Before turning specifically to the problems and early achievements of the Harvard Center for Research and Development, I want to comment on three broader issues effecting Federal involvement in education which are currently being felt in our R. & D. Center operation.

First, and most briefly, it has been suggested in the press, in meetings called by USOE officials, and in testimony to this Committee, that it might be a good thing if private industry were involved through contract with USOE in the development of new educational programs and practices. We agree: this would be an interesting and healthy experiment. Certainly, the U.S. Office should not exempt private industry from the various special provisions of doing business with the Government which private, non-profit agencies are forced to accept: I refer to restrictions on copyrighting, limits on overhead, etc. The performance of industry, as well as the performance of the universities and other non-profit agencies, should be evaluated by appropriately similar standards. These are fairly common sense considerations. The experiment would be a useful one, and, frankly, we have confidence in our own and in other universities' capacity to compete with, and perhaps do better than, most profit-making concerns. The record of the corporations, when they have finally gotten onto the firing line in education, as in the Job Corps Camps, has not been all that inspiring.

The second point I wish to mention has to do with the application of "systems analysis" to the internal operations of USOE, and to the understanding of the American educational system. These dual efforts within USOE have occasioned considerable impassioned testimony before this Committee. I feel, in general, that the tone of alarm is overdone, and that these enterprises are eminently worthwhile intellectual activities, as long as they are kept in proper perspective. However, I am not completely convinced that they are, or will be kept, in appropriate perspective. In the first place, the U.S. Office of Education is under increasing pressure from the White House and from the Congress to rationalize and justify its varied programs: the Office, like the academic community, must show "results". Further, it is the tendency of many "systems analysts" who have become interested in education to be entirely too sure that they understand both the goals of education and the processes of teaching and learning through which the goals are to be achieved. There is, in other words, a kind of intellectual arrogance in the typical systems analyst—and I may be doing a severe injustice to OE's specialists—which alarms those of us who think we know something about a little piece of the entire system which the analyst is studying. Finally, the two related analyses are taking place in the anonymity and freedom from informed public scrutiny which virtually all USOE deliberations experience, in view of the shortages of staff and time afflicting the agency. All in all, I think that USOE is involved in some important work here, but I would like to see it conducted more visibly than I fear it now is. In the long run such a style of operation will produce more valuable "systems analyses" of both the Office and American education.

My third general consideration is an example of relatively premature, over-simplified application of the "systems development way of thinking", the kind of application about which we are nervous. It has to do with the "pipeline model" of educational reform which the Office's Bureau of Research apparently espouses. I have brought with me a copy of an article by Dr. Hendrick Gideonse,* who I believe is associated with the Bureau of Research, which appeared in the November, 1965, issue of the *Phi Delta Kappan*, in which the model is set forth as well as in any other public statement I have run across. Basically, the model suggests that ideas for new practices and procedures normally arise in the "research" shops, where they are tested and clarified; when they are intellectually validated, they move to the stage of "development", where on a large scale and with considerable investment of money, they are tried out and adapted in a limited number of "hot house" school situations. Once through the developmental process, the new practices go into a stage of "demonstration", where they are put on view for school people to observe and criticize, often for periods of several years. Finally, and often in conjunction with each of the preceding processes, the new ideas are "disseminated", which means that they are promoted within the educational community through a variety of channels.

I am conscious of over-simplifying and perhaps loading my description of the "pipeline" model. There is not time to do it justice, and the Gideonse article

*Article by Dr. Hendrick Gideonse reproduced following Mr. Herzog's prepared statement.