Since the complete understanding of an institution is impossible, an administrator must base his decisions on models of institutional structure. State and federal trends towards accountability and detailed cost accounting restrict the administrator's ability to cope with the problems of the institution. Similarly, efforts to make each component of the institution operate on a profit basis provide incentive, but they limit flexibility. If the economic flow of the institution is charted in detail, it can serve as a model used to identify the institution's weakest elements, but it should be remembered that encouraging departmental self-sufficiency can lead to fragmentation and internal dissonance. (EMH)
I come before you today a very humble person--especially a group of professionals in the computer and systems field--a person who thought two years ago that the best move to make for administrative computing at his institution was to shift it from outdated equipment to our then underutilized research and instructional computer . . . a Sigma 7.

After all, I said to myself, how could you go wrong with something with a Greek name? And I feel right at home here with some of the exotic systems nomenclature--Socrates, Pansophic.

For the last few years, I have had the distinct privilege to pass through a set of experiences that brought me in contact with problems in postsecondary education at the statewide level (in Florida), at a relatively complex private university (Vanderbilt) and at the national level (NCHEMS and the Commission on Financing). I do not present myself to you as an expert in any of those areas, but I have come to a conclusion about management needs
at those levels--there is a missing link. Somehow, we are not getting it together right. All the work that you do--that I do--is considerably less productive because of this missing link.

The cliche response to the missing link is that we need to do a better job of stating goals and objectives (undeniably something we should do) and that evaluation of resources used and outcomes produced should follow the better goal statements (also desirable).

How do you take a multi-purpose postsecondary institution and catalog the myriad of specific goals and objectives that relate to all institutional activities? And perhaps more important, are those goals additive or cumulative or subject to reduction by some sort of classification system? Even if the answer to the last question is yes, to maintain an institutional or state system process that would bring human reflection to bear on goals and to make resource adjustments annually is impossible. We all know that we resort to accommodations such as incremental budgeting and very seldom find ourselves in the position of making radical changes.

Assume then that you cannot comprehend or internalize the operation of the entire enterprise annually or biennially. In order to make trade-offs necessary to fit
within limited resources, some generalized proxy for the enterprise needs to be in place in order for operations to continue. At the statewide level, the general funding formulae still existing in some states and earlier versions of those being used elsewhere served the purpose of a generalized proxy. These formulae were and are broad-based enough to give the opportunity for standard setting, but not detailed enough to allow academic programs by academic program accountability. At least two things happened to alter the effectiveness of state funding formulae. First, the press toward making them more specific (for example, using credit hour cost by discipline) moved them more into the realm of accountability models, reducing substantially the latitude of institutional executives to allocate resources. The second source of alteration came from the lack of care by institutions and systems to the important element of credibility, especially in the area of enrollment accounting.

The demise of generalized funding formulae, in my opinion, is but another nail in the coffin for institutional and system management. As they have grown more detailed and as "higher authorities" make their regular ongoing decisions based on more elemental institutional data, management control moves away from the institution to the system to ultimately the state budget office and more often
recently to the offices of analysts for legislative appropriations committees. Unless some reversal in this trend is in sight, the institutional or system president will have very little discretion. How can the trend be reversed? In my view, only one opportunity exists. It must become patently obvious that evaluation of institutional activities is taking place regularly and that changes, sometimes radical changes, result from such evaluation. Combined with the assumption that one cannot comprehend every activity of the institution during every budget cycle, review and analysis of institutional activities need to follow some sort of organizational or thematic cycle so that in a given period of time all activities are reviewed and that in the interval between evaluations, a particular institutional manager is given enough time to produce change.

At the federal level, the Green formula for general support of postsecondary education had the attributes of a general, but not fully accountable, resource allocating system. It was only when questions such as that asked by Senator Pell appeared that its general utility was compromised. Pell offered that he could be for such a formula if it were not used to pay for intercollegiate athletics. Imagine a system to track that.
In the private institution, no less of a problem exists. The competition for institutional resources is fierce. Here, in the context of the private institution, I would like to introduce another level of the problem of unstated assumptions. Again, I will use resource allocation and the economics of the institution as the window. There are a number of protocols and conventions that operate as they relate to the assignment of income and expense. In a strict each tub on its bottom approach for schools or departments, a bottom line balancing or better is the desired result. All of us are aware that altering the assumptions underlying the assignment of income and expense can drastically alter the bottom line. And consequently, the on-the-surface evaluation of the particular unit can be impacted by those assumptions. Philosophically, I do not accept the extreme application of the each tub on its own bottom approach. If each tub is truly on its own bottom, then intellectual transfer, the particular academic mix that purportedly makes a university what it is, reduces to quibbling over exchange instruction rates.

The advantages of each tub on its own bottom are supposed to be the creation of incentives for sub-institutional managers to work harder at fund-raising and expenditure control. If all academic activities stayed on an even keel without cycles in enrollment or research funding or
private gifts, then one could translate that stability into a continuing each tub on its own bottom approach. The management framework needed to rationalize even a modified each tub on its own bottom approach requires the open statement of these protocols and conventions mentioned above. For example:

1. How are central services financed? Is the system for financing central services equitable? Do these services have the same sort of constraints operating that academic units do?
2. How are inter-program student enrollments handled financially?
3. Should the same tuition be charged for all programs?
4. How should surplus funds be used if they are available?
5. How is indirect cost recovery from the federal government distributed?
6. If I can do something cheaper myself, can I forego the use of a central service?

While the items listed may appear mundane, they represent the plethora of unstated and informal assumptions by which we operate and in some ways represent back doors into the goals, objectives and resource allocation issues raised above.
If the economic system of the institution is as fully stated as possible, then it too can become a generalized model of institutional values and relationships.

At Vanderbilt, I believe we have made some progress in this area. We are in the dark ages in terms of transaction systems, but I feel strongly that an operational representation of institutional management and economies provides a meaningful backdrop for the building of appropriate transaction systems to feed ultimately the evaluation of the economic system. With something called the Income Distribution System (an idea borrowed from Case Western Reserve University), we laid out continuing operating assumptions about how income and expense flow to the schools of the University. We created five school-like entities for executive and support services and partitioned income to flow to those units. In this latter act, we decided to follow the managerial responsibilities of senior officers rather than an abstract program structure. The result of not going by a program structure has been curious. Our normal anxiety is that the use of program structures will ultimately affect the organization of the institution. What has happened to Vanderbilt is that activities that seem out of place programmatically are being questioned—the right kind of question to be generated. We have attempted and
succeeded in modeling the major programmatic and personal tensions that exist at the institution. In a steady state or declining resource situation, such a tension model must be brought to the surface and rationalized or institutional chaos will result.

The point being pushed here is that our conventional definition of management systems is usually limited to the logic, programming and cathode-ray tube or print-out results. If internal protocols and assumptions are built in, they are normally not visible. The data hide the assumptions and leave the institutional tensions unstated.

The managerial and economic representation of the institution is now a focal point for debate. Snipings that used to occur still do, but they are forced into a larger context. Subsidies for given academic units are in the open and viewed as a major part of the debate. If a long-term deficit shows in a given unit, then three choices emerge:

1. New resources will be directed to that unit;
2. Current resources will be reallocated; or
3. The scope of the unit will be reduced to fit revenues available.
Central university management cannot tolerate continued deficits in a given program. If the program has value in its present or altered form, then the resources should be put in place to reflect that value.

There are numerous dangers in this system. There is an illusion of self-sufficiency that generates pressure for an academic unit to move toward being a stand-alone administrative entity eroding institutional economies of scale for support activities.

There is extreme difficulty in holding to institutional equity systems such as personnel classification systems. There is considerable upward pressure on the operating base for those units that have money in the short run.

And, most important, there is the danger of academic isolation, subverting the major purpose for having a university in the first place.

It is my judgment that the quality of our resource allocation debate has increased and hence, the quality of resource allocation itself.
I would like to switch now to a related subject, the extension of the fiduciary responsibility of institutional executives and trustees. The matter is relevant because it generates a contrapuntal force to the notion of decentralized management presented above, requiring a documentation that is not easily accomplished on a decentralized basis.

Our common examples for new responsibilities are the Office of Civil Rights of HEW, EEOC, and the Department of Labor.

But coming into the fore quickly are the Federal Trade Commission as it relates to consumer satisfaction issues, the Environmental Protection Agency as it relates to institutional environmental impacts. In this latter area, I predict that most of us will be doing some form of environmental accounting within five years, if not sooner, especially if we are planning any significant construction.

Further, the recent suit by the New York Teachers' Retirement Fund against the U. S. Trust Company for mismanagement of pension funds will create (in addition to the new Federal Pension Legislation) a need for defensive investment accounting to protect trustees (and will...
make a lot of portfolio performance evaluation companies happy).

The Federal Government is mounting new pressures on the documentation needed for supporting indirect cost recovery. The possibility of multiple recovery rates for each overhead activity would put enormous new pressures on management system needs.

These thrusts (as well as the privacy issue you have already considered) generate the phenomenon with which you are probably the most familiar. That is, new permutations and combinations of existing data are asked for and that new needs (such as environmental analysis) cause us to enlarge transaction and analytical systems to accommodate those needs. We are certainly not at a point of settling down on management system development.

Now I have gone through this entire presentation without mentioning NCHEMS once, although the topics treated are certainly germane to the current set of NCHEMS activities. I would like to point out in particular the State Level Information Base Project that represents a major effort to develop a state-wide postsecondary education information system not solely dependent on aggregated institutionally generated data. It is another way to preserve
a system of managerial discretion by treating state-wide questions with other than unit cost by discipline by level.

Other NCHEMS board members and NCHEMS staff are on your program, but I would like to close with the theme that began this presentation—humility. I am in awe of the national, state and institutional challenges facing us. I have had a unique opportunity to see a small part of the whole picture. I remain optimistic that we have the collective wisdom to manage the present and the future.

Thank you.

GK:a

Remarks to CAUSE, December, 1975, Denver, Colorado.