My first answer is taken directly from Holy Writ and reads: "No man hath seen God at any time . . . If a man says I love God and hateth his brother he is a liar: for he that loveth not his brother whom he hath seen, how can he love God whom he hath not seen?" In other words, one's attitude toward God is revealed by and reflected in his attitude toward his brother men.

My second answer is taken from Dean Shailer Mathews, head of the Baptist Divinity School of the University of Chicago. To the inquiry, "Do you believe in God?" he replied, "That, my friend, is a question which requires an education rather than an answer."

My third form of reply is my own and reads: I do not see how there can be any sense of duty, or any reason for altruistic conduct, which is entirely divorced from the conviction that moral conduct, or what we call goodness, is somehow or other worthwhile, that there is Something in the universe which gives significance and meaning, call it value if you will, to existence; and no such sense of value can possibly inhere in mere lumps of dead matter interacting according to purely mechanical laws.

Thousands of years ago Job saw the futility of finite man's attempting to define God when he cried, "Can man with searching find out God?" Similarly, wise men ever since have always looked in amazement at the wonderful orderliness of nature and then recognized their own ignorance and finiteness and have been content to stand in silence and in reverence before the Being who is immanent in Nature, repeating with the psalmist, "The fool hath said in his heart, there is no God." Einstein, one of the wisest of modern men, has written:

"It is enough for me to contemplate the mystery of conscious life perpetuating itself through all eternity, to reflect upon the marvelous structure of the Universe which we can dimly perceive, and to try humbly to comprehend even an infinitesimal part of the *intelligence* manifested in nature."

I myself need no better definition of God than that, and some such idea is in all religion as a basis for the idea of duty.

Science News Letter, May 13, 1950

MEDICINE

## More Effective Cancer Treatment with Hormones

SEX hormones may make radioactive phosphorus 15 to 20 times more effective in treating cancer. Studies suggesting this were reported by Dr. Saul Hertz of Boston at the meeting in Atlantic City, N. J., of the American Society for Clinical Investigation.

Encouraging results in treating leukemia and a disease in which there are too many red blood cells, polycythemia, with radioactive phosphorus aroused hope of using this for treatment of cancer of other organs, Dr. Hertz pointed out.

Heretofore this hope has unfortunately not materialized because except for certain brain and breast cancers, the cancer did not take up enough more of the radioactive phosphorus than normal tissue. Hope of treating cancers with radioactive chemicals instead of with X-rays or radium had been based on the idea that the cancer would take up more of the radioactive chemical than the normal tissue. In that way more cancer-killing radioactivity could be delivered directly to the cancer.

By giving male and female hormones to cancer patients in advance of the radioactive phosphorus, a concentration of the radioactive chemical in the cancer tissues of 15 to 20 times was obtained compared to a concentration of two to three times by normal control tissues. These studies were made, Dr. Hertz reported, with hopeless cases of advanced cancer that had spread from its original place in the body.

Science News Letter, May 13, 1950

**AERONAUTICS** 

## Tiny Planes Without Pilots Are Targets

SPEEDY flying targets for Navy gunnery practice, now ready for testing, are 10-foot tiny airplanes without pilots but powered by ram-jet engines and guided from afar by radio control.

They are the Navy's KDM-1 target drones, and were constructed by the Glenn L. Martin Company. In use, they are taken aloft by a mother plane, suspended near a wing tip. When proper launching speed and altitude are obtained, the engine is started and the target released.

From then on the drone is controlled from afar entirely by radio while its progress is watched on a radar screen. Controls may be preset before launching, but these may be overridden by distant radio.

Science News Letter, May 13, 1950

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PHYSICS

# Electronics May Tell If Eggs Fertile

ADVANCES in electronics may soon produce a machine U. S. hatcherymen have long dreamed of owning—a device to tell whether a freshly-laid egg is retile.

The possibility was described to the Washington section of the Instrument Society of America by Karl Norris, an engineer at the Department of Agriculture's sprawling research center in Beltsville, Md.

Assuming that the egg comes before the chicken, farmers have long scratched their heads and ground their teeth over the question: Which egg? The only way to tell is by trial and error—incubate eggs at random. Those which aren't fertile must be thrown away, an expensive procedure.

Scientists suspected as long as 50 years ago, however, that a tiny difference in response to electric current could show whether an egg is fertile. But instruments which could detect so small a difference were non-existent.

All that is needed, Mr. Norris said, is a practical device which can measure a few millionths of one volt. It is possible to develop such an ultra-sensitive instrument today, he said.

Science News Letter, May 13, 1950



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