

CONVERSATIONS UNLIMITED - Monday, April 28, 1986

INTRO UP AND UNDER

Hi, everybody. We live in a world of science and technology. It's hard not to be aware of that. You are listening to me on a marvel of engineering enterprise, the radio. Most of us own or use television sets, calculators and computers. Our daily living is pervaded with the information that comes from biology, physics and other sciences. How good a job is our educational system doing to help prepare us to live and work in this world of science and technology?

Dr. Homer A. Neal is provost of the State University of New York at Stony Brook, and he has spent much time recently pondering that question. Dr. Neal heads the Committee on Undergraduate Science and Engineering Education of the National Science Board. The board is, in turn, the policymaking body of the National Science Foundation. That committee has just completed a study of college-level science and engineering academic programs in America's colleges and universities. The committee concludes that the United States can do much better. In fact, Dr. Neal, your committee's report suggests that the nation must do better.

INTERVIEW DR. NEAL:

-- Cover highlights of committee's findings:

- * Improve laboratories
- * Improve instruction
- * Improve supply of qualified faculty
- * Update curriculums

-- Cover highlights of committee's recommendations:

- * Increase NSF backing of UG education in sciences, mathematics and engineering
- * Increase funds support from states, municipals and private supporters of higher education

-- Cover consequences of present situation:

- * "Grave long-term threat to the nation's:

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...scientific and technical capacity
...its industrial and economic competitiveness
...the strength of its national defense"

-- What happens now - briefly

14:00

We'll take a short break now, then return to talk some more with Dr. Homer Neal about the state of science and engineering education in the United States. Please stay with us.

BRIDGE MUSIC UP AND UNDER

Hi. I'm Al Oickle, and I'm at the State University of New York at Stony Brook with Dr. Homer Neal. Dr. Neal is provost at Stony Brook, and he chairs a special committee in the National Science Foundation. We've been talking about that committee's report. After an in-depth study, the committee is recommending a major investment of funds and effort to end what it calls "the deterioration of collegiate science, mathematics and engineering education." That's a very strong word, deterioration. Is it too strong, Dr. Neal?

INTERVIEW DR. NEAL:

-- How do you respond to criticism that this report is telling us what we already knew, and that it carves out a major role for the foundation that created the study? Is it really self-serving?

-- Why is it so important for U.S. to "continue to stay ahead of other countries" in the global economy?

-- Give us some examples of testimony re:

- * Condition of campus laboratories
- * Competition for candidates for faculty/industry
- * Examples of campus/industry cooperation

-- Note improvements in secondary school level

-- What lies ahead?

- * For NSF board report
- * For states, municipalities, private donors?
- * For U.S. in world scene?

29:00-- OUTRO