

## **Fighter Pilot John Boyd**

"John Boyd: The Fighter Pilot Who Changed the World." To be published by Little, Brown & Company, Fall 2001.

c Robert Coram. All Rights Reserved.

Source: <http://www.belisarius.com/> PROLOGUE

On the first day of spring, 1997, a somber crowd gathered in the Old Post Chapel at Arlington National Cemetery across the Potomac River from Washington, DC. They came to attend the memorial service for John R. Boyd, Colonel, United States Air Force, retired. Winter often lingers in the hills of northern Virginia. And on that Thursday morning a cold rain and overcast skies caused many in the crowd to wrap their winter coats tighter and to hurry for the doors of the chapel. Full military honors were provided for Boyd; an honor guard in blue raincoats and polished boots, a band, and a flag-draped caisson drawn by six white horses. Boyd was a fighter pilot. He wore the Air Force uniform for 24 years. And during that time he made more contributions to fighter tactics, aircraft design, and the theory of air combat than any man in Air Force history. But on that soft and dreary day when his ashes were laid to rest, the U.S. Air Force all but ignored his passing. Only two Air Force officers were in the congregation. One, a three-star general, represented the Air Force Chief of Staff. He sat alone on the front row and was plainly uncomfortable. The other was a major who knew Boyd's work and simply wanted to pay his respects. Neither man had ever met John Boyd.

A chaplain opened the Protestant service. Then one by one, three of Boyd's oldest friends, walked to the front of the chapel. Tom Christie, a tall, white-haired man, solemnly read the 23rd. Psalm. Ron Catton, one of Boyd's former students and a fellow fighter pilot, delivered the first eulogy. He quoted the poet: "One must wait until the evening, to see how splendid the day has been." He told what it was like to fly with Boyd back in the old days, and his lips trembled and his speech became rushed and he had difficulty controlling his emotions. Some of those present turned their eyes away, stared at Boyd's linen-draped urn, and remembered. There was much to remember. For few men have had such a splendid day as John Boyd. Boyd's friends smiled broadly, a few even chuckled, as they recalled Boyd at his irrepressible best. The chuckles must have puzzled the chaplain. After all, a military funeral with full honors is marked by solemnity and dignity. The slow measured cadences and the history-dictated procedures evoke respectful silence. This is a sacred rite, this final remembrance of a man whose life was spent in the service of his country. Here, levity is out of place.

But Boyd's friends came to celebrate his life, not to mourn. And when Pierre Sprey, a small-boned man with swept-back white hair, began a second eulogy by saying, "Not many people are defined by the courts martial and investigations they faced," raucous laughter echoed off the white walls of the chapel. Sprey told how Boyd once snapped the tail off an F-86, spun in an F-100, and not only stole more than \$1 million worth of computer time from the Air Force to develop a radical new theory but survived every

resulting investigation. Chuck Spinney, a boyish Pentagon analyst who was like a son to Boyd, laughed so loud he could be heard all across the chapel. Even those in the congregation who barely knew Boyd wore broad grins when they heard how he was investigated a dozen times for leaking information to the press and how his guerilla tactics for successful leaking are still being used today. Boyd's young granddaughter, Rebah, was as puzzled by the laughter as was the chaplain. "Why is everybody laughing at granddaddy?" she asked her mother.

Boyd's life was marked with a series of enormous accomplishments and lasting achievements. But the thing that meant the most to him over the longest period of time was the simple title he began with almost half a century earlier: fighter pilot. He was first, last, and always a fighter pilot; a loud-talking, cigar-smoking, arm-waving, boisterous, bigger-than-life fighter pilot. There is no such thing as an ex-fighter pilot. Once a young man straps on a jet aircraft and climbs into the heavens to do battle, it sears his psyche forever. At some point he will hang up his flight suit - eventually they all do - and in the autumn of his years his eyes may dim and he may be stooped with age. But ask him about his life and his eyes flash and his back straightens and his hands demonstrate aerial maneuvers and every conversation begins with "There I was at ... " and he is young again as he remembers his glory days.

Those at the memorial service remembered the time back in the middle and late 1950s when John Boyd was the best fighter pilot in America. He returned from a combat tour in Korea to become an instructor at the Fighter Weapons School, the Air Force's premier dog-fighting academy at Nellis Air Force Base out in the desert 10 miles north of Las Vegas. There he was known as "40-Second Boyd," the pilot who could defeat any opponent in simulated air-to-air combat in less than 40 seconds. Like any gunslinger with a nickname and a reputation, Boyd was challenged. Some of the best pilots in the Air Force called him out at one time or another. So did the best pilots in the Navy and the Marines. So did exchange pilots from a half-dozen countries. He took on the best pilots in the free world. But no man could be found who was better in the air than John Boyd. Boyd was more than a great stick and rudder man; he was that rarest of creatures - a thinking fighter pilot. Anyone familiar with the Air Force can tell you two things with confidence: One, fighter pilots are known for testosterone, not gray matter; and, two, military doctrine is dictated by generals. But in 1960 when he was a young captain, John Boyd developed and wrote "The Aerial Attack Study" which became official Air Force doctrine, the bible of air combat; first in America, and then, when it was declassified, for air forces around the world. Put another way, John Boyd, while still a junior officer, changed the way every air force in the world flies and fights. Pierre Sprey told how in 1961 the Air Force sent Boyd back to college for another degree. Boyd chose the Georgia Institute of Technology, one of the tougher state engineering schools in America. Late one night he was studying for an exam in thermodynamics. He and another student were in a classroom on the second floor of the Mechanical Engineering building when Boyd went off on a riff about being a fighter pilot in Korea and what it was like to fly an F-86 on triumphant sweeps down MiG Alley. Suddenly the Second Law of Thermodynamics meshed with all that he had learned as a fighter pilot and Boyd had the epiphany that became his Energy-Maneuverability Theory.

Tom Christie smiled and nodded as he remembered. He was the man who steadied the soapbox for the rambunctious and confrontational Boyd in those tumultuous years of presenting the E-M theory to the Air Force, the years when Boyd became known throughout the Air Force as "the Mad Major." Boyd's bold theory did four things for aviation: it provided a quantitative basis for teaching aerial tactics, it forever changed the way aircraft are flown in combat, it provided a scientific means by which the maneuverability of an aircraft could be evaluated and tactics devised to overcome both the design flaws of one's own aircraft and to minimize or negate the superiority of the opponent's aircraft, and, finally, it became a fundamental tool in designing fighter aircraft. Knowledge gained from E-M made the F-15 and F-16 the finest aircraft of their type in the world. Boyd was the father of those two aircraft. Either the Aerial Attack Study or the E-M Theory would have given Boyd a lasting place in aviation history. But his greatest and most enduring accomplishments still lay ahead. After he retired from the Air Force in 1976, Boyd became the founder, leader, and spiritual center of the Military Reform Movement; a guerilla movement that affected the monolithic and seemingly omnipotent Pentagon as few things in history have done. For a few years he was one of the most powerful men in Washington. Then he went into a self-imposed exile and for almost five years immersed himself in a daunting study of philosophy, the theory of science, military history, psychology, and a dozen other seemingly unrelated disciplines. He had evolved from being a warrior to a warrior-scientist and now he was about to move into the rarefied atmosphere of the pure intellectual. He synthesized all that he studied into all that he knew about aerial combat, expanded it to include all forms of conflict, and in the mid-1980s gave birth to a dazzling and intellectually overpowering briefing entitled "A Discourse on Winning and Losing." When Sprey reached this part of his eulogy he paused and his eyes roamed the chapel and found Christie and Spinney and another man who wore civilian clothes but had the bearing of a career military officer: James Burton. These were Boyd's acolytes. Their years with Boyd were the pivotal, white-hot years of their lives. They followed Boyd into dozens of earth-shaking bureaucratic battles and their lives were forever changed, some say ruined, by the experience. These men believe that Boyd's final work made him the most influential military thinker since Sun Tzu wrote "The Art of War" 2400 years ago. They believe his work changed forever the way strategists think about war, whether it is war in the air, war on the ground, or war at sea. Their belief is founded in fact, not hero worship. For like an Old Testament prophet who was purified by wandering in the desert, Boyd's exile ended with a vision so amazing and so profound that it convinced both the U.S. Army and the U.S. Marine Corps to change their basic doctrines on war fighting. As bizarre as it sounds, an old fighter pilot taught mud soldiers how to fight a war. The results of what he taught were manifested in the crucible of the Gulf War. Almost everything about the startling speed and decisive victory of that conflict can be attributed not to the media heroes, but to John Boyd, who by then lived in south Florida and feared he had been forgotten. Boyd was one of the most important unknown men of his time. He did what so few men are privileged to do: he changed the world. But much of what he did, or the impact of what he did, either was highly classified or was of primary concern to the military. The only things he ever published were a few articles in specialized Air Force magazines and a 12-page study. His most important work was a

15-hour briefing. Thus, there is almost nothing for academics to pour over and expound upon. That is why today that both Boyd and his work remain largely unknown outside the military. The acolytes work to change that. They work to keep Boyd's memory alive and to move his ideas into the mainstream of American thought. Each Wednesday evening, as they have done for more than 25 years, they meet in the officers club at Fort Myer. The basement room where they meet is, fittingly enough, called The Old Guard Room. They talk of Boyd and the conversation lingers on his integrity and character. Not that he was an exemplar of all things good and noble. Far from it. Like many fighter pilots he took a certain pride in his coarseness and crude sense of humor. He cared little for his personal appearance and could be demanding, abrasive, and unreasonable. And while in his professional life Boyd accomplished things that can never be duplicated, in his personal life he did things few would want to duplicate. Boyd's acolytes minimize his faults. They say it is more important that his core beliefs were steel-wrapped and his moral compass was locked on true north, that he never misspent his gifts. His central motivation in life was simple: to get as close as possible to the truth. He would have been the first to admit there is no absolute truth. But he continued chasing something that was always receding from his grasp. And in the pursuit he came far closer to the unattainable than do most men. All his life Boyd was pursued by enemy's real and imagined. He reacted the only way he knew how: by attacking. The rank or position of his enemy, the size or significance of the institution, none of it mattered. He attacked. And when Boyd attacked he gave no quarter. He had to be the last man standing. Time after time he outmaneuvered his foes and sent them down to ignominious defeat.

But Boyd was driven more by failure than by victory. And the one thing he wanted more than anything else, he never achieved. He died thinking he would be remembered, if at all, as a crackpot and a failure, as a man who never made general, and a man whose ideas were not understood and whose accomplishments were not important. The men around Boyd, those who knew him longest and best, say he stood fast against the blandishments of big money. He was a profane puritan who held himself and others to the highest standards. He could see ambiguities but he lived in a world of black and white, of right and wrong, of good and evil. He never broke the faith and he would not tolerate those who did. He was an incorruptible man in a place where so many were corrupt. He was a pure man at a time when pure men were needed but so few answered the call. All this and more the friends of John Boyd remembered that dreary day in the chapel at Arlington National Cemetery. Then it was over and they slowly walked out of the chapel and huddled in small groups against the rain and mist. They were angry at the Air Force. More should have been done to honor the man who had given so much. If the U.S. Air Force was conspicuous by its absence, U.S. Marines were conspicuous by their presence. In fact, had anyone passed by who knew military culture but did not know John Boyd, they would have been bewildered to see so many Marines at the funeral of an Air Force pilot. Particularly noticeable was a group of young lieutenants; rigid, close-cropped, and hard young men from the Basic School at Quantico. These were warriors-in-training. From their ranks would come the future leadership of the Marine Corps. Then there was a senior Marine Colonel who wore the ribbons and decorations of a man who had seen

combat in many places. His presence awed the young lieutenants and they kept their eyes on him. The colonel's command presence made him stand out; that and the fact he marched alone as the crowd walked down a rain-glistening road between endless rows of tombstones. The soft day muffled the rhythmic clacking of the horses' guard. Then, on a green and wind-swept hill at Section 60, gravesite number 3660, the cortege halted. The colonel took from his pocket a Marine Corps insignia, the eagle globe and anchor. He stepped out of the crowd and placed the insignia near the urn containing Boyd's ashes. Someone took a picture. In that frozen moment the light of the flash sparkled on the eagle globe and anchor causing it to stand out sharply against the bronze urn and green grass. The black insignia drew every eye. The young lieutenants, without a command to do so, snapped to attention. Placing the symbol of the United States Marine Corps on a grave is the highest honor a Marine can bestow. It is rarely seen, even at the funeral of decorated combat Marines, and it may have been the first time in history an Air Force pilot received the honor. This simple act is an expression of love; love of the deceased, love of the Truth, love of country, and love of the Corps, all wrapped up together. It signified that a warrior spirit had departed the flight pattern. After a seven-man rifle squad fired a 21-gun salute and a lone bugler played the ever-melancholy Taps, the service ended. Boyd's friends lingered in the mist and talked. Around them, in one of America's most majestic and solemn places, were the graves of thousands who fought and died for their beliefs. It was the proper resting-place for the mortal remains of John Boyd. But some how, some way, his ashes should have been set apart from the other graves. For while America likes to believe that it often produces men like John Boyd, the truth is that men who embody a warrior spirit combined with sweeping and lasting intellectual achievement are rare not only in America, but in any country. They seldom pass among us. And they do so only when there is a great need.