
THE SPACE COMMISSION AND ITS IMPACT

As noted at the outset of this study, the congressionally mandated Space Commission was expressly established to deal with the national military space conundrum addressed in the preceding chapters. Chaired by Donald H. Rumsfeld, who had previously served as Secretary of Defense in the Ford Administration and who subsequently, just prior to the release of the commission's report, was again appointed Secretary of Defense by incoming President George W. Bush, the commission's membership consisted of uniformly qualified participants. Its 13 members included, among others, two former commanders in chief of U.S. Space Command, retired Air Force Generals Howell M. Estes III and Charles A. Horner; a former commander of Air Force Space Command and later Air Force vice chief of staff, General Thomas S. Moorman, Jr.; former Air Force chief of staff General Ronald R. Fogleman; former vice chairman of the Joint Chiefs of Staff Admiral David E. Jeremiah; former Assistant Secretary of Defense for Command, Control, Communications, and Intelligence Duane P. Andrews; and former presidential science adviser William R. Graham.

Although the commission was given a fairly broad charter, which included consideration of desired national goals in space, it elected in the end—no doubt recognizing that politics is the art of the possible—not to dwell on the question of *where* the nation should be headed with respect to the military exploitation of space, but rather on the more practical question of how the defense establishment should be organized and managed toward that end. Some analysts would find fault with that approach, arguing that U.S. planners should first have a clear notion of *what* needs to be done before pro-

ceeding to engage the second-order question of *how* we should go about doing it.¹ Yet there is an equally cogent case to be made for rectifying the most pressing organizational issues first, before grappling with the more controversial subject of where and how far the United States should move into the still largely undeveloped areas of space control and space force application. That argument would cite not only the organizational deficiencies that largely occasioned the Space Commission's creation in the first place, but also, as defense analyst Michael Evans has noted, the well-known propositions that "advances in military technology cannot be applied successfully without corresponding organizational innovation and flexibility" and that "it is through organizational responsiveness that technology is translated into superior strategic performance."² In the spirit of the latter propositions, the Space Commission was specifically asked by Congress to consider and offer recommendations on three alternatives to existing organizational arrangements for military space: namely, a separate and independent Space Force, a Space Corps within the Air Force, and a new Assistant Secretary of Defense and Major Force Program (MFP) for space. Although the commissioners brought different points of view to their tasking, they strove hard for consensus, and all of their conclusions and recommendations were unanimous.

¹On this point, two commentators recently stressed "the importance of focusing on the first-order issue of developing a robust and comprehensive vision for United States space power rather than becoming mired in premature debates over the second-order issue of how to organize the management of national security space. . . . Any road will get you there when you don't know where you're going; a more effective and better funded organization will only get you lost faster in these situations." (Lieutenant Colonel Peter Hays, USAF, and Karl Mueller, "Going Boldly—Where? Aerospace Integration, the Space Commission, and the Air Force's Vision for Space, *Aerospace Power Journal*, Spring 2001, pp. 45–46.)

²Michael Evans, "Fabrizio's Choice: Organizational Change and the Revolution in Military Affairs Debate," *National Security Studies Quarterly*, Winter 2001, p. 3. Harvard political scientist Samuel Huntington likewise pointed out nearly two generations earlier how getting an armed service's organizational structure set correctly is an important precondition for that service's operational effectiveness, since that structure, whatever form it might take, is closely tied to a distinctive strategic concept and *raison d'être*. Huntington went on to note that "if a military service does not possess such a concept, it wallows amid a variety of conflicting and confusing goals, and ultimately suffers both physical and moral degeneration." (Samuel P. Huntington, "National Policy and the Transoceanic Navy," *Proceedings*, U.S. Naval Institute, May 1954, p. 483.)

WHAT THE COMMISSIONERS FOUND OVERALL

In by far its most overarching judgment, the commission flatly concluded that the Department of Defense was “not yet on a course to develop the space cadre the nation needs.”³ Because most of the nation’s military space funding and space equities reside in the Air Force and because the commission was established in the first place out of congressional concern over the adequacy of the Air Force’s stewardship of space, that reference to the Department of Defense was in fact a barely veiled reference to the Air Force. Although the report did not expressly criticize the Air Force, it did state candidly: “Few witnesses . . . expressed confidence that the current Air Force organization is suited to the conduct of [the nation’s new space missions]. Nor was there confidence that the Air Force will fully address the requirement to provide space capabilities to the other services. Many believe the Air Force treats space solely as a supporting capability that enhances the primary mission of the Air Force to conduct offensive and defensive air operations. Despite official doctrine that calls for the integration of space and air capabilities, the Air Force does not treat the two equally.” As if to show their hand further, the commissioners rejected the Air Force’s long-standing contention that air and space represented a single and seamless “aerospace” continuum and observed that space was not just a “place” but also “a medium, much the same as air, land, or sea.”⁴

The report offered both an assessment of the nation’s institutional deficiencies with respect to military space and some recommendations to ameliorate the practical impact of those shortcomings. In the assessment portion of the report, the commissioners spotlighted three interconnected issue areas: cadre-building, funding, and organization. As for building, growing, and sustaining a cadre of truly space-competent professionals, it noted pointedly that unlike the combat aviation and submarine career fields, whose leaders have spent upward of 90 percent of their service careers in those fields, fewer than 20 percent of the general officers in key space positions

³*Report of the Commission to Assess United States National Security Space Management and Organization*, Washington, D.C., January 11, 2001, hereinafter referred to as *Space Commission Report*, p. 57.

⁴*Ibid.*, p. 13.

have space career backgrounds. Most of the others have typically spent less than three years in space or space-related assignments. As a result, the report observed, today's most senior Air Force space leaders spend most of their time learning about space rather than actually leading.⁵ This, the commissioners concluded, was a serious problem in need of fixing.

On this count, the commissioners agreed with other critics who have argued that the Air Force's long attachment to the aerospace construct—along with its recent insistence on making all its officers both air- *and* space-conversant by assigning non-space officers to space positions to enrich their knowledge of space and to better integrate space with air operations and vice versa—was threatening to have the long-term effect of producing jacks of all trades and masters of none. Many have faulted such well-meaning but arguably flawed education and training as not only detracting from the technical credibility of Air Force Space Command, but also undermining the morale of space officers by eliminating career paths for those who prefer to retain and develop their space expertise. A significant underlying problem is that the more senior space assignments are readily accessible to Air Force non-space personnel, whereas space officers cannot compete for command positions in the flying portion of the Air Force because they lack aeronautical ratings.

The commissioners further found that no single service had been assigned statutory responsibility to organize, train, and equip for space operations. In so doing, they lent tacit support to an argument often used previously by the Air Force leadership to counter charges that they were not adequately meeting their responsibilities of space stewardship. As Brigadier General Simon "Pete" Worden, then of the planning directorate at Air Force Space Command, recently expressed it, "While some would say that the Air Force has not been a good steward of space . . . the Air Force does not have an assigned responsibility to be the 'steward' of space." Worden added that the Air

⁵Ibid., pp. 43–46. As evidence of the rudimentary level of operator thinking about space and its potential a decade ago, General Horner commented after the Gulf War: "I was already aware of the danger of Scuds before we went to the Gulf, but it never occurred to me to use DSP [Defense Support Program missile launch-sensing satellites] to provide warning of Scud attacks. . . . But shame on me, I should have known." (Quoted in Lieutenant Colonel Steven J. Bruger, USAF, "Not Ready for the First Space War: What About the Second?" *Naval War College Review*, Winter 1995, p. 79.)

Force leadership had testified to the commission that it was more than ready to assume the mantle of being the nation's designated "space steward," but that "it must have that mission assigned to it, along with the resources to accomplish it."⁶

As for resource support, the commissioners noted that there is no existing Defense Department appropriation that identifies and aggregates funding for military space programs. Observing further that most of the funding for military space programs is in the Air Force and National Reconnaissance Office (NRO) budgets, they gave voice to "some concern" that although the Army and Navy are the defense community's largest users of space products and capabilities, the budget activities of those two services "consistently fail to reflect the importance of space," pointing up a "dichotomy between the importance of space to the Army and Navy versus the funding commitment these services make" which "needs to be addressed."⁷ The commissioners seemed to be saying between the lines that although the Army and Navy are the main consumers of military space products, they were not shouldering their fair share of the funding burden for the space-related services provided to them.

On the matter of existing organization for military space, the commission clearly discerned a problem in the triple-hatting of the commander in chief of U.S. Space Command (CINCSpace), who also served as the commander in chief of the North American Aerospace Defense Command (CINCNORAD) and commander of Air Force Space Command (AFSPC). The commissioners rightly spotlighted CINCSpace as the principal advocate for the space needs of all the warfighting commanders in chief (CINCs) and as the one senior uniformed figure responsible for ensuring the security of the space environment. Yet they concluded that those preoccupations required him to pay more attention to the space tasks assigned by the president and Secretary of Defense, which necessarily left insuf-

⁶Brigadier General Simon Peter Worden, "The Air Force and Future Space Directions: Are We Good Stewards?" *Aerospace Power Journal*, Spring 2001, p. 51.

⁷*Space Commission Report*, p. 76. The report did acknowledge that the Army and Navy each fund service-specific space programs. The Army funds common-user and Army-distinct ground terminals, and the Navy funds the UHF follow-on program, the multiuser objective system, and Navy terminals.

ficient time for him to give due attention to his parallel duties at NORAD and Air Force Space Command.

The commissioners concluded from this undesirable situation that making CINCSPACE and the commander of Air Force Space Command two separate four-star generals rather than one would enable the commander of AFSPC to concentrate more fully on his “organize, train, and equip” duties mandated by the Air Force and Title X of the U.S. Code and also would allow CINCSPACE, for his part, to focus his full attention and energy on actually conducting space operations in support of the Secretary of Defense and the regional warfighting CINCs. Such a change, they concluded, would, in one stroke, solve a prior problem whereby the unified U.S. Space Command often appeared to be marginalized both by Air Force Space Command, which houses 90 percent of the nation’s military space personnel and funding, and by the regional warfighting CINCs, each of whom has an assigned area of responsibility (AOR) and distinct operational and combat missions that are far clearer than those of the similarly unified U.S. Space Command.

To deal with these and other problems, the commissioners offered a number of unanimous recommendations. The first, and arguably an essential precondition for all the others to work, was that the president consider declaring and treating space as a U.S. national security priority, without which drift and a lack of focus and due funding support would be bound to persist. The commissioners further recommended amending Title X of the U.S. Code to assign the Air Force formal statutory authority to organize, train, and equip for offensive and defensive space operations. They also recommended that the Secretary of Defense formally designate the Air Force as the executive agent for space within the Department of Defense. In return for this groundbreaking dispensation, which essentially offered the Air Force on a silver platter a status it had sought in vain for nearly a half-century, the commissioners recommended that the unified U.S. Space Command be commanded by a four-star officer other than the commander of Air Force Space Command, that that position be open to any qualified four-star general in any of the four services, and that the position be nominative and not routinely rotated among the services.

As for the technical competence and organizational efficiency issues, the commissioners recommended giving Air Force Space Command full responsibility for providing resources to execute space R&D, acquisition, and operations. To do that, they added, the Air Force's Space and Missile Systems Center (SMC), hitherto a component of the separate and sometimes adversarial Air Force Materiel Command (AFMC), would need to be moved to AFSPC, thus consolidating all Air Force space functions into a single organizational entity so as to "create a strong center of advocacy for space and an environment in which to develop a cadre of space professionals."⁸

THE ISSUE OF A SEPARATE SPACE SERVICE

As noted at the start of this chapter, the Space Commission was empowered to offer recommendations on two oft-proposed alternatives for U.S. military space exploitation: a separate and independent Space Department and uniformed Space Force within the Department of Defense or, short of that, the creation of a more modest Space Corps within the Air Force, much along the lines of the Marine Corps within the U.S. naval establishment.⁹ These alternatives have been pushed by their advocates for years out of concern for seeking greater leverage from space through a more efficient and more nurturing support infrastructure. Both have either implicitly or explicitly presumed that space mission-area development has not received its proper due with the Air Force as its de facto custodian; that there is a better approach toward underwriting continued military space exploitation *within* the Air Force than through the organizational and funding mechanisms currently in place; or that the nation's military space program is mature enough to strike out on its own toward mastering the fourth medium of warfare, either partly or completely detached from direct Air Force control.

⁸Ibid., p. 90.

⁹The Center for Naval Analyses, for example, recommended the creation of an independent U.S. space service in its 1995 study for the Commission on Roles and Missions of the Armed Forces, on the avowed premise that such a new service "would provide a pool of expertise and would anticipate the future evolution of space-based weapons." (G. A. Federici, B. Wald, et al., *Commission on Roles and Missions of the Armed Forces: Space Activities*, Alexandria, Virginia: Center for Naval Analyses, May 1995, p. 19.)

Similar expressions of concern have emanated from the Air Force itself, both from career space professionals who have sought to free space from the inhibiting bonds of traditional air power thinking and from more mainstream airmen, including some at senior leadership levels, who have grown increasingly perturbed over the long-term implications of the Air Force's having had to shortchange its air responsibilities, particularly in recent years, as a necessary condition for retaining its stewardship of space. Others have come from more outspoken critics, both within the Air Force and in influential circles outside it, who have become convinced that a cleaner break from existing practices will be essential if emerging technology opportunities are to be fully exploited in a timely way. All reflect a belief that the time for continued business as usual has passed and that military space exploitation by the United States has reached a point where it needs a decided assist.

The more radical of these proposed alternatives is the establishment of a separate and independent U.S. Space Force.¹⁰ Such a new service would include its own civilian secretary, headquarters, and field staff. It would command, at least in principle, a place equal to that of the U.S. Army, Navy, and Air Force in terms of organizational stature and claims to a fair share of the annual U.S. defense budget. The Space Force's chief of staff would be a full and equal member of the Joint Chiefs of Staff. Such a separate and independent service would also presumably provide U.S. military space programs with a central acquisition executive having exclusive oversight authority and management responsibility for such programs.

A less drastic proposed alternative for better exploiting U.S. military space potential has been to create a semiautonomous Space Corps within the Air Force. As portrayed in one characterization, such an arrangement would be "modeled on the two-hundred-year-long evolution of the U.S. Marine Corps in both organization and function. The Marine Corps provides rapid-deployment forces in support

¹⁰I am grateful to Larry Valero, a doctoral candidate in the Department of War Studies, University of London, and RAND summer associate for 2001, for having marshaled a number of points regarding the Space Force, Space Corps, and MFP proposals addressed in this chapter. That research is presented in full in his unpublished paper, "A Historical Analysis of Bureaucratic Alternatives for U.S. Military Space Forces," August 2001.

of naval operations and relies on the Navy to provide all logistic and administrative support. The Space Corps would become [the Department of Defense's] single space entity within the Department of the Air Force. All [Defense Department] space assets, including personnel, space systems, and ground-based support systems would be transferred to this corps. This organizational structure would be able to leverage USAF logistical and support capabilities already in place and focus the Space Corps on space warfighting. . . . Existing space procurement, personnel, and [operations and maintenance] costs would transfer to the Space Corps budget."¹¹ The creation of such an entity would require establishing a separate headquarters unit reporting directly to the Secretary of the Air Force. The Space Corps commander, like the commandant of the Marine Corps, would be a full member of the Joint Chiefs of Staff.

The Space Commission heard testimony both for and against these alternatives. On the pro side, one argument cited the inhibiting effect the treatment of space power as a mere extension of air power has allegedly had on the development of a purer theory of space warfare that might offer better chances of making the most of the nation's military space opportunities. A casebook example of this view was expressed not long ago by a midcareer Air Force space scholar, Lieutenant Colonel Bruce DeBlois, who insisted that "one cannot build space power theory and doctrine in general upon air power theory and doctrine." Expanding on this point, DeBlois noted that while air warfare theories and doctrines, like those for land and sea warfare, can be helpful in informing the development of a vibrant theory of space warfare, space power in the end "clearly requires fundamental, bottom-up theoretical and doctrinal development. The most conducive requirement for such development remains a separate space corps or service."¹² Variations on this theme have been voiced by others in the space community in recent years. As one space officer observed of them, after all is said and done, "space-power separatists

¹¹Ralph Millsap and D. B. Posey, "Organizational Options for the Future Aerospace Force," *Aerospace Power Journal*, Summer 2000, pp. 50–51.

¹²Major Bruce M. DeBlois, "Ascendant Realms: Characteristics of Air Power and Space Power," in Colonel Phillip S. Meilinger, ed., *The Paths of Heaven: The Evolution of Air Power Theory*, Maxwell AFB, Alabama: Air University Press, 1997, pp. 529–578.

maintain that space forces will reach their full military potential only when they free themselves from air power paradigms.”¹³

Other arguments put before the commissioners on behalf of establishing a separate space service turned on the more practical concern for ensuring adequate bureaucratic support and funding flow for military space development. Because of the Air Force’s current obligation to divide its attention and resources between its competing air and space responsibilities, the argument went, a separate and independent Space Force or Corps could be a stronger and more single-minded advocate for military space and its personnel. Moreover, the consolidation and centralization of all U.S. military space activities across service lines would minimize duplication of effort and reduce costs. Proponents of a separate space service added that such a move would “improve the visibility of space programs, increase the space budget, eliminate redundancy, and [better] promote the development of space professionals.”¹⁴

In the end, the commissioners rejected these arguments and elected to give the Air Force the benefit of the doubt, at least for the near term. They concluded that, although the establishment of a Space Corps within the Air Force might be appropriate at some indeterminate future date, “a realigned, rechartered Air Force is best suited to organize, train, and equip space forces” for the more immediate years ahead.¹⁵ The commissioners did not indicate which were the most convincing of the arguments they heard against establishing a separate space service at this still-embryonic stage in the evolution of the nation’s military space capability. Surely high on the list, however, were the considerable start-up costs and additional bureaucratic overhead that would inevitably be associated with any such radical measure. The commissioners no doubt were also mindful of the divisiveness that could result from setting up a separate military space enterprise just at the point in the evolution of military space exploitation where the nation has begun to make substantial progress toward integrating space with other force elements in joint

¹³Major Shawn P. Rife, USAF, “On Space-Power Separatism,” *Airpower Journal*, Spring 1999, p. 22.

¹⁴Millsap and Posey, “Organizational Options for the Future Aerospace Force,” p. 48.

¹⁵*Ibid.*, p. 89.

operations. Any creation of an independent space service today would almost surely threaten to insert a new wedge between space and the other mediums at just the time when the Air Force has finally grown serious about this issue and taken significant steps to break down the walls that have traditionally kept them separated.

In addition, the commissioners had ample ground for skepticism about the real-world prospects of eliciting additional discretionary funds for sustaining a newly established space service significantly over and beyond the existing budgetary limit on defense R&D and procurement. As matters now stand, because the nation's military space responsibilities reside largely within the Air Force, essential space programs compete almost exclusively with other Air Force programs rather than also with Army, Navy, and Marine Corps R&D and procurement accounts. But the latter would seem more appropriate, considering that the other services are no less beneficiaries of the contributions of space than the Air Force (indeed, are arguably more so). The compromises that this arrangement has necessitated for the Air Force's air interests since the 1980s have often been cited as a compelling reason for spinning off a separate and independent U.S. space service.

Yet as reasonable as it might sound in principle to presume that appropriations for a separate space service would come from budget trades not only with other Air Force accounts, as is the current practice, but with *all* military programs across service lines, the commissioners recognized that such an ideal solution was far more easily said than done. As an Air Force space officer commented in this regard, it would make sense, from a funding perspective, to create a separate space service *only* if doing so "would allow the budget to be split four ways, thus allowing air and space forces to command half of U.S. defense outlays." Yet such an arrangement, he cautioned, would probably not make a significant difference once one took into account "the power of established services to retain their share of the pie, the additional overhead costs in creating and maintaining a separate space service, and the very real questions regarding the nation's political will to militarize space even further."¹⁶

¹⁶Rife, "On Space-Power Separatism," p. 26.

At bottom, the commissioners concluded that the time for establishing a separate U.S. space service had not yet arrived, as attested by their unanimous judgment that the Air Force remains, at least for the near term, the most appropriate organization within which to continue to grow America's military space potential. The basis for that judgment is important enough to warrant further comment. Today's space separatists often compare the proposed creation of an independent U.S. space service to the earlier establishment of the U.S. Air Force as a separate service. In fairness to that comparison, there is indeed a discernible analogy in at least one respect between the current calls for the creation of a separate space service and the earlier arguments that eventually culminated in the establishment of the U.S. Air Force in 1947. During the 1930s and 1940s, the Army leadership naturally bridled at having to provide substantial funding for its Army Air Corps because aircraft competed with land-force needs for limited funds and because the Army was displeased that the Air Corps proclaimed its ability to achieve combat outcomes without the involvement of infantry and armor. In much the same fashion, there have been recurrent signs of similar tension in recent years between the Air Force's space community and the more aerodynamically minded parts of the Air Force, which have hitherto largely determined that service's spending priorities.

Yet although there is a superficial similarity between the two cases, the circumstances that surrounded the Air Force's attainment of independence differed considerably from those that prevail with respect to the American military space community today. The Army Air Force (AAF) in 1946 and 1947 could convincingly argue that it had taken the fight directly to the enemy in every theater of war, thanks to its possession of the needed wherewithal for imposing force on the enemy. Today's military space community, in contrast, clearly lacks such a capability at this stage of its evolution, notwithstanding claims by some that Operation Desert Storm was the first "space war."¹⁷ Although America's space assets proved vital in supporting both the air campaign and coalition ground operations in southeastern Iraq and Kuwait during the 1991 Gulf War, they did not project power from space against the enemy directly. Indeed, although it took only 11

¹⁷See Gary Wagner, "Fighting the First 'Space War,'" *Space Tracks*, January 2001, pp. 9–11.

years from the invention of the airplane to the latter's first employment for force application, the nation has been in the military space business for more than four decades with no space force application yet in sight. U.S. space capabilities today are more analogous to the nascent air power of the pre-World War I era, when the missions of military aviation were limited to such support functions as battlefield surveillance and reconnaissance, than to the more developed state of the AAF on the eve of its attainment of independence from the Army.

The AAF had the needed political leverage to pursue its independence in 1947 because it had engaged successfully in combat and had a record of accomplishment that both emboldened its leaders and earned it the support of the White House and, eventually, Congress. Although the most outspoken of today's space advocates are no less insistent in their calls for the establishment of an independent space service, those calls do not yet have the persuasiveness of those made by the USAF's founding fathers in the AAF during the mid- and later 1940s. Moreover, the continued absence of a clear national determination to proceed with space weaponization constitutes yet another obstacle in the path of establishing a separate space service worthy of the name. So does the absence of any assurance that overall defense spending would increase in the wake of such a development, thereby allowing an Air Force unburdened of its former space responsibilities to retain the lion's share of its prior R&D and procurement allotments and to devote those exclusively toward satisfying its presumably underfunded air needs. In the end, it is hard to imagine how a space force with no capability to conduct space control and space force application and with only support responsibilities might justify its existence as a separate service. As for the argument that a separate space service is needed to grow a proper space doctrine, opponents of that idea counter that such logic puts things backward, since doctrine derives from theory and experience rather than the other way around, suggesting that "one must base the creation of a separate space force on sound doctrine and concepts first."¹⁸

In sum, the commissioners concluded that space does not yet meet the test of independence because existing technology remains inca-

¹⁸Rife, "On Space-Power Separatism," p. 30.

pable of conducting direct military action from space. As two opponents of space separatism expressed it, “The Air Force was established as an independent force when air power had at least reached adolescence—only after combat-tested technology, doctrine, and leadership were well established. Military space is still in its infancy, with no unique mission, untested doctrine and personnel, and unfinished technology.” Accordingly, while military space capabilities contribute to all warfighting functions in all terrestrial mediums, they have “yet to evolve into a full-spectrum warfighting force” in their own right.¹⁹ According to that view, a separate service will be justifiable only when the engagement of targets both in space and on the ground from space becomes technically and politically feasible. Until space becomes weaponized and warriors are operating in and from it, critics of separatism insist, the nation’s military space component will not win wars or be anything more than a support instrument for enabling more effective terrestrial operations.²⁰

Although they foresaw an eventual need for a new U.S. military space organization, the commissioners declined to establish any definitive timeline for a space reorganization plan, should such a plan be deemed necessary or desirable in the future. In effect, the commission left it to the Air Force to determine how a duly realigned and rechartered Air Force organizational configuration would play out in actual practice. It concluded that the disadvantages of the more radical alternatives of a Space Force or Corps, at least for now, outweighed the advantages for numerous reasons, most notably that the nation’s military space posture has yet to have attained a requisite critical mass of qualified personnel, a sufficient funding level, or a set of missions and associated operational requirements that would justify such a radical move.²¹ However, in a clear tacit warning to the

¹⁹Millsap and Posey, “Organizational Options for the Future Aerospace Force,” p. 52.

²⁰Indeed, the nation’s military space effort is still so embryonic that at least one senior Air Force general faulted those who would rush to have space declared a supported CINCdom when its principals have yet to fully articulate and demonstrate its current role as a supporting CINCdom. (Interview by the author, Headquarters U.S. Air Force, Washington, D.C., April 30, 1998.)

²¹It might be noted in passing, however, that some of these disadvantages, such as a lack of sufficient qualified personnel and funding, were precisely among the factors that contributed to the establishment of an Air Corps within the U.S. Army in 1926. My thanks to Rick Sturdevant, Office of History, Air Force Space Command, for bringing this to my attention.

Air Force, it also concluded that future U.S. military space needs “may” require the establishment of a separate space department and service “at some future date” and that nearer-term measures should be undertaken in such a way as “not to preclude” the later development of a separate space service “if that proves desirable.”²²

IMPROVING THE SPACE BUDGETING PROCESS

In addition to the question of establishing a separate space service, the Space Commission was also tasked to consider a third alternative often espoused for improving the day-to-day management of U.S. military space activities, namely, the appointment of an Assistant Secretary of Defense for Space who would be responsible for an attendant Major Force Program budget category for space that cut across service lines. In one oft-heard formulation, this alternative would roughly emulate the current MFP-11 arrangement that was created for the U.S. Special Operations Command (USSOCOM) established in 1986. Such an arrangement would provide a single budget mechanism for introducing greater transparency into the tracking and management of multiservice space procurement programs. Under this arrangement, the Assistant Secretary of Defense for Space would exercise budget responsibility and civilian oversight for the new MFP-12, as well as authority for overseeing the coordination of joint space requirements.

The precedents of MFP-11 and USSOCOM offer instructive insights into the argument for and promise of an MFP-12 budget arrangement for space. To review briefly the essential background of those precedents, the chairman of the Joint Chiefs of Staff, Air Force General David C. Jones, in 1980 established a high-level commission to explore the causes and consequences of the badly botched attempt to rescue American hostages from Iran earlier in April of that year. That commission’s report spotlighted deep and systemic deficiencies in the organization and conduct of special operations activities in all four services. Similar shortcomings associated with the later U.S. intervention in Grenada in 1983 and the subsequent U.S. response to the terrorist hijackings of a TWA airliner and the *Achille Lauro* cruise

²²Space Commission Report, p. 80.

ship in 1985 also drew congressional attention to the nation's special operations forces and to the question of whether or not they were adequately integrated and supported.

As a result of that attention, Congress in 1986 enacted the Nunn-Cohen Amendment, aimed at revitalizing special operations and correcting the deficiencies that had been identified in the nation's ability to conduct them. That legislation directed the president to establish a unified combatant command—USSOCOM—to ensure that the nation's special operations forces in all services met the highest standards of combat readiness. To provide for adequate funding for those forces, Congress further directed the Department of Defense to include a new special operations budget category, Major Force Program 11 (MFP-11), in its future-years defense plan.²³ That budget arrangement was noteworthy in that it provided USSOCOM with discrete funding authority for the development and acquisition of equipment, supplies, and services unique to special operations. The law further created a new position of Assistant Secretary of Defense for Special Operations and Low-Intensity Conflict, who would report to the Under Secretary of Defense for Policy, and a coordinating body within the National Security Council to advise the president on matters involving special operations and low-intensity conflict.²⁴

Unlike the Space Force and Space Corps alternatives discussed above, an MFP-12 for space fashioned along the lines of MFP-11 for special operations would be strictly a procurement management and cost-tracking mechanism aimed at improving the efficiency of the nation's military space R&D and acquisition programs. Since a unified command for space—USSPACECOM—was already in place, no additional organizational initiative comparable to the creation of USSOCOM would be required. With such a provision, the space

²³The other designated defense budget major force programs include strategic forces (MFP-1), general-purpose forces (MFP-2), intelligence and communications (MFP-3), airlift and sealift forces (MFP-4), national guard and reserve forces (MFP-5), research and development (MFP-6), central supply and maintenance (MFP-7), training, medical, and other personnel activities (MFP-8), administration and other associated activities (MFP-9), and support for other nations (MFP-10).

²⁴Joel Nadel and J. R. Wright, *Special Men and Special Missions: Inside American Special Operations Forces, 1945 to the Present*, London: Greenhill, 1994, p. 113.

components of the individual services would retain their separate identity and integrity and would remain responsible for the organization, training, and equipping of their respective space assets and personnel, as well as for the management of their respective space career fields.

After assessing this option, the commissioners recommended establishing a Major Force Program budget category for space, yet one managed in a decentralized manner similar to the practices of MFP-1 through MFP-10, rather than in the fashion of MFP-11, which funds special operations through USSOCOM. Such an amended practice would produce an MFP-12-equivalent for space, yet not one applied in the same way as MFP-11, with its designated Assistant Secretary of Defense for Special Operations and Low-Intensity Conflict. The commissioners ruled out creating a similar position of Assistant Secretary of Defense for Space, on the ground that any such individual “would not have sufficient influence over the evolution of U.S. national security space capabilities” and thus the position would not be “likely to result in greater or more effective focus on space” within the defense community.²⁵

One potential challenge facing the effective implementation of this recommendation could entail the satisfactory negotiation of memoranda of understanding and agreement with all concerned services to determine which space-peculiar activities in each would fall under the purview of the executive agent for military space and be deemed appropriate for inclusion in MFP-12.²⁶ By some accounts, USSOCOM has periodically encountered difficulty in adequately defining special-operations-unique items for MFP-11 to the satisfaction of all interested parties, a fact that has occasioned recurrent internal tensions between the service headquarters staffs and their respective special-operations components. If that experience is a relevant guide, one might anticipate similar problems from time to time in arriving at agreed determinations of space-unique R&D and procurement activities for MFP-12. The Air Force’s then-senior plans

²⁵*Space Commission Report*, p. 81.

²⁶As a step in the direction of coming to effective grips with this concern, the Air Staff recently developed a notional baseline MFP for space. (Comments on an earlier draft by Major General Michael A. Hamel, USAF, commander, 14th Air Force, Vandenberg AFB, Calif.)

and programs executive, however, expressed confidence that this potential problem would *not*, in the end, be a serious impediment to the effective implementation of an MFP-12 for space.²⁷ In all events, the single greatest advantage of such a budget solution will be a centralization and clarification, for the first time, of overall U.S. military space spending, along with a removal of the confusion—sometimes bordering on opacity—that currently obscures how the nation’s military space money is reported due to existing service and Office of the Secretary of Defense (OSD) accounting practices.

To be sure, such an arrangement, in and of itself, will not provide more overall funds for military space exploitation.²⁸ It will, however, dramatically improve the visibility and transparency of space spending in all services. It will also highlight conspicuous instances of redundant activity and indicate space mission needs that are not being adequately supported. As such, it represents a first step toward an eventual arrangement whereby budget trades on behalf of needed space programs may be made across service lines rather than solely within the Air Force budget. At a minimum, an MFP solution promises to create an expenditure-tracking situation in which the case for an increased overall budget limit for space—not only for the Air Force but for all services, as appropriate—can at least be more rigorously and effectively argued.

INITIAL AIR FORCE REACTIONS

There is no question that although it cooperated both willingly and seriously, the Air Force viewed itself as having been essentially targeted by the Space Commission and accordingly awaited its findings and recommendations with more than a little trepidation. As the commander in chief of U.S. Space Command, Air Force General Ralph E. Eberhart, candidly remarked, the formation of the Space Commission had been “an experience akin to a trip to the dentist”

²⁷Conversation with Lieutenant General Joseph H. Wehrle, Jr., Deputy Chief of Staff for Plans and Programs, Headquarters USAF, Santa Monica, Calif., February 19, 2002.

²⁸On this point, former Secretary of the Air Force F. Whitten Peters suggested that while the MFP approach will give decisionmakers a clearer picture and a spending trail of space allocations, making tangible improvements in space capabilities will not occur without more funds for space. (Amy Butler, “Pentagon Closely Studying Ramifications of Space Panel Suggestions,” *Inside the Air Force*, April 13, 2001, p. 13.)

for the Air Force and was clearly “not something officials sought or looked forward to.”²⁹ An even more pointed airing of that sentiment was made by then–Secretary of the Air Force Whitten Peters after the commission’s report was released when he commented that “at the risk of confirming that I am a Luddite when it comes to space, let me say that I really do not understand what the big problem is that justifies a national commission.”³⁰

In a clear indication that he was on board with the commission’s recommendations, however, General Eberhart hastened to add that the Air Force “may well be better off” when the fallout from the commission finally settled, and that the commission’s creation and findings had clearly “helped us refocus, to chart the path ahead, and to truly realize what our destiny is” with respect to the Air Force’s future in space.³¹ Then–Brigadier General Michael Hamel, the Air Staff’s director of space operations and integration, characterized the Space Commission’s product as “a watershed report in terms of the evolution of space in the military,” adding his belief that the reorganization moves prompted by the commission’s report should lessen at least some management problems occasioned by a prior fragmentation of authority.³² Recognizing that those proposed moves may have bought the Air Force some time with respect to its corporate hold over the space mission area, the since-retired Air Force chief of staff, General Michael E. Ryan, commented shortly after the report’s release that an independent Space Force or Corps was not warranted for at least another 50 years.³³ Perhaps most concisely reflecting the official Air Force position adopted in the immediate aftermath of the report’s release, the leader of the Air Force’s review of the Space Commission’s findings and recommendations, then–Major General Brian A. Arnold, director of space and nuclear deterrence on the Air

²⁹Peter Grier, “The Force and Space,” *Air Force Magazine*, February 2001, p. 52.

³⁰*Ibid.*, p. 51.

³¹*Ibid.*, p. 52.

³²*Inside the Air Force*, February 2, 2001, p. 1, and *Aviation Week and Space Technology*, May 14, 2001, p. 31.

³³“Ryan Says Space Force Unwarranted for Next 50 Years,” *Aerospace Daily*, February 9, 2001, pp. 217–218.

Staff, said of those findings and recommendations: “I don’t see anything in there that we don’t think we can do.”³⁴

Indeed, three months after the release of the Space Commission’s report, General Eberhart indicated that Air Force Space Command had supported the commission’s recommendations “in every respect.”³⁵ He also noted that the Air Force chief of staff, General Ryan, had moved promptly to cut off any nonconcurring groups within the Air Force to telegraph clearly that the Air Force had accepted the commission’s recommendations in principle and was now deep in the process of trying to determine how best to comply with them. Finally, Eberhart reported that the bureaucratically sensitive issue within the Air Force of transferring the Air Force Space and Missile Systems Center from AFMC to AFSPC had been worked out through a number of “productive sessions” between himself and the commander of AFMC, General Lester Lyles. The principal issue, he said, had nothing to do with any would-be heel-dragging from AFMC over an implied loss of turf, but rather with legitimate concerns within AFMC that AFSPC duly attend to career needs and opportunities for those SMC personnel who would be subsumed into AFSPC as a result of the transfer.

As for continued intra–Air Force sticking points, General Eberhart noted that similar concerns had been manifest at AFMC’s depot in Ogden, Utah; within the space component of the Air Force’s Electronic Systems Command; and at various other Air Force space-related functions residing outside AFSPC, all of which would need to be addressed in a similar manner. Still more vexing, he indicated that AFSPC was seeking oversight of the Air Force’s science and technology program as it related to space and that “the jury [was] still out” as to whether the Air Force Research Laboratory would cooperate. Perhaps the biggest still-unsettled organizational challenge facing the Air Force, he suggested, entailed the relationship between the Under Secretary of the Air Force and director of NRO, on the one hand, and AFSPC and U.S. Space Command, on the other. The challenge here

³⁴William B. Scott, “USAF Gives Nod to Space Report,” *Aviation Week and Space Technology*, February 12, 2001, p. 63.

³⁵General Ralph E. Eberhart, USAF, comments to a gathering of RAND staff, Santa Monica, Calif., May 9, 2001.

entails eliminating existing seams between the NRO and the director of operations at AFSPC and an essential migration of some NRO roles to AFSPC, which ultimately will require substantial trust between the Secretary of Defense and the Director of Central Intelligence. For the near term, Eberhart noted, how these issues are handled and ultimately resolved will be heavily dependent on the currently cooperating personalities involved. At some point, however, the new relationships will need to be institutionalized. For this, he said, there are already microcosms of the bureaucratic, organizational, and “turf” issues at stake in the analogous case of the individual uniformed service cryptologic functions and their relationship with the National Security Agency, which may well contain some instructive lessons to be pondered and applied.

THE BUSH PENTAGON’S POLICY DECISIONS

By law, as mandated by section 1624 of the National Defense Authorization Act for FY 2001, the former chairman of the Space Commission and later Secretary of Defense in the George W. Bush administration, Donald Rumsfeld, was required to provide Congress his assessment of the Space Commission’s recommendations by April 12, 2001.³⁶ As part of that response, in a letter to the chairman of the Senate Armed Services Committee, Senator John Warner (R-Virginia), Rumsfeld granted the need for a “new and comprehensive national security space management and organizational approach” to promote and protect U.S. interests in space. He further reported the establishment of a Policy Coordinating Committee for Space within the National Security Council “to provide a senior, interagency forum to develop, coordinate, and monitor the implementation of the president’s policy guidance for space activities.” He also announced the creation of an executive committee co-chaired by the Secretary of Defense and the Director of Central Intelligence to review space-related intelligence issues of joint concern.³⁷

³⁶“Pentagon Says Rumsfeld’s Space Report Response Will Be ‘Complex,’” *Inside the Air Force*, April 27, 2001, p. 3.

³⁷Secretary of Defense Donald Rumsfeld, letter to the Honorable John Warner, chairman, Senate Armed Services Committee, May 8, 2001.

Rumsfeld then enumerated the most important and potentially far-reaching of his decisions and intended actions on the commission's recommendations. Among other things, those decisions

- assigned responsibility to the Department of the Air Force to organize, train, and equip for “prompt and sustained offensive and defensive space operations”
- designated the Department of the Air Force as the executive agent for space within the Department of Defense (DoD), with DoD-wide responsibility for the planning, programming, and acquisition of military space systems
- directed the Secretary of the Air Force to make the commander of Air Force Space Command a four-star officer other than CINCSPACE and CINCNORAD
- discontinued the practice of requiring that CINCSPACE and CINCNORAD be flight-rated, thereby allowing for an officer from any of the four services “with an understanding of space and combat operations” to be assigned to that position
- directed the Defense Comptroller and Chief Financial Officer to establish a new space program, budget, and accounting mechanism to “increase visibility into the resources allocated for space activities” (in effect, creating an MFP-12)
- directed that headquarters and field commands be realigned to more effectively organize, train, and equip “for prompt and sustained space operations,” with Air Force Space Command being assigned the responsibility for (and being duly funded for) executing space R&D, acquisition, and operations, as well as managing the space career field within the Department of the Air Force, thus removing any remaining space functions from Air Force Materiel Command and concentrating those functions exclusively in Air Force Space Command
- directed that the Under Secretary of the Air Force be dual-hatted as the director of the National Reconnaissance Office (NRO) and the Air Force's acquisition executive for space, thus aligning mainstream Air Force and NRO space programs and enabling both organizations to use each other's “best practices.”

Concerning changes outside the corporate confines of the Air Force, Rumsfeld further

- directed the Army and Navy to continue to establish service-specific space requirements, to maintain a cadre of space-qualified officers, and to attend to R&D, acquisition, and deployment of service-specific space systems
- charged the director of the Defense Advanced Research Projects Agency (DARPA) and the service laboratories with undertaking R&D and demonstration of innovative space technologies and systems for military missions
- directed all service secretaries to enhance professional military education regarding space within their respective services at all levels “to ensure [that] our forces have a direct understanding of how to integrate space activities into military operations.”

These decisions portended the most sweeping structural changes to have been made concerning the management of U.S. military space development and operations in many years. They also held out promise for a notable improvement in the U.S. military space posture in the coming years, since Secretary Rumsfeld’s five articulated defense policy priorities (nuclear deterrence, ensuring the readiness of the deployed force, modernizing C3I and space capabilities, transforming the U.S. defense establishment, and reforming Pentagon processes and organization) all favor an increased focus on space and information technologies.³⁸ After the release of the Space Commission’s report, Rumsfeld announced that a Policy Coordinating Committee for Space had been established in the NSC under national security director Franklin Miller to “help coordinate the civil and commercial and defense-related aspects of space.”³⁹ He further confirmed that the Bush administration would commit \$1 billion in R&D funding in FY02 to missile defense technologies, with decisions

³⁸Robert Holzer, “IT, Space Top U.S. Military Priorities,” *Defense News*, February 26, 2001, p. 22.

³⁹Robert Wall, “Rumsfeld Revamps Space, Pushes ‘Black’ Projects,” *Aviation Week and Space Technology*, May 14, 2001, p. 30.

yet to be made on how that allocation would be spent.⁴⁰ As for disappointments, the Space Commission had recommended the creation of a Strategic Reconnaissance Office, which would consider not just space-based intelligence, surveillance, and reconnaissance (ISR) solutions, but also trade-offs among air, space, surface, and subsurface options. The services resisted that particular idea, and it was not approved by Rumsfeld, at least as an overt entity. However, the newly appointed Under Secretary of Defense for Acquisition, Pete Aldridge, indicated that DARPA might be directed to take on more cutting-edge space R&D.⁴¹

Clearly, an MFP-12-equivalent budget arrangement that would enable the tracking of all space-related spending was both intended and directed by Rumsfeld. Under that arrangement, military space initiatives and programs will continue to reside within the individual service annual Program Objectives Memoranda (POMs). Yet the Air Force, as the DoD's designated executive agent for space, will at least now be able to monitor and track them in greater detail across the board. In some cases, as before, individual services will want a specific space capability but will not want to pay for it. In others, as before, they will seek to hold onto existing equities and gain additional ones. Until the wrinkles of the new budget-monitoring arrangement are ironed out, the Joint Requirements Oversight Council (JROC) will continue to be involved in adjudicating cross-service requirement claims, so a system of de facto checks and balances should prevail.⁴²

SOME NEAR-TERM IMPLEMENTATION QUESTIONS

Making the transition to the new arrangements outlined above will definitely further underwrite the interests of U.S. military space development. However, needed changes will not come instantly or easily. The same day the Space Commission's report was released, one of the commissioners, Senator Malcolm Wallop (R-Wyoming), said of current U.S. military space organization and policy: "Right now, there are lots of little individuals who will give you lots of little space

⁴⁰"Rumsfeld Says \$1 Billion Will Boost Missile Defense R&D," InsideDefense.com, March 1, 2001.

⁴¹*Aviation Week and Space Technology*, May 14, 2001, p. 31.

⁴²Eberhart, comments at RAND, May 9, 2001.

answers,” but the community as a whole is “an enormous band of chieftains with no tribes.”⁴³ Another commissioner, former Air Force chief of staff General Fogleman, frankly admitted that “some people within the Air Force [still] feel that . . . we got out the 10,000-mile screwdriver and started fine-tuning things that commissions ought not muck around with, but the fact of the matter is it was in our charter, so we did it.”⁴⁴

Fogleman added that until now, military space had “pretty much been on autopilot.” Explaining the reason for the provision of a senior NSC monitor for space, he said that “if you go into the national security organization and apparatus as it existed [even recently], what you discover is that the individual who was responsible for space matters within the National Security Council was an Air Force lieutenant colonel who was doing it as an additional duty. So when we as a Space Commission started looking for a post office box and a telephone number, we couldn’t find one. We took that as wrong if this is going to be a national security priority.”⁴⁵

Another early result of the commission’s proposed reforms was the initiation of a transfer of the Air Force’s Space and Missile Systems Center in El Segundo, California, from Air Force Materiel Command to Air Force Space Command. Ever since its establishment as the Western Development Division in 1954 to develop the nation’s first ICBMs, this entity has been pivotal in military space acquisition. It currently is the principal nexus of U.S. military space systems development, in charge of developing, among other things, military communications satellites, the Global Positioning System (GPS), and missile defense functions.⁴⁶ It will now reside where it properly belongs in the interest of a more coherent U.S. military space program.

⁴³“Panel Urges U.S. to Defend Space,” *New York Times*, January 12, 2001.

⁴⁴General Ronald R. Fogleman, USAF (Ret.), comments at a seminar on “Organizing for Future National Security Priorities in Space” jointly sponsored by DFI International and AF/QR, Washington, D.C., February 1, 2001.

⁴⁵*Ibid.*

⁴⁶Peter Pae, “Missile Base Is on an Upward Trajectory,” *Los Angeles Times*, May 29, 2001.

Such a change will solve a major problem that had been caused by the previous separation of responsibilities for space systems acquisition and space operations between Air Force Materiel Command and Air Force Space Command, a practice that had tended to undermine the consideration of space as a mission area. Within the NRO, program managers enjoy full latitude to focus on the mission applications of their various systems and to make appropriate cost and schedule trade-offs over the life-cycle of those systems. In contrast, the mainstream Air Force space program did not benefit from that comparative advantage because of the duality of players (Air Force Space Command and those in the Program Element Office) who wielded influence over it. Its mission orientation was thus applied not from the top down but rather at lower levels and then folded into the acquisition, launch, or operations category as deemed appropriate in each case.

As for funding needs, General Fogleman remarked that all too often what commissions like the Space Commission typically hear from self-interested plaintiffs is that “if we just had more money, we could fix this problem.” The former Air Force chief frankly allowed that “the commission did not bite on that as being necessarily true. What we did say is that if we get an overarching national policy and we get some coherent kind of flow to what we are doing, it may in fact require more money. It may. That money will probably flow if the right type of attention comes down from the top. The fact of the matter is that just throwing more money at a flawed organization or a flawed management system is not necessarily going to provide success. That was the approach the commission took.”⁴⁷ On the MFP issue, Fogleman noted that he had been the Air Force’s chief programmer at the time MFP-11 for special operations was created. As he recalled its practical effect, “the existence of that MFP gave visibility to special operations programs and, for the services who have been criticized for not supporting special operations, it took away that criticism. At long last, everybody could see what was happening. I think that the same thing will happen with an MFP [for space].”⁴⁸

⁴⁷Fogleman, DFI seminar.

⁴⁸Ibid.

For that to happen, however, an essential next step (and one not expressly allowed for in the commission's recommendations) is the removal of the funding for multiservice space missions and functions from the Air Force's budgeting process, so that needed national security space funding can come from the *overall* defense budget rather than solely from the more limited Air Force budget. As long as space programs are traded off almost entirely against other competing Air Force mission needs, they will not receive either their due priority or the funding support they require. An all but certain side benefit of such a change in funding practice will be that once the other services are put on notice that space funding increases may come out of their allocations as well as the Air Force's, a new and long-overdue discipline will begin to influence and duly temper their hitherto often unconstrained generation of space "requirements" for the Air Force's budget to underwrite.

Clearly, the other services remain uneasy over the potential consequences that could ensue for them from the Air Force's having been designated the DoD's executive agent for space. General Eberhart candidly admitted three months after the release of the commission's report that the unified U.S. Space Command had been considerably slower to embrace the commission's recommendations than AFSPC had been because of the different service views and positions embedded within the joint command. For a time, Eberhart noted, those positions had "changed weekly" as the individual service views on the hot-button executive-agent issue shifted back and forth. The Army leadership was openly indicating its nonconcurrence. Other services argued, ultimately unsuccessfully, that executive-agent power should be vested in an Under Secretary of Defense for Space or in a reconfigured National Security Space Architect to keep the authority for military space development from becoming overly aggregated in Air Force hands.⁴⁹

Later, an Army spokesman indicated that the Army supported the Air Force's new executive-agent status, but he warned against any consolidation of functions that might jeopardize the joint nature of space operations. The Army, more actively than the other services, is

⁴⁹Eberhart, comments at RAND, May 9, 2001.

developing unclassified systems to disrupt an enemy's satellites.⁵⁰ Army Colonel Glen Collins, director of the Force Development and Integration Center at Army Space and Missile Defense Command, said that while NRO and the Air Force have the largest investments in space, the capabilities provided by the integration of those assets are "equally important to all the services. Any actions or decisions that do not protect the joint nature of our space forces . . . would cause irrevocable harm to the services' warfighting capabilities." He added that the Air Force's increased authority and responsibility for military space "must be balanced" by increased oversight from CINCSPACE, the Joint Chiefs of Staff, and the Office of the Secretary of Defense (OSD), and that "without this oversight, there is the potential that space could become focused on support to a single service, its style of warfighting, and to its priorities. This would be contrary to the best interests of the Army."⁵¹

Echoing such concerns, Rear Admiral Robert Nutwell, the Deputy Assistant Secretary of Defense for C3I, spoke for OSD in stressing that in assigning overarching authority for space to the Air Force, OSD intended to "ensure a voice" for the other services and space-related defense agencies. He added that "we also want to retain a role for each of the services in the innovation of space capabilities and generating new capabilities," especially for those services that are "just primarily customers of space capabilities in the force enhancement arena. Even though we want to empower the Air Force to be the champion and the principal implementer for space particularly, we need to preserve the proper oversight."⁵²

A TIME FOR ACTION

As the Air Force entered the 21st century, the spectrum of views with respect to "where and whither military space" ranged from arguments that the time had come to start laying the groundwork for an independent U.S. space service to confident counterclaims by the Air

⁵⁰These include laser dazzlers that can blind surveillance satellites, jammers to disrupt communication and surveillance satellites, and kinetic energy ASATs.

⁵¹Ann Roosevelt, "New Air Force Space Role Has Army Concerned," *Defense Week*, May 14, 2001, p. 1.

⁵²Butler, "Pentagon Closely Studying Ramifications of Space Panel Suggestions," p. 13.

Force, including from many in the Air Force space community, that existing arrangements were more than sufficient for meeting near-term military space needs and that custodianship of the nation's military space effort was in responsible hands. Between these polar opposites, one could further identify a substantial cross-section of concerns that existing provisions for the orderly advance of U.S. military space exploitation could bear improvement—at least at the margins. At the root of these concerns was a mounting sense of need to ensure that continued space mission-area development would receive due support within the Air Force budget without compromising that service's no less important air-related mission needs along the way.

Within the Air Force, many were prepared to retain an open mind with respect to the question of whether the establishment of a separate space service might eventually become justified once the nation's military space applications reached sufficient maturity. Clearly, however, there was a prevailing view that the time for such a development was nowhere near at hand yet, considering that the Air Force had not yet *begun* to face up to defensive and offensive space control as prospective combat mission areas, to say nothing of space force application. Further, this view seemed to support the notion that, whatever alternative organizational and funding arrangements might ultimately be settled upon on behalf of space, the proper setting in which to push for developing and acquiring space control and, eventually, space force application capabilities was the existing Air Force space establishment. In the words of two proponents of this steady-on-course approach toward military space exploitation, the Air Force's initial evolution as an integral part of the Army until 1947 offered ample ground for concluding that "space should be allowed to mature within an established parent organization to determine whether it can develop and refine a unique warfighting capability."⁵³

At the same time, a belief was growing within influential quarters *outside* the Air Force, including among both its critics and friends, that the Air Force needed a decided push toward making more of the space exploitation opportunities that now lay before it. Indeed, as

⁵³Millsap and Posey, "Organizational Options for the Future Aerospace Force," p. 52.

noted in the introduction to this study, such concern lay at the heart of the creation of the Space Commission by Congress in 1999. Yet while many commissioners appeared strongly sympathetic to alternatives that recognized air and space as separate mediums and mission areas warranting their own dedicated organizational and funding support, the Air Force remained ever more deeply committed to its “aerospace integration” mantra and to the avowed conviction of its leadership that the atmosphere and space represented a single and inseparable aerospace continuum. This, in a nutshell, was the political and bureaucratic lay of the land on the eve of the release of the Space Commission’s report in January 2001.

In their conclusions and recommendations, the commissioners seemed entirely content to allow the Air Force to remain the institutional nexus of the Defense Department’s space expertise and activity for the indefinite future, albeit with that expertise duly reconstituted at some appropriate future point in an organizational structure that might eventually evolve into a Space Corps or some comparably autonomous institution. It seemed equally clear, however, that the commission’s recommendation on that point was tacitly based on the presumption of a clean and unsentimental abandonment by the Air Force of its “aerospace” fixation, which had persisted throughout so much of its thinking and rhetoric since the late 1950s. Even before the commissioners issued this recommendation, many thoughtful critics of all persuasions on the relative importance of the Air Force’s air and space priorities had concluded that the idea that the Air Force might somehow meld the very different air and space cultures to create “aerospace generalists” was seriously flawed.

In a major milestone in the maturation of Air Force thinking and policy on the relationship between air and space, the newly installed Air Force chief, General John P. Jumper, announced on October 16, 2001 a substantially changed direction in the Air Force’s approach, declaring that “when I talk about space . . . I don’t talk about aerospace, I talk about air *and* space” (emphasis added). Indicating in no uncertain terms that he had taken due note of the Space Commission’s strong leanings, Jumper added that in his understanding, “space . . . is a separate culture. The physics that apply to orbital dynamics are different than what airmen experience in the air. And there’s a culture that has to grow up that shows the same expertise in

space as airmen showed after World War II in aerial combat. We have to respect that, and we have to grow that culture until it matures.”⁵⁴

Two months later, Jumper was even more emphatic in his avowal of the Air Force’s need to reject once and for all its former aerospace mentality and to face up to the fact that air and space must be treated as separate and distinct mediums in the best interests of military space systems management, mission-area development, career cultivation, and funding support. To be sure, he reaffirmed the abiding importance of the Air Force’s accomplishments to date in air and space integration when he underscored the continued importance of combining the effects of the two mediums in pursuit of asymmetric advantages for theater joint-force commanders. But he also recognized the closely connected fact that the Air Force had to accept that air and space operations entail fundamentally different ways of doing business. Yet he left no room for doubt that, in his view, the Air Force’s decades-long infatuation with “aerospace” thinking had been a major part of the problem rather than a part of the solution to the nation’s mounting military space exploitation predicament: “I carefully read the Space Commission report. I didn’t see one time in that report, in its many pages, where the term ‘aerospace’ was used. The reason is that it fails to give the proper respect to the culture and to the physical differences that abide between the physical environment of air and the physical environment of space. We need to make sure we respect those differences. So I will talk about air and space. I will respect the fact that space is its own culture, that space has its own priorities that have to be respected.”⁵⁵

⁵⁴Amy Butler, “Departing from Ryan’s Rhetoric, Jumper Notes Unique Space Needs,” *Inside the Air Force*, October 19, 2001, p. 15. In an important earlier benchmark of his developing thinking along these lines, during his tenure as the Air Force’s Deputy Chief of Staff for Plans and Operations (AF/XO), then-Lieutenant General Jumper in 1996 changed that key office’s name to Deputy Chief of Staff for Air and Space Operations. He was determined to provide an arrangement whereby any space officers who needed to vent operational space concerns would have both an incentive and the opportunity to proceed directly to AF/XO, the Air Staff’s uppermost clearinghouse for all operational matters, rather than work those concerns through the acquisition establishment, the traditional Air Force clearinghouse for space. (Conversation with General Jumper, Nellis AFB, Nevada, June 24, 2002.)

⁵⁵Peter Grier, “The Winning Combination of Air and Space,” *Air Force Magazine*, January 2002, p. 75. In a predictable ratification of that policy shift, the name of the Air Force’s professional quarterly, beginning with the Fall 2002 issue, was changed with little ado from *Aerospace Power Journal* to *Air and Space Power Journal*.

Those words represented a major, and possibly even historic, change in the Air Force's attitude toward space and how it should be approached both organizationally and operationally.

On this issue, General Eberhart indicated earlier that the Air Force leadership had made an easy peace with the commission's recommendation that the CINCSPACE and AFSPC command positions be separated, as well as with the dropping of the former requirement that CINCSPACE be a flight-rated Air Force pilot.⁵⁶ The North American Aerospace Defense Command (NORAD) director of operations billet is a statutorily flight-rated position, which satisfies the Canadian requirement for a rated officer at the appropriate level in NORAD and eliminates any requirement for CINCSPACE to be rated. Eberhart further suggested that the Air Force should continue to be able to compete successfully for the CINCSPACE billet because of its almost complete monopoly of space expertise among the four services. Yet it would be both necessary and proper for the CINCSPACE assignment to go to another service from time to time, if only to bear out the fact that all services are now legitimate contenders for that position. As for AFSPC, Eberhart indicated that the time had now come for routinely assigning commanders there who "grew up" in the space culture and who do not need to wear the two additional hats of CINCSPACE and CINC NORAD. Acceptance of this reality, he said, can only be healthy for the Air Force and the continued maturation of America's military space capability.

The Department of Defense finally made good on its earlier instructions to that end when Secretary Rumsfeld on October 18, 2001 directed the new Secretary of the Air Force, James Roche, to assign, within 60 days, a new Air Force four-star general to head up Air Force Space Command. General Eberhart had recommended such a move earlier in his testimony to the Space Commission and, in the end, warmly welcomed it, saying, "I can tell you that day in and day out I am very frustrated dividing my time and energy between those three hats [AFSPC, CINCSPACE, and CINC NORAD]."⁵⁷ In the same directive, Rumsfeld further instructed Roche to establish a space warrior

⁵⁶Eberhart, comments at RAND, May 9, 2001.

⁵⁷Amy Butler, "Rumsfeld Tells Roche to Pick New Four-Star for Air Force SPACE-COM," *Inside the Air Force*, October 26, 2001, p. 9.

career plan within 120 days and to assign the Program Executive Officer for military space directly to the Under Secretary of the Air Force, once that still-pending Bush administration nomination was confirmed. Shortly thereafter, the Senate approved the president's selection of former Lockheed Martin Corporation executive Peter Teets to be the Air Force's Under Secretary and the Pentagon's executive agent for military space, with acquisition milestone authority over all Department of Defense space programs, including those of the Army and Navy as well as of the Air Force and NRO. (Prior to that time, milestone authority for all major defense acquisition programs had resided solely with the Under Secretary of Defense for Acquisition). In addition, Rumsfeld directed the Pentagon's Comptroller to establish a "virtual" MFP for space so as to "increase visibility into the resources allocated for space activities."⁵⁸ The intent of that directive was to provide senior defense officials better insight into exactly how much money was being spent on space programs and in what way.

As might have been predicted, once the Air Force began pursuing its executive-agent role in earnest by developing a space program flow chart indicating Air Force, Navy, Army, NRO, and other defense-agency system requirements to be included in the space MFP and spotlighting any identified shortfalls, complaints arose from some Army and Navy quarters that the Air Force was seeking to wrest too much authority from other space-interested organizations. As one Army complainant put it, the Air Force's alleged interest in spaceborne segments over the ground-terminal portions of space systems threatened to "take the equity out of the Army as a stakeholder."⁵⁹ Yet that same Air Force effort identified cross-service space funding deficiencies in the areas of communications, multitheater target tracking capability, missile warning, ISR, space control, science and technology, and "transformation," all of which added up to some \$8 billion worth of underfunded military space activities, according to the Air Force's space operations and integration director, then—

⁵⁸Quoted in Amy Butler, "Rumsfeld Issues Long-Awaited Guidance on DoD Space Realignment," *Inside the Air Force*, October 26, 2001, p. 6.

⁵⁹Amy Butler, "Air Force's Notional Plan for Space Budgeting Process Draws Fire," *Inside the Air Force*, November 16, 2001, p. 17.

Brigadier General Hamel.⁶⁰ Moreover, as FY 2001 ended, it appeared that Department of Defense space programs might gain an overall increase of as much as \$4.8 billion over future years if a pending draft Program Decision Memorandum dealing with so-called transformation issues was signed by Under Secretary of Defense Paul Wolfowitz.⁶¹ The other services could hardly complain about those guardedly encouraging harbingers.

By early 2002, all of the essential pieces had fallen into place to signal the onset of a fundamental departure from the traditional American approach to military space exploitation—arguably a departure for the better. The Space Commission had delivered its recommendations, the Secretary of Defense had duly acted upon them, and a newly incumbent Air Force chief had announced a decided farewell to the flawed aerospace construct. In so doing, he committed his service to a new approach to military space activity that recognized air and space, albeit both arenas of primary Air Force concern, as separate and distinct mission areas warranting separate and distinct organizational attention and fiscal support.

Furthermore, a plan had been put in place to generate a new budget category for space that would allow for unprecedented accountability in the way the nation's defense dollars were spent on military space applications. Finally, the Air Force had committed itself to developing and instituting a new space warrior career plan from the ground up. The only remaining near-term move on the military space chessboard was for the Air Force to make good on the Space Commission's recommendation to affirm Air Force Space Command's stature as an operating command coequal with the Air Force's other operating commands, led full-time by a four-star commander with career space credentials and unencumbered by the obligations of serving also as CINCSPACE and CINCNOAD. That piece was finally moved into place when Secretary Roche announced on February 15 that General Eberhart would be unburdened of his AFSPC responsibilities while remaining CINCSPACE and CINC-

⁶⁰Amy Butler, "USAF Identifies Key Space Activities DoD Has Not Yet Fully Funded," *Inside the Air Force*, November 16, 2001, pp. 17–18.

⁶¹Amy Butler, "DoD Space Program Could Get Additional \$4.8 Billion Through FY07," *Inside the Air Force*, December 21, 2001, p. 1.

NORAD, and that command of AFSPC would go to General-select Lance Lord, a non-flight-rated missileer who had previously served as vice commander of AFSPC. The unfinished business for the Air Force that still remained included the implementation of these new space policy initiatives; the pursuit of a long-term space force enhancement strategy in which *all* consumers of the product might eventually share the cost burden; and—perhaps most challenging of all—coming to grips with the still undeveloped and politically sensitive but increasingly inescapable mission areas of space control and, when the right time for it comes, space force application.