

Scientist says men helpful space tool

United Press International
SPACE CENTER — In today's science text the modern youngster sees an aging picture — three men in the kind of suits grandfathers wear, holding above their heads the Explorer 1 satellite, America's first venture into space.

The men are Drs. James Van Allen, Werner von Braun and William Pickering, collectively recognized as the fathers of the U.S. space program. The 60-pound Explorer was the first step on a road that now leads to the 99-ton space shuttle Columbia.

When that first small satellite was launched, so too was an argument whether men would ever really be needed in space — whether machines, each more elaborate than the last, would replace the need to put breathing technicians into a risky environment.

Today, with the third mission of the space truck successfully completed and astronauts Jack Lousma and Gordon Fullerton safely on the ground, the question of man's role in the future of space exploration is rarely asked.

"There will always be a need for the adaptive computer in space — that's man," says Dr. Stanley Shawhan.

Shawhan, a University of Iowa physicist, put an experiment aboard Columbia's third space flight to test the atmosphere around the ship as it flew through space.

Even though his plasma diagnostics package was a highly technical piece of equipment,

"There will always be a need for the adaptive computer in space — that's man," said Dr. Stanley Shawhan.

Shawhan is the first to acknowledge the experiment's success was due to Fullerton's expert use of the payload bay arm to maneuver the package.

"We could have designed a machine that would have moved (the calibrators) through the beam in steps. But with the reasoning computer (Fullerton) we can move it back and forth. We can ask him to do it again without reprogramming a computer. We can do it in real time. We don't have to wait," he said.

Shawhan said, however, the argument over man's role in space is continuing. He notes that a great deal of technology, and money, is needed to make a

spacecraft liveable for man — technology and money that would not be needed for a robot-run program.

"But without man we can't recover from any error or misjudgment in the program," Shawhan said. "We either have to be smart as hell (in designing perfect machines) or have a man aboard."

Shawhan's arguments are supported by another scientist, Dr. Roger Williamson, who maintains it would be impossible to design a machine sophisticated enough to perform in space the way man could.

"And even if we could, why bother?" he asked. "Man is a cheap computer. We'd have tremendous problems making computers intelligent enough to replace man — and even then we couldn't be sure it would perform as well as man. And the cost of that kind of machine would be incredible."

"Man is cheaper and more adaptable. Man is actually the cheapest form of machine we have."

Although Williamson was still in school when the famous picture of Pickering, Van Allen and Von Braun was taken, he points to that early spirit of space adventure as the key to success of manned flights today.

Cancer research moves ahead

United Press International
DAYTONA BEACH, Fla. — Cancer research must sometimes seem like the old myth, where a king of Corinth was condemned to push a rock up a hill through eternity.

Every time the luckless chap neared the top, the rock fell back again.

But the American Cancer Society said this is not so. Some of the most resistant forms of cancer 30 years ago are considered curable today.

But the problem still exists. The ACS estimates 430,000 Americans will die of cancer during 1982. Of every five deaths in the United States, one is from cancer.

A key area of interest in many laboratories are proteins called monoclonal antibodies. They are made by fusing antibody-producing cells from mice immunized with human tumor cells.

They then can be programmed genetically to attack cancer cells. They can, theoretically, head straight for cancer cells and thereby identify them. It is hoped they can ferry drugs or the highly-touted interferon to wipe out tumors and other abnormal growths.

Dr. Robert Baldwin, director of the Cancer Research Campaign Laboratories in England and professor of tumor biology at the University of Nottingham, recently reported on his use of monoclonal antibodies for cancer detection purposes.

Baldwin, in collaboration with Dr. Vera Byers of the University of California at San Francisco, produced monoclonal antibodies that react with human osteogenic sarcoma, a highly malignant bone tumor that

usually affects people in their 20s and 30s.

Combined with radioactive iodine, the antibodies "light up" sarcomas on a camera.

The Nottingham group now is conducting tests to see if

monoclonal antibodies detect cancer of the colon, breast, pancreas and ovary, Baldwin said.

But he said his researchers don't see any possibility of using monoclonal antibodies for cancer treatment yet.

Doctors would be using the antibodies to ferry cancer drugs to tumors. Scientists are sure the antibodies seek out offshoots of malignant tumors as well as the main growth, he said.

BYU president speaks out

United Press International
Features such as honesty, a dress code and prohibition on alcohol are highlights of the Brigham Young University policy, the University president claims.

Holland charges the missing ingredient in higher education in America today is values' education and says if that were not so, white collar crime wouldn't be an \$8 billion a year industry.

Holland, president of Brigham Young University, Provo, Utah, earned his doctor of philosophy degree at Yale University in New Haven, Conn., an Ivy League school. He said his charges are aimed at all types of disciplines and schools — public, private, Ivy, community, two-year, four-year, medical, law, divinity, engineering.

"A lot of the perpetrators of today's white collar crimes, came through our higher education system," he said.

"That's why I say education is missing the mark."

Brigham Young is the nation's largest independent coed university — 26,000 students. It is affiliated with the Church of Jesus Christ of the Latter-Day Saints, usually known as the Mormon church.

The real crisis in higher education is that tens of thousands of people go through the schools without being impressed with the fact that honesty is the best policy — corny as it sounds, Holland said.

"It would be great if college presidents could agree that they must witness to students a belief in honesty is the best policy," Holland said.

"I think a good job description for a president of a university would declare him also a professor of moral philosophy."

There is nothing radical about teaching values, Holland says.

"Plato put it in a few words — 'Education in virtue is the only education worth the name,'" he said.

Holland said he was devastated to see a report on 131 graduate business students who had been asked if they expected to face a challenging ethical situation in their careers. All the students said that they would be faced with such a decision and that they will compromise if it helps their career or business.

Holland recited a litany of recent "compromises" he said led to scandals in research, athletics, Medicare, journalism frauds — an epidemic of cheating and a retreat from honesty in which no discipline or lifestyle seems immune.

Holland also is a board member of the American Association of Presidents of Independent Colleges and Universities.

"Education must assume some responsibility for what has been going wrong," he said.

At BYU, Holland said he assumes the responsibility to take a stand and witness values that make higher education great — and that made America great.

The only federal money going into the BYU coffers is from fees for work done on a contract basis. Holland said it is not considerable.

The reason the school does not seek federal funding, per se, Holland says, is that the university does not want to be thwarted in its institutional policies — including segregation of sexes in housing — as a result of federal strings or regulations tied to receipt of federal money.

"We have a strict moral code at Brigham Young University," Holland said.

The independence Brigham Young University maintains at the cost of turning down any possibility of massive infusions of federal money comes at a considerable loss of possible added income.

"It's a staggering amount," Holland said.

"I saw some figures recently that about 60 cents of every dollar at Massachusetts Institute of Technology is federally spon-

sored. And at Princeton, it's 45 cents of every dollar."

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