

GENERAL SCIENCE

Unemployment Remedies

The impact on the economy by reduction in defense spending can mean not unemployment, but new opportunities if plans are made early and put into effect.

► WHEN HEAVY DEFENSE spending finally lets up, vast and exciting possibilities are foreseen for replacing the injections of money into the economy.

Among these possibilities, as viewed by a group of 35 experts, are: creating jobs in new industries; providing better mass transportation to and from work; and upgrading health.

The experts were consulted by the Senate's subcommittee on employment and manpower, which investigated the impact of defense and space spending on national employment and economic growth.

There is no need for unemployment when spending for missiles and other weapons of defense drops, the experts said. The money could be used profitably for hundreds of projects, ranging from health research to mass-produced housing.

Unless plans are made and put into effect soon, a drop in Government defense spending would deal a serious blow to the economy, possibly a disastrous one, the experts agreed.

The subcommittee, headed by Sen. Joseph S. Clark (D-Pa.), made public a 520-page report pointing out ways to combat the unemployment problems that will arise, for instance, if President Lyndon B. Johnson's proposed defense budget is adopted.

On almost every expert's list of urgent problems that should be tackled was mass transportation. Dr. Seymour Melman of Columbia University points out, for instance, that in Manhattan trucks move at an average speed of six miles an hour, whereas horsedrawn vehicles in their time averaged 11 miles an hour.

Dr. Melman believes that conversion from a military economy such as we now have to a civilian economy presents a "tremendous opportunity—economic and spiritual—for American society."

Health services, Dr. Melman points out, are "inadequate," and roughly a billion dollars is needed to rehabilitate hospital buildings.

A concerted attack on all the major diseases by all means known is one of the measures urged by Dr. John E. Ullman of Hofstra College, Hempstead, N. Y. He notes that an expanded effort of this kind would in part benefit the electronics industry because of new potential diagnostic and prosthetic devices based on electronic or miniaturized mechanisms.

The same kind of forms that are used in producing aircraft should be suitable for making wall panels, plumbing units and other parts of prefabricated housing, Dr. Ullman suggests.

The aircraft industry also has the know-how to produce modern lightweight cars essential to mass transportation.

Scientists and engineers who might lose their industry jobs because of a cutback could easily be trained as teachers within a year, Dr. Melman believes. This would not only give the specialists a new career but also help solve the problem of inadequate staffing in public schools.

The change of today's industrial system based to a high degree on military technology to a civilian economy involves a set of problems without precedent. However, since the United States now has sufficient bombs, missiles and other weapons to kill every conceivable enemy many times over, Dr. Melman believes the time has come to convert.

At least one year of planning is required, he estimates.

Sen. George McGovern (D-S. Dak.) urges that all industries having sufficient Defense Department or Atomic Energy Commission contracts to require employment of 25% of their personnel should establish "an operating conversion committee" as a requisite to obtaining any contract.

The Senate subcommittee plans to hold further hearings on how these and other ideas that have been suggested can be applied to specific legislation. No time for such hearings has been set because of the debate on the civil rights bill.



NASA

AT THE TOP OF THE GANTRY—
The Gemini I spacecraft is shown at the top of the gantry for mating to the Titan II launch vehicle. The first Gemini-Titan flight tested the structural compatibility of the launch vehicle and spacecraft.

Nearly one-tenth of the country's work force is employed in defense-related enterprises. Much of this employment is concentrated in particular regions and industries, Sen. Clark noted. The aircraft, electronics and shipping industries, for instance, are "highly dependent" upon military money.

Washington, Alaska, Connecticut, California, Virginia, Maryland, New Mexico and Arizona are among the states having exceptionally high concentrations of defense industry.

Scientists and engineers particularly will be affected by the decline in military spending expected in the next few years. Their salaries will be lower in civilian enterprise, and the products they design will have to meet specifications very different from those of the military.

Among the untapped civilian markets in the U.S. and abroad are international inspection and surveillance systems to detect aggressive activities in any nation; communications, command and control systems; educational aids; air traffic control devices; topographic and oceanographic undertakings on a large scale; industrial production controls; medical electronics; mass transit and worldwide transportation systems; new energy sources and housing.

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SPACE

Gemini Spacecraft Makes Successful Tests

► PROJECT GEMINI, the nation's current man-in-space program, is off the ground.

The spacecraft was traveling in an orbit ranging from 99.6 miles to 204 miles above the earth and making one trip around the globe every 89.7 minutes after launch on April 8.

But human beings were not aboard this first Gemini craft launching. It was a test of the rocket and craft that two astronauts are scheduled to ride together into space early next year.

Already seven months behind its original schedule, Project Gemini serves as a bridge between the Mercury program, which ended last May with the 22-orbit flight of Astronaut L. Gordon Cooper, and the Apollo manned landing on the moon.

Capable of flights as long as two weeks, Gemini is being used to develop techniques for linking craft in space.

Mounted on a Titan II launch vehicle, the Gemini capsule towered 108 feet over its pad at Cape Kennedy, Fla. The capsule was shaped much like the conical Mercury capsule, but is more than a foot taller.

Gemini craft have beryllium skins and are designed to shield the crew cabin from excessive heating, noise and meteorite bombardment. Extra weights have been put in the test model to take the place of men and expensive instruments.

The Gemini spacecraft carries special features enabling astronauts to climb out of it in space and drift about for short periods.

Future space missions such as ferrying objects and doing patch-up work on space stations will also use the Gemini craft.

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