting treatment for any of these problems at the present tme?"

Of the 57 people who answered the question and described some causes of mobility problems, 3 listed no causes, and of the 54 who listed at least some causes, 18 answered "no" to question No. 23.

(b) Suggestions for changes and improvements in health services made by elderly people.

(1) "What improvements would you like to see in health services for you in this neighborhood?"

111 of 128 people responded "yes" to one or more of the following suggested improvements. 17 of the 128 people did not respond "yes" to any of the suggestions.

	Number responding "yes"
Should doctors be available to make more house calls?	89
Should it be easier to find a doctor who is willing to see you at his office?	51
Should it be easier to find a dentist who is willing to see you at his office?	47
Should there be a clinic in this neighborhood for medical care?	65
Should there be a clinic in this neighborhood for dental care?	68
Would you like to see the dentists, medical doctors, eye doctors, ear specialists and other specialists together in a single location in the neighborhood?	87
Would you like to see more visiting nurse services?	48
Would you like to see it easier to call for help if there is an emergency?	54
Do you need more help in paying bills for medical care?	27
Do you need more help in paying bills for dental care?	30
Should there be more convenient transportation arrangements to get to the physicians' and dentists' office?	48

AMERICAN BANKERS ASSOCIATION RETRACTS ITS DENIAL ON THE 360-DAY CALENDAR

HON. WRIGHT PATMAN

OF TEXAS

IN THE HOUSE OF REPRESENTATIVES

Tuesday, June 22, 1971

Mr. PATMAN. Mr. Speaker, on June 7, the American Bankers Association issued a news release charging that statements I had made about the banks' use of the 360-day year to calculate interest charges were "untrue." I immediately wrote the president of the ABA asking that he publicly explain his charges against me.

Last Thursday—June 17—the American Bankers Association, through its president, Mr. Sommer, retracted its charges and stated that it regretted suggesting that my statements had been "untrue".

Mr. Sommer stated in a letter to me:

Our release of last week was based on press reports and issued before we had access to the survey conducted for you by the Federal Reserve System as contained in the Congressional Record. We have now had the opportunity to review the survey findings, and I regret suggesting in our press release that your interpretation of the study was "untrue" and "entirely misleading and inaccurate."

Mr. Speaker, it is always hard for an organization like the ABA to admit mistakes and Mr. Sommer is to be commended for facing the issue forthrightly and retracting his charges. I accept his retractions and apologies.

Now that the ABA is facing the facts on this issue, I hope that it will turn its energies to see that the practice is stopped in banks all over the Nation. By calculating "per annum" interest charges against a 360-day calendar, the banks are able to overcharge their customers substantial sums. More than 80 percent of the banks responding to the Federal Reserve survey of this practice state that they use the 360-day calculations on some loans. Nationwide, it appears that the banks are collecting at least $150 million in excessive interest charges by calculating interest rates under the bobtailed 360-day calendar.

In his letter, Mr. Sommer states:

However, we certainly agree with you that in some classes of loans, notably single payment loans, the practice in many banks has been to collect interest for an exact number of days calculated on a 360-day year. When this occurs, it will result in the collection of the additional interest to which you refer in your examples.

Mr. Speaker, I hope that the regulatory agencies are moving to see that this practice is corrected. I have informed all of the bank supervisory agencies of my concern about this practice and I hope that we will have early administrative action.

VA DRUG BILL

HON. WM. JENNINGS BRYAN DORN

OF SOUTH CAROLINA

IN THE HOUSE OF REPRESENTATIVES

Monday, June 21, 1971

Mr. DORN. Mr. Speaker, today I joined my colleague, Chairman "TIGER" TEAGUE of the Veterans' Affairs Committee, to introduce a bill which would establish a drug treatment program in the VA hospitals for returning veterans. I am alarmed and concerned over the growing drug problem that exists today throughout the country. The drug-abuse bill for treatment of veterans will have three basic purposes. It establishes procedures for the VA to cooperate with the armed services to treat drug addicts. The bill allows the VA to treat drug abusers on the basis of commitment from Federal courts. It also allows the VA to treat any serviceman or ex-serviceman regardless of the type of discharge they received or other legal problems as a result of violation of other laws.

Mr. Speaker, I also favor further legislation to treat and cure alcoholism in the VA hospital system. Alcoholism is a form of drug abuse and contributes to the high rate of crime and family misfortune. The consequences of alcohol abuse are as pressing a problem as heroin addiction. The VA system has a fine history of medical care and new discoveries in the medical field. I am confident that with adequate funding the VA will be able to assist in the solution of the drug and alcohol abuse problem which plagues this country.

RED CHINA POLICY—A REWARD FOR MURDER

HON. JOHN R. RARICK

OF LOUISIANA

IN THE HOUSE OF REPRESENTATIVES

Tuesday, June 22, 1971

Mr. RARICK. Mr. Speaker, a steadfastness in refusal to yield to both domestic and foreign pressures urging the United States to make concessions to the Red Chinese regime has been a trademark of American foreign policy from the time Communists with the assistance of the United States usurped power of the people on mainland China in 1949 until the advent of the "New American Revolution" of the Kissinger-Nixon administration.

Many sound American reasons can be given to justify this policy toward Red China. Red China was condemned by the United Nations as an aggressor. Red China invaded South Korea in a war in which more than 33,000 Americans were killed, over 136,000 maimed, and an undetermined number of American prisoners of war were taken and are still held—a war which has officially not ended.

Missionaries and other church leaders have testified of the abominable and un-Christian conditions which have been occurring in Red China—slave labor, destruction of the family unit, communal living, inhuman atrocities against individuals, confiscation of property, and demolition of churches.

The effects of the exportation of the Red Chinese revolution to free countries, including the United States, can be seen in the riots, bombing, arson, and other acts of subversion.

Communist Chinese leaders have given no indication by word or deed of their intent to treat their subjects as free men. They have made no effort to deceive us or our leaders.

Yet, in spite of these reasons, Mr. Kissinger wrote in the U.S. Foreign Policy for the 1970's—Building for Peace":

In the coming year, I will carefully examine what further steps we might take to create broader opportunities for contacts between the Chinese and American peoples, and how we might remove needless obstacles to the realization of these opportunities. We hope for, but will not be deterred by a lack of, reciprocity.

Even though the Red Chinese show no signs of mellowing with the free world, Mr. Nixon asserts his intention to aid these Communist leaders.

And so he has with his recent lifting of trade bans against Red China. And recently his administration has shown a measure of support for admission of Red China to membership in the United Nations with a hint that it may abandon the two-thirds vote requirement in favor of a bare majority vote for Peking's entrance. The subtle hint must be considered as a feeler to gage public reaction.

While a candidate for the Presidency, Mr. Nixon stated to the Ameri-

can Society of Newspaper Editors on April 19, 1968:

I would not recognize Red China now, and I would not agree to admitting it to the United Nations, and I wouldn't go along with those well-intentioned people that said, "Trade with them," because that may change them. Because doing it now would only encourage them, the hardliners in Peking and the hardline policy they're following. And it would have an immense effect in discouraging great numbers of non-Communist elements in Free Asia that are now just beginning to develop their own confidence.

Red China has not changed nor have the non-Communist elements in Free Asia—nor have the Americans who chose Mr. Nixon for President. Only Mr. Nixon has changed. Or who is really running the country?

I insert Ambassador Liu Chieh's speech at this point in the RECORD:

[From the Christian Beacon, June 17, 1971]

A WARNING AGAINST SEATING PEIPING IN THE U.N.

I have been asked to speak on a topic which is now very much on the minds of those who, like yourselves, are genuinely concerned with the future of the United Nations. The late Adlai E. Stevenson regarded the question of the representation of China in the United Nations as one that has "momentous consequences for the future of the Organization." For "more is at stake than the status of certain delegations; more is at stake than the registering or reflecting of existing facts of power." He went on to say:

"Indeed, the underlying question is how the great people of China, who by a tragedy of history have been forcibly cut off from their own traditions and even led into war against the community of nations, can be enabled to achieve their own desires to live with themselves and with the rest of the world in peace and tolerance."

These memorable words of a great American, spoken some ten years ago, have lost neither their relevance nor their cogency with the passage of time. If anything, their validity has been enhanced by subsequent events. The Cultural Revolution, which convulsed the mainland of China a few years ago, shows the extreme length the Chinese Communist leadership would go to tear asunder the traditions and cultural values of the Chinese people. Far from enabling the Chinese people to achieve, in the words of Mr. Stevenson, "their own desires to live with themselves and with the rest of the world in peace and tolerance," the seating of Peiping in the United Nations will assuredly broaden the scope of its aggressive activities against freedom and independence of countries in the more vulnerable parts of the world and, what is more, give it an opportunity to carry out its long-standing threat to "thoroughly reform" or rather to destroy the United Nations.

As you well know, the question of the representation of China has come up, in one form or another, for heated discussion at every session of the General Assembly since 1950. It is unnecessary for me to review here the parliamentary maneuvers that have been used, first by the Soviet Union, then by India, and in more recent years by Albania and others, to seat the Chinese Communists. Suffice it to say that all attempts to do so have failed. At the 25th session of the General Assembly last year, however, the Albanian resolution calling for the replacement of the Republic of China by the Communist regime in Peiping was able, for the first time, to muster a majority of two votes—51 versus 49, with 25 abstentions. But since the question of Chinese representation has been regarded as an "important question" within the meaning of Article 18 of the Charter, and since the margin of merely two votes fell far short of the two-thirds majority required for such questions, Peiping remains outside the United Nations.

THE 1970 VOTE—A SERIOUS SETBACK

It must, however, be frankly admitted that the 1970 vote was a serious setback for the Republic of China and its suporters. Yet there is no reason to think that it is an irreversible setback. No one should be misled into believing that the participation of Peiping in the work of the United Nations is already a foregone conclusion. In my humble submission, the result of the voting reflected the impact of Canada's and Italy's recognition of the Chinese Communist regime at a time when the question of Chinese representation was coming to a head. In this connection, a similar set of circumstances readily comes to mind. In 1965 General De Gaulle's government extended diplomatic recognition to Peiping. In consequence, there was a marked shift of votes in favor of seating of the Chinese Communists at the 21st session of the General Assembly that year. The result was a stalemate—47 versus 47. Then, as now, it was widely believed that the admission of Peiping was imminent. But this did not happen. In fact, at the next session of the General Assembly in 1966 the Albanian draft resolution seeking to replace the Republic of China by the Communist regime of Peiping was decisively rejected by a vote of 46 for and 57 against. There was a comfortable margin of 11 votes. While I cannot assert with absolute certainty that the same thing will happen again this year. I certainly do not subscribe to the view that the General Assembly will in good conscience and in its own interest allow itself to reverse completely a position it has held for twenty years.

I would be less than realistic if I should fail to take into account the changes that have taken place on the world scene in the last few years. There has been much talk about East-West *détente*, Vietnam, the Middle East. There are people who believe that the cold war is a thing of the past and international Communism as such may even be an outmoded expression. Such is the state of euphoria that anti-Communism has now become a dirty word. This climate of opinion cannot but rebound to the advantage of the Chinese Communist regime.

PEIPING'S PROPAGANDA MACHINE

For its part, Peiping's propaganda machine has worked overtime to create the impression that order and stability have returned to a land which but two years ago was convulsed with the turmoil and confusion of the so-called Great Proletarian Cultural Revolution. Pilgrims to the Maoist "paradise" now paint a glowing picture of progress and achievements, and want us to believe that the masses of the Chinese people made peace with the Communist regime. The illusions of unity so assiduously promoted by partisan observers appear to be taking root in the outside world.

It is pure journalistic folklore to believe that a brief conducted tour to a totalitarian capital can provide genuine insights into the real conditions of the country. For the most part, dispatches by correspondents who have recently visited the mainland of China must be taken with a grain of salt. This is not to question their integrity. In the nature of things they cannot be expected to record more than what they have been allowed to see. They cannot be expected to know that underneath the seemingly stable surface there is a boiling and ultimately irrestible mass of resentments and suicidal despairs. The crust of the Communist rule is thinner and more brittle than most of the visiting journalists supposed. The hot lava of revolt, which oozed through a thousand cracks and fissures at the height of the Cultural Revolution, continues to seethe and sizzle and may yet erupt with incalculable fury. The Chinese people have never ceased to struggle against their oppressors. No one should give them up as irretrievably lost to Mao Tse-tung. We of the Republic of China certainly cannot give them up. They are our kith and kin. We have an unshirkable duty to see to it that they regain their freedom.

MACHINE OF TERROR

Foreign observers are inclined to believe that the Mao Tse-tung regime, after the convulsive struggles of the 1966–1968 period, has now embarked on a course of comparative moderation. The Chinese people, however, are not deceived by it. They are too well schooled by painful experience to mistake the phosphorescence of propaganda moves for a new dawn of freedom. They know that the machine of terror remains intact and is ready to spring into action at the drop of a hat. Indeed, this seeming mildness may well be the prelude to a new tightening of screws, as it has happened so many times in the past. To suppose a totalitarian regime such as that of Peiping could somehow transform from within in the direction of liberalism is to misunderstand its true nature. Its leaders could not have done that even if they had wanted it. The fact is that they are not in fact free agents. They are trapped by their own logic and system. There is a limit to what seems to be a relaxation of tension and terror. To go beyond that limit is to unleash forces which must sooner or later bring about their downfall.

It is surprising that so much indifference has been shown over the reports and photographs that have recently come out of the mainland. They present a frightening spectacle of men, women, and children, all in the same drab clothing, all relating their every activity to the thought of Mao Tse-tung, spouting the same slogans and clichés from the little Red Book. They behave not like ordinary human beings but like so many robots with no mind or will of their own. Yet it would be a great mistake to view them as a passive, bovine mass of beaten and subjugated people who have accepted their unwanted fate without a murmur. On the contrary, their will to revolt, though smothered, is not dead. It may burst into vehement flame if the opportunity presents itself.

A NEW IMAGE FROM PEIPING

Internationally, Peiping has in the past two years been able to project a new image of conciliation and flexibility. It seems ready to break out of its self-imposed isolation and enter into normal diplomatic relations with other countries. This new posture has gained considerable credibility since the recognition of the Chinese Communist regime by Canada and Italy. The recent visit of a Ping-pong team to Peiping has engendered a thrill of hope across the world. This swelling euphoria has of late somewhat subsided. But wishful thinking about the Maoist regime persists.

It is easy to understand why people in the West, and particularly in the United States, received Peiping's gestures of good will with so much fanfare and enthusiasm. In the first place, there has been a tradition of friendship between the American and Chinese peoples. In the second place, the possibility of trading with the potentially mammoth market on the Chinese mainland stirs the imagination of all businessmen. In the third place, Mao Tse-tung has in recent years enjoyed not a little popularity among the extreme elements of the New Left. Let me comment briefly on each of these three aspects.

1. It cannot be doubted that there has always been a reservoir of good will in America for China and the Chinese people. The idea that the traditional friendship between the two peoples can now be revived and strengthened has a strong romantic appeal to Americans.

On their part, the Chinese people have always had a warm spot in their hearts for

America and the American people. This is a friendship which two decades of Communist propaganda has been unable either to breach or to tarnish. When the Chinese Communists talk about the friendship between the two peoples, they seek to drive a wedge between the American people and the American Government. Even in the wake of Ping-pong diplomacy, the official Communist press has never ceased to attack "U.S. imperialism." It has characterized the friendly overtures of the Nixon Administration as motivated by a desire "to extricate itself from the unprecedented isolation at home and abroad" (*People's Daily*, May 5, 1971). It has called upon the American people to struggle against their government, believing that "the fascist rule in the United States will inevitably be defeated" (*Ibid.*, April 29, 1971).

2. To be able to trade with mainland China is a prospect many American businessmen have been dreaming about ever since an embargo was placed on shipments of a wide range of goods at the time of the Korean war. Some of them have already been counting up their profits from that trade. But the technicolor visions conjured up by them could well be a mirage. It is by no means easy to trade with the Communist regime. And the amount of the trade is far less than what is suggested by the existence of 700 million consumers. It may be of interest to take a look at some actual figures. Estimates by the best available sources placed Peiping's trade for the past decade fluctuating between U.S. $2.7 billion and U.S. $4.2 billion. These figures covered both trade with the free world and barter with Communist bloc nations. In contrast, the Republic of China's trade performance in 1970 was U.S. $3.1 billion, already equal to Peiping's total two-way trade with the free world.

3. It is fashionable for the self-styled revolutionaries of today to profess a determination to overthrow the establishment through mob violence. This is what Mao Tse-tung has been preaching for years. In Mao's little Red Book one finds ready-made justification for riots, arson, and bomb-throwing. It is these young militants, Mao believes, who will touch off "violent revolutionary storms in the United States." It is with them in mind when he speaks of "people-to-people" diplomacy.

PEIPING IN ECONOMICS DISLOCATION

Peiping has been seriously weakened by the 1966–1968 upheaval. It still suffers from grave economic dislocation. Its authority is at a discount in many provinces. The Party and administrative structure continues to be in disarray. The regime needs the help of its "enemies" to forge ahead. Its diplomatic offensive has met with a success which far exceeds its own expectations.

Members of the United Nations Association of New York are, I am sure, familiar with the pros and cons in regard to the question of Chinese representation. I shall try to lay before you the views of my Government on this question. I know that many of you do not see the question in the same light as we do. I cannot of course convince any one who is not already convinced. I seek neither approbation nor agreement. I hope, however, what I say will provoke fresh thinking on the subject.

U.N. AND REPUBLIC OF CHINA

The Republic of China has earned its place in the United Nations by virtue of its contributions to the cause of peace and freedom during World War II. From 1931 to 1941 it fought single-handedly against one of the mightiest war machines of that time, without allies and with little material aid from abroad. During those long and difficult years, we had more than once been approached by the enemy to agree to a settlement on terms not altogether unfavorable to us. But we rejected all offers because we were fighting for a principle—the principle of law and order in international relations. It is a principle on which we could not compromse. It had always been our unshakable conviction that peace not based on law and justice will not long endure.

When the war that started in China developed into a global conflict, the Republic of China became one of the principal allies which signed the Declaration of the United Nations in 1942. Subsequently it played an important part in the drafting of the United Nations Charter. It was one of the four Powers which sponsored the San Francisco Conference. It actively participated in the formation of the specialized agencies.

The legal status of the Republic of China has not changed since then. Its government continues to function on Chinese territory. There has been no break in the continuity of its leadership and policies.

COMMUNIST CHINA'S POSITION

The Communist regime, on the other hand, represents a complete break with China's past. In philosophy and traditions, in culture and social values, in institutions and policies, it has nothing in common with the State of China which participated in the founding of the United Nations and which is specified in the Charter as a permanent member of the Security Council. That perceptive correspondent of the *New York Times* in the Far East, Tillman Durdin, who has recently visited the mainland of China after an absence of a quarter-century, wrote under the date line Hong Kong, May 18:

"One of the early objectives of the Cultural Revolution . . . which began in 1966 and goes on today, was to wipe out the 'four olds'—old things, old ideas, old customs, and old habits. The 'four olds' had already suffered in the years of the Communist rule preceding the Cultural Revolution, but the Maoist leadership tried to use the new revolutionary upsurge launched in 1966 to eliminate them completely" (*New York Times*, May 19, 1971).

Such a regime is clearly un-Chinese in character and un-Chinese in purpose. How can such a regime represent the great Chinese people in the United Nations? How can such a regime speak in the name of the Chinese people and give expression to their true interests and aspirations?

The United Nations was founded "to save succeeding generations from the scourge of war, which twice in our generation has brought untold sorrow to mankind." The paramount purpose of the United Nations is therefore the maintenance of international peace and security. The Charter commands every nation not to use or threaten force against the territory and independence of another. But experience requires us to go further. We have seen nations and peoples subjugated by political subversion and guerrilla warfare. We have seen how economic aid by the Communists has been used as a bait and club to impose political influence and subservience. In our time aggression may be camouflaged and indirect.

There is another principle of the Charter that needs affirmation. It is summed up in the splendid words of the Preamble—"to practice tolerance and live together in peace with one another as good neighbors." And tolerance is the key to international peace; there can be no peace unless there is mutual respect and mutual forbearance as between differing peoples, cultures, and systems.

A FETISH OF FORCE

The Chinese Communist regime negates these basic principles. It promotes violence and war. It makes a fetish of force. It foments armed insurrection in neighboring countries. It is a past master in the art of political subversion. It is the world's greatest theroretician and practitioner of guerrilla warfare and undertakes to train, equip, finance, and direct "people's war" on a global basis. The essence of Maoism can be summed up in this well-known sentence: "The seizure of power by armed force, the settlement of issues by war, is the central task and the highest form of revolution."

Time does not allow me to go into a detailed discussion of the aggressive activities which the Chinese Communist regime has carried out in various parts of the world. Let me call your attention briefly to the fact that of the 23 nations that make up the continent of Asia, 16 are embroiled in some kind of war, rebellion or civil strife—much of it instigated or supported by Peiping. These countries are home to 1.8 billion people, over half of the world's 3.5 billion population.

In Hanoi, Peiping is pressing for a military victory, regardless of the consequences for the people of both Vietnams. Chinese military aid is going to Communist troops in Vietnam, as well as to Laos and Cambodia.

In North Korea, Peiping has patched up its differences with Pyongyang, and has enabled Kim Il Sung to be more militant towards South Korea.

The hand of Peiping is plainly visible in the unrest in India, Ceylon, and the Philippines. Arms and ammunition are being smuggled to rebel bands in the jungles, mountains, and swamps of Thailand, Burma, Malaysia. and Indonesia.

There can be no doubt that Peiping is the world's greatest instigator of war and violence. To seat such a regime in the United Nations would be to give implicit blessing to aggression, to undermine the rule of law in international relations and to undercut whatever claim the Organization may have to being a moral force in the world of today.

Fortunately, however, China has been represented in the United Nations by a government which can truly articulate the wishes and aspirations, woes, and fears of the Chinese people. The notion of expelling the Republic of China in order to make room for the Comunist regime in Peiping is not only repugnant to all fair-minded people but also to all those who have the true interest of the United Nations at heart.

It is sad to observe that there are today those who do not hesitate to throw vital principles of the Charter overboard in order to accommodate the Chinese Communists. Appeasement is in the air. Expediency rather than principles seems to be the primary preoccupation of publicists. The stark realities of international life, it has been argued, are such as to make strict adherence to Charter provisions out of question. Indeed, the United Nations today is very different from what its founders conceived it to be 26 years ago. Far from a community of purpose vested with authority to demand compliance of members with certain specified obligations, it has now become a battleground of conflicting interests. It has therefore been contended that the United Nations cannot be other than a mirror reflecting faithfully the world as it is rather than the world as it should be. This being so, it is unrealistic to quibble over the question whether Peiping qualifies for membership or not under Article 4 of the Charter.

I am as aware of the changes that have taken place since 1945 as the next man. But I cannot accept the proposition that the purposes and principles of the Charter must be abandoned for the sake of reflecting the realities of the world situation. The Charter, it seems to us, is the basic law of the United Nations. You cannot tamper with the basic law of an organization without doing irreparable damage to the organization itself. Whatever immediate advantages may be achieved at the expense of Charter principles cannot be balanced by what has been lost for the future of the United Nations.

As you know, there is a school of thought in the United States which discounts the threat posed by the Chinese Communists. They attribute Peiping's outrageous and beastly behavior to the American policy of trying to isolate the regime from the rest of the world. They picture Mao and his followers as more Chinese than Communists, more interested in the recovery of China's

lost hegemony in Asia than world revolution, more frustrated than expansionist, more given to grandiloquent rhetoric than to conquest. Membership in the United Nations, they believe, would cure all this. The interplay of ideas and interests in the world community would, in their view, sooner or later cause the Chinese Communists to abandon their aggressive and bellicose ways and accommodate themselves to the rule of law and the comity of nations.

WISHFUL THINKING

This, it seems to me, is wishful thinking. It fails to understand the tremendous importance of the Maoist ideology as a determinant of behavior. The Chinese Communists, it should never be forgotten take their ideology seriously. They are out not merely to gain China's seat in the United Nations They intend to remake the United Nations in their own image. For them international relations are not simply a matter of conventional dealings between nation and nation, government and government. Their approach to international affairs demands the use of every possible tactic to change the pattern of world development. The United Nations would be used not to "save succeeding generations from the scourge of war," not to stabilize the situation in areas where peace is threatened, not to solve vital problems or settle international disputes, but to promote conflict and dissension so as to transform the Organization into an instrument of their own policy. Indeed, Peiping has never been known to have joined any international organization in order to achieve common ends. One has only to see how it has split the world Communist movement to know what is in store for the United Nations should it be allowed to occupy the seat of China.

This leads me to the same conclusion arrived at by the late Adlai E. Stevenson some ten years ago. This is the conclusion to which I have already referred, namely, the question of the representation of China has "momentous consequences" for the future of the United Nations. This conclusion, I believe, is also shared by many thinking people in and outside the United Nations. Whatever the detractors of my Government may forecast about the outcome of the vote on the question of Chinese representation at the forthcoming session of the General Assembly, I have reason to believe that when the chips are down the cause we have been fighting for will once again prevail.

NEW YORK TIMES SUPPORTS TITLE IV OF H.R. 1

HON. JONATHAN B. BINGHAM

OF NEW YORK

IN THE HOUSE OF REPRESENTATIVES

Tuesday, June 22, 1971

Mr. BINGHAM. Mr. Speaker, I would like to include in the RECORD at this point an editorial that appeared today in the New York Times, supporting title IV of H.R. 1, the Social Security Amendments of 1971.

SHOWDOWN ON WELFARE

The welfare reform bill which passed the House last year only to founder in the Senate just before adjournment is once again nearing a showdown vote. The bill now before the House is a compromise laboriously arrived at in the Ways and Means Committee between liberals and the Nixon Administration, with moderate conservatives led by Chairman Mills of Arkansas serving as the brokers. This compromise is not entirely satisfactory to any of the contending factions, but it deserves support as the best vehicle for constructive change.

The Negro Democratic Congressmen who make up the new "Black Caucus" are leading the opposition to the bill. Many of their criticisms are well taken. The sum of $2,400 a year is inadequate for a family of four, particularly as there is no provision for cost-of-living differentials between low-cost rural communities and expensive cities. To provide no more support for a married couple with two children than for an elderly couple creates an indefensible disparity between the family and aged categories. Moreover, there is a distinct probability that some welfare recipients may be worse off under the new plan because states would not be required to maintain present levels of assistance.

As against these disparities and defects, however, the bill makes some major advances. It establish a uniform Federal standard of assistance across the nation. It erases the distinction between the unemployed and the working poor by making help available to the latter. It provides an incentive for fathers to stay with their families rather than desert them.

Since the bill reaches the floor under a parliamentary rule which permits a separate up or down vote on welfare reform but precludes any amendments, the weaknesses in the committee compromise cannot be corrected in the House. But these restraints will not apply in the Senate where the bill could be further refined.

It would be ironic if black and liberal Congressmen who believe that this reform is not generous and compassionate enough were to defeat the bill by joining with reactionaries opposed to any improvement. This stultifying result would lead nowhere, while a vote for the bill is a vote to keep the door open for hope and change.

The number of children and parents trapped in the welfare morass has risen by nearly 3.5 million in the two years since President Nixon originally proposed a basic Federal floor under family income. The need is urgent for a start toward reform.

VETERANS' ADMINISTRATION PROGRAM

HON. STROM THURMOND

OF SOUTH CAROLINA

IN THE SENATE OF THE UNITED STATES

Tuesday, June 22, 1971

Mr. THURMOND. Mr. President, for the benefit of all those people who are interested in a more responsive government, I want to describe a Veterans' Administration program which provides a model in developing new avenues of communication between a Government agency and the public it serves.

The able Administrator of Veterans' Affairs, Donald D. Johnson, has just completed a series of seminars that brought him and key members of this agency in face-to-face contact with a cross section of a group to whom this Nation owes the greatest debt—Vietnam veterans.

Administrator Johnson held five meetings in Washington, D.C., New York, Salt Lake City, Houston, and Chicago. During these meetings the top management officials of VA's 165 hospitals and 57 regional offices were brought together in specially designed seminars.

Mr. President, an important feature of each of these meetings was a panel of Vietnam veterans who were encouraged to speak frankly with regard to their feelings about the services they receive from VA hospitals and benefit offices. These panels provided some now insights into how Government services come across to young people. These panels also brought out some shocking incidents of hostile attitudes some of these young men encountered when they returned to their home communities and families after serving their country overseas.

Behind the Veterans' Administration seminars is a sincere desire on the part of top VA officials to make needed changes and stimulate greater awareness and appreciation of the young veteran as a person.

Mr. President, Administrator Johnson opened the meetings with a statement that included this challenge:

All of us must get a better feel for what it meant to be in Vietnam, the impact of reentry into civilian life, and the expectations veterans have of VA, as well as how these expectations are being met. The Vietnam Era veteran constitutes a unique, complex, and major challenge to the Veterans' Administration and to the nation.

Their problems are unique because these are the first veterans who, despite their service and sacrifices, are not assured of the respect and appreciation of all their countrymen.

Their problems are made more complex because today's veterans are full members of a generation of young people who have lived their entire lives in a period of rapid and unprecedented changes in our society.

It seems apparent to me that the Veterans' Administration is in a unque position to help all young people—veterans and nonveterans—understand their Government better. The VA can play a major role in enabling young people in general to have confidence in their country and influencing them to seek meaningful and constructive changes in our society.

I feel that the Veteran's Administration has the necessary compassion and understanding to carry out these goals as evidenced by these seminars and by a recent memorandum Donald Johnson sent to all VA field stations in a followup to the seminars.

Mr. President, I ask unanimous consent that the above referenced memorandum be printed in the Extensions of Remarks.

There being no objection, the memorandum was ordered to be printed in the RECORD, as follows:

MEMORANDUM

To: Directors, All Field Stations.

From: Administrator (00).

Subject: Seminars on the Vietnam era version.

1 Our recent discussions on the Vietnam veteran brought out a number of points that require re-emphasis, the major point being that the seminars in Washington, New York, Salt Lake City, Houston, and Chicago were only a beginning.

2. Weaknesses in these first meetings, apparent to all of us, and the sometimes unjustified complaints we heard about VA services, should not in any way obscure the real issues raised during the conferences.

3. The major recurring problem areas identified by those of us who attended all five conferences included:

a. Staff attitude, behavior, and communication.

b. Poor comprehension of benefits information.

c. Outreach, especially in rural and ghetto areas.

d. Delays in admission procedures and outpatient services.

e. Telephone jams.

f. Compensation and pension examinations.

g. Growing need for drug abuse treatment.

h. Other than honorable discharges.

i. Insufficient collaboration between DVB and DM&S.

j. Need to ease the transition from military to VA hospitals by such things as providing more recreational opportunities in VA hospitals.

4. A number of proposed Central Office steps to deal with these problems are being studied collaboratively between DM&S and DVB, but your own programs for dealing with them should not be delayed in anticipation of detailed guidance from Central Office. The aggressive steps taken already by a number of hospitals and regional offices make it quite clear that most of the field stations have both the talent and the resources to deal with most of these problems imaginatively without continued stimulation from higher authority.

5. Steps need to be taken at every supervisory level to overcome the problems brought on by any non-communicative, poorly motivated employees. Special attention must be given to overcoming unnecessary delays in admissions, outpatient services, and benefits application processing. Each supervisor must, in addition to examining his own attitudes, exercise his management skills and other qualities of personal leadership to overcome any vestige of bureaucratic attitudes that tend to perceive the consumer as one who should be patient and grateful for whatever he gets.

6. It has been my observation that the vast majority of VA employees have the more constructive attitude that the veteran-consumer *is* his primary concern, that he has rights, and that VA has, as a fundamental responsibility, the obligation to meet these rights effectively, expeditiously, and politely. Attitudes other than this cannot be condoned in either professional or administrative personnel.

DONALD E. JOHNSON,
Administrator.

REPUBLIC OF ITALY HONORS 25TH ANNIVERSARY

HON. ELLA T. GRASSO

OF CONNECTICUT

IN THE HOUSE OF REPRESENTATIVES

Monday, June 21, 1971

Mrs. GRASSO. Mr. Speaker, it gives me particular pleasure to honor the Italian people on the 25th anniversary of the Republic of Italy.

On June 2, 1946, the people of Italy voted in a plebiscite to end the monarchy and replace it with a republic. This ushered in a new era in Italian history marked by economic development and entry into full partnership in the community of nations.

The obstacles to Italy's achievement of prosperity and stability have been many and her success all the more admirable. The United States enjoys a warm friendship with the Italian people and cooperates with Italy's leaders in many vital areas.

Italy continues to be a leader in nearly every cultural field. Art, letters, religion, science, and philosophy have long been enriched by the contributions of Italy's genius. Silone and Antonioni Lampedusa follow in the splendid tradition of Leonardo DaVinci, Michelangelo, Vivaldi, Puccini, Galileo and Mazzini.

This great nation has not only provided America with the benefits of her cultural and scientific achievements, but has also furnished the foundation for the creativity and industry of Italian-Americans who have contributed so much to our Nation's prosperity.

My warmest wishes to our good neighbors on the Mediterranean during their 25th anniversary celebration.

SELF-DETERMINATION OF THE BALTIC PEOPLE

HON. STROM THURMOND

OF SOUTH CAROLINA

IN THE SENATE OF THE UNITED STATES

Tuesday, June 22, 1971

Mr. THURMOND. Mr. President, the Lithuanian American Community of the United States of America will mark the anniversary of the June 15, 1940, overthrow of the Baltic States by the Soviet Union.

The Soviet Union invaded the Baltic States and took over Lithuania, Latvia, and Estonia by force. These peaceful republics have been suffering under Communist domination for more than 30 years.

Since the very beginning of Soviet occupation, the Baltic States have waged an intensive fight for freedom. During the period between 1940 and 1952 alone, some 30,000 Lithuanian freedom fighters lost their lives in an organized resistance movement against the invaders. The cessation of armed guerrilla warfare in 1952 did not spell the end of the Baltic resistance against Soviet domination. On the contrary, resistance by passive means has gained a new impetus.

Mr. President, although the Lithuanian community will remember this sad occupation, they also have reason to remember a heroic effort. This year marks the 30th anniversary of Lithuania's successful revolt against the Soviet Union. During the second part of June 1941 the people of Lithuania succeeded in getting rid of the Communist regime in that country. Freedom and independence were restored and a free government was reestablished This government remained in existence for more than 6 weeks. At that time Lithuania was overrun by the Nazis who suppressed all the activties of this free government, and the government itself.

The Government of the United States of America has refused to recognize the seizure and forced incorporation of the Baltic States into the Union of Soviet Socialist Republics. Our Government maintains diplomatic relations with the former free governments of the Baltic States. Since June 1940, when the Soviet Union took over Lithuania, Latvia, and Estonia, all the Presidents of the United States, from Franklin D. Roosevelt through Richard Nixon, have stated, restated, and confirmed our country's nonrecognition policy of the occupation of the Baltic States by the Soviet Union.

Mr. President, the case of the Baltic States is not a question about the rights of self-rule of these states, since this is established beyond any reasonable doubt, but the question is how to best help these people to be restored to the freedom and independence of their countries. The U.S. Congress has made a step in the right direction by adopting House Concurrent Resolution 416 in the 89th Congress. This resolution calls for the freedom of Lithuania, Latvia, and Estonia. All freedom-loving Americans should urge the President of the United States to implement this very important legislation by bringing the issue of the liberation of the Baltic States to the United Nations. We should have a single standard for freedom. Its denial in the whole or in part, any place in the world, including the Soviet Union, is surely intolerable.

Mr. President, I ask unanimous consent that House Concurrent Resolution 416, as it passed the House, the action of the Senate, and a statement of the position of the executive branch be printed in the Extensions of Remarks.

There being no objection, the items were ordered to be printed in the RECORD, as follows:

H. CON. RES. 416

Whereas the subjection of peoples to alien subjugation, domination, and exploitation constitutes a denial of fundamental human rights, is contrary to the Charter of the United Nations, and is an impediment to the promotion of world peace and cooperation; and

Whereas all peoples have the right to self-determination; by virtue of that right they freely determine their political status and freely pursue their economic, social, cultural, and religious development; and

Whereas the Baltic peoples of Estonia, Latvia, and Lithuania have been forcibly deprived of these rights by the Government of the Soviet Union; and

Whereas the Government of the Soviet Union, through a program of deportations and resettlement of peoples, continues in its effort to change the ethnic character of the populations of the Baltic States; and

Whereas it has been the firm and consistent policy of the Government of the United States to support the aspirations of Baltic peoples for self-determination and national independence; and

Whereas there exist many historical, cultural, and family ties between the peoples of the Baltic States and the American people: Be it

Resolved by the House of Representatives (the Senate concurring), That the House of Representatives of the United States urge the President of the United States—

(a) to direct the attention of world opinion at the United Nations and at other appropriate international forums and by such means as he deems appropriate, to the denial of the rights of self-determination for the peoples of Estonia, Latvia, and Lithuania, and

(b) to bring the force of world opinion to bear on behalf of the restoration of these rights to the Baltic peoples.

Passed the House of Representatives June 21, 1965.

Attest:

RALPH R. ROBERTS,
Clerk.

[From the CONGRESSIONAL RECORD, Oct. 22, 1966]

CONCURRENT RESOLUTION TO REQUEST THE PRESIDENT OF THE UNITED STATES TO URGE CERTAIN ACTIONS IN BEHALF OF LITHUANIA, ESTONIA, AND LATVIA

Mr. MANSFIELD. Mr. President, I ask unanimous consent that the Senate turn to House

consideration of Calendar No. 1573, House Concurrent Resolution 416.

The PRESIDING OFFICER. The concurrent resolution will be stated.

The LEGISLATIVE CLERK. A concurrent resolution (H. Res. 416) to request the President of the United States to urge certain actions in behalf of Lithuania, Estonia, and Lavia.

The PRESIDING OFFICER. Is there objection to the present consideration of the concurrent resolution?

There being no objection, the Senate proceeded to its consideration.

Mr. KUCHEL. Mr. President, I wish to say that I am delighted that this matter is being taken up. It deserves attention in this session as a mark of our continuing concern for those peoples who have been deprived of their democratic institutions and are unable to speak for themselves.

The PRESIDING OFFICER. The question is on agreeing to the concurrent resolution.

The concurrent resolution (H. Con. Res. 416) was agreed to.

EXECUTIVE POSITION

The position of the executive branch with respect to the concurrent resolution is outlined in the correspondence which follows:

DEPARTMENT OF STATE,
Washington, June 1, 1965.

Hon. THOMAS E. MORGAN,
Chairman, Committee on Foreign Affairs, House of Representatives.

DEAR MR. CHAIRMAN: I am writing in reply to your letter of May 20, 1965, to the Secretary of State, requesting the Department's comments on House Concurrent Resolution 416, which has been approved unanimously by the Subcommittee on Europe and ordered favorably reported to the full Committee on Foreign Affairs. The resolution requests the President of the United States to urge certain actions in behalf of Estonia, Latvia, and Lithuania. The language of the resolution, as formulated, is not objected to by the Department of State.

The Department has been advised by the Bureau of the Budget that from the standpoint of the administration's program there is no objection to the submission of this report.

Sincerely yours,
DOUGLAS MACARTHUR II,
Assistant Secretary for Congressional Relations
(For the Secretary of State).

THE SMALL BUSINESS COMMITTEE: WORKING TO IMPROVE THE LOT OF THE SMALL BUSINESSMAN

HON. TOM STEED

OF OKLAHOMA

IN THE HOUSE OF REPRESENTATIVES

Tuesday, June 22, 1971

Mr. STEED. Mr. Speaker, Saturday, June 19, 1971, marked the 35th anniversary of the signing into law the Robinson-Patman Act by President Roosevelt. This act, which reenforced and amended the Clayton Act, was largely the product of the distinguished gentleman from Texas, Mr. WRIGHT PATMAN, who in his years of service has been a champion of the protection of small businesses as the first chairman of the Small Business Committee and as chairman of the Banking and Currency Committee. The act which we are remembering today is but one fine example of his dedicated labors.

House Report 2287 of the 74th Congress in reporting the Patman bill (H.R. 8442) explained that the purpose of this bill was to restore, as far as possible, the equality of opportunity in business by strengthening the antitrust laws, and by protecting trade and commerce against unfair trade practices and unlawful price discrimination, and also against restraint and monopoly for the better protection of consumers, workers, and independent producers, manufacturers, merchants, and other businessmen.

This is the legacy of the Small Business Committee, and that committee, of which I am honored to be a member, is constantly working to improve the lot of the small businesses in the tradition of the Robinson-Patman Act.

ALABAMA'S SENATOR SPARKMAN RECEIVES BAR ASSOCIATION AWARD FOR SMALL BUSINESS LEGISLATION

HON. ROBERT E. JONES

OF ALABAMA

IN THE HOUSE OF REPRESENTATIVES

Tuesday, June 22, 1971

Mr. JONES of Alabama. Mr. Speaker, on June 17, Senator JOHN J. SPARKMAN of Alabama was honored for his pioneering contributions to small business legislation by the 14,000 lawyers of the Federal Bar Association in a ceremony at the U.S. Capitol.

The award was presented by FBA national president-elect Norman Poirier and John Horne of Clayton, Ala., formerly Administrator of SBA and now chairman of the board of Investors Mortgage Insurance Corp. The citation reads as follows:

Senator John Sparkman is hereby recognized for outstanding qualities of leadership and dedicated service to the Federal Bar Association and to the federal legal profession as a constructive and diligent lawmaker in the field of small business and particularly for his vision and effectiveness in drafting and securing the successful enactment of the Small Business Act of 1953 creating the Small Defense Plants Administration; the Small Business Investment Act of 1958; the Small Business Amendments of 1966 and 1967; as well as the historic Housing Acts of 1949, 1961, and 1968, and (except 1953–1954) every other major piece of housing and small business legislation of the past 22 years; and for his continued interest and support for Federal Bar Association committees and programs relating to laws benefiting the 5½ million small businesses of this country.

Senator SPARKMAN was chairman of the Select Committee on Small Business from 1951 until 1967, when he became chairman of the Senate Banking Committee. He has been chairman of the Financing and Investment Subcommittee from 1955. The Senator's record is indeed the catalog of small business laws which our country has developed. We in Alabama are proud that they can be traced to the efforts of a man who grew up in our part of Alabama and learned about the value of the dollar working his way through the University of Alabama by emptying coal cars for the school furnaces at $5 a car.

Joining over 100 bar members and their guests at the event were Senators THOMAS M. MCINTYRE, JOSEPH M. MONTOYA, and HARRISON A. WILLIAMS; Congressmen TOM BEVILL, JOHN BUCHANAN, WALTER FLOWERS, BILL NICHOLS, ROBERT STEPHENS, WILLIAM HUNGATE, president of the Capitol Hill chapter of the FBA; and JOE EVINS of Tennessee, chairman of the House Select Committee on Small Business.

In accepting the award, Senator SPARKMAN said he had always felt that "small business is the backbone of our economy." He recalled how many Alabama servicemen returned after World War II and Korea with their severance pay and started small business firms. One of them at Muscle Shoals went on to become the largest maker of a certain type of casement window for the housing industry. The Senator said he felt that this avenue of opportunity should always be open in our country.

I certainly want to associate myself with this recognition of Alabama's senior Senator and with his concern for small business, which has done so much for our State and Nation.

Small firms account for about 40 percent of the jobs in our economy and over one-third of the gross national product. The well-being and prospects for many of these companies can be attributed to the work of Senator SPARKMAN, who richly deserves the award which his colleagues in the law have given him.

I would like at this point to insert in the RECORD certain letters which were received on that occasion:

BOSTON, MASS.,
June 8, 1971.

Hon. JOHN J. SPARKMAN,
U.S. Senate,
Washington, D.C.

DEAR JOHN: You and I worked together from its inception in the days of Alben Barkley to create a committee in the United States Senate for consideration of the problems of small business. It is a particularly important committee for us here in Massachusetts. You and I, for a number of years, worked together as its chairman and senior minority member, and during that time our thoughts and consideration of the problems were unanimous. You were good enough to take several of my suggestions, and I know I took yours.

I have always had great respect for you and a warm friendship with you as members of the Senate. You are objective, thoughtful and conscientious in working out the many problems that face our Government today.

May I join your friends in congratulating you upon this twentieth anniversary of your service in behalf of small business throughout our country.

Very sincerely yours,
LEVERETT SALTONSTALL.

NATIONAL SMALL BUSINESS ASSOCIATION,
Washington, D.C., June 17, 1971.

Hon. JOHN J. SPARKMAN,
New Senate Office Building,
Washington, D.C.

DEAR SENATOR SPARKMAN: On behalf of the Board of Trustees and the 40,000 members of the National Small Business Association, we are happy to join with the Federal Bar Association in paying tribute to you for 20 years of legislative service on behalf of the small business community.

You have been unusually effective not only as a spokesman for the small business community but as a major sponsor and pioneer of legislation that has proved most helpful in promoting the birth and viability of small business.

Because of your interest the problems of small business today are more seriously considered in any legislation before the Senate.

We know we can count on your continued support to fight many battles in the future and pledge our continued support to you and your endeavors.

Sincerely,

HARRY E. BRINKMAN,
President.

NORTH ALABAMA CHAPTER,
THE FEDERAL BAR ASSOCIATION,
Huntsville, Ala., June 7, 1971.

Mr. HERBERT L. SPIRA,
Chairman, Small Business Committee,
Washington, D.C.

DEAR MR. CHAIRMAN: On behalf of the North Alabama Chapter of the Federal Bar Association I want to thank you and the other members of the Small Business Committee for recognizing the efforts that Senator John Sparkman has made to small business. I know of no other person who is more deserving of the honor.

As attorneys in an area in which small business plays such a vital part of the economy, we have for many years recognized the numerous contributions which Senator Sparkman has made to small business. Today we join with the rest of the nation in expressing our sincere gratitude for the work he has done. Without his efforts, the progress that has been made in small business and the resulting contribution to the prosperity of our nation would be far less than it is today.

Will you please tell Senator Sparkman that each and every member of the North Alabama Chapter of the Federal Bar Association joins with me in saying that we are indeed proud that he is our Senator.

Sincerely yours,

E. W. DICKSON, Jr.,
President.

BOSTON, MASS.,
June 10, 1971.

Mr. C. NORMAND POIRIER,
President-elect,
Federal Bar Association,
Washington, D.C.

DEAR MR. POIRIOR: It is a great disappointment not to be able to attend your luncheon honoring Senator Sparkman on June 17, but unfortunately I have a long-standing commitment for Harvard Commencement on that day.

I wish I could be there in person to congratulate him on the award which he has so richly earned. Since that is impossible, please do so for me.

Probably few people realize as well as I do how much John Sparkman has done for the small businesses of the country. Having been a Director of the Smaller Business of New England from its inception in 1938, I went through that trying period before the importance of small business was recognized economically and politically, so we learned who our real friends were. Appointed a Director of the Smaller War Plants Corporation by President Roosevelt in July, 1942, when that organization was created by the Congress, I knew we could always count on John's wholehearted support and cooperation.

In later years we of the Smaller Business Association of New England have always looked forward to our annual trip to Washington to present our proposals to our New England Senators and Congressmen and to the Small Business Committees of the Senate and the House. One great pleasure was seeing our old friend, Senator Sparkman, the long-time supporter of small business.

My warmest best wishes to him on this happy occasion.

Sincerely yours,

S. ABBOT SMITH.

SMALL BUSINESS ADMINISTRATION,
Atlanta, Ga., June 14, 1971.

Hon. JOHN SPARKMAN,
U.S. Senator, Senate Office Building,
Washington, D.C.

DEAR SENATOR: Although I am unable to attend the luncheon, I am delighted to know that my fellow members of the Federal Bar Association are honoring you on June 17 for your 20 years of legislative service to small business. It has been my privilege to watch your excellent legislative work since 1956. I know that the recognition being paid to you by the FBA has been earned in double measure. I will always remember particularly the banner year of 1958 in which you guided three major pieces of small business legislation through the Senate and into law.

Of course I also look back with much satisfaction on the years when I worked with you indirectly on small business legislation and other legislation. The years of staff service in your office helped me to know, understand, and appreciate my state of Alabama more than ever before. We covered all of its geography and met and talked with its people in every walk of life. That was a great privilege for me and, as I told the Rotarians in your home town of Huntsville a few days ago, those were good years for me, years of personal growth and wide experience in the demands of public service.

Therefore, I not only extend congratulations and appreciation for your excellent work for small business, but I take this occasion to thank you again for the opportunity of working with you in the cause of small business.

Sincerely yours,

WILEY S. MESSICK,
Regional Director, Small Business
Administration.

OUR COUNTRY, RIGHT OR WRONG

HON. WILLIAM E. MINSHALL

OF OHIO

IN THE HOUSE OF REPRESENTATIVES

Tuesday, June 22, 1971

Mr. MINSHALL. Mr. Speaker, in this week's issue of U.S. News & World Report, one of the Nation's most eminent journalists, Mr. David Lawrence, speaks with his usual eloquence to the current controversy over publication of classified material.

Mr. Lawrence's editorial, "Our Country, Right or Wrong," merits the thoughtful consideration of all of us in positions of public trust, of the news media, and of good citizens throughout our Nation.

The article follows:

OUR COUNTRY, RIGHT OR WRONG

(By David Lawrence)

The duty of a newsman is to cover the news and publish the facts as he finds them. But there are situations that develop at times which make a reporter pause and wonder if what he knows should be disclosed. He is faced with the question of whether doing so at the moment is in the best interest of his country, or will give "aid and comfort" to the enemy.

There are those who feel that "news is news" and that everything should be published, irrespective of the consequences.

There are those who believe that news should be printed no matter how it is acquired—even if it is improperly taken from the files of the Government and offered to a news medium or if a former official actually turns secret documents over to a newspaper.

This writer remembers a lesson learned many years ago about the dangers that could arise from dealing with news of international affairs obtained from individuals in Government who are not authorized to make it public.

One incident comes to mind. I happened to live not far away from the building in Washington where the Navy Department had its offices, and one night about ten o'clock noticed that all the lights were burning, which was very unusual. Apparently something was going on.

Inside the building, I talked with friends in the Department. World War I had just started, and China had declared its neutrality. Japan, however, was moving to take over some territory in China which was under German control. The United States had naval units up the Yangtze River to guard our interests. I was told that plans were being made to deploy more of our ships in the area for possible action should there be an attack by any foreign fleet.

This obviously was important news, but there was a question as to whether publication of the information could hurt the interests of our country. My decision was to write nothing about it.

There have been many instances, particularly in wartime, when the Government has asked the press to keep certain things confidential until a given date. Newsmen generally have willingly agreed to do so.

Again and again, occasions have arisen when it would have been a mistake to publicize various matters in which our Government was involved. Premature disclosure could have created considerable difficulty for the President of the United States in pursuing America's policies abroad.

This writer has had close contact over a period of several decades with the operations of the White House, the Department of State and the military departments. His feeling is that committees of Congress are entitled to receive specific information in confidence which can at the proper time be made public.

A function of the press is to report to the people what the Government does. But it should not be done in a way that impairs the activities of the President or the Secretary of State in dealing with other governments.

There is an idea among some newsmen that the press has an absolute right to do as it pleases with news and that the people are entitled to read everything which a newspaper may gather from any source and which may be of interest to the public. Theoretically, this is true. Yet the printing of such items can be directly related to the effectiveness of the United States in its relations with other governments.

A case in point is the recent publication of secret documents concerning strategy for the Vietnam war during the Johnson Administration. Secretary of State William Rogers declares this not only is a clear violation of the law but is "going to cause a great deal of difficulty" with other governments which might fear they "can't deal with us in any degree of confidentiality."

These are crucial days. The Government should be trusted. It may be moving too slowly for some in withdrawing our forces and not fast enough for others in bringing peace in Vietnam. We are in the middle of one of the most serious periods in our history. This is not a moment for treating the Vietnam war as if it were merely a piece of domestic politics. We are fighting not just North Vietnam but the Soviet Union and Red China, which are backing and equipping the forces of Hanoi.

We have undertaken an obligation to help a small nation in Southeast Asia. If the word of the United States is to mean anything, we must keep faith with our allies. If we

do not, a third world war involving the use of nuclear weapons and the loss of millions of lives will be inevitable within the next decade.

It is time for all citizens—irrespective of whether they happen to be newsmen or politicians—to bear in mind that their allegiance belongs first to the United States of America. Their slogan should be the words of Stephen Decatur:

"Our country! In her intercourse with foreign nations, may she always be in the right; but our country, right or wrong."

THE MINNESOTA EXPERIMENT

HON. BILL FRENZEL

OF MINNESOTA

IN THE HOUSE OF REPRESENTATIVES

Tuesday, June 22, 1971

Mr. FRENZEL. Mr. Speaker, the May issue of Challenge, the Department of Housing and Urban Development magazine, carried an article of Dennis Dunne on the "Minnesota Experiment," the Metropolitan Council.

Mr. Dunne is a resident of my district and a member of the Metropolitan Council.

As a member of the Minnesota State Legislature at the time the legislation authorizing the establishment of the Metropolitan Council was passed, and an admirer of the manner in which the council has fulfilled its responsibilities, I would commend the article to my fellow members who reside in metropolitan areas.

[From the HUD Challenge, May 1971]

NEW REGIONALISM—THE MINNESOTA EXPERIMENT

(By Dennis W. Dunne, Metropolitan Council Member)

The urban crisis in America today stems primarily from the inability of government to cope with social and physical problems at the metropolitan level. Numerous efforts have been made to provide structures to deal with such problems as air and water pollution, suburban sprawl, older neighborhood decay, governmental financial crises. In response to these problems that tend to split cities apart, residents of Minneapolis and St. Paul have worked together to unite and conquer.

The "Minnesota Experiment" is the result of concerted citizen efforts that led the Minnesota State Legislature in 1967 to establish the Metropolitan Council, a regional coordinating agency of local government with broad responsibilities of organizing orderly growth in the Twin Cities area. Made up of 15 members appointed by the Governor, the Council has decision-making powers that are unique to similar bodies around the country.

In 1969 the Council received authority to review all local planning and development programs—with veto power over special purpose districts—and issue bonds for operations. Its authority to direct area-wide development encompasses Minneapolis, St. Paul, and suburbs, about 1.8 million people, seven counties, and numerous local agencies.

NEED OVERSHADOWS RIVALRY

The Council was created in response to immediate, pressing demands that overshadowed the traditional rivalry between the greater St. Paul and Minneapolis areas. In 1959 more than 300,000 people on the outskirts of the two cities found their chief source of water—backyard wells—contaminated. Rather than settling for piecemeal solutions, community leaders began to consider the possibility of a sanitary district covering the entire urban region.

Throughway routes, air pollution spreading from the factory districts, land planning for recreation, and development of a new, major airport were among other issues that needed to be handled on a metropolitan scale.

It took 10 years, but once the Council received its major authority during the 1969 State legislative session, it moved rapidly to improve these conditions. First, legislation was approved setting up a Metropolitan Sewer Board appointed by the Council to cover the seven counties. Under the legislation, all proposed plans and the Board's budget are subject to approval by the Council, which can thus determine the direction of comprehensive development for sewer systems, highways, and housing growth. Operating on its own budget raised through bond issues, the Sewer Board expects to raise $50 to $60 million in the next five years to help solve the area's pollution problems.

In park development, the Council obtained $2 million from cigarette taxes for acquisition of regional parks.

To prevent work stoppage on highway construction while insuring the best possible design, the Council obtained legislation requiring local review of highway systems and required Council approval before plans are implemented. Previously, local opposition could stop construction at any phase.

To facilitate solid waste disposal in the area, the Council drew up plans requiring the seven counties to acquire sites for landfill that conformed to basic standards of sanitation. The intercounty program requires all disposal locations to accept landfill from any other county at the same price.

In addition, the Council held public hearings to develop a Metropolitan Development Guide as a planning tool for local officials to help in determining locations for housing, shopping districts, and public facilities.

MODEL FOR THE NATION

During the current legislative session, the Council is focusing its attention on an innovative financing plan to equalize tax and public service disparities in suburban and core city areas. The program, which could prove a model for the Nation, is presently awaiting State legislative approval. So far the proposed tax sharing legislation calls for a one percent additional sales tax that would be redistributed to municipalities on a formula basis.

In all the Council is now concentrating on nine major issues; metropolitan finance, the Metropolitan Development Guide, airport work, sewer inmplementation, thoroughfare and transit systems, open space implementation, health, and housing.

The Council, created with the enthusiastic support of local citizens, was designed to reflect their interests and needs without interference from vested interest groups. Each of 14 members appointed by the Governor for staggered six-year terms represents two State senatorial districts. Serving about 125,000 residents in each district, the Council seats are divided equally between core city and suburban areas so that no special interest is served by any Council member. There is also one chairman appointed at-large by the Governor. No local officials serve on this all-citizen council, which probably will become an elected body. It has a budget of about $3 million financed primarily by property taxes (seven-tenths mill levy), supplemented by grant and other contract monies.

HISTORY OF CIVIC CONCERN

Why is this metropolitan experiment taking place in Minnesota, rather than larger metropolitan areas with more critical problems? The answer may lie in the area's historical orientation toward civic concern—and more important civic action—aided by a cooperative State legislature.

The area's 3,600 member Citizens League, devoting most of its time to problems and issues of metropolitan concern, has supported the Council since its inception. Prominent individuals in the business community, serving on service clubs, Chambers of Commerce, and Citizen League activities contributed their efforts to the Council's development. And the local press helped to keep metropolitan issues before the public.

Leadership by local citizens toward improving the area's environment dates back to the 19th century when Horace W. S. Cleveland, the famous landscape architect, delivered an address to a local citizens' group on "Public Parks, Radial Avenues and Boulevards: An Outline Plan for the City of St. Paul." The following decade, Cleveland prepared a comprehensive report for the newly formed Minneapolis Board of Park Commissioners, calling for joint municipal action between Minneapolis and St. Paul.

In the 1930's the Minnesota Legislature, recognizing the need for effective legislation to aid metropolitan problems, passed legislation to provide sewage collection and treatment for the two cities. Metropolitan Airports Commission legislation was approved in the 40's. And in the 50's a Metropolitan Planning Commission and Minnesota Municipal Commission were established.

While the Planning Commission laid the groundwork for the creation of the Metropolitan Council, its powers were limited to an advisory planning role. It was the first such agency in the country to be given the status of a political subdivision with a tax levy for operating purposes and was recognized nationally for developing new techniques in metropolitan planning.

The Municipal Commission was established to hear petitions concerning incorporations, annexation, consolidations, and detachments. It prevented undesirable and illogical incorporations, while helping to produce much needed consolidations and annexations.

TWIN CITY COOPERATION

In the 1950's Minneapolis and St. Paul also started ambitious, while separate, urban renewal programs. St. Paul's program, based on a design originating in 1910, includes rebuilding the area around the State capital for public purposes.

Before 1960 a few reservations about full cooperation between the greater St. Paul and Minneapolis areas still remained. There seemed to be a feeling that more was to be accomplished by isolation than cooperation. For instance, newspapers and prominent mail order houses in each city refused to accept ads from the other city.

Ironically, the first metropolitan merger came about because of the interdependence of the two cities' baseball and football teams, the Twins and the Vikings. Separately the population of Minneapolis ranked the city 22nd in the minor league with St. Paul ranking 43rd. Together they ranked 15th nationally in population and were thus able to support a major league team. Everyone became "Twin Cities" conscious and began to think "metropolitan."

Serving the Metropolitan Area is an active Citizens League. Prior to 1966 the League was known as "The Citizens League of Minneapolis and Hennepin County," but in June of 1966 they officially broadened their scope of authority. Since 1960 the League has been devoting most of its time to problems and issues of metropolitan concern. Strong support of the League stems mainly from its careful selection of programs and thorough, objective manner in dealing with each issue.

The League played a major role in the 1967 legislative session of assisting in the coordination of forces seeking legislation for a Metropolitan Council and in 1969 in obtaining additional authority and responsibility for the Council.

PRELUDE TO COUNCIL AUTHORIZATION

The events leading to the 1967 legislative session and the adoption of legislation cre-

ating the Metropolitan Council is an interesting study of the democratic political processes and the need in any movement for a community consensus on issues requiring legislation. An awareness that the promotion of any form of metropolitan organization would require more than a one man crusade arose from the smoldering ashes of a futile attempt in 1961 by the Executive Secretary of an interim commission on Municipal Law, who tried in vain to create some alternative to the continued patch-work of "special service districts."

By 1965, however, much was being done in an orderly, objective manner to force the issue of governmental reorganization in the Metropolitan Area. Policy papers on governmental structure were being produced by the Metropolitan Development Guide and the Citizens League was carrying on extensive studies on how governmental reorganization should take place.

The upper Midwest Research and Development Council sponsored a Conference on Governmental Structure on Nov. 10, 1966, with outstanding national speakers and excellent local support and attendance.

There were many others during the 1965–67 period who made similar contributions and proposals. These included the proposals of several mayors, policy statements by political parties, research and business groups, County Leagues of Municipalities, and Leagues of Women Voters, editorial comments, positions by the press and other media, and evidence of potentially strong support from influential members of the Minnesota Legislature. A groundswell of support appeared everywhere. The fears and hostile opposition that stopped the 1961 effort seemed to have disappeared, or at least, did not appear to be organized.

FORM OF THE COUNCIL

By the time of the 1967 State Legislative session the question was not "shall there be a Metropolitan Council," but rather "how will it be constituted?" The Citizens League, the Metropolitan Planning Commission and many others advocated an elected body with broad powers and a free standing governmental unit. Some influential legislators, however, felt the Council should be a State agency appointed by the Governor. The compromise was an appointed body with some ties to the State, but not a State agency.

In granting legislation for the Council in both 1967 and 1969 the Legislature was aware that those asking for authority were highly motivated and ready to accept and assume heavy responsibilities.

The "Minnesota Experiment," a unique innovation, has been used as the model in Atlanta, Ga., which recently adopted a similar council composed of a mix of local officials and citizens. Residents of Denver are also reportedly considering a similar structure based on the Minnesota model.

The Council has proved itself an efficient, representative body using its decision-making powers to serve the interests of the area at-large. Public hearings are held constantly to keep the lines of communication between citizens and local government open. The Council has been able to act on the areas of immediate concern while providing long-range vision for the future.

MAN'S INHUMANITY TO MAN—HOW LONG?

HON. WILLIAM J. SCHERLE

OF IOWA

IN THE HOUSE OF REPRESENTATIVES

Tuesday, June 22, 1971

Mr. SCHERLE. Mr. Speaker, a child ask: "Where is daddy?" A mother asks: "How is my son?" A wife asks: "Is my husband alive or dead?"

Communist North Vietnam is sadistically practicing spiritual and mental genocide on over 1,600 American prisoners of war and their families.

How long?

A RESOLUTION AUTHORIZING THE RESTORATION OF THE THADDEUS KOSCIUSZKO HOME

HON. JAMES A. BYRNE

OF PENNSYLVANIA

IN THE HOUSE OF REPRESENTATIVES

Tuesday, June 22, 1971

Mr. BYRNE of Pennsylvania. Mr. Speaker, the Honorable Paul D'Ortona, president of the City Council of Philadelphia, has brought to my attention Resolution No. 402, which was adopted by the council on May 27. I am especially interested in bringing this resolutiton to the attention of my colleagues inasmuch as Kosciuszko House is located within the congressional district which I represent. Gen. Thaddeus Kosciuszko came to America to aid our struggling Nation in its fight for independence, and I feel this great Polish advocate of human freedom deserves a place of honor. On March 29, I introduced H.R. 6827, to provide for the establishment of the Thaddeus Kosciuszko Home National Historic Site, and many of my colleagues have introduced similar legislation. It is my earnest hope this legislation can be enacted into law at a very early date.

RESOLUTION NO. 402, COUNCIL OF THE CITY OF PHILADELPHIA

Resolution memorializing the Congress of the United States to enact legislation authorizing the Secretary of the Interior to acquire and restore the 301 Pine Street house as a National Shrine to Thaddeus Kosciuszko

Whereas, The National Park Service has recently listed, in the National Register of Historic Places, the three and one-half story brick building at 301 Pine Street, Philadelphia, as a tangible reminder of properties worthy of preservation for their historic value; and

Whereas, This existing structure, built in 1775 by Joseph Few, a Quaker merchant and member of the Carpenters' Company, was the last residence in America of General Thaddeus Kosciuszko who dedicated his services to the cause of American independence; and

Whereas, In this brick building Kosciuszko, recuperating from wounds suffered on a Polish battlefield in a vain attempt to free his land from foreign rule, held important meetings with Thomas Jefferson, John Adams and other patriots of the war for American liberty and independence; and

Whereas, This building, now vacant and rapidly deteriorating despite attempts to restore it, is greatly in need of measures to protect the shell of the dwelling by shoring up the floors and boarding up the windows and doors; and

Whereas, This historic dwelling is the only meaningful house left that is still associated with the name of one of the great colonial patriots of American independence; a dwelling which if lost, can never be recovered; therefore

Resolved, By the Council of the City of Philadelphia, That we hereby memorialize the Congress of the United States to enact legislation authorizing the Secretary of the Interior to acquire and restore the 301 Pine Street house as a National Shrine to Thaddeus Kosciuszko.

Resolved, That certified copies of this Resolution be forwarded to the President and Vice-President of the United States, the President Pro Tempore of the United States Senate, the Speaker of the House of Representatives, the United States Senators from Pennsylvania and the entire congressional delegation of the Commonwealth.

Certification: This is a true and correct copy of the original Resolution adopted by the Council of the City of Philadelphia on the twenty-seventh day of May, 1971.

PAUL D'ORTONA,
President of City Council.

Attest:

CHARLES H. SAWYER, JR.,
Chief Clerk of the Council.

THE IMPORTANCE OF RURAL ELECTRIC COOPERATIVES TO KANSAS AND TO RURAL AMERICA

HON. KEITH G. SEBELIUS

OF KANSAS

IN THE HOUSE OF REPRESENTATIVES

Tuesday, June 22, 1971

Mr. SEBELIUS. Mr. Speaker, in that we will soon be considering agriculture appropriations, I would like to take this opportunity to discuss the importance of rural electric cooperatives to my home State of Kansas and to rural America.

The extension of electric power to rural America revolutionized farming and improved living conditions in the countryside.

The first REA loan in Kansas was approved in May 1936, 1 year after passage of the Rural Electrification Act. Since the first REA loan was made in Kansas—over 35 years ago—REA has approved $177.6 million in loans to 37 member-owned cooperatives in the State. The loans provide for service for 103,201 farm and other rural consumers and over 57,834 miles of line. Today, 98 percent of all the farms in Kansas have central station electric service.

This impressive service record duplicated throughout rural America illustrates the rural electric system's great potential in solving the growing population distribution crisis facing our Nation.

For too long, the youth of rural and small-town America have migrated to our already overcrowded cities. They leave the countryside in search of jobs and economic opportunity. This influx of people has imposed impossible demands on urban resources to meet the requirements of employment, transportation, education, welfare, crime control, pollution control, health care, public services, and housing.

This rural migration has accomplished the worst of both worlds for urban and rural America. Our metropolitan areas are more congested and unmanageable. Our rural areas have lost the youth and vigor so necessary for economic prosperity and future growth.

The rural electric systems have recognized the fact that an adequate, reliable, and low-cost source of electricity is essential to stop this outmigration and for success in rural development. To satisfy these objectives, the thrust of the

Rural Electrification Administration has been directed toward area coverage, rural job development, and expanded economic opportunity in rural and smalltown America.

For the Nation as a whole, during the 1960's nearly 4,100 commercial, industrial, and community facility projects were assisted by REA borrowers with the result that an estimated 186,000 jobs were directly created in rural America in addition to 120,000 more jobs which were created indirectly by these projects.

In this regard, I am pleased that the Sunflower Electric Cooperative generation and transmission project located in my congressional district has been approved. This project will play a major role in rural development in western Kansas. When completed this project will include construction of an 85,000-kilowatt steam generating plant at Garden City and a transmission network involving 46 miles of 115-kilowatt transmission line and related substation and service facilities.

The Sunflower project will be the wholesale power-supplier for eight member distribution systems, tens of thousands of families in Kansas, and hopefully a wealth of new business and industry.

However, to effectively satisfy growing power demands and to develop rural America as an attractive alternative to urban living, the rural electric system must have adequate capital to satisfy service requirements and power demands.

To satisfy this growing capital requirement, the National Rural Utilities Cooperative Finance Corporation—CFC—was formed. The CFC provides supplemental financing for the rural electric program by drawing investment capital from existing REA borrowers and also by issuing its own debentures to obtain additional funds from the private money market. This self-help initiative illustrates REA's dedication to service the needs of REA borrowers throughout America.

However, this infant form of self-help financing is simply not adequate to meet REA's commitment to revitalize rural and smalltown America. If we plan to solve the related crisis in rural and urban America, we must build on the experience and success of established programs like the rural electric system. I am hopeful that the majority of my colleagues in the House of Representatives will support added REA appropriations recently reported by the House Appropriations Committee.

BLUE HILLS COMMUNITY CAMPAIGNS FOR SUBURBAN EXODUS TO THE CITY

HON. WILLIAM R. COTTER

OF CONNECTICUT

IN THE HOUSE OF REPRESENTATIVES

Tuesday, June 22, 1971

Mr. COTTER. Mr. Speaker, too often now we read of the decay of our cities, that white, middle-class families are fleeing to the suburbs to escape the crushing taxes and deteriorating schools. To say that this is not happening would be naive. But to say that all is lost is at least premature, if not downright untrue.

I represent a compact urban-suburban district in Connecticut whose central city faces many of the problems that contribute to urban doomsaying—a declining tax base, an influx of economically disadvantaged people, increasing demand on costly social services. The city of Hartford also possesses much talent which is working in many different ways to overcome these problems.

An example of this effort is the Blue Hills Civic Association which is attempting to reverse the exodus to the suburbs by extolling the positive features of city life. An editorial in the June 19 Hartford Times, written by Don O. Noel, Jr., who lives in the Blue Hills neighborhood, best describes this effort:

[From the Hartford Times, June 19, 1971]

OBSERVER AT LARGE: A CITY NEIGHBORHOOD ON A CAMPAIGN TO SELL ITSELF

(By Don O. Noel, Jr.)

"Blue Hills Commuters DON'T", read the bumper sticker the neighbor on my doorstep thrust at me.

"Don't what?" I asked.

"Don't commute."

All right, I'll agree to that. Blue Hills is a neighborhood of Hartford, which means it's close to the downtown city. Those of us who are city-dwellers go back and forth to work, of course, but it's so short a trip that it can hardly be called commuting. That's the somewhat gimmicky message the bumper-sticker is trying to get across—and it's a story worth telling.

I stopped commuting six years ago, when we moved to Blue Hills. I'm now 2.6 miles from the office, which is a handy bus ride, a ten-minute bike ride in good weather, and even close enough to walk once in a while—and I have.

One of my neighbors walks across town to the Aetna every day, rain or shine, putting me to shame. Others are occasional walkers, just for a change; and there are other bikers.

Most, of course, drive or take the bus—but with that big difference that it isn't very far. Someone suggested finding a handy billboard at one of the highways where traffic plugs up in the afternoon, with a simple message: "If you lived in Blue Hills, you'd be home now."

Blue Hills (as you gather by now) is currently engaged in selling city living—and non-commuting is one of the attractive features.

There are other attractions. Unless, a growing stream becomes a boom, the city's neighborhoods are relatively inexpensive to buy into.

Not only in Blue Hills, but in other neighborhoods of the city, there are handsome, tree-lined streets (and not spindly saplings the developer has just planted, either) and solid, roomy old houses that most families simply couldn't afford out in the suburbs.

Hartford's tax rate is high—but it's computed on a lower value. The actual dollars of property taxes paid on a city house may in fact be lower than on a comparable house and yard in some suburbs.

Better bus service for many families means they can sell the second car, which can be a big money-saver. Because things aren't so spread-out, kids often can walk to Scouts or Campfire Girls or the dozens of other activities they must be chauffeured to in outlying suburbs.

And proximity to downtown means that evenings out—concerts, movies, ball games, Constitution Plaza festivals—don't seem like a major expedition.

The neighborhood is attractive indeed to many of the city's Negro families with the energy and ability to move out of the ghetto and up to home ownership. And they are welcome.

But it also sought to be attractive to white suburbanites. It's not an "either-or" situation; the community hopes it will continue to attract the diversity of race, religious and age groups that contribute to the vitality of this integrated neighborhood.

Blue Hills residents know first-hand what sociologists have long concluded: That people who buy into a given neighborhood in a given price range tend to be remarkably similar in age, education, income. Racial or religious differences prove minor; common interests prevail.

But because that isn't widely understood or believed, Blue Hills is an integrated neighborhood that could become un-integrated if many more white families move out than move in.

People move all the time, of course, in any community. About 7 or 8 percent of the families annually move out of Blue Hills, as they do out of any comparable-sized neighborhood. About one in four of the families who move in are white.

That's not a "panic sale" situation, but it's a long-term trend that the community, white and black alike, would like to change. This is a neighborhood that finds positive values in integration—not only white, black and Puerto Rican, but Protestant, Catholic and Jew.

A recent organization with the awkward title of Blue Hills Housing Services Corporation is aiming to interest more white suburbanites in considering a move back to the city. My neighbor Jonathan Colman, former Hartford city planner, is receiving a steady trickle of inquiries following up newspaper ads.

A few years ago, it was assumed that the only white families moving in were those who already assumed some positive values in an integrated neighborhood. But a recent sampling shows a surprising number who've moved in despite integration—moved in to cut down commuting, or to get a housing bargain—and then have found they liked the social neighborhood, too.

Are there problems? Of course.

Schools are a problem. They've been in a slump. But they're looking up; men like Paul Collins at Weaver are re-creating school spirit, and rebuilding high school academic excellence. Hartford's elementary school program, city-wide, has some of the most innovative programs in the metropolitan region, programs that work. The school system is responsive to neighborhood organizations—on such matters, say, as the naming of a new principal—to a degree that would astound most suburbanites.

The Blue Hills Civic Association, which published a monthly newsletter and organizes a host of community activities, lobbied successfully for the first public-school Montessori program in the area, and for "Follow Through" primary-school programs at all three Blue Hills schools.

Parks aren't the problem they're made out to be. Keney Park is a big, well-used park, with lots of space and playing fields, and a vast majority of park-users who share the universal desire for a pleasant afternoon in the sun. West Indian cricket games are a Sunday afternoon feature near my house; there are several Little League diamonds. There are a handful of tough kids who give the place a bad reputation, but they're a problem that can be brought under control.

Crime is a problem—or so people think. But statistically, house burglaries are no

higher in Blue Hills (or most other city neighborhoods) than in surrounding suburbs. "Street crime"—purse-snatchings, say—are higher, but no higher than other single- and two-family residential neighborhoods in the city.

But the problems aren't overwhelming, or people would be moving out in droves. They aren't. And those who move in—both whites from the suburbs and blacks getting their first chance at home ownership—are more determined to solve the problems than most areas of the city.

And that's a big plus.

DEMOCRATS VERSUS DRUGS

HON. JOHN T. MYERS

OF INDIANA

IN THE HOUSE OF REPRESENTATIVES

Tuesday, June 22, 1971

Mr. MYERS. Mr. Speaker, Andrew Tully, in his column "Capital Fare" in the June 16 issue of the Alexandria Gazette, points up the miserable Democrat record in the field of drug abuse prevention. He notes that nothing much was done during the Kennedy and Johnson administrations despite the tremendous drug problem existing in the 1960's. Now, Democrat presidential candidates are attempting to conceal the dereliction of their party by contending the problem is a new one.

Mr. Speaker, the menace of drug addiction is a problem of long standing; it is only drive to solve it that is new. Only under the leadership of President Nixon has this Nation launched an all-out assault to destroy the drug menace.

I commend Mr. Tully's article to the attention of my colleagues.

DEMOCRATS VERSUS DRUGS

(By Andrew Tully)

WASHINGTON.—It can be said without successful contradiction, I believe, that every one of the announced or potential Democratic candidates for President is publicly appalled by the drug problem among American troops in Vietnam. Bully for them.

What I find hard to swallow is the preposterous suggestion contained in their sanctimonious public utterances that Richard Nixon is to blame for this tragedy. Listening to their whimperings, one gets the impression that the tragedy is the direct result of the President's refusal to end the war yesterday.

Nixon may not be able to win this one, because everybody wants an end to the war, but at least one citizen, namely me, finds himself underwhelmed by the Democratic position. The record shows it is based on both a false premise and a disdain for the facts.

If we buy the argument that American youths became drug addicts because they were shipped to Vietnam, which, as we shall see, is not necessarily tenable, then we find the Democrats indicting themselves. It was not Nixon who shipped the GIs to Vietnam, but two Democratic Presidents named John F. Kennedy and Lyndon B. Johnson. Although his critics seem unaware of the fact, Nixon is bringing the boys home. (Too slowly, maybe, but let's not get into that at this time; I'm not writing a book.)

Now, neither Kennedy nor Johnson was able to concoct this piece of villainy on his own. They had to be, and were, aided and abetted by a succession of Democratic Congresses. The Democrats ran (and still run) the armed services, foreign affairs and appropriations committees of the Congress which approved the Kennedy-Johnson policies and provided the money with which to implement them.

Today, when even some generals want to get out of Indochina, Democratic "peacemongers" so far have been unable to persuade their Democratic colleagues to cut off the dough for the fighting.

Although it is now called "Nixon's War," the still-Democratic Congress has refused to use its control over the purse strings to disavow it. Some peace mongering.

This leads us to an examination of the howls emitted by Democratic polls over American dope addiction in Vietnam. The fact they so blithely ignore is that the U.S. has had a drug problem here at home since, roughly, 1960, well before the buildup in Vietnam. If kids could go junkie on campus and street, where it was officially considered naughty and even, sometimes, criminal, it follows they would have no trouble enjoying their addiction in Indochina, where taking dope for centuries has been a part of the life style.

I say drug addiction was considered naughty in the Sixties, but I don't know. Nothing much was done about it by either the Kennedy or Johnson administrations, perhaps because permissiveness was the fashionable mot. On the other hand, the Nixon administration spearheaded by Atty. Gen. John Mitchell immediately took a tough line on the problem, and since 1969 has pursued it with extraordinary vigor.

Some figures: In 1965, when dope-taking was near its height, the Bureau of Customs seized only 24 pounds of heroin; in 1970, it confiscated 402 pounds. Marijuana seizures are up 498 per cent; cocaine seizures up 441 per cent; hashish seizures up 324 per cent. Yup, I'm going to be a cad and wonder what Lyndon Johnson's cops were doing all that time.

But nobody should have to wonder what the Democrats' scapegoat, Richard Nixon, was doing during those heady days of Camelot and the Great Society. A check of newspaper files will reveal that he was practicing law.

SENATE—*Wednesday, June 23, 1971*

The Senate met at 11:30 a.m. and was called to order by the President pro tempore (Mr. ELLENDER).

The Chaplain, the Reverend Edward L. R. Elson, D.D., offered the following prayer:

Eternal God, father of all men, in the heat and burden of these feverish days, which drain our strength and demand our best, we turn to that living water which alone can restore our souls and bodies. May we drink of that fountain which flows from the rock of our salvation that we no longer thirst. Cool our fevered lips and our hot spirits with the living water Thou hast promised.

Send us forth, O Lord, into the duties and the decisions of this day with a serene and calm strength which no difficulty can strain or break. Give us a part in winning a redeemed world, delivered from hate and injustice, where men and nations live in peace. In these demanding days which cry aloud for wisdom and character, help us to quit ourselves as men of God, ever improving the Nation and advancing Thy kingdom on earth.

We pray in the name of Him who is the truth and the way. Amen.

THE JOURNAL

Mr. BYRD of West Virginia. Mr. President, I ask unanimous consent that the reading of the Journal of the proceedings of Tuesday, June 22, 1971, be dispensed with.

The PRESIDENT pro tempore. Without objection, it is so ordered.

COMMITTEE MEETINGS DURING SENATE SESSION

Mr. BYRD of West Virginia. Mr. President, I ask unanimous consent that all committees may be authorized to meet during the session of the Senate today.

The PRESIDENT pro tempore. Without objection, it is so ordered.

MILITARY SELECTIVE SERVICE ACT

QUALIFICATION OF AMENDMENTS

Mr. BYRD of West Virginia. Mr. President, I ask unanimous consent that all amendments which will have been submitted at the desk to H.R. 6531 at the time the vote on the motion to invoke cloture is announced may be considered as having been read, so as to qualify under rule XXII.

The PRESIDENT pro tempore. Is there objection?

Mr. GRIFFIN. Mr. President, reserving the right to object, I would inquire of the distinguished majority whip if I am correct in my understanding that any Senator who had an amendment at the desk could have it read if we did not have unanimous consent, and thereby have it qualified?

Mr. BYRD of West Virginia. The distinguished assistant Republican leader is correct.

Mr. GRIFFIN. So that we are, in a sense, just saving some time by doing it by unanimous consent?

Mr. BYRD of West Virginia. The Senator is correct. The unanimous-consent request, if granted, will be saving the time of the Senate, and it will also give any Senator who has submitted an amendment heretofore, but who has not had it read, the opportunity to call up his amendment after cloture is invoked, if invoked.

Mr. GRIFFIN. Would the majority whip withhold that request for a few more moments?

Mr. BYRD of West Virginia. Yes; I will be glad to withhold my request. May I say to the assistant Republican leader, the Senator will recall that the unanimous-consent request of the majority leader yesterday had effect only up to that moment, and there have been Senators who have contacted me expressing a desire to get amendments in today, feeling there might not be an opportunity to have them read, and this is just an effort to protect all Senators.

I withhold my request.