

GENERAL SCIENCE

AEC Security Decision

Concepts of security discussed in opinions as four AEC commissioners deny Dr. J. Robert Oppenheimer's security clearance while Dr. Smyth finds him both "loyal and secure."

► THE ATOMIC Energy Commission's punch at Dr. J. Robert Oppenheimer will resound throughout the scientific world. Its four-to-one decision that he shall fall by his associations rather than be recognized for his aid in creation of the bomb (the prime reason for the AEC existence) will stir many citizens, even those who are not scientists.

The AEC muffed a chance to remedy what the relatively conservative American Chemical Society weekly, *Chemical and Engineering News* (June 21), calls "horribly inept" handling of the Oppenheimer case "jeopardizing our national safety and well-being."

The AEC majority statement goes far beyond the majority report of its investigating board. Stressing continued "association" with persons they consider suspect, the anti-Oppenheimer commissioners uphold what has come to be known as "negative security."

The majority opinion by Chairman Lewis L. Strauss, Eugene M. Zuckert and Joseph Campbell denied Dr. Oppenheimer's access to restricted data "because of proof of fundamental defects in his 'character'" and because "his associations with persons known to him to be Communists have extended far beyond the tolerable limits of prudence and self-restraint."

Separate, Concurring Opinion

A concurring opinion by Commissioner Thomas E. Murray branded Dr. Oppenheimer as "disloyal" and charged him with being "seriously deficient in his cooperation with the workings of the security system."

Commissioner Zuckert stated that the evidence which convinced him that Dr. Oppenheimer's employment was not warranted on security grounds "did not justify an accusation of disloyalty."

Commissioner H. D. Smyth in his minority dissent argued that security risk should be judged on whether a person "will intentionally or unintentionally reveal secret information to persons who should not have it." Dr. Oppenheimer is not a security risk by this test, in Dr. Smyth's opinion.

It is not mere accident that the scientist on the personnel security board (Dr. Ward V. Evans, Loyola University chemist) and the scientist among the commissioners (Dr. H. D. Smyth, author of the famous 1945 report on the A-bomb) were the two who upheld Dr. Oppenheimer.

Scientists may be expected to shy away further from the service to their nation so badly needed to keep us in the forefront of scientific and technological development.

It has been rumored that Dr. Smyth intends to resign from the AEC and his scientific friends will understand if he does. But some among them will urge him to continue to raise an expert dissenting voice so that the scientific attitude that is being ignored may have a spokesman, even one who is outvoted.

Excerpts From Smyth's Dissenting Opinion

► I DISSENT from the action of the Atomic Energy Commission in the matter of Dr. J. Robert Oppenheimer. I agree with the "clear conclusion" of the Gray Board that he is completely loyal and I do not believe he is a security risk. It is my opinion that his clearance for access to restricted data should be restored.

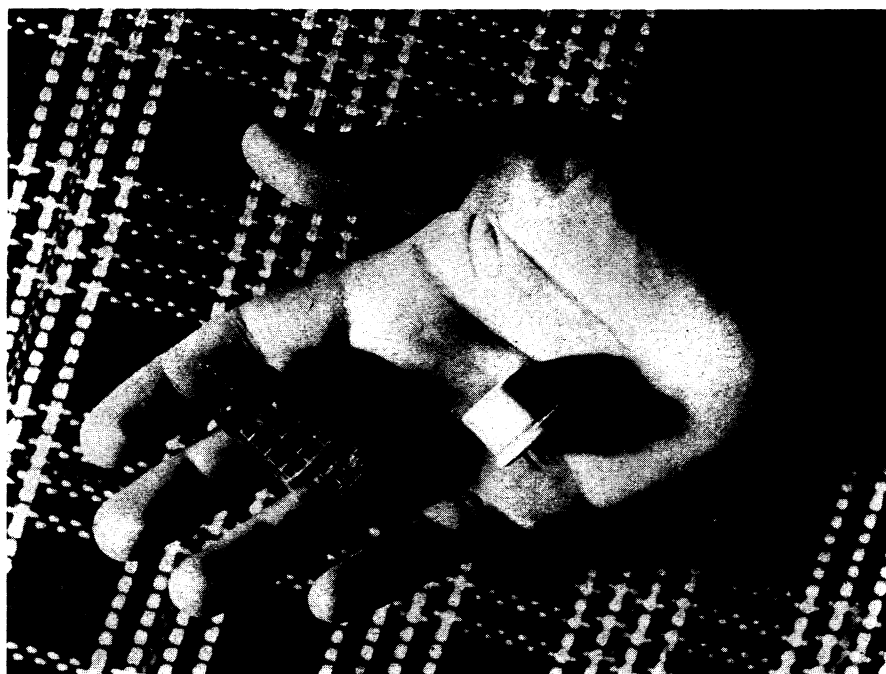
In a case such as this, the Commission is required to look into the future. It must determine whether Dr. Oppenheimer's continued employment by the Government of the United States is in the interests of the people of the United States. This prediction must balance his potential contribution

to the positive strength of the country against the possible danger that he may weaken the country by allowing important secrets to reach our enemies.

Since Dr. Oppenheimer is one of the most knowledgeable and lucid physicists we have, his services could be of great value to the country in the future. Therefore, the only question being determined by the Atomic Energy Commission is whether there is a possibility that Dr. Oppenheimer will intentionally or unintentionally reveal secret information to persons who should not have it. To me, this is what is meant within our security system by the term "security risk." Character and associations are important only insofar as they bear on the possibility that secret information will be improperly revealed.

In my opinion the most important evidence in this regard is the fact that there is no indication in the entire record that Dr. Oppenheimer has ever divulged any secret information. The past 15 years of his life have been investigated and re-investigated. For much of the last 11 years he has been under actual surveillance, his movements watched, his conversations noted, his mail and telephone calls checked. This professional review of his actions has been supplemented by enthusiastic amateur help from powerful personal enemies.

After reviewing the massive dossier and after hearing some forty witnesses, the Gray Board reported on May 27, 1954, that Dr. Oppenheimer "seems to have had a high degree of discretion reflecting an unusual ability to keep to himself vital secrets." My own careful reading of the complete dossier



STACKED TUBES—A conventional vacuum tube, left, is shown here beside a "stacked tube" in a ceramic envelope, both using the same size, 9-pin miniature basing. The stacked tube is less than half the height of the conventional tube. The new tube is also very rugged.

and of the testimony leads me to agree with the Gray Board on this point. I am confident that Dr. Oppenheimer will continue to keep to himself all the secrets with which he is entrusted.

The most important allegations of the General Manager's letter of December 23 related to Dr. Oppenheimer's conduct in the so-called H-bomb program. I am not surprised to find that the evidence does not support these allegations in any way. The history of Dr. Oppenheimer's contributions to the development of nuclear weapons stands untarnished.

It is clear that Dr. Oppenheimer's past associations and activities are not newly discovered in any substantial sense. They have been known for years to responsible authorities who have never been persuaded that they rendered Dr. Oppenheimer unfit for public service. Many of the country's outstanding men have expressed their faith in his integrity.

In spite of all this, the majority of the Commission now concludes that Dr. Oppenheimer is a security risk. I cannot accept this conclusion or the fear behind it. In my opinion the conclusion cannot be supported by a fair evaluation of the evidence. . . .

With respect to the alleged disregard of the security system, I would suggest that the system itself is nothing to worship. It is a necessary means to an end. Its sole purpose, apart from the prevention of sabotage, is to protect secrets. If a man protects the secrets he has in his hands and his head, he has shown essential regard for the security system.

In addition, cooperation with security officials in their legitimate activities is to be expected of private citizens and government employees. The security system has, however, neither the responsibility nor the right to dictate every detail of a man's life. I frankly do not understand the charge made by the majority that Dr. Oppenheimer has shown a persistent and willful disregard for the obligations of security, and that therefore he should be declared a security risk. No gymnastics of rationalization allow me to accept this argument. If in any recent instances, Dr. Oppenheimer has misunderstood his obligation to security, the error is occasion for reproof but not for a finding that he should be debarred from serving his country. Such a finding extends the concept of "security risk" beyond its legitimate justification and constitutes a dangerous precedent.

In these times, failure to employ a man of great talents may impair the strength and power of this country. Yet I would accept this loss if I doubted the loyalty of Dr. Oppenheimer or his ability to hold his tongue. I have no such doubts.

I conclude that Dr. Oppenheimer's employment "will not endanger the common defense and security" and will be "clearly consistent with the interests of the national security." I prefer the positive statement that Dr. Oppenheimer's further employment will continue to strengthen the United States.

Zuckert Discusses Security Risk

➤ ONE OF the difficulties in the development of a healthy security system is the achievement of public understanding of the phrase "security risk." It has unfortunately acquired in many minds the connotation of active disloyalty. As a result, it is not realized that the determination of "security risk" must be applied to individuals where the circumstances may be considerably less derogatory than disloyalty. In the case of Dr. Oppenheimer, the evidence which convinced me that his employment was not warranted on security grounds did not justify an accusation of disloyalty.

The "security risk" concept has evolved in recent years as a part of our search for a security system which will add to the protection of the country. In that quest, certain limited guidelines have emerged. With respect to eligibility of people for sensitive positions in our government we have said, in effect, that there must be a convincing showing that their employment in such positions will not constitute a risk to our security. Except in the clearest of cases, such as present Communist membership, for example, the determination may not be an easy one. In many cases, like the one before us, a complex qualitative determination is required. One inherent difficulty is that every human being is to some degree a security risk. So long as there are normal human feelings like pain, or emotions like love of family, everyone is to some degree vulnerable to influence, and thus a potential risk in some degree to our security.

Under our security system it is our duty to determine how much of a risk is involved in respect to any particular individual and then to determine whether that risk is worth taking in view of what is at stake and the job to be done. It is not possible, except in obvious cases, to determine in what precise manner our security might be endangered. The determination is rather an evaluation of the factors which tend to increase the chance that security might be endangered. Our experience has convinced us that certain types of association and defects of character can materially increase the risk to security. . . .

Scientists See Nation Less Secure in Long Run

➤ THE ATOMIC Energy Commission's decision to deny Dr. J. Robert Oppenheimer's security clearance may make this country less secure in the long run. This was the opinion of at least eight scientists and former Atomic Energy Commissioners, some of whom would not speak for quotation.

When informed of the four-to-one decision, Gordon Dean, former AEC chairman, said, "The country is not any more secure now and I am afraid that, in the long run, it will be less secure."

Dr. Hans Bethe of Cornell University, in

a statement made prior to his departure for England last week for publication at the time of the AEC decision, said that he hoped scientists would not resign if Oppenheimer's security clearance was denied.

"This would be very sad," he stated. "I would much rather see them stay in government advisory positions and work for what they believe."

At the Institute for Advanced Study, Dr. Albert Einstein and 26 other permanent members and professors emeriti stated, for the first time publicly, their "complete confidence" in Oppenheimer. They said:

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"We, who have known him as a colleague, as director of our institution, and as a neighbor in a small and intimate community, had from the first a complete confidence in his loyalty to the United States, his discretion in guarding its secrets and his deep concern for its safety, strength and welfare. Our confidence in his loyalty and patriotic devotion remains unimpaired as our admiration for his magnificent public service is undiminished."

They noted that Oppenheimer was also serving his country in a "less conspicuous" manner that is of "great significance" by directing with "inspired devotion" the work of the Institute.

Those signing included Harold F. Cherniss, Ernest H. Kantorowicz, Benjamin D. Meritt, Erwin Panofsky, Homer A. Thompson, E. L. Woodward, Deane Montgomery, Marston Morse, Abraham Pais, Atle Selberg, John von Neumann, Hassler Whitney, Hetty Goldman, E. A. Lowe, Walter W. Stewart, Kurt Weitzmann, James W. Alexander, Julian H. Bigelow, Freeman J. Dyson, Kurt Godel, Herman H. Goldstine, George Palczek, Oswald Veblen, Hermann Weyl, and Chen Ning Yang.

Oppenheimer Issues Short Statement

Oppenheimer issued the following statement after receiving a copy of the AEC decision:

"I have seen the release of the AEC. Dr. Smyth's fair and considered statement, made with full knowledge of the facts, says what needs to be said.

"Without commenting on the security system which has brought all this about, I do have a further word to say. Our country is fortunate in its scientists, in their high skill, and their devotion.

"I know that they will work faithfully to preserve and strengthen this country. I hope that the fruit of their work will be used with humanity, with wisdom and with courage.

"I know that their counsel when sought will be given honestly and freely. I hope that it will be heard."

Science News Letter, July 10, 1954

ASTRONOMY

Total Eclipse Seen by Millions

See Front Cover

➤ JUST AN instant before the moon blacked out the sun during the total eclipse on June 30, hundreds of thousands of people on both sides of the Atlantic saw with their own eyes the most beautiful diamond ring in the world, pictured on the cover of this week's SCIENCE NEWS LETTER.

Millions of others viewed the celestial show on television and movie screens. Many astronomical observations, however, were frustrated by bad weather along a good part of the totality path.

Science News Letter, July 10, 1954



CURB-HOPPING WHEELCHAIR—With this new wheelchair, the invalid can get up and down curbs without requiring aid.

INVENTION

Wheelchair Climbs Curbs

➤ A CURB-CLIMBING wheelchair has been invented to free invalids from the embarrassment and inconvenience of having someone with them when they take a roll through the park.

Requiring no more force to mount a curb than it does to travel on level ground, the wheelchair would cost only 30% more than ordinary wheelchairs on a production basis.

This was the finding of engineers in the research division of New York University's College of Engineering who developed the chair for the National Foundation for Infantile Paralysis.

The model demonstrated was the "off-spring" of three false starts. The first chair borrowed a pole-vaulting technique. When wheeled to the curb at seven feet a second, two rods sprang out at the right time to leapfrog the chair from road to curb. This model was rejected because it was easily tipped over, it put its user at a psychological disadvantage and it made a lot of noise.

The second prototype used a complicated mechanism involving piston rods. It cost too much, it was too complex and it "looked like a miniature locomotive," criticized Leon Bennett, who was one of the research engineers.

Then he and co-designers Renato Contini, William Murray and Herbert Tramposch worked up the third version that depended

upon expensive hydraulic jacks which signed this model's death warrant.

However, with the last model came the germ of an idea that grew into the present wheelchair. It uses a "block-and-tackle" principle that gets the patient up on a curb in less than a minute.

All the invalid has to do is touch the curb with his front wheels, press the operating handles on each armrest and turn them three times. Two steel rods jack up the front of the wheelchair. Then he moves forward slightly and twists the handles in the other direction to jack up the rear wheels.

Science News Letter, July 10, 1954

ASTRONOMY

Very Faint Comet Spotted in Corona

➤ A VERY faint comet has been discovered in the constellation of Corona, the crown, now directly overhead, by Robert G. Harrington of Mt. Wilson and Palomar Observatories in California, Harvard College Observatory has reported. The comet was spotted on June 24 and is of magnitude 19, much too faint to be seen except with the very largest telescopes.

Science News Letter, July 10, 1954