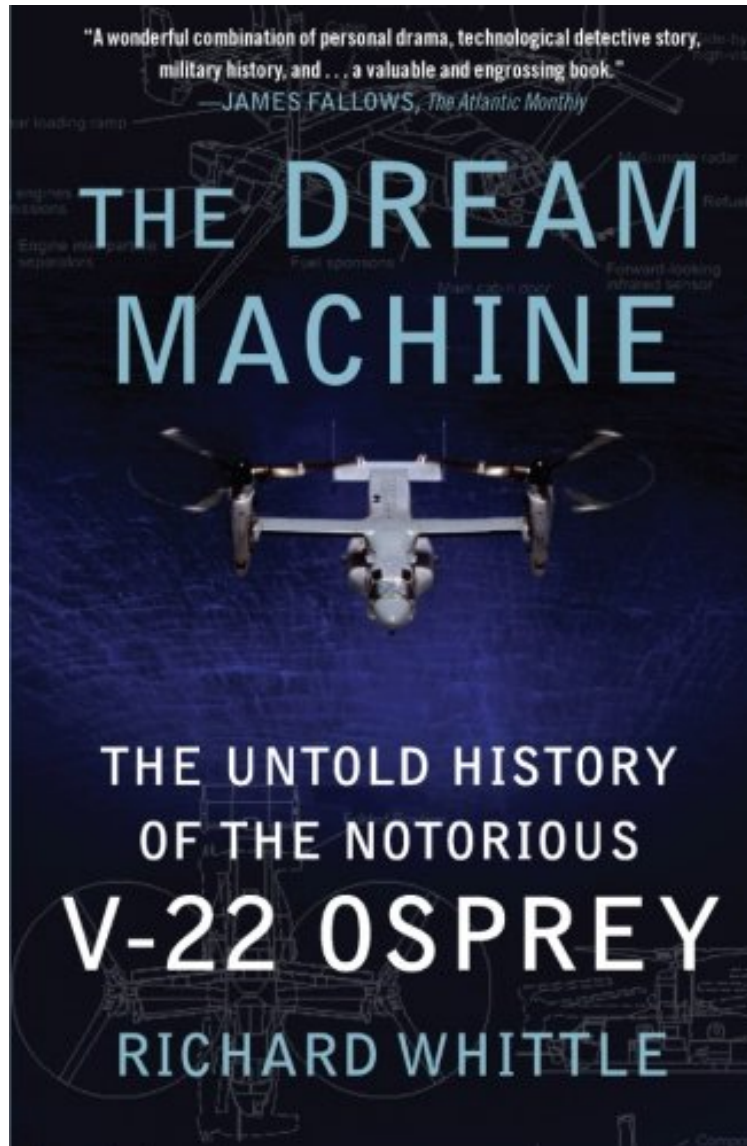


(Free) The Dream Machine: The Untold History of the Notorious V-22 Osprey

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Richard Whittle

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Richard Whittle : The Dream Machine: The Untold History of the Notorious V-22 Osprey before purchasing it in order to gage whether or not it would be worth my time, and all praised The Dream Machine: The Untold History of the Notorious V-22 Osprey:

0 of 0 people found the following review helpful. The final judgement as to whether it is the ultimate machine the

marines wanted or an enormous boondoggle is still out and may rBy G. DornThis is a fascinating and disturbing look into the current weapon procurement process in the United States. This book appears to be an even handed and well researched account of the incredible 30 year process that led to the introduction of the v-22 Osprey as an active duty service machine. The final judgement as to whether it is the ultimate machine the marines wanted or an enormous boondoggle is still out and may remain impossible to decide with the strong biases so prevalent on both sides but the details and information provide in this book will certainly leave you wondering if there is not a better way of doing business than what we now have.0 of 0 people found the following review helpful. Great account of the development of the V-22 OspreyBy R. KabanlitA fantastic read, mainly because Richard Whittle is such a good storyteller. The book is a comprehensive account of the development of the V-22 Osprey from different perspectives, from a Historical, Technical and Political point of view. The most important highlights for me from the book are:- How it had been the dream of early aviators to have a machine that can take off and land vertically and yet still have the speed of a fixed wing aircraft, hence the book title of "The Dream Machine" as that dream has been fulfilled by the Osprey;- The fact that the Osprey's design was constrained because its dimensions were limited to enable it to operate on Landing Platform Docks, hence its Propellers ended up being shorter than ideal and its weight and complexity had to be increased because of the need to incorporate a wing-folding mechanism;- The long and "bloody" battle it had to go thru in terms of funding under the Senior George Bush's administration who wanted it cut from the budget;- How the whole program was nearly shelved after accidents and the scandal about the falsification of its maintenance records;- Since the Osprey was such a new aircraft, much of its flight characteristics weren't really explored properly yet, leading to speculations about its vulnerability to the issue of a flight condition called the "Vortex Ring State (VRS)" and its ability to maneuver at slow speeds. Additional comprehensive tests ultimately proved these concerns to be false, and that in fact what was true was the reverse of what was speculated. The Osprey is much less vulnerable to VRS and much more maneuverable and less susceptible to enemy fire than Helicopters.Nowadays the Osprey has proven itself in service and is seen as truly a technological wonder, the only vertical take off and landing fixed wing aircraft in service in the world today. But it wasn't always like this, it had a very troubled development, but look at it now. This should serve a lesson to everyone of how some aircraft tend to have a troubled "teething stage", but ultimately turns out well in the end.Overall a pretty good book, I really enjoyed reading it.12 of 12 people found the following review helpful. Will resonate for aviation enthusiasts and engineersBy M. HodiesThis book is a good read for anybody who spent some time working on this program in any capacity or for anyone that truly enjoys how aviation comes together (or perhaps how it cannot come together). As someone who worked on this program for several years, it was a great trip down memory lane. I was surprised to see how well insulated I was from the politics, and ego battles going on in senior management with respect to the design of the V-22. The old adage of too many cooks spoiling the soup is incredibly applicable to development of the Osprey. I should not be amazed (but I was anyhow) at the the number of design decisions where the VP/Director with 35 years of experience trumps a great engineer with 25 years of experience just because the VP/director has a big ego and wants to put his stamp on the program. There are a number of other power brokers from both the contractor and customer sides who also make unilateral decisions in the areas of requirements definition and budgeting. I sure hope weapon systems are developed a bit better nowadays....for the sake of my tax dollars.Whittle's characterizations of the engineers and the facts seem to be fairly accurate. He did a good amount of research by interviewing a lot of the key folks who made an impact on the program. The book starts out a bit slow but once the XV-15 comes along, it starts to become very fascinating and revealing.

WHEN THE MARINES decided to buy a helicopter-airplane hybrid "tiltrotor" called the V-22 Osprey, they saw it as their dream machine. The tiltrotor was the aviation equivalent of finding the Northwest Passage: an aircraft able to take off, land, and hover with the agility of a helicopter yet fly as fast and as far as an airplane. Many predicted it would reshape civilian aviation. The Marines saw it as key to their very survival. By 2000, the Osprey was nine years late and billions over budget, bedeviled by technological hurdles, business rivalries, and an epic political battle over whether to build it at all. Opponents called it one of the worst boondoggles in Pentagon history. The Marines were eager to put it into service anyway. Then two crashes killed twenty- three Marines. They still refused to abandon the Osprey, even after the Corps' own proud reputation was tarnished by a national scandal over accusations that a commander had ordered subordinates to lie about the aircraft's problems. Based on in-depth research and hundreds of interviews, *The Dream Machine* recounts the Marines' quarter-century struggle to get the Osprey into combat. Whittle takes the reader from the halls of the Pentagon and Congress to the war zone of Iraq, from the engineer's drafting table to the cockpits of the civilian and Marine pilots who risked their lives flying the Osprey—and sometimes lost them. He reveals the methods, motives, and obsessions of those who designed, sold, bought, flew, and fought for the tiltrotor. These stories, including never before published eyewitness accounts of the crashes that made the Osprey notorious, not only chronicle an extraordinary chapter in Marine Corps history, but also provide a fascinating look at a machine that could still revolutionize air travel.

From Booklist A feast for the more advanced student of military and current affairs, this is the story of the star-crossed V-22 Osprey. The hope of the U.S. Marines for preserving their vertical envelopment capability, that fact alone made the Osprey the target for the marines' enemies in the Pentagon. It also attracted mountains of negative publicity for its accident record as the developers struggled to perfect an entirely new system for combining vertical takeoff and landing capabilities with high speed in horizontal flight. This involved technological breakthroughs—and also a number of fatal crashes. Still demanding careful maintenance, the Osprey is now in service in Iraq and has the potential to serve not only the marines but also, in time, civilian short-haul airlines. --Roland Green "[A] book that takes off like a novel and flies like a well-sourced historical investigation." —Gretel C. Kovach, The San Diego Union-Tribune "What makes *The Dream Machine* interesting is the light it sheds on Washington's 'permanent government,' the lobbyists and consultants and bureaucrats and contractors... One of the lessons of Whittle's book is that no one misses a chance to swim in the giant pool of money and power that is the nation's capital, where the defense industry is the biggest fish of all." —Matthew Continetti, The Washington Post Book World "A wonderful combination of personal drama, technological detective story, military history, and . . . a valuable and engrossing book that will be read for many years to come." —James Fallows, The Atlantic Monthly "The definitive biography of this embattled bird's troubled development and initial deployment. Whittle weaves an engrossing tale as much about people as about this complex machine." —Lee Gaillard, Raleigh News Observer "Like the helicopter-airplane that tantalized generals, engineers, and pilots for decades, *The Dream Machine* is also an irresistible hybrid—a cross between *The Soul of a New Machine* and *Black Hawk Down*." —Brad Matsen "The long, costly, and bloody tale of this hybrid bird, which has taken thirty years . . . to go from blueprints to battlefield. . . . A great yarn for those in love with military gee-whiz technology and aviation." —Mark Thompson, Washington Monthly "A gripping tale of the development, near-death, and final redemption of one of the most controversial and fascinating aircraft ever flown." —Air Space magazine Excerpt. © Reprinted by permission. All rights reserved.

PROLOGUE "A salesman is got to dream, boy. It comes with the territory."—*Death of a Salesman*, by Arthur Miller, 1949 Where he was and what he was doing when he first heard the news is seared into Dick Spivey's memory. The disaster took place in the desert near Marana, Arizona, at two minutes before eight o'clock in the evening, local time, on April 8, 2000. Spivey's brain stores that data alongside November 22, 1963, and September 11, 2001, in the lobe reserved for devastating events. "For me, that's the same kind of thing," Spivey explains in a native Georgia drawl seasoned with an acquired Texas twang. When it happened, Spivey was 5,300 miles and seven time zones away from Marana, lying in bed in his room at the Thistle Hotel Victoria in central London as the sun rose. Barely awake, he was listening to, but not watching, a morning television news broadcast. The Thistle Victoria, a somewhat timeworn but convenient pile of stone and faux marble attached to the city's throbbing Victoria Station rail terminal, is mostly an affordable place to flop for tourists. Spivey, a fifty-nine-year-old aeronautical engineer-turned-marketer for Bell Helicopter of Fort Worth, Texas, was there because the hotel was the site of an aviation conference that Monday. He and a U.S. Marine Corps general were to speak there about a peculiar aircraft Spivey had helped sell the Marines on two decades earlier. It had been the service's top priority ever since. The aircraft was the V-22 Osprey "tiltrotor," called that because it tilts two giant rotors on its wingtips upward to take off and land and swivels them forward to fly fast. The tiltrotor was Bell's solution to an engineering challenge that had tantalized inventors and engineers and industrialists and the military since the 1920s: how to build a vehicle able to take off, land, and hover with the agility of a helicopter yet fly as fast and far as an airplane. Spivey had had a hand in designing the tiltrotor in his engineering days. Since becoming a marketer in the 1970s, he had promoted it to anyone who would listen. But Dick Spivey was not just a salesman with a product, he was a salesman with a dream. Spivey expected the tiltrotor to change the way people fly as much as the jet engine had—and the jet engine had changed the world. That's what Dick Spivey told people all the time, and that was what Dick Spivey believed. By the spring of 2000, the Osprey was nine years behind schedule and billions of dollars over budget. Its developers had been whipsawed between technological hurdles and political interference. They had struggled with manufacturing problems. They had been undermined by business rivalries and their own overly ambitious promises. They had been emotionally scarred and financially stung by an epic political battle in Washington over whether to build the Osprey at all. After they had won that fight, the Marine Corps had pressed relentlessly to get the Osprey into service. Now, at last, everything seemed to be on track. The Marines were practicing mock missions with the Osprey as a prelude to fielding it as a troop transport in 2001. The general with Spivey would tell the conference about that. Spivey planned to talk about an even more audacious tiltrotor he and others at Bell had been working on—a tiltrotor bigger than the military's bulky C-130 Hercules cargo plane. The designers were calling it the Quad TiltRotor because instead of the Osprey's two rotors it would have four, mounted on two wings instead of one. The theoretical behemoth would dwarf the V-22, carrying four times the troops and cargo that could fit in an Osprey. Spivey was going to tell the conference all the great things a bird like that could do for the military. If anybody asked, he would also gladly explain how the tiltrotor was not just going to change but revolutionize civilian air travel, too, solving the airport congestion problem by making it possible to fly without runways. In the future, he had no doubt, tiltrotors would carry civilian passengers from, say, the heart of London to the heart of Paris in less time than it took to get from Victoria Station to London Heathrow Airport by train or taxi. Spivey sometimes got so worked up at the

prospects he found it hard to sleep at night. That morning in London, though, as he lay there drowsily listening to the TV in his hotel room, Spivey heard a news item that jolted him awake. “They were talking about this jet that had crashed in the U.S. and killed nineteen people—a Marine Corps jet,” Spivey recalled. “I had this rush throughout my body thing, but then they called it a jet. I thought, ‘What Marine Corps jet do they have that will carry nineteen people?’ That made me feel better for a few minutes. But then this chill ran through me and I called the general.” The general called headquarters in Washington, then rang Spivey back with awful news. The plane that had gone down near Marana a few hours earlier, killing its crew of four and fifteen Marine infantry riding in back, hadn’t been a jet. It had been an Osprey. Paul J. Rock Jr., a square-jawed, red-haired, tightly wound Marine Corps pilot—radio call sign “Rocket”—was another who would never forget Marana. The “mishap aircraft,” in the dry terminology of military accident investigation reports, was one of four Ospreys taking part in a mock embassy evacuation—the very mission for which Spivey and other believers had long touted the tiltrotor as ideal. Rock, a young major at the time, was copiloting one of two Ospreys trailing two others as they flew to a tiny airfield near Marana, a desert town about twenty-five miles northwest of Tucson. A group of role players were waiting there to be “rescued.” After the first two aircraft approached the airfield and tilted their rotors upward to land, a nightmare began. Without warning, the second Osprey snapped into a right roll and plowed into the ground with its belly up. It exploded in a fireball that lit the evening sky for miles. Rock saw the orange flames in his rearview mirror as his Osprey circled five miles away. Four of Rock’s squadron mates and fifteen other Marines riding in the back of the Osprey that went down were killed instantly. Investigators attributed the crash to “human factors” and the Marines went ahead with their plans for the Osprey. Eight months later, though, Rock lost another four squadron mates when yet another Osprey went down in a boggy forest near their coastal North Carolina home base, New River Marine Corps Air Station. Pentagon officials, who had been expected to approve plans to build 360 Ospreys in all for the Marines, grounded the few already built. Four days after the New River crash, Secretary of Defense William Cohen formed a commission to examine whether the tiltrotor—despite decades and billions spent developing it—might in fact be fatally flawed. The panel had barely started its work when a national scandal over the Osprey erupted. The commander of the Osprey training squadron at New River was accused of telling his mechanics to lie about how frequently the aircraft couldn’t fly because of mechanical problems. The Defense Department opened a criminal investigation. The crashes, the grounding, and the maintenance scandal disheartened the Osprey pilots at New River. All pilots love to fly. Most pilots live to fly. For the next two years, though, Marine pilots were forbidden to take an Osprey off the ground—or even sit in one and crank the engines. Headquarters Marine Corps was afraid something new might go wrong. Reduced to reviewing and revising maintenance manuals, Rock and other Osprey pilots began to fear they might never fly the tiltrotor again—might even be tainted by having flown it at all. Critics were calling the Osprey a boondoggle and a death trap, a “widow-maker.” They said the Marines were foolhardy at best and delusional at worst for wasting so many taxpayer dollars and so many promising lives on such a Rube Goldberg contraption. The Osprey’s foes urged the Pentagon and Congress to destroy the beast before it killed again. Rock was a U.S. Naval Academy graduate who planned to make the military his life’s work. He had joined the Osprey program in 1997 full of zest, certain he was at the cutting edge of Marine Corps aviation. He had been proud to fly the most prized aircraft in the Marine Corps stable, an innovative piece of technology expected to revolutionize the way his service fought wars. Yet, after the crashes and the grounding, after attending the funerals of friends and being interrogated about the maintenance scandal by Defense Department investigators, after watching nearly every other pilot in the Osprey squadron transfer out, Rock was demoralized. He thought of asking for a transfer, maybe even resigning his commission. In 2001, like the Ospreys in the Arizona desert and the North Carolina woods, Paul Rock’s career and Dick Spivey’s dreams lay in ashes. In October 2007, Lieutenant Colonel Paul Rock led the first squadron of V-22 Ospreys ever to fly actual military operations into Iraq, where a U.S.-led invasion four years earlier had ignited ethnic and religious blood feuds and an insurgency that had taken thousands of lives. By then, the bitter debate over how the war had begun was largely over. It was hard to remember why the war’s sponsors had thought it would be so easy, and so cheap in dollars and lives, to change the world. The war in Iraq was a fitting stage for the Osprey’s combat debut—a project sold for a mission once deemed existential, a venture begun under the influence of a dream that soon became a nightmare. The Osprey and its first war had much in common. © 2010 Richard Whittle