

## Faculty Forecasts Future

IN THE YEAR

2000

In the year 2000:

- \*Nuclear war will be increasingly improbable;
- \*Computer crime will be one of our greatest law-enforcement problems;
- \*Family structures will be greatly altered;
- \*Mind control will be widely accepted therapy for certain ailments;
- \*Private colleges will gain strength through mergers;
- \*Coronary disease will be treated by use of artificial hearts.

These statements are among the predictions of selected Trinity faculty members and administrators who were asked to speculate upon what we might reasonably expect the world to be like two decades from now. The responses, which give some indication of the breadth of faculty interests, were necessarily limited to certain fields including: energy, religion, family life, education, public affairs, health care computing, and urban problems.

### COMPUTING

"Computers will continue to get smaller and smarter," according to Dr. David Ahlgren, assistant professor of engineering. "Micro computers will be as common and inexpensive as pocket calculators, and we will be able to hold two-way conversations with computers in our own language."



Ahlgren envisions significant changes in our bill paying procedures and banking practices, with shopping done without credit cards or cash. Vendors will have computer terminals in their places of business and when a customer wants to make a purchase, the store will simply call a central data bank to check on the customer's credit rating.

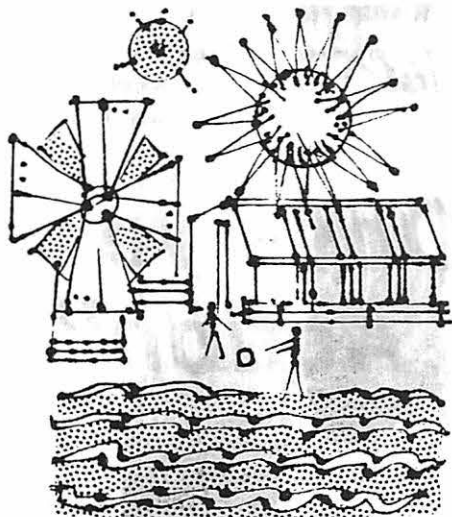
Ahlgren also predicts that home computers will be as much a part of our complement of household appliances as TV sets are today. These devices will be capable of balancing a checkbook, serving as an answering service, fire alarm, income tax expert, burglar alarm system and home entertainment center. They will make our washers, dryers, and televisions sets more efficient. Computers will even be able to draw our bath water at the proper temperature!

"The new technology may have its dangers," Ahlgren says. He is especially concerned about the loss of privacy which may accompany the centralization of individuals' financial records. There is great potential for abuse of these systems and he expects computer crime to be a major law enforcement problem. He also anticipates that society will be challenged to make good use of the increased

leisure time provided by the computerization of many routine tasks.

### ENERGY

"Conservation alone will never solve our energy problems," says Dr. Frank Egan, associate professor of economics. "Despite President Carter's enthusiasm for coal production, this isn't the entire answer either. New sources of energy must be found."



Egan sees promise in solar power, which is becoming economically attractive even more quickly than was predicted. Another encouraging development involves the use of laser beams to process uranium for atomic power plant fuel.

He also points out that concern about our energy supply is not a new topic in this country. In 1914, the Bureau of Mines said our total future production of oil would be 5.7 million gallons, and in 1939, the U.S. Department of the Interior forecast that we would be out of domestic oil by the 1950's. "False predictions such as these not only make one wary about making predictions, but they also contribute to the public's lack of understanding about the energy situation," states Egan.

Egan, who worked for the Federal Energy Administration in Washington last year, does not see railroads, subways or other forms of mass transit staging a recovery in the U.S. Americans are so attached to private means of transportation that Egan sees little chance of having fewer vehicles on the road by the year 2000.

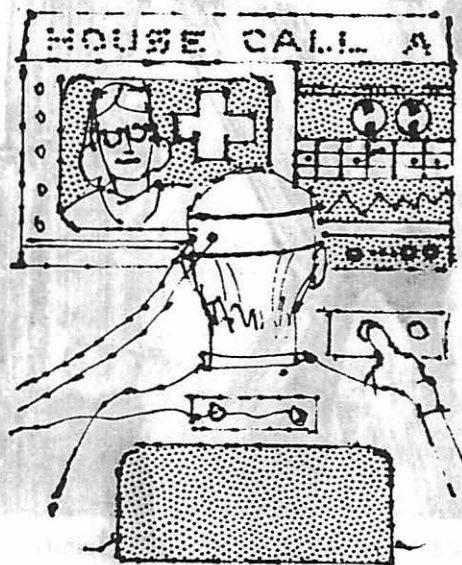
#### HEALTH CARE

Dr. Joseph Bronzino, Vernon D. Roosa Professor of Applied Science, expects dramatic changes in our health care system. "Hospitals will continue to be the site for surgery and acute care, but Health Maintenance Organizations (HMO's) will compete with our traditional medical facilities for patients. HMO's — prepaid group practices set up by physicians and corporations — will offer less expensive medical alternatives. Subscribers will pay fixed fees for treatment the same way we pay yearly premiums on our automobile insurance. This system contrasts sharply with the present system, which charges of a fee-for-service basis."

In spite of the Carter administration's interest in comprehensive national health insurance, Bronzino does not expect such a plan to be adopted by the year 2000. He does expect, however, that national catastrophic health coverage will be in effect.

Bronzino, who is director of the

Trinity-Hartford Graduate Center Biomedical Engineering Program, foresees that an artificial heart will be developed as an alternative to organ transplantation.



Along these same lines, he sees a revolution in medical instrumentation through the adaptation of computers to diagnostic procedures. For example, he envisions a computerized scanning device which can check a patient's vital signs and general health in a short period of time. Such analytical equipment will be welcomed by patients who now often suffer through long, expensive and sometimes painful batteries of tests.

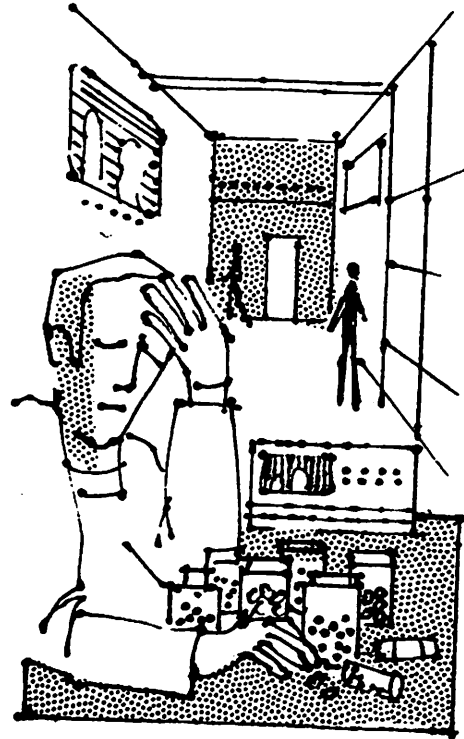
"Biofeedback training — the use of mind control to change certain bodily processes — will be more common in the future," says Bronzino. He cited mind-over-body experiments demonstrating that it is possible for individuals to sense and then alter their internal processes such as heart rate, blood pressure, muscle tension and brain wave activity. "Biofeedback could provide the answer for individuals with migraine headaches, insomnia, hypertension, arthritis, and other ailments," Bronzino says.

#### FAMILY LIFE

Despite recent reports to the contrary, the nuclear family as we know it is not destined to make a comeback, according to Dr. George Higgins, professor of psychology and psychological counselor.

"By the year 2000 there will be many more non-married family units in this country," Higgins predicts. "Although the legal and social stigmas once associated with divorce have moderated, the psychological trauma accompanying marital break-up has not. Those once-divorced will be reluctant to try again. Moreover, one of the major incentives to marry — children — will become less compelling as people learn to enjoy the economic advantages of two-career families."

Higgins also sees gay rights disappearing as an issue. With their



legal standing protected, homosexuals will be assimilated into the population, and the need for separate social centers will no longer exist.

"Drugs and alcohol will continue to cause serious problems in the United States," Higgins maintains. "But I am not talking so much about illegal drugs, such as heroin or cocaine, as about medications for hypertension, depression, and insomnia. The pace of life and the pressure for success in our society continue to grow. As long as we treat the symptoms of distress and not the problem, namely that we are pushing ourselves too hard, we will continue to be a drug-oriented society." Higgins also believes that by the year 2000 marijuana will be used as widely and openly as alcohol.

#### EDUCATION

On a more positive note, Higgins predicts that more people will be in school at the end of the century, and that education will be viewed as a life-long process. "Our leisure time will be so greatly increased," he adds, "that the opportunities for returning to school will be abundant."

President Theodore D. Lockwood shares Higgins' optimism about the future of education. "The financial future of education in this country is basically sound," Lockwood believes, "and although the academy may have to adopt a leaner style, the people will always support education."

Lockwood also sees an end to the concern for equal access to higher education because the declining birth-rate will guarantee a place in college for all who should be enrolled.

Along with improved access will come a concern for quality, Lockwood opines. He anticipates more stress on better writing and reading skills, and an emphasis on effective oral communication, as well as closer relationships between secondary schools and colleges.

"Between five and ten percent of private higher educational institutions will close their doors," Lockwood predicts. "The differential pricing between public and private colleges will put some marginal institutions out of business. I also envision a number of mergers among private institutions, bringing new strength to the independent sector."

Trinity's president foresees a crisis in graduate professional education as the cost of preparing physicians and lawyers skyrockets. He expects students and taxpayers to demand new ways of funding this kind of training.

"We will also discover that our graduate students have been too narrowly educated in the last fifteen years or so, and universities will begin to demand that students broaden their study by mastering several fields in graduate school," Lockwood believes.

As for competitive sports, Lockwood forecasts that professionalism in college athletics will continue. By the year 2000 he expects that Division I college football will have direct affiliations with professional teams.

#### RELIGION

The Rev. Dr. Alan Tull, Trinity chaplain and assistant professor of religion, foresees controversy and polarization in mainstream Christian churches continuing well into the next century. "The underlying issue," he says, "is the relationship of the churches to problems of social justice such as hunger, poverty and the distribution of wealth. This basic concern will manifest itself in questions like the ordination of women, sexual morality and abortion, as well as the hierarchical structure in the churches and the nature of worship."

Tull anticipates a growing tendency



among progressives in various denominations to work together in terms of intercommunion and social issues. Conservatives will be more likely to emphasize the traditional elements which have kept churches apart. The evangelical sects will experience the same tensions between those who want to involve their religion with social issues and those who wish to keep it apart.

"A major unknown factor," Tull suspects, "is the role of the Roman Catholic Church and the balance between liberals and conservatives within its hierarchy. Much will be determined by the election of the next Pope; another Pope John could exert a unifying influence throughout the Christian world and have a major impact on Christianity at the end of the millennium."



#### FOREIGN AFFAIRS

Dr. Samuel Hendel, professor of political science, predicts that wars between the superpowers will be increasingly improbable by the year 2000. "As we gain a deeper understanding of our nuclear capabilities, we will realize that we cannot deploy our weapons. A stalemate of terror will set in."

For America, Japan, and much of the Western world, Hendel sees the main challenges as coping with the problems of stagflation, mass unemployment and urban blight. Failure to find a solution, he feels, will lead to a "corporate" state of some kind. He also sees it more likely that collectivism will survive in the Soviet Union, China, and Eastern Europe than it is that capitalism will continue in its present form in the West.

As for the so-called Third World of Africa, Asia, and Latin America, "these countries, with few exceptions, will continue to wallow in misery and despair."

#### URBAN AFFAIRS

And what about cities such as Hartford? According to Dr. Andrew J. Gold, director of urban and environmental studies, one possible scenario is that the "back to the city" movement will continue, giving Hartford a revitalized central core, with the poor displaced to impacted suburbs.

Gold sees no massive redistribution of wealth forthcoming. "If the poor are to become viable politically, the courts will have to champion their cause," he states.

Gold sees the voucher system for schools as a possible solution to inner city educational problems. "If the decision about where people live is separated from where they are educated, people might feel more inclined to move into areas where inferior school systems had dis-

couraged them in the past." Another possibility Gold sees is redrawing city boundaries to achieve more effective racial and economic integration in the schools.

"The fate of Hartford," Gold concludes, "depends on the vitality of the Northeast which, in turn, rests on the quality of our human resources. Services industries, which are on the rise, will require very competent work forces with sophisticated training. Industry will remain here only if our labor force is more highly productive and better trained than the manpower in other sections of the country."