A NEW ROLE FOR THE ILLINOIS ACADEMY OF SCIENCE

SENATOR ALAN J. DIXON

Thank you Doctor Pappelis for your kind introduction.

Ladies and Gentlemen of the Academy, I am honored to join you this morning. I must confess I suffered a touch of concern, if not outright foreboding, in this morning's panel discussion concerning a new role for the Illinois Academy of Science. Friends in the academic community have told me that scientists apply strict standards of academic excellence before permitting a student to join their ranks as a fully qualified member. You have heard that I am an attorney, legislator and a more or less successful practitioner of the political arts. But since politics and government have not risen to the level of exact sciences, I seriously questioned my qualifications for appearing before you today.

My scientific achievements are not found in any monograph or periodical. They can only be found in the notes and reports that passed in a flurry between my high school and college science instructors and parents. I am pained to admit to you that these messages and reports graphically traced a precipitous downward spiral in my scientific aptitudes. I was an early underachiever in the physical sciences.

I have been informed that it is somewhat unprecedented for a member of the Illinois State Senate to address the Academy. I am honored to be here to discuss with you areas of mutual concern and interest which have narrowed the gap between your professions and mine.

After some study and reflection, I am convinced the time is right for an exchange of views between you, as members of our state's scientific community, and me, as a representative of our state legislature. I hope that some of the comments I intend to make stimulate you to make further contacts with other legislators and agencies in Springfield. Only in this fashion will we be able to undertake a scientific dialogue.

I am not qualified to attempt this morning to enter your various fields of research and study. I will limit my remarks to a discussion of some needs that I have begun to perceive clearly during my twenty years in the state legislature. Needs that require your attention and consideration.

Since I was first elected to the general assembly at the age of 23 in 1950, the problems plaguing Illinois, problems that continue to demand some legislative resolution, have multiplied and expanded in geometric fashion. Decisions faced daily by the working legislator have become awesome in complexity. As a Committee Chairman in the House and more recently as Floor Leader of my Party in the Senate, I have participated actively in every major effort to come to grips with the problems that plague our state. During my years in the legislature, the state government in Springfield

has expanded tremendously. New agencies have been added and old ones expanded to meet continuing demands from the public for improved and expanded government services. Programs have been initiated to provide improved health care, better environmental protection, more recreational facilities and parks and more effective crime prevention and control.

But despite the progress that we have made, many of the problems that concerned me 20 years ago as a freshman legislator still plague our state today. And new ones have been added to the catalogue. Urban blight spreads despite our best efforts to push back its boundaries. Racial harmony and a solution to the nagging problems of urban and rural poverty are not in sight.

Ironically, our successes have produced problems that the legislature is required to cope with today. For example, improved public health care has enabled us to reduce Illinois' infant mortality rate and to lengthen the average life span of residents of the state. Our state's commercial and industrial development, our welfare standards and our large and flourishing economy have made it a magnet for citizens from poorer states. This enlarged population has created serious drains on our already overburdened resources.

Industrial growth has also been accompanied by the unwanted waste of environmental pollution and the serious problems of automation and structural unemployment. Industry through automation and mechanization has created a vast new requirement to train and retrain thousands upon thousands of our residents for jobs requiring higher and more technical skills.

Because of overcrowded conditions, our public elementary, secondary and higher education systems are faced with crisis after crisis. How will we allocate the state's resources for training new teachers? What will be the budget for our state's school systems? Are there new and better programs available to deal with the problems of meeting the educational needs of our adult citizens and taxpayers?

Each year, ladies and gentlemen, the legislature is called upon to deal with this depressing catalogue of nagging problems. The public demands action, action now, new solutions, and solutions now, not later. But the legislature is not composed of experts in these various fields. The legislature is a representative group. There are no ecologists there to offer their experience and advice on how to come to grips with the problems of environmental waste. Nor will you find highly qualified conservationists able to bring their expertise to bear on balancing the state's need for additional recreation space against its need for the preservation of plant and animal life.

The legislature is a representative body. Some of its members are labor union men. Others are shopkeepers. There are few doctors. Many are farmers. And most are members of the legal profession. None have a great deal of scientific or technical skill. These ordinary men and women, utilizing their limited training in an extraordinary way, are called upon to legislate and to resolve problems that often would require the concentrated concern of dozens of scientific experts. Make no mistake about it, there is a clear and urgent need for more and better qualified scientific advice if the legislature is to cope adequately with the pressing needs of our state.

In order to highlight the legislature's need for an improved system

for obtaining scientific and technical advice, allow me to discuss very briefly the present system utilized by the legislature in obtaining this type of information.

In most cases highly motivated and public spirited individuals, who happen to have special qualifications to comment on or offer advice concerning a proposed bill, request and are granted time to testify before legislative committees. At times committees will invite experts to testify when they are dealing with a particularly thorny issue. The information and advice we receive from these meetings often directly influence our views. But even when the testimony is the best available, it is often spotty and incomplete. There is no guarantee that all of the relevant data available on a particular subject has been presented. In a typical fifteen minute session of testimony, witnesses seldom move beyond the broadest generalities and recommendations.

Committee hearings also raise another type of problem in trying to find the best advice available. Many times the testimony offered, even when provided by one with the appropriate academic qualifications, represents the views of one or more special interest groups that have a particular stake in the legislation under consideration. Although these views have a right to be represented in committee, they rarely are completely reliable. This advocacy system, which at times becomes an adversary system, has been successful up to now. But the time has come when we must supplement these views with some additional source of scientific advice untainted by a particular special interest and more representative of larger public interests.

Another example of our present information gathering system are the commissions formed by the legislature from time to time to study a particular major issue. These commissions, composed of legislators and laymen, hire consultants, collect testimony, and assemble data prior to making recommendations to the Governor or General Assembly for specific action.

The commission system has been successful in reforming our judicial system. Important recommendations have been produced by the State Highway Commission for improving our state's system of roads. And more recently, I was a member of the commission which laid the groundwork for calling the constitutional convention. But the commission system is not appropriate for gathering and disseminating the amount of scientific information needed by the state government on a continuing basis.

There is one last technique by which the legislature obtains scientific advice. The executive branch of the state government, which makes legislative recommendations to the General Assembly, has a large staff of trained personnel who serve as advisor to our top policy makers. But these experts are not available directly to the legislature and often represent the views of their agency or political administration.

It has also been my experience that problems tend to outpace their recommendations for solutions. For some reason state agencies often lag behind other institutions such as our universities in projecting solutions for problems. They sometimes fail to even recognize let alone respond to a particular pressing problem until it bursts forth in public as a major controversial subject.

As you can see, the legislature's present system for accumulating technical and scientific advice is clearly unorganized and haphazard.

It does not provide for a continuous flow of the most timely data from our state's scientific community to the legislature. Clearly the individual legislator is not always able to make the kind of educated and informed judgment that is called for in response to a particular issue.

If the General Assembly is going to come to grips with the issues of the day that require clear and unbiased technical or scientific clarification, the best scientific advice available must be provided for every legislator on a continuing basis. Some agency in the state must undertake to coordinate and channel a continuous flow of the most recent scientific information, advice and recommendations to the state legislature. The time has long passed to be satisfied with our present archaic system.

It is clear, ladies and gentlemen, that the Academy is the only statewide organization qualified to coordinate all of the various scientific interests of the state in undertaking the task of becoming an official advisory body to the state on scientific and technical matters. I propose for your consideration that the Academy undertake this critically important function.

Since 1907 your organization has written a long and distinguished record of service to the people of the state of Illinois through the promotion of scientific research, and the diffusion of scientific knowledge throughout the state. In undertaking this new function you would again be undertaking a role of service.

The new advisory function for the Academy could be similar in broad outline if not in specific performance to that performed by the National Science Foundation for the Federal Government. Although the NSF does serve to channel new research and ideas to the Federal Government, this is not its sole function. As you also know, it plays a large role in fostering and directing pure research activities on a nationwide basis.

Although the Academy may consider a role of setting statewide science policy similar to that of the National Science Foundation at the national level, I am not qualified to recommend such a course of action. I am concerned, however, with the state government's need and especially the legislature's need for more and better scientific advice on a continuing and coordinated scale.

Other proposals have been made to form a statewide Illinois research commission or to create a new office of scientific research and technology in the Governor's office. Both of these proposals merit consideration. The concept of a research commission is not unprecedented since it is my understanding that the state of Connecticut is a leader in this area.

Perhaps the Academy could affiliate with such an organization to collect, analyze and summarize scientific and technological information helpful to all levels and agencies of state government. I understand that such an affiliation with the state is not unprecedented since the Academy is presently affiliated and works closely with the Illinois State Museum at Springfield.

In performing its new advisory role, the Academy could consider forming task forces in various problem areas to utilize specialists in our universities, industry and government agencies. Specialists from surrounding states and national and international experts could be called on for counsel and advice when needed.

Both Houses of the legislature, their Committees and the various state agencies in the Executive

Branch, should be permitted to request specific studies or information. In return, a grant or stipend would be provided by the state to underwrite the costs of the particular study. The work products of the task forces organized by the Academy would be made available to the legislative committee or the agency requesting information or to the appropriate agency when no specific request has been made.

Some topics that might be areas for concentration by early task forces could be agricultural and industrial research for statewide economic development. Second, new approaches to our public health needs could be sought. Third, there is a great need for a continual flow of technical information concerning air pollutants, their measurement and control. In time these studies could be expanded to include research and recommendations from eminently qualified experts in the behavioral sciences.

In conclusion, ladies and gentlemen, members of the General Assembly as well as other state officials need the advice which may most accurately be produced by the members of this Academy. The need for your skills are great. The problems are myriad. New channels of communication must be opened between this Academy and the members of the state legislature who must cope with the increasingly complex issues of our time. The job at hand is no small task. It cannot be undertaken without clear planning and solid groundwork.

But it is most practical for us, when in this age scientific knowledge is at a peak, to turn to you to share the value of your wisdom and skills. With your help perhaps we can move on to meet some of the old and new challenges that will face us during the final decades of this century.

I appreciate this opportunity to address you and hope that you will invite me to return to assist you if you choose to undertake this new task.

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