

The Pentagon's Brain: An Uncensored History of DARPA, America's Top-Secret Military Research Agency

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NATIONAL BESTSELLER A Pulitzer Prize Finalist and the definitive history of DARPA, the Defense Advanced Research Project Agency, from the author of the *New York Times* bestseller *Area 51*

No one has ever written the history of the Defense Department's most secret, most powerful, and most controversial military science R&D agency. In the first-ever history about the organization, *New York Times* bestselling author Annie Jacobsen draws on inside sources, exclusive interviews, private documents, and declassified memos to paint a picture of DARPA, or "the Pentagon's brain," from its Cold War inception in 1958 to the present.

This is *the* book on DARPA--a compelling narrative about this clandestine intersection of science and the American military and the often frightening results.

The Pentagon's Brain: An Uncensored History of DARPA, America's Top-Secret Military Research Agency Details

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Tony says

THE PENTAGON'S BRAIN: An Uncensored History of DARPA, America's Top Secret Military Research Agency. (2015), Annie Jacobsen. ***1/2.

The author was right; it was (and is) a top secret agency. I've never heard of it. Of course, with all of the acronyms floating around in this study, I might have heard of it, but forgot it. Acronyms are a funny thing. Usually, the government assigns them in the hopes that the next congressman who hears them will not remember what they stand for. For example, DARPA might well be, "Diapers Are Routinely Pulled Aside." Of course it doesn't mean that, but the temptation to make up other meanings is almost irresistible. What it does stand for is : Defense Advanced Research Projects Agency. You soon learn that this is the organization that conducts research into new technology that can be used in future combat situations. They are responsible for developing America's WMDs. I'm sure that the author took advantage of the declassification of information regarding this group to come up with most of the startling chronicle of their doings. If you want to catch up with what has been going on for over sixty years, then this book is a must. You will learn about the development of super-weapons technology, and the proposal for next generation programs. If you are like me, you will be slightly scared by the possibilities. I believe that this book should be read by as many Americans as possible. Try and ignore the acronyms – if they get in your way. If you only have limited time, read the chapters: "Terror Strikes," and "Combat Zones That See." The only negative I have about this study is the sheer amount of information that the author tries and cram into the space available. She overwhelms the reader with all of her data. Otherwise – read this book.

Charles says

Good overview of various DARPA initiatives, starting with the pre-DARPA Manhattan Project, the gadgets and social science employed in Vietnam, modern network centric warfare, etc. The discussion of artificial intelligence towards the end of the book was particularly enjoyable.

Suffers from some discontinuity, but I suppose that's to be expected when trying to tell the history of an ultra secret government organization.

Derek Allen says

Oh, this book is crazy! The good, bad, and amazing things that have come from our Nation's obsession of not wanting to get left behind from another "Sputnik" event. I was thrilled, enthralled, and horrified by listening to this book.

Yet the most funny part is when Jacobson talks about when Chris Carter (developer and creator of the X-Files) and Gale Anne Hurd (creator and writer of the Terminator franchise) visited the Pentagon and the DARPA offices there. Of the government official who had the photo of Carter's "Cigarette Smoking Man" in

his office. As much as the Government wants to create autonomous computers to police and monitor humans, because of science fiction and the speed at which are solving computing issues, these men and women are very aware of the dangers these inventions may incur.

Published in 2015, everything mentioned in this book have been declassified for the public. But as you get to the end of this book, and you get to what direction DARPA seems to be taking, the hints of what may be behind the closed door of Defence Advanced Research and Development Projects could make what has been relegated (until now) to the field of Science Fiction could become disturbingly real and sooner than we think.

Like the fact that DARPA has been talking about creating advanced prosthetics for wounded warriors. Showing videos of how these devices are used and helping former soldiers with missing limbs. Then taking the limbs and placing them back into their sealed containers and the vaults of DARPA once the cameras are turned off. (Know this, the R and D offices of the Military do not have the mandate to find a way to make wounded veterans whole again, their job is advanced weapons and war winning strategy) Couple that with brain and cyborg research and it should give you some idea of where the agency is going.

Things in the book are so detailed and complexed that I will be listening again before the end of the year!

Aaron says

I know that Mark Twain said, "Never let the truth get in the way of a good story." However, I cannot find who first said, "Never let the details ruin a good story." There is not a word in the English language to describe how overly verbose this lady is. The DARPA technology really started getting interesting post 9/11 but she absolutely ruined it with unnecessary details about uninteresting people, places and things. Reading this book was like writing a paper in college. I would find housework to do or I'd space off and start planning my own funeral while reading this boring drivel. She could easily have said twice as much and I would have retained thrice as much with a good editor. And come on, even Forrest Gump knows that two planes can't cause three buildings to collapse at free fall speed. I saw it on meme and Lord knows you can't argue with meme science.

Brittany says

very well researched and written. the flow was great and it didn't get dry and boring. Annie did an amazing job of telling a story while educating you on a fascinating subject. superbly done. I highly recommend this book.

Tobin Elliott says

I remember picking up Jacobsen's Area 51: An Uncensored History of America's Top Secret Military Base, thinking, *this should be good for a laugh..* Instead, it was a frightening insight into what may have been occurring for the past 70-odd years at the secretive base. I was hooked.

So then I saw she'd put out another book. And this one scared the living shit out of me. I know others are complaining about whether this was fully fact-checked (though she goes to reasonable lengths to quote

sources), and that it has--to use the words of another reviewer--an "ain't it awful" bias, but for me, this book was engaging and fascinating from cover to cover.

I choose to spend much of my time in the realm of the fantastic. I read a lot of horror, fantasy, and SF. Technology just grabs me.

But reading the stuff in here? Hell even if a quarter of it is true, it's chilling. Playing with thermonuclear devices that they have no control over. Biological weapons. Experimentation on insects and animals. It's the stuff of nightmares.

It's a good book. Well worth the read.

Cassandra says

What a ridiculous book. For the first 150 pages, I was completely hooked. The material was interesting and seemed well researched. The author had some opinions or drew some conclusions that I was slightly skeptical of, but they were fairly clearly labeled as opinions, so that was fine with me. Unfortunately, as I got deeper into the book, I started to see some errors with concepts I was quite familiar with already. First of all, she refers to a bombsight as a "bombsite." Bombsite doesn't even appear to be a word, and was my first clue that this book may not have been properly edited or fact-checked. I am generous, however, and understand that misspellings can make it through even the best of editorial processes. After that, though, my skeptic senses were perked for more inconsistencies. When I got to the part where the author completely mangles Moore's Law (instead of saying computing power doubles every 18 months, she was saying it squares), I was done. The problem with a book like this is that the subject matter is difficult for a layperson to fact-check, and when fairly simple concepts aren't correct, it doesn't bode well for the recently declassified material. I'm super disappointed, because this book was extremely interesting before I lost faith in its accuracy.

Mal Warwick says

If you're familiar with the history of the computer industry, you're no doubt aware that the Internet was conceived and developed by a U.S. Government agency called DARPA (the Defense Advanced Research Projects Agency).

You may also know that the same agency invented GPS, the Global Positioning System. Chances are, though, that you don't know that DARPA also invented drones both big and tiny, Agent Orange, the M16 Assault Rifle, sophisticated sensor technology, the F117A stealth fighter jet, MIRVs (Multiple Independently Targetable Reentry Vehicles) that carry nuclear weapons, the Ballistic Missile Early Warning System, robotic soldiers — and a slew of other military weapons systems, most of them still top secret.

Remember Total Information Awareness, the predecessor to the massive data collection programs of the NSA that Edward Snowden revealed? DARPA was responsible for that one, too. The agency's work also gave birth to less lethal technologies, including "real-time video processing, noise reduction, image enhancement, and data compression." It's difficult to exaggerate the impact of this little-known agency.

All this comes to light in the pages of journalist Annie Jacobsen's *The Pentagon's Brain*, the first full-length

study of America's secretive military research agency.

DARPA's mission

DARPA was created by President Dwight D. Eisenhower over the strenuous objections of the Joint Chiefs of Staff and just about everyone else in the military establishment. "Its mission is to create revolutions in military science and to maintain technological dominance over the rest of the world." No doubt there are many in the military and in conservative circles who are thrilled at how successful the agency has been in fulfilling its mission, their original unhappiness notwithstanding. The rest of us should be scared. Very scared.

With its origins in the debates over the use of the hydrogen bomb and the policy of Mutual Assured Destruction in the 1950s, DARPA's R&D programs have consistently been found on the far frontiers of military science. Among its least savory efforts (among a great many) were a project in 1958 to shield the United States from Soviet attack by exploding nuclear weapons in the upper atmosphere and the use of the herbicide Agent Orange to defoliate the South Vietnamese forests sheltering Vietcong troops. DARPA scientists actually did detonate nuclear weapons in the atmosphere — and you know the story of Agent Orange.

Unpleasant surprises

The Pentagon's Brain was the product of exhaustive research. Much of the book is based on formerly classified materials that have only lately come to light. Author Annie Jacobsen turned up startling new information in the course of her research. For example, she learned that the world came even closer to Armageddon during the Cuban Missile Crisis than anyone outside top government and military circles was aware: "four nuclear weapons were detonated in space" during those tense days, when the U.S. and the Soviet Union stood on the brink of total nuclear war. (Two of those were the aforementioned bombs sired by DARPA.)

Though born in the grimmest days of the Cold War, DARPA's work for more than a decade focused on the war in Vietnam. (The agency was originally called just ARPA until Congress got into the act.) That conflict led to the development of the M16 rifle and many other, less celebrated weapons of war. But much of the work involved the social sciences, subcontracted to the RAND Corporation, a name that will be familiar to anyone who lived through those times. ARPA contractors working for RAND helped to justify the notorious Strategic Hamlets program in which South Vietnamese peasants were forcibly removed from their villages and their lands and moved into heavily guarded new settlements. In fairness, the first round of ARPA social scientists found that the Strategic Hamlets were alienating peasants, but their findings were simply rejected by Pentagon leaders and more amenable researchers hired. Similarly, "the agency did not want to hear that the Vietcong could not be defeated. [Administrators] took the position that [the social scientists] had gone off the rails."

The electronic battlefield

The high profile of many DARPA inventions notwithstanding, what may be its most significant creation was a "system of systems" that is known today as the electronic battlefield. Jacobsen calls it "the most revolutionary piece of military technology of the twentieth century, after the hydrogen bomb." This concept encompasses the use of remotely piloted attack drones and technology that enhances the ability of individual soldiers. Ultimately, DARPA research is expected to extend the concept into "transhumanism — the notion that man can and will alter the human condition fundamentally by augmenting humans with machines and other means." One such effort is the DARPA exoskeleton, which bears an uncanny resemblance to The Terminator and Robocop. Another is an effort to "allow future 'soldiers [to] communicate by thought alone."

The Pentagon's Brain is crammed with chilling examples of the brave new world envisioned by DARPA scientists. I would like to think that every member of Congress would read this book — and then take a much more careful look at funding for the Pentagon. Fat chance, eh?

About the author

Annie Jacobsen is the author of three previous nonfiction books about the Pentagon. One relates the story of Operation Paperclip that brought Werner von Braun and other Nazi scientists to the U.S. following World War II. Another is a history of Area 51, which may be the best known and most notorious American military base in existence.

Jared says

4/5 stars

'Pentagon's Brain' is a 2016 Finalist for the Pulitzer Prize in History. I found it to be an enjoyable read. The part that I enjoyed most about this book was the 'factoids'. It seemed like I was highlighting some interesting tidbit on every few pages. If anything, those are worth checking out (see below). DARPA has been the driving force behind some of the most revolutionary concepts in civilian life and the battlefield. There's no telling what they are working on presently...

COMPETITION SPURS INNOVATION

- "The Joint Committee on Atomic Energy decided that a second national nuclear weapons laboratory was needed now, in order to foster competition with Los Alamos. This idea—that rivalry fosters excellence and is imperative for supremacy—would become a hallmark of U.S. defense science in the decades ahead."
-
- "To get the most out of an American scientist was to get him to compete against equally brilliant men."
-
- "In the mid-1950s, P&G had four major soap brands—Ivory, Joy, Tide, and Oxydol. Sales were lagging until (Sec'y of Defense and former P&G exec) McElroy came up with the concept of promoting competition among in-house brands and targeting specific audiences to advertise to."
-
- "President Eisenhower made a bold and brilliant move with his choice. Instead of sending one of his science advisors who wanted nuclear weapons tests to stop, he chose a scientist who did not: Ernest Lawrence."

SPUTNIK LAUNCH LEADS TO DEVELOPMENT OF DARPA

- Real significance of Sputnik: "Sputnik weighed only 184 pounds, but it had been launched into space by a Soviet ICBM. Soon the Soviet ICBM would be able to carry a much heavier payload—such as a nuclear bomb—halfway across the world to any target in the United States."
-
- (In the months prior to Sputnik launch, Eisenhower wanted to know how to protect Americans for Soviet nukes in case of war. The result was the 'Gaither Report') "
-
- "...top secret Gaither Report, officially titled “Deterrence and Survival in the Nuclear Age,” the defense

contractors, industrialists, and defense scientists concluded that there was no way to protect U.S. citizens in the event of a nuclear war."

- "It was York and Wiesner's findings about the missile threat that the public focused on, which was what caused the Sputnik panic to escalate into hysteria."

START OF 'ARPA'

- "(Sec'y of Defense McElroy) took office with a clear vision. "I conceive the role of the Secretary of Defense to be that of captain of President Eisenhower's defense team," he said. His first job as captain was to counter the threat of any future Soviet scientific surprise."

-

- "On November 20, 1957, just five weeks after assuming office, Secretary McElroy went to Capitol Hill with a bold idea. He proposed the creation of a new agency inside the Pentagon, called the Advanced Research Projects Agency, or ARPA."

-

- "Congress liked the idea, and McElroy was encouraged to proceed. The military services, however, were adamantly opposed. The Army, Air Force, and Navy were unwilling to give up control of the research and development that was going on inside their individual services, most notably in the vast new frontier that was space."

-

- "But the attack against ARPA by the military services was bound to fail. "The fact that they didn't want an ARPA is one reason [Eisenhower] did,"

-

- "ARPA was a "pre-requirement" organization in that it conducted research in advance of specific needs."

-

- "The agency's dilemma, said Rechtin, was this: if you can't do the research before a need arises, by the time the need is there, it's clear that the research should already have been done."

'JASON' GROUP (OF ACADEMICS) THAT ADVISED ARPA/DARPA IN EARLY DAYS

- "They were asked to think about new programs to be researched and developed, and also to imagine the programs that Russian scientists might be working on."

-

- "...the Jasons had displayed a "pattern of arrogance." That they were a self-congratulating group. "They picked their members. And so they had in 1969 the same members they had in 1959." Lukasik wanted new blood."

CONFIRMATION BIAS

- The strategic hamlet effort was a failure, despite follow-on reports to portray it as a success: "In one interview after another, Hickey and Donnell found widespread dissatisfaction with the Strategic Hamlet Program."...(later) "News footage seen around the world showed farmers smashing the fortifications' bamboo walls with sledgehammers, shovels, and sticks, as the strategic hamlets disappeared."

-

- "According to other RAND officers, Deitchman perceived the (enemy) POW report as unhelpful. RAND needed to send researchers into the field whose reports were better aligned with the conviction of the Pentagon that the Vietcong could and would be defeated."

-

- RAND picked an ardent anti-communist writer to do a report that said the opposite of Zasloff.: "Frank

Collbohm tapped Leon Gouré to replace Joseph Zasloff as the lead social scientist on the ARPA Viet Cong Motivation and Morale Project in Saigon. Zasloff saw this appointment as a disaster waiting to unfold."

ARPA MOVES OUT OF THE PENTAGON

- "in February 1970 came another devastating blow for ARPA. The secretary of defense authorized a decision that the entire agency was to be removed from its coveted office space inside the Pentagon to a lackluster office building in the Rosslyn district of Arlington, Virginia"

ARPA BECOMES DARPA

- 'Defense' added to the front of 'ARPA' in order to demonstrate that funding for its efforts had direct military application, as required by Congress: "And in keeping with the Mansfield Amendment, which required the Pentagon to research and develop programs only with a "specific military function," the word "defense" was added to ARPA's name. From now on it would be called the Defense Advanced Research Projects Agency, or DARPA."

DARPA 'PHASES'

- "The agency already had shifted from the 1950s space and ballistic missile defense agency..."
-
- "...to the 1960s agency responsible for some of the most controversial programs of the Vietnam War. And now, a number of events occurred that eased the agency's transition as it began to change course again...."
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- "Under the direction of the physicist Stephen Lukasik, in the mid-1970s the agency would take a new turn—a new "thrust," as Lukasik grew fond of saying. In this mid-1970s period of acceleration and innovation, DARPA would plant certain seeds that would allow it to grow into one of the most powerful and most respected agencies inside the Department of Defense."
-
- After several Vietnam projects left a bad taste in its mouth, DARPA re-focused itself on doing only revolutionary, 'pre-requirement' research: "Testifying before Congress in 1973, director Stephen Lukasik said that DARPA's goal was to refocus itself as a neutral, non-military service organization, emphasizing what he called "high-risk projects of revolutionary impact." Only innovative, groundbreaking programs would be taken on, he said, programs that should be viewed as "pre-mission assignments" or "pre-requirement" research. The agency needed to apply itself to its original mandate, which was to keep the nation from being embarrassed by another Sputnik-like surprise. At DARPA, the emphasis was on hard science and hardware."

FACTOIDS

- "The presence of x-rays (while near a hydrogen bomb) made the unseen visible. In the flash of Teller light, Freedman—who was watching the scientists for their reactions—could see their facial bones. "In front of me... they were skeletons," Freedman recalls. Their faces no longer appeared to be human faces. Just "jawbones and eye sockets. Rows of teeth. Skulls."
-
- "RAND, an acronym for "research and development," was the Pentagon's first postwar think tank, the brains behind U.S. Air Force brawn."
-
- "(Brilliant physicist) Von Neumann was to write down his thoughts each morning while shaving, and for those ideas he would be paid \$ 200 a month—the average salary of a full-time RAND analyst at the time."

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- Origin of the name of 'Sputnik': "...Iskusstvennyy Sputnik Zemli, or “artificial satellite of the earth.”
-
- "Monsanto Chemical Company, a nuclear defense contractor that would be vilified during the Vietnam War for producing the herbicide Agent Orange,"
-
- "With no formal training, and in a matter of a few years, (physicist) Christofilos transformed himself from an elevator technician into one of the most ingenious scientists in the modern world.
-
- (The Defender radar was so powerful that it had detected the moon coming up and thought it was an inbound missile): "There, coming up over the horizon, over Norway, was a huge rising moon. The BMEWS had not malfunctioned. It was “simply more powerful than anyone had dreamed,”
-
- (Factoid- Time it takes for an ICBM from Russia to hit DC.): "a mere 1,600 seconds. It seemed impossibly fast. Just twenty-six minutes and forty seconds from launch to annihilation."
-
- "Discoverer III was a highly classified spying mission, a cover for America’s first space-based satellite reconnaissance program, called Corona."
-
- "The most significant weapon to emerge from the early days of Project Agile was the AR-15 semiautomatic rifle. In the summer of 1961, Diem’s small-in-stature army was having difficulty handling the large semiautomatic weapons carried by U.S. military advisors. In the AR-15 Godel saw promise, “something the short, small Vietnamese can fire without bowling themselves over,”
-
- ARPA responsible for 'strategic hamlet' initiative: "But there was also a far more ambitious plan in place whereby ARPA would collect enough information on strategic hamlets to be able to “monitor” their activity in the future."
- "The man, J. C. R. Licklider, invented the concept of the Internet, which was originally called the ARPANET. Licklider did not arrive at the Pentagon with the intent of creating the Internet. He was hired to research and develop command and control systems, most of which were related to nuclear weapons at the time."
-
- "Licklider was a trained psychologist with a rare specialization in psychoacoustics, the scientific study of sound perception. Psychoacoustics concerns itself with questions such as, when a person across a room claps his hands, how does the brain know where that sound is coming from?"
-
- During Cuban Missile Crisis: "The president raised the defense condition to DEFCON 2 for the first and only time in history."
-
- Nukes detonated during the Cuban Missile Crisis: "Twice during the height of the Cuban Missile Crisis, on October 20 and October 26, 1962, the United States detonated two nuclear weapons—code-named Checkmate and Bluegill Triple Prime—in space. These tests, which sought to advance knowledge in ARPA’s pursuit of the Christofilos effect, are on the record and are known. What is not known outside Defense Department circles is that in response, on October 22 and October 28, 1962, the Soviets also detonated two nuclear weapons in space, also in pursuit of the Christofilos effect."
-
- "The Soviet nuclear weapon detonated on October 28, 1962, over Zhezqazghan in Kazakhstan at an altitude of ninety-three miles had a consequential effect. According to Russian scientists, “the nuclear detonation caused an electromagnetic pulse [EMP] that covered all of Kazakhstan,” including “electrical cables buried

underground.”

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- "With terrible irony, the place where Fall (author) was killed was the same stretch of road that had given his book its title, Street Without Joy."

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- "Harvard's legendary Society of Fellows, making him one of twenty-four scholars from around the world who were given complete freedom to do what they wanted to do, all expenses paid, for three years."

-
- "Project Agile defoliant campaign. The herbicides, varied in composition, were now being called Agent Orange, Agent Purple, Agent Pink, and other colors of the rainbow."

-
- "the Jaxons were asked to determine "whether it made sense to think about using nuclear weapons to close off the supply routes [along] the Ho Chi Minh trail"

-
- "the Omnibus Crime Control and Safe Streets Act of 1968 as a turning point. The act established the Law Enforcement Assistance Administration (LEAA), a federal agency within the U.S. Department of Justice designed to assist state police forces...The act also provided \$ 12 billion in funding over a period of ten years. Police forces across America began upgrading their military-style equipment to include riot control systems, helicopters, grenade launchers, and machine guns. The LEAA famously gave birth to the special weapons and tactics concept, or SWAT, with the first units created in Los Angeles in the late 1960s."

-
- "the Pentagon Papers appeared on the front page of the New York Times. The classified documents had been leaked to the newspaper by former Pentagon employee and RAND Corporation analyst Daniel Ellsberg."

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- "...in May 2000 President Clinton discontinued the selective availability (coordinate offset) feature on GPS, giving billions of people access to precise GPS technology, developed by DARPA."

-
- "At RAND, (Andrew) Marshall had secured his reputation as a master game theorist, and at the Pentagon, his wizardry in prognosis and prediction earned him the nom de guerre Yoda, or the Jedi Master."

-
- Regarding reflectors left on moon by Neil Armstrong and "Buzz" Aldrin: "The interval between launch of the pulse of light and its return permitted calculation of the distance to the moon within an inch, a measurement of unprecedented precision,"

-
- "Directed-energy weapons have many advantages, none so great as speed. Traveling at the speed of light means a DEW could hit a target on the moon in less than two seconds."

-
- "It is often said that the Clinton administration canceled the SDI ("Star Wars") program, when in fact it canceled only certain elements of the Strategic Defense Initiative. SDI never really went away."

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- "And then to everyone's surprise, on the last day of the simulated war game exercises (INTERNAL LOOK exercise that featured a scenario in which Iraq invaded Saudi Arabia) , on August 4, 1990, Iraq invaded its small, oil-rich neighbor Kuwait—for real."

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- "In the first twenty-four hours of the (first Gulf) war, a total of forty-two stealth fighters, which accounted for only 2.5 percent of the U.S. airpower used in the campaign, destroyed 31 percent of Iraqi targets."

-
- "...a U.S. Patriot missile shot down an Iraqi Scud missile, making the Patriot the first antimissile ballistic

missile fired in combat."

- "each battery was shooting nearly ten missiles at each incoming Iraqi Scud."

-

- "...the Iraqi Scuds were breaking apart in their terminal phase, shattering into multiple pieces as they headed back down to earth. These multiple fragments were confusing Patriot missiles into thinking that each piece was an additional warhead."

-

- "In one instance, a group of Iraqi soldiers stepped out from a hiding place and waved the white flag of surrender at the eye of a television camera attached to a drone that was hovering nearby. This became the first time in history that a group of enemy soldiers was recorded surrendering to a machine."

-

- megadeath - (noun) "a unit used in quantifying the casualties of nuclear war, equal to the deaths of one million people."

-

- "As part of the animal sentinel program, going back to 1999, scientists had been making great progress training honeybees to locate bombs. Bees have sensing capabilities that outperform the dog's nose by a trillion parts per second."

-

- "Within the thirty-six-square-mile Los Alamos campus, there are 1,280 buildings, eleven of which are nuclear facilities. Even the cooks who work in some of the kitchens have top secret Q clearances."

Annette says

Repetitive. Lackadaisically edited. Could have been 200-300 pages shorter. Could have been interesting. Reads like it was written for a dozen or more magazine articles...in different magazines.

Admittedly though, it does speak about some projects in AI and bioengineering that are pretty darn disturbing to think about in a moral, ethical and humanitarian sense.

Joe says

This is a terribly biased (Hollywood/LA Times)version of the amazing stories of ARPA/DARPA achievements and their influences on our world. Most of the stuff in here is well known. I was even involved in some of them. But the whole book is laced with the author's storytelling speculation and extreme liberal bias. Page after page of "ain't it awful". When scientists and engineers push the bounds of knowledge as DARPA still does, there are mistakes. It's always a brave new world. But thank God they are on our side.

This book would be better titles. "Hindsight Analysis of DARPA and our Dumb-ass Government by an Ignorant Author".

CJ says

This is a history book?!? I gave five stars to a history book?!? I have only ever been really impressed with one other history book before but this one beats them all. While providing the detailed history of DARPA, this tome brings the various events to life while capturing the reader's interest with amazing details that are almost unbelievable. Each section held amazing information such as the hydrogen bomb information in the first section and the three foot cement walls that warbled like jello. Section two had an amazing human interest story about a soldier who parachuted out of burning plane in Vietnam and landed in a tree and was saved hours later by one of the Jolly Green Giants rescuers and then the added tale of how these two men reconnected years later is told in the acknowledgments section in the back of the book. There is something in every section and before I finished the book, I found myself going back and forth to reread points and happenings. I fully intend to continue to do so as the because the information is all so interesting.

I received this book through a Goodreads giveaway contest as a first-reads volume and I actually thought it was going to be something different than it was, but I couldn't be more pleased that it is exactly what the whole title says it is and is such an in-depth, fantastically expressed tales of amazing happenings in our history. I can only imagine at this time how much better the final copy will have improved with the addition of photographs and an index to aide in the search for particular sections that the reader will want to review again and again.

Eugene Miya says

It's highly biased to IPTO (Info. Proc. Techniques Off.). She does not provide or even consider an Org chart. In this respect James Bamford's Body of Secrets: Anatomy of the Ultra-Secret National Security Agency from the Cold War Through the Dawn of a New Century (she uses as a reference however flawed) is a better organized book (even if of a different agency). It's not the first attempt of a DARPA history. Alex Rolland was commissioned to try that (at least cited in the references).

Not one word on Stanley (Stanford) and the DARPA autonomous vehicle challenge (it was done to reduce the number of supply trucks being blown up by IEDs (a whole chapter), remember?). Their head programmer had to explain what DARPA was to the people in the Pentagon, most of whom (the uniformed), never heard of DARPA.

Most annoying is a poor index. No pointers to Islamic State (one occurrence). A whole slew of topics I wanted to refer back to the text. The means probably that this book is best read as an electronic version. You could certainly search and go back easier.

Many references attempt to relate to the successful Manhattan Project (which started with only a request for \$50K (so they misjudged)). Most successor projects started many times more expensive and she does 2015 inflation price comparisons.

Many interviews (a plus, fine selection of people) mark the references. One answers the question: What happened to John Poindexter?

What's amusing to a technologist is her attempt to explain what a maser is requires the use of laser, which came after the maser (they were first called optical masers). So she calls them microwave lasers then has to

explain lasers (to introduce Charles Townes). Next, I feel sorry for the non-technologist for the number of Newspeak (1984) like acronyms (this is the military).

I'm certain that with the publication of *The Gun* (about the AK-47) and its section on the M-16 makes her section on the introduction of the M-16 tick off a lot of vets from that period (for the AR-15s and M-16s problems (true we still have the M-4 carbine version to this day)). I think this problem was way more than ARPA.

The text wanders between vilifying DARPA and the DOD versus citing them as the solutions to the world's problems. The book cites SRI working for them but leaves out the work of Doug Engelbart who was why SRI was the 2nd ARPAnet node. Doug was doing intellect augmentation (covered in John Markoff's book *What the Dormouse Said: How the Sixties Counterculture Shaped the Personal Computer Industry*) in contrast to the artificial intelligence being attempted by DARPA currently (in fact augmentation comes into the text late in the book).

Was DARPA (and were the Jasons) part of the problem with Vietnam? No mention of Panama (the first use of the F-117 Stealth fighter).

Anthropologists, and their professional society, and social sciences join the biologists as the new kids on the scientific block started by physicists. Some not flattering views of social sciences in the *Human Terrain*.

I told a friend (Gio) who was an DARPA Program Manager at one time to glance this book. Alas, my friend Barry Leiner passed away, and I do recall a little discussion on TIA (Total Information Awareness). It was far less evil sounding (it was overblown). (Hell, I was working next to NSF and DARPA program managers at the time (I was not a program manager, just our agency's technical reviewer). That a friend (Markoff) was called a cause of its demise was interesting.

She overall does not vilify DARPA only cites Eisenhower's admonishment to beware the military-industrial (-academic) complex. So this is a book about being aware of one's government. They book is slightly annoying to the knowledgeable. It might be a little eye opening to those for home this is a new topic.

Peter Mcloughlin says

A lot of books have come out about DARPA with a lot of emphasis on the great technologies and breakthroughs pioneered by this wing of the Pentagon. This is great but we need to be reminded that the Qs of the world make gadgets for agents with licenses to kill. The main objective of all this technology is primarily to serve on the battlefield. That is what it is for. As always there are wonderful spin offs for civilian life but the author doesn't let us forget the primary objective of DARPA is battlefield technology. Very much a Dual purpose history.

Gayle says

I got this free is a drawing from Goodreads First Reads.

I've always said that I'm more afraid of what the government doesn't tell us than what they do. This book just reiterates that. I found myself saying what are you kidding me many times while reading this. The crowd control ideas was one of those times. Lasers and drones are examined to an extent with some of that information being still classified so then of course the whole story can't be given. The polio vaccine problem I had never heard of before. That is scary. There are many other items covered in this book which is a very interesting read if you are interested at all in what our government is doing.
