

GENERAL SCIENCE

# Scientists Combat Contention That Science Destroys Jobs

## Leaders, Armed With Facts, Show That New Industries Employ Many More People Than Old Ones They Replace

**S**CIENCE makes many more jobs than it destroys. Science has made our civilization and is not at the root of our economic and social ills.

This was the contention of leaders of science, including Drs. Karl T. Compton, R. A. Millikan and F. B. Jewett, all members of President Roosevelt's Science Advisory Board, who joined in condemning as "insidious" and dangerous to the nation the idea that science is to blame for unemployment and the depression.

America would be barred from rising to a higher level of living and we would suffer from industrial advances in foreign countries if NRA codes are allowed to stifle further technical improvements in manufacturing or if propaganda against science reduces support of scientific work, the scientific leaders made clear in a meeting arranged by the New York Electrical Society and the American Institute of Physics.

Dr. R. R. Millikan, of the California Institute of Technology, declared that labor-saving devices do not in general destroy jobs that demand intelligence.

"They cannot do it," he continued. "The heavy, grinding, routine, deadening jobs are the ones that machinery destroys. The progress of civilization consists primarily in the multiplication of human wants. If you want a stagnant civilization you have only to destroy the influences that cause these wants to multiply. . ."

Dr. Compton, president of the Massachusetts Institute of Technology and chairman of the SAB, stated that if 30 years ago there had been a successful attempt to restrain so-called "technological unemployment" in the carriage and wagon industry through legislation or codes that prevented the rise of the automobile, the source of income that now supports about 10,000,000 of our population would have been eliminated.

"Previous to the days of the automobile the 1900 census lists 976,000 individuals employed in the carriage and wagon industry, as manufacturers, driv-

### THE PRESIDENT'S LETTER

Dear Dr. Compton:

The value to civilization of scientific thought and research cannot be questioned. To realize its true worth, one has only to recall that human health, industry and culture have reached, in a century of progress, a far higher state than ever before.

The idea that science is responsible for the economic ills which the world has recently experienced can be questioned. It would be more accurate to say that the fruits of current scientific thought and development, properly directed, can help revive industry and markets for raw materials.

Very truly yours,

FRANKLIN D. ROOSEVELT.

ers, draymen, livery stable managers, blacksmiths, etc.," Dr. Compton said. "Thirty years later, with the advent of the automobile, based on innumerable scientific discoveries and engineering developments, the census lists 2,405,000

individuals engaged in this industry, exclusive of those involved in oil production. These figures have been corrected to allow for the increase in general population in the same interval. They show that while the advent of the automobile produced technological unemployment among carriage and harness makers, yet the net result for labor has been a 250 per cent. increase in the number of jobs."

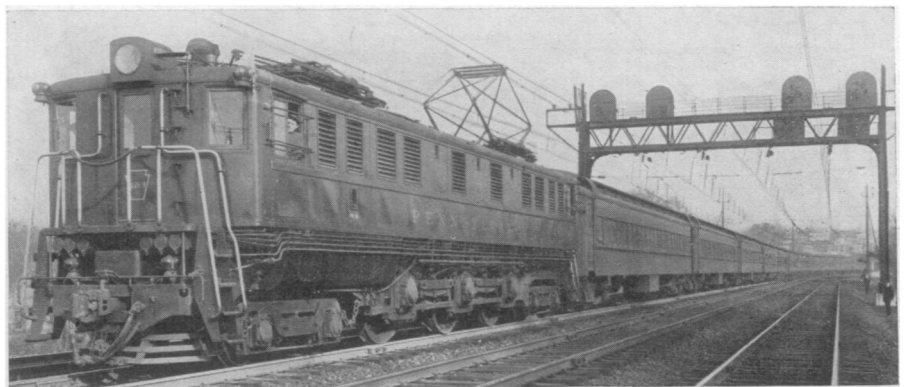
Dr. Compton combatted the widespread idea that use of labor-saving machinery on highways has thrown out of work any men who would otherwise be employed in road construction. The 20 years from 1910 to 1930, which witnessed development of most of the road-building labor-saving machinery, show an increase in the number of employees in road construction and repair from 203,000 to 339,000 individuals, with figures corrected for increase in general population.

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PSYCHOLOGY

### Children Learn Best at "Psychological Moments"

**P**SYCHOLOGICAL moments, or periods, occur in the life of each child at which time he can profit best from a certain type of instruction. Teaching him any skill or subject too early or too late means a waste of the child's energies and the instructor's. This was one of the points emphasized by Dr. Edgar A. Doll, of The Training School, Vineland, N. J., in an address before the Conference on Child Development, Care and Training held in Washington under the auspices of the Mooseheart Laboratory



**ELECTRIFICATION**

*While some railroads build aluminum alloy, internal combustion-engined, streamlined train units, the Pennsylvania pushes to completion with recently acquired PWA funds the electrification of its main line from Wilmington, Del., to Washington. Plans call for employment on the project to increase to 6,000 men. The picture shows the kind of passenger express that is expected in 1935 to link the nation's capital with New York City. Already 72 such locomotives operate on 200 route miles.*