

Just as predicted, the Air Force is about to run short of pilots.

And Now, the Pilot Shortage

By Bruce D. Callander

IN 1943, US Army Air Forces produced 97,792 rated officers—65,797 pilots, 15,938 navigators, and 16,057 bombardiers. Now the task would take 158 years. The Air Force, if it started today and worked at prevailing rates, would not turn out its 97,792d new flyer until 2154.

The record year for training came, of course, at the height of World War II. Since then, the Air Force never has approached anything like the 1943 pace and is not likely ever to do so again. Even for peacetime,

however, the training rate is worrisome, languishing at a record and perhaps dangerous low, warn some service officials.

The problem became acute in 1994 and 1995. In each of the two years, USAF graduated just more than 600 new rated officers—500 pilots and 118 navigators. This was a big drop; through the 1980s, the Air Force annually produced 1,500 to 2,000 pilots and 500 to 1,000 navigators. This year, the Air Force will pick up the pace only marginally.

The decline began during the ten-year, post-Cold War drawdown of the force. As total strength dropped by about one-third, USAF jealously guarded its rated inventory, but with units closing and aircraft numbers declining, there were fewer cockpit slots for those already in flying status and none for those in the training pipeline.

The Air Force's solution was to cut back on rated production. Hun-

A Changing Pilot Mix

Numbers of Rated Officers, 1986-95

| Grade | 1986 | 1995 | Percent Change |
|--------------------|---------------|---------------|----------------|
| 2d Lieutenant | 1,183 | 80 | -93.2 |
| 1st Lieutenant | 3,583 | 997 | -72.2 |
| Captain | 9,184 | 8,949 | -2.6 |
| Major | 5,990 | 2,717 | -54.6 |
| Lieutenant Colonel | 4,208 | 2,597 | -38.3 |
| Total | 24,148 | 15,340 | -36.5 |

dreds of flight school applicants had to wait for training slots. More than 1,000 pilots who already had graduated were "banked" in nonflying jobs. Even some seasoned pilots were sent to staff positions until the rated force thinned out.

Now, with the drawdown tapering off, the Air Force has started to turn things around. It will take a long time to return to something close to normal production rates. This year, USAF will graduate 525 new pilots and gradually increase the annual rate to more than 1,000 by the turn of the century. It will produce 188 new navigators in 1996 and 300 per year in most of the ensuing years.

Pilot requirements are designed to support the Pentagon's wartime mission requirements, currently geared to fighting two nearly simultaneous major regional conflicts, as well as supporting contingency operations when not actually engaged in war. Officials say they foresee no change in this approach in the near future or any major easing of the budget constraints that help to keep training rates modest.

Coming Shortages

The Air Force will continue to be slightly overstrength in both categories for a while longer. However, as older flyers retire, USAF will increasingly have to contend with rated shortages, particularly among pilots.

The shortfall will be especially acute in some year groups because of the earlier cutbacks in training. As a result, the Air Force will have to use experienced field-grade pilots in cockpit slots calling for less rank and experience. Then, as they retire, it will have to replace them with new company-grade pilots having far less experience—in many cases moving

them into jobs for which they normally would not qualify for some years.

The trade-offs are certainly less than ideal. Even if it makes them, however, the Air Force still will face overall pilot shortages in 1998 and, at projected training rates, will continue to suffer from them into the next century. At that point, pilot retention could become critical.

A few years ago, Lt. Gen. Billy J. Boles, then deputy chief of staff for Personnel, predicted difficulties. He said that if the Air Force continued to graduate only 500 pilots a year for too long, it could retain 100 percent of them and still not meet its future requirements. It now appears that, even though training rates are beginning to rise, the prediction was correct.

At the moment, rated retention is not a major problem, said Maj. Lou Olinto, formerly of the deputy chief of staff for Personnel's Rated Force Policy Division.

"I think we are doing well," said Major Olinto, "but a lot will depend on the economy, and that's hard to predict. And airline recruiting probably is going to pick up."

Competition from the airlines has long been a worry for the military. The concern has lessened in recent years because most airlines have been hiring only modest numbers and some have gone out of business.

However, the airlines periodically lose experienced captains and look to service pilots to replace them. That could be a problem again, Major Olinto concedes, but he thinks the Air Force is in better shape to compete than in past years.

Shifts in the Navigator Force

Numbers of Rated Officers, 1986-95

| Grade | 1986 | 1995 | Percent Change |
|--------------------|---------------|--------------|----------------|
| 2d Lieutenant | 741 | 10 | -98.7 |
| 1st Lieutenant | 1,588 | 129 | -91.9 |
| Captain | 4,029 | 2,605 | -35.3 |
| Major | 2,968 | 1,774 | -40.2 |
| Lieutenant Colonel | 1,139 | 1,335 | +17.2 |
| Total | 10,465 | 5,853 | -44.1 |

"The difference this time," he said, "is that over the last few years, we have been restructuring and improving policies so that when airline hiring does come, we won't see retention rates drop as much as they did in the mid- to late 1980s. Right now, retention is at the highest point it has ever been in the Air Force."

Major Olinto gives significant credit to one relatively recent incentive, Aviator Continuation Pay. That bonus plan pays flyers up to \$12,000 per year for every year they agree to remain beyond eight years of active commissioned service (to a total of fourteen years). They can earn up to \$72,000 over and above their normal flight pay, which now can reach \$650 per month for officers with six or more years of aviation service.

Thinking Twice

Even with flight pay and bonuses, Air Force pilots may not make as much as senior airline captains do. However, such incentives should be enough to make them think twice about jumping quickly into entry-level jobs with the commercial carriers, particularly when they have begun to build up USAF retirement equity.

Still, said Major Olinto, the service would like to increase training rates a bit more to be on the safe side. The problem stems more from tight military budgets than from a lack of candidates. There are more pilot applicants from students in the major commissioning sources—the Air Force Reserve Officers Training Corps, Air Force Academy, and Officer Training School—than USAF can accept into training.

Nor does the Air Force suffer from a shortage of navigator candidates, but here the situation is somewhat different. The Air Force long has trained fewer navigators than pilots, and now the difference is becoming greater. This is because changes in USAF equipment have sparked a decline in navigator requirements, said Maj. Greg Hayman, who works

Enlisted Crew Numbers Stable

The Air Force expects little near-term change in the number of enlisted airmen serving in aircrew positions.

At present, about 6,850 enlisted troops serve in what the Air Force deems flying positions, including flight engineers, boom operators, loadmasters, and E-3 Airborne Warning and Control System command-and-control specialists.

Equipment changes have had little effect on these totals, USAF officials said. When 345 enlisted tailgunners were removed from the B-52, for example, the airmen were shifted to other crew positions. Now, some units are receiving large aircraft, such as the E-8 Joint Surveillance and Target Attack Radar System aircraft, that require large numbers of enlisted crew members.

Enlisted members also are moving into some flying slots previously filled only by officers. The air weapons director specialty recently was opened to airmen, and officials say that some battalion air liaison officer positions may be opened in future. Airmen also have been allowed to apply for astronaut training. More than 250 have done so, and six have been reviewed for consideration, but so far none has been accepted.

An additional 1,200 crew members—both officer and enlisted—continue to fly in “command-unique” positions, such as nurses, medical technicians, and linguists.

Percentages in the Pilot Force . . .

Rated Officers, 1986–95

| Grade | 1986 Share | 1995 Share | Change |
|--------------------|------------|------------|--------|
| 2d Lieutenant | 5 | 0.5 | -4.5 |
| 1st Lieutenant | 15 | 6.5 | -8.5 |
| Captain | 38 | 58.3 | +20.3 |
| Major | 25 | 17.7 | -7.3 |
| Lieutenant Colonel | 17 | 16.9 | -0.1 |
| Other | 0 | 0.1 | +0.1 |

in the Rated Management Section of the Operations Directorate.

For pilots, such changes are expected to have little impact. “The C-17 replaces the C-141,” Major Hayman said. “That’s an airlifter for an airlifter. As far as we know, our force structure will remain based on twenty fighter wing equivalents to fight two wars, so it is going to take X number of fighters whether they are one type or another. The F-22 is coming on and they may retire something else, but it’s still one pilot going into one cockpit in terms of fighters.”

For navigators, though, it is another story.

“Modifications will take all of the nav requirements out of the KC-135 aircraft,” Major Hayman reported. “Also, the C-141s have navs, and the new C-17s do not, so we’re looking at the force structure out a ways, and

it’s pretty clear that the requirements are going to dwindle.”

Fewer Navigators

Major Hayman, himself a navigator, added, “We’re down to about 5,000 now, and we continue to draw down. The problem we face in production is that you can absorb just so many navs each year. We’re poking up to about 300 per year for 1997 and beyond, and that will support a force of about 4,200 total. The force requirements will continue to come down. The combat crew members will stay pretty steady, but you’ll see a lot fewer navigators in the staffs.”

USAF’s projections for coming years bear out that prediction. They show the pilot inventory lagging requirements but the stock of navigators exceeding requirements until about 2001.

In both rated categories, however, the problem again is less one of numbers than of experience levels.

“We’ve had all these charts showing that we should be bringing in all these people to support the rated force,” claimed Major Hayman, “and we’ve been way below it the past several years. That’s because the only flexibility we had was to shut off the training pipeline.

“It’s going to result in our having some year groups . . . without nearly the number of people you normally would bring in year after year. Over a twenty-year career, you would have enough folks in every year group, but we now have some older year groups that are large, so we’re going to have to use them to fill in where normally you would have captains.”

Another effect of returning rated officers to the cockpit will be that fewer will be available for staff assignments.

“During the drawdown,” said Major Hayman, “we had to have places to put a lot of flyers for whom there weren’t any cockpit slots, so we had a lot of them go to nonrated jobs just to spread the rated expertise around. Now, units are finding how painful it is not to have such people. We’re only producing to support the rated requirements and bringing all these rated folks back into flying jobs, and those nonrated positions are going begging.”

Even as it struggled to juggle its

rated resources and requirements, the Air Force has made drastic changes in the way it produces flyers. Traditionally, pilots and navigators were trained broadly and the Air Force considered any flyer at least potentially qualified to fly in any type of aircraft.

That tradition began to change in the 1980s when USAF adopted specialized undergraduate navigator training (SUNT). In the years since, it has moved into a similar program for pilots. In both programs, Air Force students do some training jointly with the other services.

Under specialized undergraduate pilot training (SUPT), all students receive flight screening in the T-3A Firefly and then primary training in either the T-37B Tweet or the Navy equivalent, the T-34 Mentor. After that, however, they are divided into different tracks to train for bombers and fighters or airlifters and tankers.

The SUPT program still is being phased in. The program for navigators has been in business for some time but shifted from Mather AFB, Calif., to other locations. Under SUNT, all students begin training in Navy T-34s at NAS Pensacola, Fla. Then, those picked to become panel navigators in airlifters—about fifty-five percent of the total—receive advanced training in T-43s at Randolph AFB, Tex. The rest stay at Pensacola for training as weapon

bombers and the rest to fighters. Another thirty-two percent take the EWO track, most going to bombers or fighters and the rest to heavy aircraft.

Tracked for Life

Once specialized on types of aircraft, pilots and navigators are likely to remain with those types through-

philosophy, few flyers actually shifted among aircraft types anyway and the change would have little impact.

Major Olinto said that it still would be theoretically possible to cross-train flyers to fly in different aircraft, but as a practical matter USAF foresees little need to do so.

“If there ever is a cross-flow program,” said Major Olinto, “it will

Pilots: The Fifteen-Year Record

Actual Results, 1981–95

| Year | Requirement | Inventory | Net +/- | New Pilots |
|------|-------------|-----------|---------|------------|
| 1981 | 23,219 | 22,297 | -922 | 1,693 |
| 1982 | 23,819 | 22,814 | -1,005 | 1,875 |
| 1983 | 23,719 | 23,458 | -261 | 1,783 |
| 1984 | 23,645 | 23,901 | +256 | 1,937 |
| 1985 | 23,978 | 24,198 | +220 | 1,872 |
| 1986 | 24,137 | 24,210 | +73 | 1,700 |
| 1987 | 23,499 | 23,663 | +164 | 1,453 |
| 1988 | 22,699 | 22,819 | +120 | 1,510 |
| 1989 | 22,537 | 21,750 | -787 | 1,581 |
| 1990 | 21,474 | 20,917 | -557 | 1,581 |
| 1991 | 19,672 | 19,222 | -450 | 1,460 |
| 1992 | 17,157 | 17,887 | +730 | 870 |
| 1993 | 15,939 | 16,723 | +784 | 746 |
| 1994 | 15,209 | 15,963 | +754 | 500 |
| 1995 | 14,792 | 15,453 | +661 | 500 |

... and in the Navigator Force

Rated Officers, 1986–95

| Grade | 1986 Share | 1995 Share | Change |
|--------------------|------------|------------|--------|
| 2d Lieutenant | 7 | 0.2 | -6.8 |
| 1st Lieutenant | 15 | 2.2 | -2.8 |
| Captain | 38 | 44.5 | +6.5 |
| Major | 28 | 30.3 | +2.3 |
| Lieutenant Colonel | 11 | 22.8 | +11.8 |
| Other | 1 | 0 | -1 |

system officers; WSOs picked to become electronic warfare officers (EWOs) receive added training at Corry Naval Technical Training Station, Fla.

About thirteen percent of the navigator students follow the WSO track, with some three-quarters going to

out their careers. When the new track system was proposed, some officials feared it would reduce the Air Force's ability to shift flyers between fighters and bombers if requirements demanded. Those who supported specialization insisted that, despite USAF's "universal assignability"

never be in large numbers. Even when we had an exchange program between the old [Strategic Air Command and Tactical Air Command], the numbers were small.”

The Air Force is considering some cross-flow at the moment, the Major said, but only for a specific group of pilots. Those affected would be officers who graduated as fighter pilots during the drawdown and were sent to other types of aircraft. The proposal, still to be approved, would give such officers another crack at fighter aircraft.

Overall, officials said, the feedback from gaining commands on the specialized training approach is positive.

Now being considered are changes designed to beef up other tracks. For example, the officials said, when the planned T-38 Talon avionics modifi-

cation is completed, the Air Force may be able to integrate the current graduate-level Introduction to Fighter Fundamentals course into the bomber/fighter track. Then, fighter

female rated officers dropped during the drawdown, for example, but in a smaller force the proportion of female flyers actually has risen. Last year, the Air Force had ninety-nine

steadily in recent years. This year, the Air Force said, about thirty-one percent of total pilot requirements are being filled by members of the Air National Guard and the Air Force Reserve. Totals are split about evenly between the two components, and officials say they do not expect this mix to change appreciably in coming years.

Concern still focuses on what officials term the "bathtub" effect, the dip in the rated officer inventory caused by the training cuts taken during the drawdown.

Major Hayman summed up the difficulty this way: "People always see training as the point where you can be flexible, and when you do that you pay the price years down the road when you don't have the correct types when you need them."

The Coming Drought

Projected Shortages of Pilots

| Year | Requirement | Inventory | Net +/- | New Pilots |
|------|-------------|-----------|---------|------------|
| 1996 | 14,558 | 15,024 | +466 | 525 |
| 1997 | 14,211 | 14,464 | +253 | 650 |
| 1998 | 13,859 | 13,733 | -126 | 850 |
| 1999 | 13,714 | 13,219 | -495 | 950 |
| 2000 | 13,683 | 12,961 | -722 | 1,025 |
| 2001 | 13,737 | 12,932 | -805 | 1,050 |

maneuvers and procedures could be introduced earlier and give students more experience and confidence when they graduate and make the transition to their follow-on weapon systems.

This presumably would be a refinement of an earlier approach the Air Force adopted during the drawdown. To relieve using commands of the need to do so much combat training, Air Education and Training Command took charge of the Follow-On Training Units. The idea was to ensure that graduates were mission-ready when they reported to their operational units.

So far, USAF officials said, the feedback from the gaining commands has been favorable, but AETC has found it expensive to provide the training and the combat aircraft required to support the new mission. Being able to offer similar training in appropriately equipped trainers should help.

Empty Bank

Some problems caused by the drawdown already have been corrected. Of the 1,094 officers "banked" in nonrated jobs, all but ninety-nine were returned to the cockpit. Most of those ninety-nine have separated from service. Another 1,065 officers, most of them ROTC graduates, were delayed an average of three years in starting flight school. Of these, all but 265 have entered training.

Other changes in the rated force are also under way. The number of

female navigators and 315 female pilots. Women now make up about two percent of the pilot inventory and a slightly smaller percentage of the navigator force.

The percentages of reservists in the rated force also have grown

The biggest pain will be with the field-graders who have to come back and fill line cockpits. But it will work out. As production increases, there will be a few tough years, but we will get back up to where we want to be. ■

Pilot Commissioning Sources

| Organization | 1986 | 1995 | Percent Change |
|-------------------------|---------------|---------------|----------------|
| Air Force ROTC | 10,370 | 6,807 | -34.4 |
| Officer Training School | 7,023 | 2,362 | -66.4 |
| Air Force Academy | 6,509 | 6,121 | -6.0 |
| Other | 246 | 73 | -70.3 |
| Total | 24,148 | 15,363 | -36.4 |

Navigator Commissioning Sources

| Organization | 1986 | 1995 | Percent Change |
|-------------------------|---------------|--------------|----------------|
| Air Force ROTC | 4,549 | 2,950 | -35.2 |
| Officer Training School | 4,743 | 2,076 | -56.2 |
| Air Force Academy | 977 | 774 | -20.8 |
| Other | 196 | 26 | -86.7 |
| Total | 10,465 | 5,826 | -44.3 |

Bruce D. Callander, a regular contributor to Air Force Magazine, served tours of active duty during World War II and the Korean War. In 1952, he joined Air Force Times, becoming editor in 1972. His most recent article, "The Transition After the Transition," appeared in the February 1996 issue.