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## Educational Synergism

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## EDUCATIONAL SYNERGISM

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Great Britain and France are combining their efforts to manufacture a supersonic transport plane, the Concord.

Morris Keeton, Academic Vice President of Antioch, speaking at the Association of American Colleges meeting in Los Angeles in January predicted that strong four year colleges would form partnerships with each other to do things they could not afford on their own.

Title III of the Higher Education Act provides federal support for institutional consortiums and for cooperative arrangement between a college and almost any other type of organization including businesses and industry. This act is predicated on the knowledge that two or more institutions working together can produce results not possible if they operate separately.

This idea of consortiums of course is not a new concept, whether it is two nations producing a supersonic transport, or four colleges sharing the costs of a well known concert artist.

In chemistry and medicine there is a term that many of you are familiar with, namely: Synergism. Webster defines this as "The simultaneous action of separate agencies which, together, have greater total effect than the sum of their individual effects." This concept has applicability to chemical agents and institutional agencies.

My concern today, however, extends beyond just inter-institutional cooperation. Let me try to differentiate between cooperation and synergism. Cooperation among institutions is a well known practice, familiar to all of us. Synergism exists when the cooperative relationship produces something that neither of the institutions could alone produce. For example, when two colleges pool their resources to share a concert artist, this I would term simply a cooperative undertaking.

To describe synergism let me recount the relationship between a hospital, a community college and several other health related agencies.

Franklin Square Hospital is a private, non-denominational hospital operating in obsolete inadequate quarters in Baltimore. By deliberate efforts it has purchased 80 acres directly adjacent to the 135 acre campus of Essex Community College.

Critical examination of the total parcel of land, the 135 acres belonging to the College and the Hospital's 80 acres, disclosed greater land use potential if the two institutions could exchange certain acreage. For example, the College could acquire land better suited for its athletic facilities and the Hospital could be placed on a high saddle of land which would facilitate future build-

ing expansion. The outcome, as it worked out, was the exchange of approximately 25 acres of Hospital property for 20 acres of Essex Community College property.

Now the two institutions could plan their building programs to facilitate a continuous cooperation in the use of physical resources and in the sharing of services and personnel. To make such planning possible, Educational Facilities Laboratories granted \$15,000 to Essex Community College for an initial study of the possibilities inherent in this growing relationship. With these funds the College and Hospital turned to E. Todd Wheeler of Chicago, and the Perkins and Will Partnership, in Washington. Visits were made to the site and conferences were held in Baltimore and Washington. The outcome was a sketchbook report entitled "Eastern Baltimore County Education and Health Complex." The reports' conclusions and recommendations are incorporated within the following portions of these remarks.

While the developments outlined thus far were occurring, two more health agencies appeared on the scene. The Baltimore County Health Department was planning to locate a major public health clinic in the Eastern part of the County. Also, the local Commission on Problems of the Ageing was planning to establish a quasi-public rehabilitation nursing home in the same part of the County. To those involved it became apparent that each of these two agencies might very well consider joining the Health-Education family begun by the College and the Hospital. The Hospital thereupon agreed to donate two small parcels of its land at appropriate and planned locations for use by the health center and by the rehabilitation nursing home. At present there is a strong possibility of a day care center for mentally retarded joining in the complex.

The Health and Education Campus was thus born, comprised of four institutions, plus a fifth, two of which already existed and were functioning elsewhere, namely the Community College and the Hospital, and three of which were on paper, the health center, the rehabilitation nursing home, and the day care center for mentally retarded. Part of the Educational Facilities Laboratories' study included a critical review of the master plan for the total 215-acre tract, designed with a view to maximize joint use of physical and human resources.

The term "Institutional Synergism", then, describes the philosophy with which the master plan was undertaken and the philosophy which thus guided the concept since its inception, i.e., there are great mutual advantages, and great advantages to the community, in joint planning for close physical proximity, for maximum coordination and actual sharing of facilities, and for correlation of the functional activities of the agencies involved. The major value is hard to describe, but it will be an outgrowth of the five institutions working together, sparking ideas with experiments, meeting local and regional needs, as well as their mutual needs, in a kind of institutional symbiosis. To be more specific, here are some of the potential outcomes



visualized and presently being planned. Much of this is expected to minimize unnecessary duplication of effort and to reduce duplication of plant facilities. More important than even avoiding duplication, is the increase in services available to each institution and to the community. This is the synergism which will produce more than the sum total of the five components:

Sharing of physical facilities includes at least partial joint use of parking areas, auditorium, cafeteria, library, physical education facilities, power plant, data processing, audio-visual media, jitney bus service, and even amenities such as sylvan walks.

Other possibilities inherent in the relationship include:

The Hospital and Health center providing all of the health services needed by the College for its students, faculty, and staff.

The establishment of a heavy specialization of paramedical curriculums and short courses offered by the College, such as nursing, accredited records technicians, laboratory technician, medical secretary, sanitary technician, medical emergency technician, surgery technician, etc. Among the new paramedical occupations made feasible and presently being explored are psychologist assistant, pediatric assistant and geriatric assistant. Students in these educational programs, A.A. degree or short term, would draw upon the personnel and physical facilities of the three health agencies for clinical experiences, some laboratory work, and for part-time employment.

Because of its proximity to the three health agencies the College will be able to search out new areas for which training is needed but not presently available. For example, a curriculum instituted for Social Services Assistants will provide an opportunity to experiment with possible uses of such a person in a variety of situations in the three health agencies.

The College will be in a position to institute and coordinate special events and informal education programs for the patients and the community as for example, "A Day of College for the Ageing," and a series of programs on "The Child in the Hospital."

This then describes our term Synergism.

But what has this to do with the space industry? Basically there is a principle involved here which we believe can be applied to other types of agencies as well as health and education agencies. It is also felt that much of what is planned and already being done in this instance can be accomplished by organizations and agencies not necessarily so close geographically as the institutions in this project. It is believed the project has the potential of setting up guidelines that could establish principles and practices applicable thus to other inter-institutional relationships elsewhere.

Can these guidelines be applied to the space industry? An educator is hardly the person to answer this question. Yet in raising it, I imply an affirmative answer. Certainly the space industry is already applying the principle of inter-institutional cooperation in the production of the hardware for which the industry is established.

The more basic question then becomes this: To what extent have you examined inter-institutional possibilities beyond the space industry, that is between the space industry and other elements of our socio-economic system, as for example city planning agencies, national professional organizations, state commissions on air and water pollution, local law enforcement agencies, and so on. Are there areas in such agencies where the space industry can cooperate, i.e. can synergize?

Let me suggest a few examples of the kind of synergistic relationship which might develop.

For example, what can the space industry do with city planning agencies? Most urban planners are naturally quite satisfied if they can project their thinking to the year 2000. To go beyond that date would seem both unnecessary and unreal. Yet I suspect that changes in our mode of living in this next century will be so radical, that if we don't plan more vigorously now,--our children will be called upon to make adjustments which will stretch the limits of our present suicide rate, alcoholism rate, crime rate, and so on.

In other words, I think that the present parameters of city planning need to be greatly extended. Within the space industry I suspect there lies the potential for bringing this about.

Here's a specific example. Space research has concerned itself with the problems of being alone. Concurrently one of the major problems in urban areas is anomie, or lack of identity,--a loss of effectiveness from a feeling of being lonely. I suspect these two concerns,--the matter of aloneness in space and loneliness in a big city may have much in common,--that research in one may have bearing and applicability to the other. Such an effort would require probing,--not outwardly as you are accustomed to,--but inwardly to new social applications of the vast knowledge and skills you have thus far applied toward the moon.

Within the span of our children's lives, I am told, people will live on the moon and some will be born there. In fact,--so I am told, it may be that those inhabitants will not visit earth. These people will explore space from the moon and may gradually lose interest in us earthlings. Is it too fantastic to pre-examine the possibility of antagonisms developing between the earth people and the moon people, in order to develop a basis for cooperation rather than antagonisms? Such an effort could conceivably avoid an interplanetary war for our grandchildren. The problem of examining this possibility would certainly call for our most sophisticated social sciences synergizing with our most sophisticated space sciences.



There are other, far more immediate concerns, which call the space industry to seek out its neighbors in mutual solutions to myriad problems. Among the areas of concerns are:

- forecasts and control of weather,
- dust storms and ocean currents
- water control by recycling and desalinization
- the applications of systems management to medical practice
- the rebuilding of our major cities of the United States

Deeply and fundamentally, this is the message: In this age of science, a man, to be termed educated, must be science oriented and knowledgeable of science. What we may be overlooking however is that if a scientist is to be termed educated he must be man oriented and knowledgeable about man. The scientist who lacks a fundamental concern with man as a human is not truly a scientist.

The dialogue, the exchange, the intercommunication, the cooperation, the synergism must increase between the firmaments of physical science and social science.

In essence I suggest a new set of dialogues among elements of our social-economic - technological structure which I believe can evoke new products and processes that our unimagined way of life will deeply need.

This new relationship of public and private, non-profit and possibly profit-making institutions holds promise of realizing the challenge to create a new breed of educational and community service enterprise, an obligation of every portion of society, including the space industry and education.

Joshua Lederberg, professor of Genetics at Stanford University, and a Nobel prize winner, submits this concept with infinite grace:

"The problem is perhaps one of compartmentalization, that moral issues are segmented away from technological ones. This may be indispensable to accomplish one day's work, but it also glosses over a magnificent opportunity--to apply technical attitudes to fundamental human problems, to look for the ways in which a morally insoluble dilemma can be mitigated by a technological advance that restores a new balance to our repertory."