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## The Icarus Syndrome: The Role of Air Power Theory in the Evolution and Fate of the U.S. Air Force

Barry D. Watts

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new social and economic models being developed in Asia," observes James Fallows, but "there is great danger in failing to see them for what they are." However, as if visually impaired by solar phenomena, the author overlooks the possibility that an even greater danger exists.

F.G. HOFFMAN  
Major, U.S. Marine Corps Reserve  
Fairfax, Virginia

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Builder, Carl H. *The Icarus Syndrome: The Role of Air Power Theory in the Evolution and Fate of the U.S. Air Force*. New Brunswick, N.J.: Transaction, 1994. 299pp. \$39.95

In late 1990, the Air Command and Staff College (ACSC) at Maxwell Air Force Base, Alabama, asked the RAND Corporation to develop an essay that the college could use to remind incoming students of the obligations of the profession of arms and of their air power heritage. Carl Builder, a senior staff member at RAND, accepted the task. Thus *The Icarus Syndrome* was written. It is an examination of the relation between the air power theory that was first codified at Maxwell in the 1930s and that of which the institutional health of today's U.S. Air Force is the result.

While ACSC's request initially seemed straightforward, Builder soon realized that it reflected a deep-seated malaise. On the basis of "conversations with Air Force people at all levels," he concluded that the youngest service had somehow lost its bearings. Despite its evident success,

the Air Force seemed to be in the throes of an institutional "crisis" of purpose and vision that transcended the fiscal and other problems affecting all of America's services in the post-Cold War era.

How had this institutional crisis arisen? Builder's answer focuses on the theory of strategic air attack that was refined at the Air Corps Tactical School (ACTS) during the 1930s. Essentially the theory argued that air power, properly employed, could decisively defeat an enemy nation through the precision bombardment of "vital links" in the enemy's war economy. It provided air power, in Builder's assessment, an effective, unifying vision for Army Air Force aviators before, during, and immediately after World War II. Before and during the conflict it promised a way to avoid the horrendous human casualties both sides had experienced on the Western Front during the First World War, by directly attacking the heart of the enemy state; by late 1945, with the destructive potential of atomic weapons obvious to all, doubts stemming from the evident indecisiveness of World War II strategic bombing were largely stilled. However, beginning in the late 1950s this air power "vision fractured with the advent of alternative means (missiles and space systems) . . . and with the realization that the atomic bomb was not, after all, a politically usable weapon short of Armageddon." The Air Force's leaders were faced with a choice between their preferred means (the airplane) and embracing alternative means (missiles and space systems) to preserve the purposes of air power theory. By the

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early 1960s, the institution had opted to cling to the airplane, thereby turning the means of the original ACTS theory into an end. Hence, Air Force aviators revealed that their real affection was for their airplanes, not for the concept of striking at the heart of the enemy, and from this abandonment of theory sprang the institutional crisis that afflicts the Air Force today.

Builder's analysis holds up best within the context of the Cold War. Ballistic missiles, especially, offered an alternative to the long-range bomber for nuclear deterrence. Builder is not mistaken in arguing that until Russian missile and space developments forced the Air Force's hand its leaders were reluctant to give such systems priority over bomber development.

Nuclear war, though, proved to be a dead end, and even today it is far from clear that Air Force leaders were mistaken in clinging to the airplane for *non-nuclear* warfare. However, the real-world problem that Builder overlooks—by implying that the Air Force should long ago have shifted from aircraft to missiles for contingencies like the 1991 Persian Gulf War—is the high cost of cruise weapons like the Tomahawk Land Attack Missile (TLAM). Careful analysis of Desert Storm and the major regional contingencies now being envisioned by the Pentagon indicates that even if such campaigns were waged exclusively with precision weapons, *from thirty-five to forty-five thousand weapons would still be needed*. With prices in the vicinity of \$1 million per round or more, munitions like TLAM and their Air Force equivalents are simply too expensive to

be expended in quantities of more than a few thousand. True, cruise missiles employed in small quantities can, as they did in Desert Storm, play a crucial role early in a campaign. Nonetheless, barring technical breakthroughs that bring their costs down to levels comparable with laser-guided bombs (\$65,000 to \$85,000 each), these weapons can provide only a small fraction of the stockpile necessary for real-world campaigns; the bulk of the munitions will continue to be direct-attack weapons delivered by aircraft. This substantial oversight notwithstanding, however, *The Icarus Syndrome* will be of interest to all concerned with air power theory and the institutional dynamics of military services.

BARRY D. WATTS  
Bethesda, Maryland

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Watson, George M., Jr. *The Office of the Secretary of the Air Force, 1947–1965*. Washington, D.C.: Center for Air Force History, 1993. 390pp. (No price given)

A favorite teacher once told me, "Be careful what you pray for, you might get it!" She might well have been instructing the heavyweights of the United States Army Air Force of the early 1940s, especially General Henry H. Arnold, the Commander Army Air Force, General Carl Spaatz, Commander Army Air Force, and Lieutenant General Lauris Norstad, Deputy Chief of Staff for Operations, Headquarters, U.S. Air Force. After World War II, at the onset of the great