Book Reviews

A Fiery Peace in a Cold War: Bernard Schriever and the Ultimate Weapon

By Neil Sheehan

Reviewed by Group Captain Clive Blount

Introduction

"A Fiery peace in a Cold War" is the story of the United States program to develop an ICBM during the fevered early days of the Cold War and uses, as a framework, the biography of one of its key architects, USAF General, Bernard Schriever. It is based on extensive research, including many personal interviews, by award winning journalist, Neil Sheehan. Sheehan was born and raised in Massachusetts and graduated with a BA from Harvard in 1958. In 1962, after service in Korea and Tokyo with the US Army, he joined United Press International, acting as their Saigon bureau chief until 1964, when he joined *The New York Times* as a correspondent. After a spell in New York, he returned to South East Asia, first to Indonesia and then back to Vietnam. In late 1966, he became the paper's Pentagon correspondent.[1] Although well-known by this stage, particularly for his collaboration with David Halberstam in uncovering the corruption of the Diem regime in Vietnam, his name became best known as the journalist who obtained access to the *"Pentagon Papers"* - a secret review of the Vietnam War, initially commissioned in 1967 by then Secretary of State, Robert McNamara, and leaked to Sheehan by Daniel Ellsberg in 1971. The US government tried, unsuccessfully, to halt publication of the papers and the subsequent Supreme Court ruling, rejecting the government's position, became a landmark First Amendment decision.[2] *The New York Times* earned a Pulitzer Prize for what became one of the most celebrated news stories of the decade.

Sheehan spent some 16 years writing his first major 'Best Seller' *A Bright Shining Lie: John Paul Vann and America in Vietnam*[3] which won both Pulitzer Prize and National Book Awards

for Nonfiction in 1989. *A Bright Shining Lie* examined the American war in Vietnam by concentrating on the life of one individual, Lt Col John Paul Vann. Vann was a controversial and troubled character who had leaked information to Sheehan when he was in the press corps in Saigon; Sheehan became fascinated by Vann and befriended him, following his tragic, and often out of control, rise to a General's command - the first civilian to do so - in 1971. Vann was killed in Vietnam in 1972. Sheehan's book is more than a biography. Whilst unusually intimate in his detail of Vann's life, he places that life firmly in the context of the US conduct of the war in Vietnam and Vann's role within it, making some very clear comments about policy and strategy. It is generally regarded as a sophisticated and well-argued history of the war.

In *"A Fiery Peace in a Cold War,"* Sheehan attempts the same technique of addressing a broad sweep of history through the life of one man. This time he describes the history of the development of the ultimate cold war weapon, the Intercontinental Ballistic Missile (ICBM), by focusing on the life of Bernard Schriever. However, the power of *"A Bright Shining Lie"* came from two key ingredients; namely, the flawed but charismatic personality of his main subject, Vann, and the deep involvement and emotional investment that Sheehan himself had in the Vietnam War. Sadly, neither was available for this book. Schriever, though a capable and successful officer, is portrayed as a rather bland bureaucrat, and it is obvious in several areas that Sheehan's technical knowledge of missile engineering and the early USAF is somewhat lacking. Moreover, Sheehan obviously got very close to Schriever during the fifteen years or so that it took him to write this book, and there is a tendency towards hagiography in several areas where, as the wider historical record suggests, Schriever may have been less of a central actor than Sheehan credits.[4] In addition, in an effort to introduce his wide 'supporting cast', Sheehan's prose can be somewhat meandering and slow to get to the key points; also, the lack of a detailed system of referencing his sources is an irritating omission. That said, the book was well reviewed – *The New York Times* described the book as "deeply researched, compulsively readable and important"[5] – and is an eminently readable account of the technical and political challenges faced during the early cold war years as the US tried to close the perceived 'Missile Gap'.

"A Fiery Peace in a Cold War," is, however, far more than an interesting biography or history. In its description of how the ICBM program was devised and driven to success, it provides an intriguing case study in the adoption and development of technical innovation in a government/military bureaucracy and provides a number of thought-provoking areas worthy of further consideration.

First, and this is perhaps unsurprising in a largely biographical work, is that of the importance of the role played by key individuals in successful innovation. It is clear from the book that individuals play a large part in how technical developments are adopted and nurtured (or otherwise) to operational capability. It is clear from the start that this process is eased, significantly, if the project is initiated by a leader who provides a clear vision of the future. In *"A Fiery Peace"* this vision is provided by Gen 'Hap' Arnold, wartime leader of the USAAF and

the man who arguably 'set the conditions' for the success of the fledgling United States Air Force. As Sheehan notes, Arnold's view was that "The First World War had been decided by brawn. . . the Second by logistics. . . the Third World War will be different. It will be won by brains."[6]

Arnold commissioned the renowned aeronautical engineer, Theodore Von Kármán, to produce a far reaching study, eventually entitled *Towards New Horizons*, to assess the impact of emerging and future technology on air warfare. In writing the report, Von Kármán drew heavily on the results of research conducted in Nazi laboratories – both from interrogations of erstwhile Nazi scientists, and from some 3 million documents gathered in a post war trawl and sent back to the US[7] – and it was his realization that these laboratories had made giant steps in aeronautical science "not the result of any superiority in their technical and scientific personnel. . . but rather due to very substantial support enjoyed by their research institutions in obtaining expensive research equipment, such as large supersonic wind tunnels" that led him to recommend to Arnold the foundation of a permanent Air Force Scientific Advisory Group and an infrastructure of well-equipped research centers. Many advances in USAF capability emerged from these initiatives and Sheehan, rightly, gives Arnold due credit for his leadership and vision.

Schriever clearly identified the influential people who could guarantee success, first in his early career and then in his single-minded pursuit of success for his programs. Throughout the book, Sheehan documents Schriever's consummate skill as a 'politician' in winning over these individuals to his cause. Whether on the golf course or in the corridors of Washington DC, Sheehan credits Schriever with an unerring ability to identify key 'players' (both technical and political) and then to charm them to his will. However distasteful this may seem at first consideration, in a system such as the USAF and DOD, where individuals wield considerable power, such a skill proved invaluable to Schriever. However, the book also documents a number of areas where Schriever's 'charm' was insufficient. Bureaucracies are naturally suspicious of individuality and tend to close ranks against newcomers who try to overturn the established order of things; Schriever's 'golf diplomacy' and attempts to circumvent bureaucratic 'brakes' must have incensed some of the senior officers with which he worked. In addition, bureaucracies are prone to the 'not invented here' syndrome and usually treat attempts to force progress by new techniques and ideas with much distrust. Sheehan documents several such occasions in *A Fiery Peace*. Perhaps the ultimate demonstration of the efficacy of winning key support was the ICBM team's effort at persuading President Eisenhower to put his weight behind the program. However, although Sheehan, rightly, lauds the political triumph of winning over the President, he misses the bureaucratic wrangling that followed. Persuading the President was not enough, and as NSC proceedings show, there was much debate following the briefing described in the book before NSC 1433 was agreed and signed by Eisenhower.[8]

On the other side of the equation to gaining key supporters, it is also clear that individuals can play a key part in *preventing* or *delaying* innovation. The role of 'chief villain' in this respect is

reserved by Sheehan for General Curtis Le May. Schriever's relationship with Le May got off to a poor start with Schriever presenting an 'inane' idea to Le May regarding the water-basing of Strategic Air Command (SAC) bombers on America's rivers.[9] Le May continues to prove a significant obstacle to Schriever throughout the book. Although the popular legend of Le May as an ignorant, cigar-chewing autocrat is probably well-founded, his judgment and behavior as a senior USAF general was probably more nuanced than the now popular caricatures give him credit for. However, Sheehan's description of his behavior regarding the ICBM program raises some compelling issues for discussion. Le May was against anything that diverted resources from manned bombers and used his authority, and invective, in defense of his cause. Whilst 'commitment' and 'drive' are often widely regarded as positive attributes, Le May clearly demonstrated that, in excess, they can lead to narrow-mindedness and a dogmatic adherence to out dated ideas, thus squashing innovation and delaying progress. In addition, hubris born of success, combined with Le May's forceful persona, made him a vociferous champion of ideas that supported his aims, long after experts had deemed them infeasible. His drive to create a supersonic nuclear-powered bomber, seemingly by the pure force of his own willpower against the laws of physics, provides a case in point.[10]

The other area worthy of further consideration is the way Schriever and his colleagues sidestepped normal bureaucratic procedures in order to deliver the program on time. The project was undoubtedly challenging; Simon Ramo, one of the founders of the systems engineering company engaged to provide technical oversight and project management, later said that the ICBM program was, "a crash program of unprecedented size. . . marshaling the resources of industry, government, and science on a broader scale than had ever been attempted in peacetime."[11] Historically, weapons, aircraft, and equipment had all been produced separately; the aim with this project was to deliver the full capability, including warhead, delivery vehicle, guidance, support equipment etc - to deliver to the Air Force a complete *weapon system*. It became obvious, very early in the program, that the aircraft company charged with creating the Atlas missile, Convair, was unable to manage the systems engineering requirement (America's aircraft industry was just that – a producer of aircraft – the aerospace industry was yet to develop), so a new system was developed. Schriever was given command of a field office, with wide powers, and engaged the relatively new company, Ramo Wooldridge(R-W) to provide technical consulting services. Sheehan describes how the novel organization was extraordinarily effective, and the project ultimately successful, with systems engineering becoming a fundamental discipline in all modern aerospace companies. However, does this *ad hoc* 'tiger team' approach provide a model for the management of innovation in defense and all acquisition?

The approach adopted by Schriever and his team has a number of advantages; most of which are clearly described by Sheehan in the book. Such an approach enables rapid progress as the project is managed by a small, close-knit team of experts who are all focused on a single outcome. The team is motivated by a 'higher cause' – in this case the race for cold war supremacy – and the lack of baser distractions, such as company profit, enable innovative

thinking and provide flexibility to capitalize on, and incorporate, new ideas. The momentum such teams develop often sidesteps the established bureaucracy to accelerate senior decision-making, gaining rapid approval of project changes. Vested interests, outside of the immediate team, are often sidelined or emasculated, again streamlining progress. This system is ideal for rapid, innovative projects where early operational capability is of a higher priority than longevity.

However, this type of project management approach has significant disadvantages. Traditional procedures and bureaucracies have generally developed over time to establish safeguards – both in terms of safety and quality control, and to ensure legitimate governance. Although it is easy, as Sheehan implies, to criticize the many government and aircraft industry objections, to the way the ICBM program was handled, as self-serving and maliciously disruptive, a disregard for longer-term configuration control (particularly now with software), engineering quality and supportability issues, and financial probity - the very reason for which traditional procedures are developed to prevent - has led to many high profile disasters. The Apollo 1 fire, Apollo 13 cryogenic tank and the Space Shuttle *Challenger* solid rocket booster disaster can all be traced to lack of careful systems engineering management. More recently, and more mundane but no less significant in terms of military capability, efforts to integrate systems, that were introduced rapidly, via unorthodox project teams, to satisfy urgent operational requirements in Afghanistan and Iraq, into core 'peacetime' capability and safety management processes have proved expensive and difficult*.

Notwithstanding the issues discussed above, Schriever's achieved a great deal during his career. Although largely unknown before this book, he was a major contributor to the US rocketry program and, recognizing that his missiles were adapted to form the backbone of America's space launch capability, the magazine *Space Daily* pointed out on the occasion of the 476th and final launch of the *Atlas* booster family, derived from Schriever's initial missile, "Schriever was the 'American Korolev†' – the real brain behind US rocketry in the cold war years."[12]

"A Fiery Peace in a Cold War" is an entertaining and thought-provoking read that has much to offer students of military innovation. Schriever proved to be exceptionally adept at persuading, recruiting and managing individuals to achieve success in a radical, but vital, program of capability development following the vision of his one-time mentor, Hap Arnold. Perhaps the last word should go to Bernard Schriever himself, who said in a NASA Oral History interview in 1999, "From the standpoint of the Air Force as a service, I think we need to elevate the whole future . . . you need a four star general who's looking to the future, who fights like hell . . . we need that four star guy who sits at that decision table and says. 'Damn it to hell, I need this and I'll argue with you until the cows come home'."[13]

* This has been a major issue for Defence Acquisition in the UK. I am unsure of the situation in the United States.

† Sergei Korolev – the Soviet Rocket Genius

Notes

[1] W Transcript of Interview with Sheehan, 22 Oct 88. http://www.booknotes.org/Watch/4284-1/Neil+Sheehan.aspx accessed 8 Nov 12.
[2] Correll, John T., "The Pentagon Papers" in *Airforce Magazine*, Vol. 90, No. 2, Feb 2007. http://www.airforce-magazine.com/MagazineArchive/Pages/2007/February%202007/0207pentagon.aspx. Accessed 9 Nov 12.
[3] Sheehan, Neil, *A Bright Shining Lie: John Paul Vann and America in Vietnam*, (London: Pimlico, 1988).
[4] For instance, see Dyer, Davis, "Necessity as the Mother of Convention: Developing the ICBM, 1954-1958" in *Business and Economic History*, Vol. 22, No.1, Fall 1993.
[5] Beschloss, Michael, "Missile Defense" in *The New York Times* Sunday Book Review, 1 Oct 09. http://www.nytimes.com/2009/10/04/books/review/Beschloss-t.html?pagewanted=all Accessed 9 Nov 12.
[6] Sheehan, Neil, *A Fiery Peace in a Cold War: Bernard Schriever and the Ultimate Weapon*,(New York: Random House, 2009) xviii.
[7] Sheehan, *A Fiery Peace in a Cold War*, 120.
[8] Foreign Relations of the United States, 1955-1957. Vol XIX, National Security Policy, Document 34. www.history.state.gov/historical documents/frus1955-57v19/d34 #fn9 accessed 11 Nov 12.
[9] Sheehan, *A Fiery Peace in a Cold War*, 143.
[10] Ibid., 159.
[11] Dyer, "Necessity as the Mother of Convention", 195.
[12] Bell, Jeffrey F., "Bernard Schriever's Stifling Shadow" in *Space Daily*, 28 Seo 2004. www.spacedaily.com/news/oped-04zd.html. Accessed 11 Nov 12.
[13] NASA Oral History. General Bernard A. Schriever, interviewed by Carol Butler. 15 Apr 99.