

# We Were Deans Once . . . and Young

## Veteran PME Educators Look Back

Dr. James W. Forsyth Jr.\*

Dr. Richard R. Muller

The publication of a book chapter titled “Professors in the Colonels’ World” by Daniel J. Hughes, a retired Air War College professor, began a debate regarding the quality and future of professional military education (PME) in the US Air Force.<sup>1</sup> The chapter sparked a lively exchange on journalist Tom Ricks’s widely read *Foreign Policy* blog *The Best Defense*.<sup>2</sup> Among his most serious charges, Hughes claims that Air Force PME is hamstrung because its major educational institutions, particularly Air War College (AWC), are led by senior leaders with little or no academic background. He further claims that the military faculty members at these schools are at best ill prepared for their educational tasks and at worst openly hostile to academic enterprise. Finally, Hughes argues that academic standards and scholarly rigor are noticeably absent from PME. The culprit? Something one might call the “clash of cultures” that exists between civilian and military faculty. Certainly, serious differences exist between these two groups of people, but are those differences so stark as to make life intolerable? Are they insurmountable? Perhaps, but we think not.

This article represents an attempt to distill some of the observations and lessons we have gleaned through many years teaching

within the Air Force, educating the officer corps.<sup>3</sup> Most of our examples come from our time at Air Command and Staff College (ACSC) at Maxwell AFB, Alabama, a school that sits a few hundred yards from AWC. Although every school has its own unique culture, most of the points Hughes raises apply to both ACSC and AWC—indeed, to any military college. We state up front that Hughes is onto something, but his conclusions are a bit overdone. This is an attempt to address some of his concerns.<sup>4</sup> It is not an attempt to refute Hughes’s charges point by point but simply to offer a different perspective. We suspect that these observations might resonate with colleagues at other PME schools, anyone interested in Air Force education, and even those in civilian academe.

Most of us who decide to make a career in Air Force education realize that we are not producing academic specialists. Historians in a civilian history department strive to educate and train graduate students to become professional historians and members of the academic guild. A historian who accepts a job at a PME school will teach students who are already credentialed members of a different guild—the profession of arms. These students may not realize it, but they can benefit from exposure to a his-

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\*Dr. Forsyth is a professor of national security studies at the USAF School of Advanced Air and Space Studies (SAASS), Maxwell AFB, Alabama. Dr. Muller is a professor of military history and associate dean at SAASS.

torical or theoretical perspective that can give them insight into their profession and inform their decision making. Both are rewarding undertakings, but they are different. And let's be clear: staff and war colleges are hybrid organizations, following many academic conventions but unmistakably military in orientation. If one accepts these conditioning factors, the challenge of educating air, space, and cyberspace professionals seems less daunting.

## Schools Only as Good as Their Faculty

Like the international environment, PME has undergone a series of dramatic changes during the past two decades. It no longer focuses on teaching just the mechanics of officership, narrowly defined in terms of leadership or staff skills, as well as the fundamentals of airpower doctrine and application. The men and women attending today's service colleges are steeped in history and international relations, together with joint, interagency, and multinational operations. Studies on peacekeeping, human rights, and military intervention have shored up obvious security concerns such as terrorism, failed states, and interstate war. Officer education has made strides in becoming more theoretically and practically sound, but as Hughes makes clear, serious issues and challenges face students and faculty, the most important of which is the quality of faculty.

What makes for a great school? It's the amalgam of teachers and students. As Hughes notes, in PME we are fortunate to have students at the top of their year group. They are professionals with years of accomplishments behind them and bright futures ahead. Most will go on to serve as colonels, and some attain flag rank.<sup>5</sup> Yet their assignments to Maxwell can be a difficult task for them: "Put down your weapons, spool down the jet, and return to school." They have much to learn and sometimes even more to teach, yet we suspect, like Hughes, that

many would prefer to be elsewhere. These warrior-students are exceptional people, but while they are here with us, they are students first and foremost. This distinction is worth emphasizing. Students are here to learn; networking and recharging batteries can be part of the process, but they are not why we have a university. This is important to remember, especially when answering the popular philosophical question "What am I supposed to get out of this?" The answer is, whatever you can. Truth be told, some students will get more from their year here than others. This is the inevitable result of nature or choice, but the central point remains that the integration of knowledge is the students' responsibility. The faculty owes them a sound and coherent curriculum.

Without top-quality faculty, little else matters—technology, infrastructure, and even money pale by comparison. When it comes to educating students, a quality faculty is the alpha and omega—and PME is no different. Along these lines, PME has made some strides. Few people are aware of the fact that in 1990 only two faculty members at ACSC had PhDs. By the 2002–3 academic year, the number of individuals holding advanced degrees (including those who had completed all requirements except the dissertation) had grown to 40, representing 38 percent of the faculty.<sup>6</sup> How did that happen? It resulted from years of work, keeping one thing in mind: faculty first.

This became evident at a staff meeting one day nearly 15 years ago when we were discussing student assignments with our new commandant. Listening carefully as the dean of students outlined the process for managing student assignments, he then asked, "What are we doing for the faculty?" His point was well taken. "AFPC [Air Force Personnel Center] will take care of student assignments. Starting today—I'm in charge of faculty assignments." During his tenure, faculty assignments were his priority, with a colonel working them personally. He knew that word would spread and that volunteers would emerge. He wasn't wrong.

From 1998 to 2003 or so, ACSC had an uncommonly high promotion rate to lieutenant colonel—for three or four years it hovered around 100 percent in the promotion zone.<sup>7</sup> What's more, the commandant had devised several attractive assignment options, one of them designed to entice future AWC attendees to spend two years on the faculty at ACSC before attending AWC. The lesson is simple, the implications enormous: to attract a quality faculty, you need to take care of them. Word spread, and quality became a self-fulfilling prophecy. Incidentally, this episode serves as a tonic to Hughes's contention that commandants without formal academic training cannot possess good educational instincts.

In 2000 the desired minimum requirements for faculty duty consisted of resident PME and a master's degree in an appropriate field of study. Though many nonresident graduates enjoyed highly successful faculty tours at ACSC, all things being equal, having experienced a resident program as a student gives a new faculty member a leg up.<sup>8</sup> Moreover, the school equally sought volunteers. Despite some exceptions, the hiring process tried to hold true to those standards. During the years 2000–2004, we received approximately three or four candidates for every faculty hire we made—nonvolunteer, nonresident graduates were virtually extinct. A good number of the military faculty held PhDs. At the same time, ACSC launched an ambitious faculty hiring process culminating in the appointment of approximately 16 civilian professors.<sup>9</sup>

This is not a story of constant improvement, however. Gains vanished, progress stalled, and wheels underwent reinvention. By 2006 the quality of the faculty had slipped considerably. By comparison, approximately 50 percent of today's faculty are nonresident graduates, and a fair number of them are nonvolunteers. Whereas the school used to count on 30 high-quality faculty hires out of each graduating class, the numbers today are in single digits. Moreover, only 30—less than 25 percent—possess

the PhD.<sup>10</sup> What accounts for this change? Certainly, the wars in Iraq and Afghanistan have played a significant part. However, there are other reasons: a colonel no longer works faculty assignments, the incentive program disappeared for several years before ACSC and AWC reinstated it, maintaining high standards has proven more difficult, and the process has become something other than a self-fulfilling prophecy.<sup>11</sup>

From our perspective, this is not an impossible situation to remedy. At Air University, teaching in the classroom is akin to flying the jet—everything else supports this mission. Manning the instructor force with nonresident/nonvolunteers without the necessary academic credentials, keeping the best for staff positions, is akin to creaming off the best officers in a flying unit to serve in the command post while the cockpits sit empty. A flying outfit would never tolerate that—and neither should Air Force education.

### Core Curriculum Called “Core” for a Reason

The core curriculum of any PME institution generally stems from external and internal guidance. At Air University, external guidance comes from Congress, the Department of Defense, the university, the Joint Staff, major commands, Headquarters Air Force, and the chief of staff himself. Internally, guidance comes primarily from the commandant, the dean, and faculty and student feedback.<sup>12</sup> The point here is that nearly everything happening in the classroom is linked to a requirement. Neither the master's degree nor regional accreditation drives what the schools teach. This is worth mentioning because students, administrators, and even faculty sometimes wrongly associate subject matter with the master's degree—quite simply, if that degree went away, the core curriculum would look much as it does now. It is important to stress, however, that faculty holds this together. The faculty interprets and imple-

ments guidance, has a proprietary interest in the curriculum, and must answer to the various accrediting agencies that visit the university regularly.<sup>13</sup>

Despite popular belief, military organizations exhibit strong biases for change because of the wholesale turnover of commanders and key personnel every few years. Each understandably wants to make his or her mark, but this is a dangerous inclination for curricula. Once in a great while, a massive curriculum revision is warranted (e.g., the ACSC revolution in 1992, led by then-commandant Col John A. Warden III). Educators obviously want to ensure that course materials and readings are up to date and of the highest quality. Yet the basics of a good core interdisciplinary PME curriculum change remarkably little over the years. The core curriculum needs to provide our top officers a structured opportunity for reflection. It should allow them to consider their operational experience in a changing international environment in light of a rigorous examination of history, theory, fact, and analysis—seasoned with a healthy dose of service and joint doctrine/planning. Our schools can do all of that within the confines of the external and internal guidance—perhaps with some finessing, but they can do it.

An educated strategist or commander consists of many things, none more important than a mind that seeks to understand the complexities of humankind—one that recognizes the fragility of civilization and grasps the importance of science and the humanities. Such a mind is conscious of the fact that self-determination and freedom may not be the same thing but nevertheless remain essential elements of social life. This mind is practiced in the art of work well done and strives to build bridges across bodies of knowledge that at first glance appear only loosely related. At the same time, we should also seek, as Clausewitz put it, “to distinguish precisely what at first sight seems fused.”<sup>14</sup>

To put those sentiments into play, in 1999 ACSC reorganized into a book-based

semester system, the fall term focusing on broadening and the spring on depth. It had become apparent that courses could be redesigned and the faculty reassigned along functional lines—with PhDs teaching within their specialty and war fighters theirs.<sup>15</sup> How did this turn out? During the years 1999–2003, Air Education and Training Command rated the dean’s directorate outstanding, the directorate won the Muir S. Fairchild award twice (in 2003 and 2004), the Southern Association of Colleges and Schools accredited the college’s master’s degree and gave its faculty-management process a rare “commendable” rating, and the chairman of the Joint Chiefs of Staff’s Process for Accreditation of Joint Education reaccredited the degree twice. These accomplishments culminated in a visit by the chief of staff of the Air Force, who, after receiving a two-hour briefing on the curriculum, proclaimed, “You’ve got it right”—one reason, perhaps, that he gave the college an additional 24 faculty and a considerable sum of money to institute his revolutionary force-development initiative.<sup>16</sup> Review of the data gives the impression that ACSC was moving in the right direction, but in less than a year it began to unravel. What happened?

Part of the explanation lies in a bias toward change exhibited by senior leaders whose managerial instincts, though excellent in their respective fields, did not translate well into education. Outside agencies have injected themselves more and more into curriculum decisions; “too many cooks in the kitchen” is a common lament from educators contemplating an elegant way to insert mandatory “modules” dealing with everything from sexual assault to customs and courtesies. This situation is not uncommon, and in contrast to what Dr. Hughes implies, it is not strictly a military problem. One cannot pick up the *Chronicle of Higher Education* without reading of a distressing trend in academe: activities such as institutional research, outcomes assessment, and data collection—formerly relegated to their proper place on the periphery

of the enterprise—have lately tended to crowd into the center. The Air Force has an institutional bias toward metrics, quantification, and stratification. In our time, we have seen experienced course directors unable to teach because they are too busy “evaluating” instructors; well-constructed and highly rigorous courses abandoned because they have low student-approval ratings; and the “relevance” of faculty research scored on the basis of factors unrelated to scholarly merit. Additionally, we have seen countless stoplight PowerPoint charts that measure nearly everything but the quality of the faculty. We should certainly strive to create meaningful metrics, but one ought to recognize the number of qualified faculty as the most meaningful thing one can count on.

### Organizing for Success

During our tenure, ACSC organized into 44 seminars, each with a student seminar leader who tended to students’ needs inside and outside the classroom. A faculty organized into departments did the teaching. Like a squadron commander, the center of gravity of the entire operation—the department chair—was responsible for building a teaching team from whole cloth, a team that planned, trained, flew, and evaluated the mission. In many respects, the chair position is the most senior “honest” job in PME. As is the case at the wing, the further one moves away from the squadron, the harder it becomes to see and assess mission impact.

Currently, no formal mechanism exists for raising up department chairs from the ranks—no ladder to ensure we are grooming the right breed. As for deans, each year or two the school searches far and wide for a colonel who holds the requisite PhD and who may or may not have spent any time in the classroom. After being in business this long, isn’t it time to change that model?

A clear fix begins with teaching—and ensuring teaching excellence, the key to the process, is job one. Regarding our uni-

formed faculty, the advanced academic degree program—by means of which a major or lieutenant colonel goes through a three-year PhD program at a civilian university—remains the surest route to raising our own cadre of PME leaders. These newly minted military PhDs then continue a rigorous progression through the academic ranks. Civilian faculty, already credentialed, must pass a similar series of tests. First, they serve as course director—time spent directing a core course is essential to learning the ropes. From there, they move into an assistant department chair seat, and if they pass that test, they become department chair. A few will go on to become deans and even program managers. Such a process offers another benefit: military and civilian faculty who endure the same rites of passage tend to develop a healthy mutual respect. Ask anyone in the halls of ACSC to name the best seminar teachers—we guarantee they’ll list civilian professors, military academics, and war fighters. Their mix of academic preparation, practical experience, and seminar dynamics marks them as masters of their craft. The idea here is straightforward: we wouldn’t trust our children’s education to amateurs, so why not hold PME to the same standard?

### Old Methods Still the Best

Education is notorious for chasing fads. During our tenure, we routinely fought off some colleagues’ impulses to tech-out the classroom, streamline readings, go paperless, and institute “revolutionary” teaching methods. More than a few times, we succumbed to baubles such as “just-in-time faculty development” or “student-driven learning”—and found to our dismay that these labor- and time-saving devices were illusory. We are in complete agreement with Professor Hughes here: high standards must be maintained and defended, however unfashionable they may seem.

Though some of us might balk, Kindle and e-readers may in fact eventually sup-

plant cloth and paper. But make no mistake—in whatever medium they may appear, books have for centuries remained the backbone of advanced education for one very compelling reason: they work. Engaging with an author's argument, weighing the evidence, and connecting the book to other readings and to one's experience—this is the essence of education. The most successful course directors realize that they earn most of their pay by selecting the correct readings. It's no accident that reading well-written books and journal articles makes one a better writer. So we must fight the impulse to assign snippets, summaries, and digests in place of the real thing.

Likewise, classrooms of the future might be our fate but should not be our priority because they will look a lot like the ones from the past. Even the world of distance learning, arguably the most demanding teaching environment, emphasizes replicating the classroom experience, not the other way around. Nevertheless, the desire to create a classroom for the future remains real. Once upon a time, a well-meaning team at ACSC designed such a prototype. It was so cluttered with gadgetry and "smart" accessories that quite some time passed before anyone realized it had no room for the teacher.

In general, the problem with calls for designing "revolutionary methods for learning" and the "classroom of the future" stems from reform movements within public education—"teaching experts" have convinced administrators that critical thinking and levels of learning are more important than content. If there were ever two words we could strike from the English language, they would be *critical thinking*. We watched as the concept moved from obscurity to meaninglessness in the blink of an eye, done in largely by the same "experts" who could not agree on its meaning or importance. *Levels of learning*, another meaningless phrase, has no purpose in education—training, perhaps, but not education.<sup>17</sup> The formula for success in PME is all too familiar: it's content over method, not the other

way around. Many have it backwards, insisting that a jazzier way of learning will produce dramatic effects. In fact, blocking and tackling win games, not trick plays. Those who call for more critical thinking are no more in tune with classroom needs than those who call for more "cowbell" in the making of gold records. Reading, thinking, writing, and speaking—that's what we need more of, and that is hard work.

With respect to hard work, few things require more time and attention than honing the writing skills of our students. After years of reading papers that would shock our old high-school English teachers, we have come to some conclusions. Legions of the Tweet generation struggle to compose a coherent, well-written sentence. Let's forgo talk of the five-paragraph essay, elements of exposition, or even grammar. In fairness, the roots of this problem extend back to grammar school. The fact is that too many students arrive on the steps of PME schools as remarkably poor writers—and for many reasons.<sup>18</sup> The most prevalent one seems to be that they do not read much either. Crippled writers are oftentimes crippled readers, and that impairment takes much time to fix. What's more, they are shocked to discover that their writing skills, in a word, stink. Many of them will claim that they never received a bad grade in their lives. That might be true, but it does nothing to temper the facts: in a typical seminar of 12, a few students write well, a few are truly handicapped, and a bunch in the middle write prose so muddled it is painful to read. Of all the "problems" we have seen in PME, this one is paramount and, surprisingly, misunderstood.

An ACSC commandant once insisted that students write a formal research paper (he seemed to recall writing one himself and thought that if he had to do it, so did they). An important part of intellectual growth, writing research papers instills good habits of mind and patterns of inquiry that stay with students throughout their lives. But to produce one requires considerable time and hands-on attention. Back then, we were still

building up the faculty and felt that we did not have the talent to supervise 600 research papers. That fact did not sway the commandant, who remained adamant, so one day we said to him, “Boss, give us two numbers from one to 44.” “Six and 33,” he replied. We pulled the latest exams from those two seminars and gave them to him to read. The next day he came by. “Are they all like this?” “Yes, sir, they are.” Shocked by the poor quality, he began a writing mentor program immediately. To this day, all of the PME schools struggle to improve students’ writing; it remains a work in progress. Suggestions include requiring entrance examinations, assigning writing projects designed to produce publishable work, and rewarding superior writers with favorable performance reports. In our years at Maxwell’s School of Advanced Air and Space Studies, we have learned the value of multiple writing opportunities, coupled with extensive feedback.<sup>19</sup>

### One Faculty, “All In”

Unity of effort, a critical factor in the success of air operations, should apply to education as well. Hughes’s critique makes a central point that an unbridgeable gulf had opened up between the military and civilian sides, the leaders and the led. Indeed, a PME faculty is spun from two different yet essential fabrics—the active duty force and civilians. At every opportunity—in dean’s calls and department meetings—the phrase “We are ONE faculty!” appeared on a slide or otherwise came into play. To return to our flying-unit analogy, everyone in the building was responsible for generating the sorties—educating students from the stage and in seminar. Not everyone literally appeared in front of the students, but—like the maintainers, munitions folks, life-support personnel, security forces, and so on—everyone knew the mission and played a part in making it happen. Faculty unity is all important. Years before Dr. Hughes’s article appeared, some other friends of ours at

AWC developed a presentation highlighting the incompatibilities between civilian academic and military cultures. The presentation had good points, but we prefer to concentrate on those things that unify rather than divide us. At ACSC nearly every important leadership position (with the exceptions of commandant, vice-commandant, and student squadron commander) was filled by civilian and military faculty at various times—and this practice continues to the present. Not to put too fine a point on it, but we do not recognize the world that Hughes describes—a Balkanized faculty consisting of civilian “academics” and military “operators,” with “ersatz civilian colonel doctors” hovering in between.

Lately, it does seem that academic administrators have grown apart from the teaching faculty, an inevitable occurrence to some extent as spans of control increase and internal and external demands on administrators grow. Yet we must resist this trend. Veteran teachers must accept the fact that serving as administrators will often be part of their careers; similarly, administrators, including the top military leadership, must get their feet wet in seminars. A few times at ACSC, the commandant mandated that everyone in the building would teach at some point. Impractical, some said. Perhaps. But it sent a very good and powerful message.

*Even senior leaders must teach.* It can be done. At a few—not many—PME schools, commandants and deans lecture in their specialty and make the time to teach at least one course in seminar. Senior leaders do not need to be “the best sticks” in the seminars, but their presence there gives them tremendous credibility with the students and the faculty. Just as numbered air force and wing commanders of flying units fly, so should PME administrators, no matter their rank, teach. There is nothing like the common experience of the seminar to blur distinctions among faculty members.

Senior leaders must also take time to educate themselves about the business. Operators would rightly bristle if a newcomer

asked, “Why do you guys waste so much time mission planning?” and an AC-130 squadron commander would be baffled by the question “How come you people fly only at night?” Yet people often ask us, in all seriousness, why faculty members could not teach every day of the year or why they need time to get ready for class. Certainly a senior leader has no business telling the students, “I slept in that seat when I was here,” or the perennial “It’s only a lot of reading if you do it.” Such academic malpractice does a disservice to Air University. ACSC leadership has the sometimes delicate task of reminding speakers that “this is not your father’s PME.”

### Students: The Only Consumers Who Want to Be Cheated

Lastly, all students seem to prefer teachers who cut corners and hand out high grades like they were candy. How else can one explain the universal joy engendered by the snow day? Nothing pleases youngsters more than not going to school, an attitude that carries forward to college students who insist they must wait no longer than 15 minutes for a full professor to show up for class. No professor, no problem! After many years of reading course critiques, we recognize that student comments such as “Great time management!” often mean “She showed a film, gave us an action-packed 20 minutes, and let us go early!” This is not always the case, but it is mostly true most of the time. However alluring, we must not cave in to the temptation.

This dynamic extends beyond students. Sometimes the senior staff wants to cheat them too. One year at ACSC, during the

time to upgrade the leadership program, we happened to have a creative faculty member who had done something like this elsewhere. After we gave him a team of skilled people and the necessary resources, they went to work to build the most comprehensive leadership program ACSC had ever seen. The day came to brief the boss—the lights went down, and they began unpacking a first-rate program complete with new courses, lectures, and writing assignments. When they had finished, they expectantly awaited the commandant’s verdict. The boss looked over and said, “Now boys, let’s not work the students too hard!” One is tempted to end the anecdote here, but, in fact, the department—military and civilians—went ahead and delivered that first-rate program.<sup>20</sup> The commandant supported it, hard work and all.

### Concluding Thoughts

One finds the purpose of PME in the letter “E.” On that point, we and Professor Hughes are in complete agreement. Quality faculty, sound curriculum content, and enlightened leadership set the proper tone and get the most out of the civilians, military personnel, and students. No one can deny the importance of education, and the surest way to educate is getting students to read, think, write, and speak—a lot. The faculty represents the key to ensuring the soundness of this process; there are no shortcuts, no magic by which one can bypass hard work and reach an authentic, educated end. And get to the end we must, for the future rests in the hands of those who pass through our doors. Let us never take that for granted. 🌟

*Maxwell AFB, Alabama*

## Notes

1. Daniel J. Hughes, "Professors in the Colonels' World," in *Military Culture and Education*, ed. Douglas Higbee (Farnham, United Kingdom: Ashgate Publishing, 2010), 149–66.

2. Thomas E. Ricks, "Need Budget Cuts? We Can Probably Start by Shutting the Air War College," *The Best Defense* (blog), 11 April 2011, [http://ricks.foreignpolicy.com/posts/2011/04/11/need\\_budget\\_cuts\\_we\\_probably\\_can\\_start\\_by\\_shutting\\_the\\_air\\_war\\_college](http://ricks.foreignpolicy.com/posts/2011/04/11/need_budget_cuts_we_probably_can_start_by_shutting_the_air_war_college).

3. One of us is a retired colonel with a PhD; the other is a civilian professor who has never served in the military. One or both of us were at ACSC from 1991 to 2008. During that time, we both served (at various times) as course director, department chair, vice-dean, and dean of education and curriculum.

4. Readers ought to know that we agonized over this piece for some time, particularly its tone. We do not intend to sound like a couple of old session players blowing their own horns. If that is what you hear, then we missed the mark. Our intention is modest: we saw some good practices along the way, and "here they are."

5. At the School of Advanced Air and Space Studies (SAASS), where we both teach now, approximately 28 percent of our graduates have attained flag rank.

6. One of us was the third civilian PhD hired at ACSC in 1991. See AU-10, *Air University Catalog, Academic Year 2002–2003* (Maxwell AFB, AL: Air University Press, August 2002), 75–80, [http://www.au.af.mil/au/cf/au\\_catalog\\_2002\\_03/au\\_cat\\_2002-03.pdf](http://www.au.af.mil/au/cf/au_catalog_2002_03/au_cat_2002-03.pdf). The annual editions of the AU catalog provide valuable information on faculty demographics.

7. Both authors vividly recall the announcements of the results of the promotion lists in the ACSC auditorium. The high promotion rate for ACSC faculty was there for all to see and no doubt helped with recruiting for faculty duty out of the current ACSC class.

8. One should note that Colonel Forsyth did not attend resident intermediate developmental education or senior developmental education.

9. A perusal of the faculty lists published in the *Air University Catalog* from 2000 to 2004 reveals the scope of this effort.

10. AU-10, *Air University Catalog, Academic Year 2010–2011* (Maxwell AFB, AL: Air University Press, October 2010), 264–74, <http://aupress.maxwell.af.mil/digital/pdf/book/AU10.pdf>. Discussions with current ACSC faculty members and administrators confirmed this impression.

11. In reference to the colonel working assignments, not long ago ACSC had a dean of students who, among other things, worked manning issues directly for the commandant.

12. For an example, see "Guidelines for Academic Year 2000 Resident Curriculum Development," ACSC/DE, 29 January 1999, copy in the authors' possession.

13. Air University is aided by the Board of Visitors, Southern Association of Colleges and Schools, and the chairman of the Joint Chiefs of Staff's Process for Accreditation of Joint Education.

14. Carl von Clausewitz, *On War*, ed. and trans. Michael Howard and Peter Paret (Princeton, NJ: Princeton University Press, 1984), 141.

15. "ACSC Academic Year 2000 Curriculum Overview," PowerPoint briefing, 12 July 1999, copy in the authors' possession.

16. "ACSC Modular Curriculum VTC," PowerPoint presentation, 18 December 2002, copy in the authors' possession.

17. Our use of the terms *critical thinking* and *levels of learning* is obviously pejorative. If nothing else, liberal education is a process of developing useful habits of mind and patterns of inquiry. Deciphering what those might be is certainly part of learning how to think critically, but we depart from mainstream advocates of "critical thinking" with regard to the means of developing those skills. For instance, in a widely distributed pamphlet titled "How to Study and Learn," the authors make the following claim: "The skills of critical thinking are the keys to learning every subject." Although this observation may have some validity, its importance is truncated by the other 17 ideas listed as essential for becoming a master student. As mentioned above, master students are a product of reading, thinking, writing, and speaking—that amounts to considerable work, something not mentioned in the pamphlet.

18. Some people have argued cogently that the Air Force, as a highly technical and action-oriented service, tends to attract individuals with little interest in written expression.

19. In a typical SAASS year, a student will write at least 10 essays of 10 pages each and a thesis of 60–100 pages, all extensively critiqued by the mentor, adviser, and reader.

20. Commandant PowerPoint presentation, 16 June 1998, copy in the authors' possession.