



The Pentagon's Brain: An Uncensored History of DARPA, America's Top Secret Military Research Agency by Annie Jacobsen.

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The Pentagon's Brain promises more than it delivers, beginning with “an uncensored history,” as if the Defense Advanced Research Projects Agency (DARPA),¹ a public government agency within the Department of Defense (DoD), could hide its existence or suppress a report based on interviews and open sources. It is, for example, common knowledge that the internet and the Global Positioning System were originally created with DARPA funding. Nothing particularly nefarious goes on there: some 120 program managers decide on the funding of classified research projects at universities, think tanks, and defense industries. DARPA itself does no research and the programs it does fund are typically sponsored by other defense agencies. It is, in fact, boring, which may account for the paucity of books about its history.

All this is not to say that DARPA-funded projects themselves are without interest. But journalist and bestselling author Annie Jacobsen misleadingly argues that some of these programs have been sinister and pose threats to humanity. For instance, she links the development of hydrogen weapons—with which DARPA had no involvement—to its current focus on artificial intelligence and the creation of “killer robots.” Herbert York, a scientist involved in the creation of the hydrogen bomb, became the first full director of DARPA in 1958. But, like other atomic scientists, he became a strong proponent of arms control.

In the book's opening chapters, on pre-1958 nuclear tests and the dangers of the resulting radiation, Jacobsen distinguishes projects initiated by DARPA from those under the control of other DoD agencies. She discusses DARPA “Study No. 1” (1958), in which defense scientists sought, in York's words, “to identify problems not ... receiving adequate attention' in the national security domain” (65). In the Sputnik era, such developments were quite apparent, but DARPA did not always back the right horse. One of York's first hires, one Nicholas Christofilos, an elevator repair technician and self-taught “scientist,” claimed that high energy electrons trapped in the earth's magnetic field could act as an anti-ballistic missile defense.² To generate the requisite high-energy electrons, a small nuclear warhead was launched from the USS *Norton Sound* in the South Atlantic, but the expected “Christofilos effect” did not occur. Jacobsen calls the experiment “the world's first test of an electromagnetic pulse bomb (EMP)” (71). In fact, the EMP effect was already known, if not fully understood, and was not the subject of this particular test.

Lack of evidence vitiates many of the author's claims. Her extensive bibliography notwithstanding, she relies chiefly on seventy-some interviews conducted mostly with former DARPA members; many

1. The agency was known as the “Advanced Research Projects Agency” or “ARPA” from 1958 to 1972 and again from 1993 to 1996. For simplicity's sake, I will use the acronym “DARPA” throughout.

2. In 1948 Christofilos sent a letter to the University of California Radiation Laboratory in Berkeley, describing the idea for a nuclear particle-accelerating synchrocyclotron, which had been invented but several years before. It contained no engineering details and was put aside. In 1950, he sent a letter describing a type of accelerator built several years later. With a little self-promotion, he gained a reputation as a “strange kind of genius” whose ideas should not be ignored.

of these by now elderly individuals were ready to tell good human interest tales featuring heroes and villains.

Jacobsen revisits the theme of “militarists not listening to the qualms of scientists” in her treatment of DARPA-funded social science research by the RAND Corporation in Vietnam in 1963. This study found that the US Army’s strategic hamlet program would inevitably fail. In Jacobsen’s telling, Pentagon officials pressured then DARPA director and future Secretary of Defense Harold Brown to suppress this finding and rebuke RAND’s leadership. She adopts here the interpretation of the scientists involved, who were dismayed that, when they briefed Brown on their findings, he “turned his heavy chair around and looked out the window leaving us to talk to the back of his chair”; Jacobsen grants that “perhaps Brown was simply contemplating the severity of the situation” (141), but cannot resist the temptation to turn this into a good vs. bad confrontation. She goes on to discuss in detail Vietnam projects like “Jason,” the failed attempt to construct an “electronic fence” of sensors to detect North Vietnamese infiltration through jungle terrain. She shows proper respect for the service and bravery of the Vietnam veterans from whom she learned of such improbable schemes and inevitable failures.

An additional problem is the author’s failure to discriminate between direct statements made by her interviewees and those culled from autobiographies, oral histories, and various articles, leaving readers uncertain of the context of the statements. For example, many quotations of Herbert York, who died in 2009, likely came from his autobiography or other sources, but they are not so designated.

The Pentagon’s Brain is less a history than a compilation of human interest stories, some verging on the absurd. For example, we learn that DARPA contracted retired admiral John Poindexter (*after* the Iran-Contra scandal) to direct its Information Awareness Office, supervising the data-mining Total Information Project, which many critics believed to threaten civil liberties. His Senate testimony devolved into a shouting match with staffers. It was a very bad day for DARPA.

Stringing together human interest stories does not make a history; some lack any clear relevance to DARPA. A long section of the book concerns the catastrophic brain injury suffered by Allen M. Dulles (Allen W. Dulles’s son) in the Korean War. Jacobsen interviewed Dulles and his family at length, but (much later in the book) ties his story to DARPA by stating that it funded research “around trying to restore the mind and memories of brain-wounded warriors” (421). True enough, but no such research was conducted on Dulles himself.

Jacobsen concludes with an alarmist review of current DARPA-funded projects.

This book begins with scientists testing a weapon that at least some of them thought was an “evil thing” (hydrogen bomb) ... [and] ends with scientists inside the Pentagon working to create autonomous weapons systems, and scientists outside the Pentagon working to spread the idea that these weapons systems are inherently evil things, that artificially intelligent hunter-killer robots can and will outsmart their human creators, and against which there will be no defense. (452)

This is indeed a serious debate, one that transcends a discussion of DARPA, but Jacobsen cites only three opposed scientists and a single published report.

The initial premise of *The Pentagon’s Brain* is ill-conceived. A brain directs action. Other organs execute those actions. Not DARPA, but the Office of the Secretary of Defense—carrying out the will of the president with the funding of Congress—decides upon and directs actions. DARPA generates necessary paperwork and allots funding. A sound, well-documented history of the agency remains to be written.