

# Army Science Board — Providing a Half Century of Scientific Advice and Guidance

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**F**or more than 50 years, the Army Science Board (ASB) has served as the Army's senior scientific advisory board. When it was chartered as a Federal Advisory Committee under the *Federal Advisory Committee Act* in 1977, the ASB replaced the Army Scientific Advisory Panel (ASAP). Both the ASAP and the ASB grew out of the need for Army-specific guidance on scientific research and development (R&D) and the Army's desire to maintain its strong technical advantage over other nations.

Secretary of the Army Dr. Francis J. Harvey (center), a former ASB member, awards the Decoration for Distinguished Civilian Service to departing ASB Chair Dr. James Tegnalia (left) as ASB Executive Secretary LTC Scott Haraburda (right) reads the citation, Feb. 24, 2005. (Photo courtesy of ASB Photo Archives.)

From the founding of the Army through the early 1900s, the Army did not have an effective R&D program — production and procurement were emphasized and R&D during this era was limited to product improvement. Prior to World War II, the Army's R&D was controlled through the G-4 as a function of the supply arms and services. In October 1943, Secretary of War Henry Stimson indicated that he wanted scientific help in the war effort, resulting in the R&D branch's reorganization and its elevation to division level in May 1944. This elevation eliminated obstacles related to recruiting and retaining enough qualified scientific people, and provided them the clout to effectively perform their duties.

Following World War II, despite GEN Dwight D. Eisenhower's warnings that using scientific and technological resources solely for procurement purposes limited the usefulness of those resources, and other indications that separating R&D from procurement and production would benefit the military, concerns remained that senior Army leaders lacked the vision to effectively guide the direction of R&D

programs. However, funding and personnel limitations continued to direct R&D toward the necessary areas of procurement and production. A few years later, Dr. Donald Loughridge, the Army's Senior Scientific Advisor, was concerned that the Army lacked an effective basic research program, resulting in its inability to attract desirable entry-level scientists to its laboratories. By April 1950, Secretary of the Army Gordon Gray was also concerned with the Army's R&D program and its ability to support warfighters in future wars. He did not believe that the United States could fight a war based solely upon Soldiers, especially with the fall of China to communism.



Dr. Harold Agnew, eighth chair of the ASAP, helped develop the first atomic weapons and is seen here on Tinian Island in 1945 carrying the plutonium core for the Fat Man bomb used on Nagasaki. (Photo courtesy of Los Alamos National Laboratory.)

## The Role of Scientific Advisors

Shortly thereafter, Gray's replacement, Secretary of the Army Frank Pace, evaluated the existing Army R&D program, which was then engaged in supporting the conflict in Korea. In January 1951, the evaluators recommended that a research advisory board be established to assist the Secretary of the Army in R&D matters. Based on this report, GEN Joseph Collins, Army Chief of Staff, recommended establishing an Army Scientific Advisory Committee as this research advisory board. By March, Pace approved establishing this board in principle and in November he took the first steps to obtain this scientific advice. Without formally establishing a committee, the Secretary appointed 10 outstanding scientists and industrialists as his scientific advisers. These pioneer advisers were:

- **Dr. Detlev Bronk**, National Academy of Sciences President, 1950 to 1962, and Johns Hopkins University President, 1949 to 1953. He was credited with formulating the modern theory of biophysics.

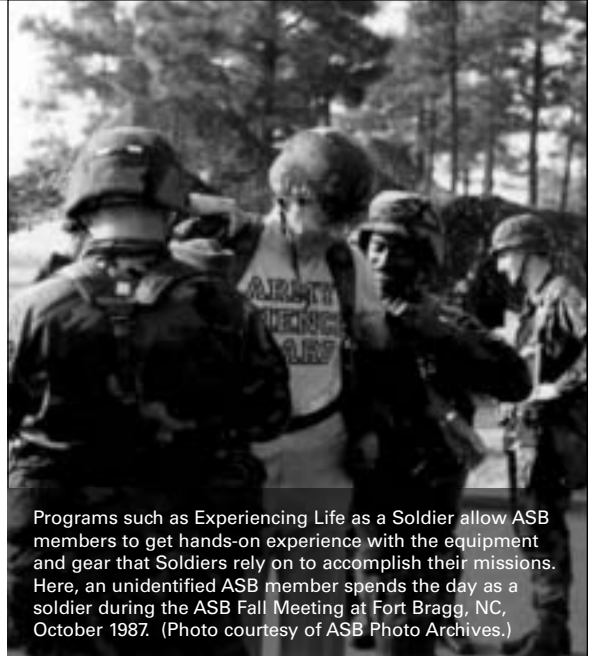


As daughter Carolyn and President Dwight D. Eisenhower look on, Dr. James R. Killian Jr. is sworn in as the presidential science advisor in 1957. Killian served as the first ASAP chair from 1951 to 1956. (Photo courtesy of NASA.)

- **Crawford Greenewalt**, DuPont President, 1948 to 1962. He was instrumental in transforming the theoretical work into a production system capable of manufacturing sufficient plutonium for the Manhattan Project.
- **Robert Haslam**, consultant and board of directors member of W.R. Grace & Co. and retired Standard Oil Co. Vice President. Previously, he was a professor of chemical engineering at the Massachusetts Institute of Technology (MIT).
- **Dr. Frederick Hovde**, Purdue University President, 1946 to 1971. During World War II, he was Chief of Division 3, Rocket Ordnance Research, National Defense Research Committee.
- **Kaufman Keller**, Chrysler Chairman of the Board, 1950 to 1956; Chrysler President, 1935 to 1950.
- **Dr. James R. Killian Jr.**, MIT President, 1948 to 1959; MIT Corp.

Chairman, 1959 to 1971. Following his service on this board, he became the presidential science advisor to President Dwight D. Eisenhower from 1957 to 1959.

- **Dr. Charles Lauritsen**, Danish-born physicist and professor of electrical and radio engineering at the California Institute of Technology, 1911 to 1962. During World War II, his nuclear physics research was instrumental in the Manhattan Project.
- **Dr. Murrough O'Brien**, University of California's College of Engineering Dean, 1943 to 1959. Previously, he was the university's Mechanical Engineering Department Chair, 1937 to 1943.
- **Dr. William Shockley**, Bell Telephone Laboratories Research Physicist, 1945 to 1954. During World War II, he was the Anti-Submarine Warfare Operations Research Group Research Director. He received the Nobel Prize in physics in 1956 for his role in developing the transistor.
- **William Webster**, New England Electric System Executive Vice President and Director. Following World War II, he was Deputy to the Secretary of Defense on Atomic Energy



Programs such as Experiencing Life as a Soldier allow ASB members to get hands-on experience with the equipment and gear that Soldiers rely on to accomplish their missions. Here, an unidentified ASB member spends the day as a soldier during the ASB Fall Meeting at Fort Bragg, NC, October 1987. (Photo courtesy of ASB Photo Archives.)

and the Chairman of the Military Liaison Committee to the Atomic Energy Commission. In 1950, he was the DOD R&D Board Chairman.

Following the Korean War, the Advisory Committee on Army Organization analyzed the Army's organization with respect to its ability to support the Nation in times of war and peace. This committee praised the scientific advisory group's creation, indicating it was a significant step in bringing the best scientific ability and experience to the Army. In 1954, the House Committee on Government Operations issued a report stating that the Army's scientific advisory group was not being used effectively. Army Secretary Robert TenBroek Stevens, Pace's successor, concurred with these recommendations and established plans to formalize the ASAP with a permanent charter, enlarge its membership and give it more latitude in its efforts.

The ASAP — then with 25 members — held its first meeting Nov. 16-17, 1954. During the meeting, the panel heard briefings on various areas involving the Army's R&D efforts. By 1958, the



ASAP members socialize with GEN Omar N. Bradley (left, in wheelchair) and BG William Burdeshaw (right, in fatigue uniform) at an ASB event at Fort Bliss, TX, April 1977. (Photo courtesy of ASB Photo Archives.)



Army Acquisition Executive and Assistant Secretary of the Army for Acquisition, Logistics and Technology Claude M. Bolton Jr. presents a Certificate of Appreciation for Patriotic Civilian Service to departing ASB member Dr. John Blair (right) as ASB Chair Dr. Frank Akers Jr. (left) and LTC Scott Haraburda (at podium) look on, Feb. 24, 2005. (Photo courtesy of ASB Photo Archives.)

panel grew to 70 members and divided itself into eight different subpanels:

- Air Mobility.
- Chemical, Biological and Radiological Warfare.
- Communications and Electronics
- Firepower.
- Environmental Research.
- Human Factors.
- Surface Mobility.
- Research Organization and Planning.

Over the past 50 years, 590 people — including 50 women — have served as ASB members, resulting in more than 3,700 years of uncompensated, voluntary service to the Army. The ASB's distinguished members also include two astronauts, three Olympians (one with a silver medal in the long jump), one U.S. Ambassador to France and a member of the first expedition team to ascend Mount Minya Konka in Eastern Tibet, China.

ASB and ASAP personnel have accepted many of the significant challenges the Army has had during the

past half century. Even though these are some of the country's busiest people, these 590 board members have willingly rearranged their complex schedules on short notice to use their own time to solve these significant challenges. They have placed the needs of their country first, and the Army has been fortunate to have, and is grateful for, their generous service. With good fortune, the ASB will continue supporting our Nation long into the future.



ASB members visit various Army facilities to see firsthand what products the Army uses. Tours such as this November 1978 tour of Fort Bliss help ASB members better understand the role that R&D plays in providing Soldiers the very best technology and equipment. (Photo courtesy of ASB Photo Archives.)

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