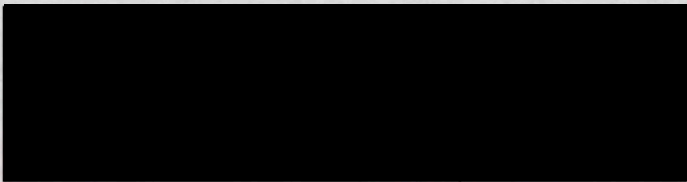


17 March

Brian Lamb
C-Span

Your recent letter last night referred
to Col. Boyd. His death may not
have come to your attention.

Col. Boyd was far more deserving
of promotion to general than
most who carry that rank today.
Best regards and keep up the
good work.


Barabara City FL 32407

O. ~~HBK~~ BK

Col. John Boyd Is Dead at 70; Advanced Air Combat Tactics

By ROBERT McG. THOMAS Jr.

Col. John R. Boyd, a legendary Air Force fighter pilot whose discovery that quicker is better than faster became the basis of a far-reaching theory that helped revolutionize American military strategy, died on March 9 at a hospital in West Palm Beach, Fla. He was 70 and had lived in Delray Beach.

The cause was cancer, his family said.

To combat pilots of the late 1950's, it was always high noon in the skies above the Nevada desert. A pilot, a crack instructor at Nellis Air Force Base, perhaps, or a hotshot Navy flier passing through would get on the radio to call him out and within minutes Colonel Boyd would have another notch in his belt.

They did not call him 40-second Boyd for nothing. From 1954 to 1960 virtually every combat pilot in the country knew that Colonel Boyd, a former Korean War pilot who helped establish the Fighter Weapons School at Nellis, had a standing offer: take a position on his tail, and 40 twisting, turning seconds later he would have the challenger in his own gun-sights or pay \$40. Colonel Boyd never lost the bet.

A high school swimming champion who won an athletic scholarship to the University of Iowa, Colonel Boyd, a native of Erie, Pa., had superior reflexes and hand-eye coordination, but what made him invincible in mock combat was something else.

At Nellis he taught himself calculus so he could work out the complex formulas that produced his awesome repertory of aerial maneuvers and led to his 1960 report, "Aerial Attack Study," the bible of air-to-air combat.

His own combat experience had been limited to a few missions in Korea, but that had been enough to produce a breakthrough insight.

Wondering why the comparatively slow and ponderous American F-86's achieved near total domination of the superior MIG-15's, he realized that the F-86 had two crucial advantages: better visibility and a faster roll rate.

This, in turn, led Colonel Boyd to develop what he called the OODA Loop, to denote the repeated cycle of observation, orientation, decision and action that characterized every encounter. The key to victory, he theorized, was not a plane that could climb faster or higher but one that could begin climbing or change course quicker — to get inside an adversary's "time/cycle loop," as he put it.

The fast-cycle combat theory, expanded by Colonel Boyd into a lec-

ture he later delivered hundreds of times, has since been widely applied to fields as diverse as weapons procurement, battlefield strategy and business competition.

One implication of the theory was that the best fighter plane was not necessarily the one with the most speed, firepower or range. Colonel Boyd, who enrolled at Georgia Tech after his Nellis tour, was helping a fellow student with his homework over hamburgers and beer one night when he had an insight that led to a way to quantify his ideas. The resulting Energy Maneuverability Theory, which allows precise comparisons of maneuverability, has become a standard measure of aerial performance.

Assigned to the Pentagon in 1964, Colonel Boyd became an important figure in a movement that started in response to \$400 hammers and other headline excesses of Defense Department spending and soon expanded to question the need for many hugely expensive weapons systems.

Although he had allies in the Pentagon, Congress and business, Colonel Boyd's ideas often went against the grain of an entrenched military-industrial bureaucracy devoted to the procurement of the most advanced, most expensive and (not coincidentally, he felt) most profitable planes.

Although his design ideas helped give the F-15 a big, high-visibility canopy, his major triumph was the F-16, a plane lacking many of the F-15's high-tech, expensive features, but which is far more agile and costs less than half as much, allowing for the purchase of many more of them for a given expenditure.

Top Air Force officers were so opposed to the concept of producing a plane that did not expand on the F-15's cutting edge technology that Colonel Boyd and some civilian allies developed it in secret.

The plane was hailed for its performance in the Persian Gulf war, a war whose very strategy of quick, flexible response was based largely on ideas Colonel Boyd had been promoting for years.

Colonel Boyd, who maintained that the lure of big-money defense contracts invariably perverted weapons assessment, was so personally fastidious that during his years in the Pentagon he became known as the ghetto colonel because he lived in a basement apartment.

He carried his notion of propriety to such an extreme that when he retired in 1975 and began some of his most productive work, as a Pentagon consultant, he insisted that his fam-



Col. John R. Boyd

ily live on his retirement pay. Initially offering to work full time without pay, he was persuaded to accept one day's pay every two-week pay period, because he had to be on the Pentagon payroll to have access to the building, before retiring in 1988.

He is survived by his wife, Mary; three sons, Stephen, of Springfield, Va., Scott, of Burke, Va., and Jeff, of Delray Beach, Fla.; two daughters, Kathryn, of Delray Beach and Mary Ellen Holton of Centerville, Va.; a brother, H.G. Boyd of Pompano Beach, Fla.; a sister, Marion Boyd of Erie, and two grandchildren.

AN OBITUARY TEENAGER.

Almost a week has passed. The doctor finally convinces you to go home. To change. To sleep. The answering machine is filled with well-wishers. The neighbors bring over food — chili, you think. You're still too numb to eat. You're still

the everyday products your child
t, markers, correction fluid — lie
se is quiet. You begin to realize
have to get used to.

RESTS are appropriate
ecifics such as "played
ttle League" are not.

nce your child was pronounced
pose yourself as you begin to
you phoned didn't know about

