Predator: The Secret Origins of the Drone Revolution

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The untold story of the birth of the Predator drone, a wonder weapon that transformed the American military, reshaped modern warfare, and sparked a revolution in aviation

The creation of the first weapon in history whose operators can stalk and kill an enemy on the other side of the globe was far more than clever engineering. As Richard Whittle shows in *Predator*, it was one of the most profound developments in the history of military and aerospace technology.

Once considered fragile toys, drones were long thought to be of limited utility. The Predator itself was resisted at nearly every turn by the military establishment, but a few iconoclasts refused to see this new technology smothered at birth. The remarkable cast of characters responsible for developing the Predator includes a former Israeli inventor who turned his Los Angeles garage into a drone laboratory, two billionaire brothers marketing a futuristic weapon to help combat Communism, a pair of fighter pilots willing to buck their white-scarf fraternity, a cunning Pentagon operator nicknamed "Snake," and a secretive Air Force organization known as Big Safari. When an Air Force team unleashed the first lethal drone strikes in 2001 for the CIA, the military's view of drones changed nearly overnight.

Based on five years of research and hundreds of interviews, *Predator* reveals the dramatic inside story of the creation of a revolutionary weapon that forever changed the way we wage war and opened the door to a new age in aviation.

Predator: The Secret Origins of the Drone Revolution Details

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Scott Swanson says

I was fortunate to be one of the team members who designed, tested, armed, flew and deployed with the Predator. I thought I had understanding into what was going on at the time. After reading this book, it became clear that I never knew about what went on in parallel to our BIG SAFARI effort to make the armed Predator a reality.

Rick does a great job of bringing forward history that even those of us in the middle of it may have missed as we concentrated on getting our part of the job done.

His 360 degree view is presented in a way that will make the reader understand what went on behind the scenes in developing and fielding the Predator. He gives great insight into this amazing time in our aerospace history.

Matt Loy says

Very well written. Engaging story of how the UAV was brought to service and how it is changing the future of warfare.

T.J. says

I have to admit to being a little uncomfortable reading this book, but in the end it provoked a chain of thought that might lead to a book I write myself one day, so I have to thank Richard Whittle for that!

Why uncomfortable? This book is a very apolitical look at a very political topic. The Predator and its successor the Reaper have killed thousands of people in recent years and according to the Center for Investigative Journalism, 134 of these (to Feb 2015) were civilians. So although this is a well written account of the development and deployment of this new and frightening weapon, I kept reminding myself this is not a story about the development of a new way of delivering parcels from Amazon (though drone technology may well be that one day), this is the story of the development of a new killing machine.

But the book inspired me to dig a little deeper into military plans for the use of drones in warfare and it may surprise you to know there are many who see drones (unmanned air, sea or land warfare machines) are the future of warfare. Bard College Center for Drone Studies calculated that the US Department of Defence is planning to spend 4.3 bn USD on drone technology projects in 2017 in every arm of the defence forces from the US airforce, to the navy, army and DARPA.

Reading all this makes you realise there is little doubt that future machines of war will not have human pilots or drivers in them (though they will still hopefully be in control), just as the cars we drive to work every day will one day soon be able to drive themselves. The difference being that my commuter vehicle isn't armed with Hellfire missiles (yet! though some days I wish it was...).

A good book is one for me which tells a story well, which this does, but also provokes a lot of thinking, fantasising and conversation, which Whittle's book certainly did!

Jerome says

An interesting, readable, and well-written history of the origins, development and deployment of the Predator drone. Whittle is good at describing everything that transformed the Predator from a novel and seemingly bizarre concept to America's weapon of choice in the war on terror: the people, the technology, and everything else.

Whittle uses both official records and personal recollections, and brings them together in an interesting and readable narrative. He describes the bureaucratic infighting and intrigue that both hindered and drove the drone's development, and does a good job highlighting all of the Predator's technical issues.

Whittle begins his story with the Israeli Abe Karem, the beginnings of General Atomics, and how it all led to the development of the Predator. He gives us an interesting look at all the testing and the technical problems that prevented it from being fully operational on September 11, 2001. He is good at describing the interaction between the military, the CIA, and Presidents Clinton and Bush. The most interesting part was the role the Predator played immediately following the 9/11 attacks., although Whittle describes only the Predator's Afghan operations and nothing about later operations in Yemen, Pakistan, and Somalia.

Also interestingly, most previous accounts said that the twelve experimental drone flights flown over Afghanistan in 2000 were flown from Langley, but in reality, as Whittle reveals they were actually flown from Ramstein in Germany (without the knowledge of the German government).

Among the other interesting new revelations that Whittle provides, he also reveals that the idea of arming the Predator with Hellfire missiles actually had nothing to do with the CIA's operations against bin Laden, at least not originally. Nor was the concept of an armed UAV a secret.

There are a few instances of rather juvenile phrasing like "super-secret" and "shit-hot," or writing "jury-rigged" rather than "jerry-rigged," but these occur only briefly and do not disrupt an otherwise readable narrative

In all, a very interesting and well-written study of the origins of a strange and novel concept that has now become America's weapon of choice.

Mike Maurer says

An excellent book about the history of UAV's, specifically around the General Atomics Predator (AKA RQ-1, MQ-1). The author does a great job in presenting the various personalities that either pushed for or against the idea of UAV's in the military.

The author also illustrates many of the problems inherit in military procurement. The Predator is a bit of a hacked together system, resembling more like a Silicon Valley startup attitude to product design. It took the genius of small groups to rapidly evolve the Predator from a PoC to a combat deployed system.

Big Safari would be an awesome group to work for. Part Skunk Works, part startup, they are the antithesis of set-in-their-ways military. They are the ones that come up with big ideas and execute them quickly.

For me, this was a fun book about a new wave of aviation that is really less than two decades old. Today, most combat units expect to have UAV support of some type. Before 2001, this was a rarity. Now the world is awash with drones.

Chris Higgins says

A very easy read. Whittle traces the evolution of modern drones, the politics of how they began abd how they became armed. The evolution of these drones is tied very closely to the Global War on Terror. A lot of these sort of books can be a struggle to read. This book flows beautifully and is very easy to follow.

Doug Cornelius says

Predator covers the story of the birth of the Predator drone and its effect on military and covert operations. Richard Whittle manages to weave through the military and aeronautic bureaucracy of the Predator as it is destined to become the most successful military unmanned aircraft.

I was surprised to see the level of detail about the development of the aircraft. I would think that much of the information would be secret. Or that those involved would be quiet about its history. Whittle clearly was able to uncover a tremendous amount of detail. The story is rich, enjoyable to read, and compelling.

The Predator drone was ugly, slow and unreliable. The key to its success was its ability to stay in the air for an extended period of time. Manned craft are limited by human endurance. The Predator can have flight crews swapped while in flight.

Everything else was good old-fashion ingenuity to expand the use and conquer the problems with the plane's technical limitations. One key was the ability to transmit video not only to the pilots, but to other military leaders. That level and length of surveillance was compelling for military leaders.

According to the author, the turning point for the Predator happened during the Bosnian War. Those were the first flights in combat, but limited to surveillance.

It was the war in Afghanistan that pushed the Predator into more action. That turning point was the idea of mounting a hellfire missile on the aircraft. The Predator could not only watch the enemy, but could take action.

The book is focused on the history of the Predator, not the legal and ethical implications of the Predator. Part of that history is the legal analysis of mounting a missile on the aircraft and who can authorize taking a shot. There was some concern that the Predator with a missile could be classified as a cruise missile and be subject to weapon treaties with Russia.

The book's historical narrative ends in 2002. That leaves most of the ethical implications to the book's epilogue. Is it ethical to fight a war by remote control, with uniformed Air Force pilots blowing up targets on

the other side of the world from their safe, air-conditioned work stations? Are the attacks assassinations or merely defensive strikes in the War on Terror?

The ethical implications are felt by the pilots. They are not whisking over target at supersonic speeds delivering their payloads with little time to see the damage. A Predator pilot has the continuing transmission to watch as the aircraft lumbers along above the target looking at survivors and victims.

The publisher provided me with a free review copy of the book.
http://www.compliancebuilding.com/201...

Mark Monsma says

Another amazing book by author Richard Whittle. I am just as amazed by his style of writing as I was with his first book, "The Dream Machine: The Untold History of the Notorious V-22 Osprey".

In this book, Whittle describes the evolution of a particular drone, known as the Predator. A commonly known drone which has been reported on countless times in the media.

As for the drone or UAV revolution, Whittle describes where it all began and where it is going. The US military was the first to use a drone in war. It was used initially in the 90s as merely a surveillance asset. The key moment in time, that aided the arming of drones, was 9/11. Only a couple of months after US President Barack Obama declared war on Al Qaeda, the first Predator drone fired a Hellfire missile at Al Qaeda target. To understand this revolutionary technology, I will take you back to March 2002 which was four months into Operation Enduring Freedom. At that time, the US military owned 82 drones, including both armed and unarmed versions. As of 2010, the US military owned 150 different types of drones, between 40 and 4000 lbs. The total number of drones in control by the US military, at that time, was 8,000 (or just shy of 100 times as many 9 years earlier).

As with Richard Whittle's previous book about the V-22 Osprey, I highly recommend this book to anyone interested in the military comples, aircraft, drones or UAVs , and emerging technology. This book is definitely ????? worthy.

Gurvan says

Excellent livre sur l'histoire et le développement du Predator.

Un seul regret : il s'arrête un peu trop tôt et ne se poursuit guère au delà du début des opérations en Afghanistan. Il est néanmoins excellent !

Frank Cahill says

News stories about Unmanned Aerial Vehicles (UAV) are commonplace today, but "Predator" readers may be surprised to learn that the US had only two armed drones after the terrorist attacks on September, 11 2001. The UAV system was still very much under development at the time, and the author combines the

remarkable story of aircraft and electronic design with the intrigue of CIA and military operations. Although there is no human on board, the units are not really unmanned, but are controlled by a large team of dedicated individuals on the ground that make life and death decisions that have resulted in the drone system being called an intercontinental sniper rifle.

To enable this extraordinary reconnaissance and attack system required the combined development of aerodynamics with electronics and software integrated into split communications support. The aerodynamic achievement resulted with unparalleled aircraft endurance approaching twenty-four hours in the air with its heavy payload. The ingenious communications methods used a crew in the Middle East to takeoff and land the drones before and after hand offs to a crew in the US that flew the spy and sniper portion of each mission.

The author weaves the back story of many of the individuals involved in the development of the drones as the project story is unfolded for the reader. It adds somewhat to understanding the resistance to the drone program and to the tenacious dedication of those who believed in the concept.

The hero of the story is one of the first drones with tail number 3034. This little drone was the primary development platform that also served in over 3,000 missions in the Middle East, and today hangs honorably in the Smithsonian Institute. It is followed by more than 8,000 drones serving today, and roughly 165 armed Predators.

If you enjoy stories about engineering, government and political battles, military exploits, and secret stuff, then this is a book you shouldn't miss.

Les Gehman says

Predator: The Secret Origins of the Drone Revolution by Richard Whittle is a very well-written and engaging history of the Predator UAV program. Whittle does a great job of conveying the initial reluctance that the armed forces had towards UAVs, and then the great urgency to get them into the field after 9/11. Some very talented people worked on this program and overcame some difficult technical challenges in creating a working UAV system. I highly recommend this book for anyone curious about UAVs, how they operate, and how they came to be such an integral part of the U.S. Air Force.

Steve says

A terrific piece of non-fiction, an excellent story, a thought-provoking slice of history that dramatically featured in the new millennium's most significant events, and, at the same time, an intriguing case study of disciplines ranging from the law of war, defense procurement, innovation within bureaucracy, and even the psychology of warfare (as killing by remote control from another continent becomes commonplace, while simultaneously offering the trigger puller unprecedented, clear images of the devastation wrought). All that in one volume is no small achievement.

Sure that's quite a broad spectrum, but the book - even with such an ambitious scope - succeeds because (1) Whittle's background as a reporter/journalist shines through - he's a pleasure to read; and (2) despite the fact

that his protagonist is a machine, Whittle makes clear that the Predator's story is all about people. And when Whittle introduces you to people, you can't help but care about them. (Granted, as he concedes, Whittle has spent a career meeting extraordinary people, and this book is no exception. But his enthusiasm shines through - it's infectious, contagious, and gratifying.)

Whittle crystallizes this theme with a splendid riff in his epilogue, reminding us of the fallacy of the nomenclature "unmanned aerial vehicle". There may not be a pilot aboard, but men and women - however remotely located - are what make them tick.

I recommend this book without hesitation to anyone interested in, among other things, military history, national security, technology development, defense procurement, public policy, Al Qaeda (and/or 9/11 and the USS Cole), or, at its most basic, current events.

And, of course, if you haven't read Whittle's *Dream Machine*, which chronicles the development and deployment of the V-22 Osprey, I highly recommend that as well.

Jared says

Predator is a lively, enjoyable read that tells the winding tale of how the Predator (and other UAVs similar to it) came to be and how this technology has revolutionized modern combat. The story begins in Israel with Abe Karem, an aeronautical genius, who is challenged to find a way to use unmanned equipment in order to combat anti-air defenses for the Israeli Air Force. As the story unfolds, Abe has a falling-out with the Israeli defense industry and moves to the United States to start his own company. Since he was a child, Abe was fascinated with small hobbyist aircraft. As a result, he was able to create aircraft that had the characteristics to fly over 24 hours. Due to circumstances beyond his control, Abe's company was eventually bought by a larger company and his intellectual property and prototype aircraft went with it.

In a strange series of twists and turns, the aircraft that came to be known as the Predator came into being. First, the aircraft flew missions over Kosovo and did nothing more than reconnaissance missions - and it had to be within line-of-sight range to control it. Over time, the UAV was outfitted with a series of targeting and imagery pods so that it could target spot for military aircraft. Next, the "next logical step" occurred and the Predator was armed with a variant of the Hellfire missile (which was originally designed to destroy tanks). After a series of tests, the Hellfire proved successful. Within a day or so after the Sept 11th attacks, the Predator was in the skies of Afghanistan. In two or three separate instances, the Predator team located "a tall man in white robes" and the CIA was very confident that he was Osama bin Laden. Although the team did not get word in time to take the shot, the Predator did score Hellfire hits on terrorists during the first days of Operation Enduring Freedom.

Predator is an outstanding read and I would recommend it to anyone who has an interest in military (or aviation) history. It was fascinating to watch how the Predator came to be through various fits and starts. The team would recognize a need for the UAV and they would inevitably 'MacGyver' something together and would improve it over time.

Katy says

I had this one sitting out because I had just received it in the mail as a GoodReads FirstReads. My son was intrigued and I let him take the book. So it may be a while before I have the chance to review it.

David Despain says

Excellent! A concise and well-written history.