

CHAPTER I

READINESS AND THE HOLLOW FORCE

As the U.S. military continues to face cuts in funding and personnel, some policymakers are raising concerns about its future readiness. A review of the concept of military readiness, and of the problems with readiness that the Defense Department encountered during the 1970s (the so-called hollow force), may help to explain why so much of the current defense debate is focused on this issue.

DEFINING READINESS

Readiness, as defined by the Joint Chiefs of Staff (JCS), is the ability of forces to deploy quickly and perform initially in wartime as they were designed to.¹ The readiness of a military unit depends heavily on its personnel, training, and equipment. A ready unit possesses the equipment and supplies needed for initial deployment as well as sufficient numbers of experienced people with the right skills. Through realistic and comprehensive unit training, these people have been forged into a cohesive unit that can perform its wartime tasks even under extreme conditions.

Readiness contributes to military capability--that is, to the ability to achieve specified wartime objectives. Yet, according to the JCS definition, readiness is only one of four pillars on which military capability rests. The others are force structure (the number, size, and composition of military units); modernization (the technical sophistication of the forces, weapon systems, and equipment); and sustainability (the "staying power" of the forces, often measured in number of days). Readiness is therefore not the same as military capability. A force consisting of 10 ships might have high readiness, provided that each ship was fully manned with a well-trained crew and provided with equipment in good condition, but a force that small would have little capability to achieve wartime objectives.

Even though readiness is only one element of military capability, it is the subject of much of the current debate about plans by the Department of Defense (DoD) to reduce force structure and defense spending. In 1993, the Secretary of Defense established the Defense Science Board Readiness Task Force, a panel of eight retired flag officers whose task is to provide the

1. Joint Chiefs of Staff, *The Dictionary of Military and Associated Terms*, JCS Publication 1 (January 1986).

Secretary with independent, expert advice on readiness issues. More recently, DoD formed an internal group, the Senior Readiness Council, whose members include the Chiefs of Staff of the military services.

Readiness is also of considerable interest to the Congress. Last year, for example, Senator John McCain asked each of the service chiefs to respond to an extensive series of questions about readiness issues. In addition, the 1994 defense authorization bill asks the Joint Chiefs of Staff to provide the Congress with an annual assessment (in 1994, 1995, and 1996) of the readiness and capability of the armed forces.

Why does so much of the defense debate focus on readiness? One answer is that DoD must carefully balance readiness, force structure, modernization, and sustainability in order to achieve the maximum level of military capability within a limited defense budget. A large force structure with sophisticated weapon systems is of little value unless the systems are in working order and operated by trained personnel. Moreover, the appropriate balance has not always been achieved. During the late 1970s, for example, DoD may have underemphasized readiness and sustainability while over-emphasizing force structure and modernization.

THE HOLLOW FORCE OF THE 1970s

In 1980, General Edward C. Meyer, then Army Chief of Staff, used the term hollow army in Congressional testimony to describe the imbalance that existed at that time between the number of Army divisions and the number of combat personnel available to fill those divisions.² Soon after his testimony, the term hollow force was being widely used to characterize not only the shortages of experienced personnel but also the shortages of training, weapons, and equipment that undermined military readiness during the mid- and late 1970s. Today, much of what is known about the hollow force of that period is based on anecdotal evidence. Press reports written in 1980, after the military's failed effort to rescue U.S. citizens held hostage in Iran, sometimes sensationalized the impact of readiness problems on U.S. military capabilities. Nonetheless, there is persuasive evidence that many units were not well prepared to fight.

In 1980, according to reports published at the time, less than 40 percent of all divisions, air squadrons, and ships were rated by their own

2. Testimony of General Edward C. Meyer before the Subcommittee on Investigations, House Committee on Armed Services, May 29, 1980, p. 18.

commanders as fully or substantially combat ready.³ (The remainder were rated as marginally combat ready or not combat ready.) The problem was even more severe in some of the reserve components: in 1977, 43 percent of Army National Guard and 54 percent of Army Reserve units were rated as not combat ready.⁴

Personnel problems played a major role. DoD instituted the All-Volunteer Force in 1973 on the premise that military pay would be competitive with pay in the private sector. Yet by the late 1970s, military compensation was not adequate to attract and retain high-quality personnel. As the quality of new recruits declined, discipline, morale, and training suffered. In addition, low retention rates among noncommissioned officers (NCOs) led to shortages of experienced personnel, particularly among NCOs with technical skills that could be used in the private sector. The Navy suffered from a reported shortage of 20,000 petty officers. The impact of such shortages on readiness was publicly, and perhaps intentionally, highlighted in 1980 when the commander of the U.S.S. Canisteo, a Navy supply ship, reported that he was unable to deploy because of a lack of experienced personnel in the engine room.⁵

These personnel problems were aggravated by shortages of fuel, spare parts, and ammunition that restricted training opportunities. Without sufficient skilled maintenance personnel and spare parts, the ability of even the most modern ships and aircraft to perform their missions was reduced. In 1980, the Air Force's First Tactical Fighter Wing, with 66 F-15 fighters, failed a mobilization test; because of a shortage of parts, only 23 of the aircraft were capable of performing their mission.⁶

How did these problems develop? Between 1969 and 1975, public disillusionment with the nation's role in Vietnam encouraged rapid reductions in defense spending. Expenditures on national defense, adjusted for inflation, fell by 31 percent. Limited budgets, together with rising oil prices and increased personnel costs resulting from the elimination of the draft, meant that the acquisition of modern weapons by the military, which had been

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3. Heritage Foundation, "Shortchanging Military Readiness," Backgrounder No. 267 (Washington, D.C., May 17, 1983), p. 1.
 4. Richard K. Betts, "Conventional Forces: What Price Readiness?" *Survival* (January/February 1983), p. 30.
 5. Bernard Weinraub, "Nation's Military Anxiety Grows as Russians Gain," *The New York Times*, September 21, 1980, p. A-1.
 6. Bernard Weinraub, "Losses of Skilled Air Force People Prompt Concern Over Its Readiness," *The New York Times*, September 23, 1980, p. A-1.

delayed by the Vietnam War, was delayed still further. Thus, when the defense budget did start to rise slowly between 1976 and 1981, DoD emphasized the procurement of new weapon systems. According to General John Chain, Director of Air Force Operations and Readiness in 1980, "Our aircraft at the end of the Vietnam War were tired and were facing a new generation of Soviet equipment. We had a choice: We could have either bought a new airplane or we could have bought spare parts for our old ones. We couldn't buy both."⁷

In the eyes of some critics, the decision to emphasize modernization over readiness was an error in judgment that left existing units unable to operate. Yet the underlying problem, as General Chain's comment suggests, may have been an imbalance between defense resources and national security commitments that made it impossible for DoD to buy both readiness and modernization.

The readiness problems of the late 1970s, however, might not reappear in the current drawdown, for a number of reasons. Because of substantial funding during the 1980s, DoD does not face the same backlog of modernization requirements that it faced in the mid-1970s. With the collapse of the Soviet threat, reduced commitments may balance with reduced resources. Public attitudes have also changed: the desirability of having forces that are ready to fight may be more apparent today, in the wake of Operation Desert Shield/Desert Storm, than it was in the aftermath of the Vietnam War. The All-Volunteer Force is well established, and DoD has extensive experience with the types of recruiting incentives and retention bonuses needed to provide experienced, high-quality personnel for the armed forces. Finally, since 1982, the Congress has required that funding for operation and maintenance be authorized in addition to being appropriated. The subcommittees responsible for reviewing those authorizations provide a forum in which readiness concerns are highlighted rather than neglected.

The Department of Defense may also have learned a lesson from the 1970s. The newly created Defense Science Board Readiness Task Force and the Senior Readiness Council are both public symbols of DoD's commitment to avoiding a hollow force in the 1990s. Former Defense Secretary Les Aspin tried to make readiness the department's highest priority, and William Perry, the current Secretary, has continued that effort.⁸ To the extent that the

7. Cited by Lt. Gen. Hans H. Driessnack, "The Key to Readiness: O&M," *Air Force Magazine* (October 1980), p. 57.

8. Office of the Assistant Secretary of Defense (Public Affairs), news briefing by Secretary of Defense Les Aspin, May 19, 1993.

department's plans reflect this priority, it is possible that any imbalance between defense resources and commitments during the current drawdown will take the form of a force structure that is too small, not sufficiently modern, or not sustainable, rather than one that is not ready. Some critics who warn that the readiness problems of the 1970s could reappear are, on closer examination, actually concerned that needed modernization is not being undertaken or that the planned force structure is too small to satisfy peacetime commitments and still be prepared to deal with two major regional contingencies simultaneously.

Nonetheless, the experience of the 1970s provides a strong rationale for carefully reviewing trends in readiness. Although some factors that contributed to the readiness problems of that period have been resolved, new factors--increased costs for environmental cleanup and compliance, rising costs for health care and family support, and the cost of maintaining aging DoD facilities--are now competing for funding that might otherwise be available to purchase the fuel, spare parts, and depot maintenance that more directly support unit training and readiness.

CHAPTER II

INDICATORS OF UNIT READINESS AND THEIR TRENDS

Senior military leaders evaluate current readiness based on a combination of commanders' judgments, quantitative measures of the resources that units possess, analytic models that attempt to relate those unit resources to performance, and assessments of how units actually perform in exercises or operational tests. Efforts to track trends in readiness consistently over a number of years, however, rely primarily on measures of units' resources. Although the Department of Defense uses a variety of resource measures to indicate changes in the readiness of units, this paper focuses on two of the most widely used and longest established: overall C-ratings, as reported in the Joint Chiefs of Staff Status of Resources and Training System (SORTS), and mission-capable rates for weapon systems.

THE STATUS OF RESOURCES AND TRAINING SYSTEM

SORTS, the most comprehensive indicator of unit readiness, is maintained by each service in accordance with broad JCS guidance.¹ Under this system, each commander rates his or her unit's resource status overall and in four areas: personnel, training, quantity of equipment and supplies, and equipment condition. Ratings in each resource area range from C-1 (the unit has the resources that would be prescribed for it in wartime) to C-4 (the unit needs additional resources or training before it can undertake its wartime mission). For example, a unit possessing at least 90 percent of the combat-essential equipment and supplies that are prescribed for it in wartime might be rated C-1 in terms of the quantity of equipment and supplies, while a unit with less than 90 percent but more than 80 percent of its wartime requirement would be rated C-2 in that resource area. Units that are not ready as the result of planned actions--ships being overhauled, new units in the process of being formed, and units being removed from the force--are categorized as C-5.

Although higher-echelon units also report, the Navy provides reports for individual ships and squadrons and major combat service support units; the Air Force provides reports for squadrons and deployable detachments;

1. See Joint Chiefs of Staff, "Joint Reporting Structure Status of Resources and Training System (SORTS)," JCS Publication 1-03.3 (August 10, 1993).

and the Army provides individual reports for units of company size or larger.² Both active and reserve units are required to report under SORTS, although support activities that would not deploy in wartime—such as maintenance depots and management headquarters—are not covered.

The extent to which a unit commander's judgment can influence C-ratings varies by service and by resource area. For example, ratings in the personnel area tend to be relatively objective, since the number, grade, and individual skill qualifications of the people assigned to a unit can be compared directly with the unit's wartime requirements. Ratings in the training area, however, which can depend on how many additional days of training the commander thinks the unit would need before meeting service standards, tend to be much more subjective.

Although practices differ among the services, the overall C-rating for a unit generally reflects the unit's lowest resource rating. Thus, a unit that is C-3 in personnel would be rated C-3 overall even if it was C-2 in each of the other resource areas. Some upward or downward adjustment in the overall rating, however, is possible based solely on the commander's judgment. Although each service has made an effort to spell out objective criteria for different ratings, overall readiness depends on many factors, at least some of which are intangible.

MEASURES OF THE OPERATIONAL AVAILABILITY OF WEAPON SYSTEMS

DoD also uses measures of the operating condition of equipment held in combat and combat-support units to track trends in readiness over time. Although these measures refer specifically to equipment condition, they provide an indication of overall readiness. Ships and aircraft that cannot perform their mission because of equipment failures are not ready, regardless of the quality of their personnel or training. Moreover, good equipment condition depends on personnel and supplies: it requires adequate depot maintenance, a sufficient number of trained maintenance personnel in the unit, and a supply system that can provide the spare parts needed to keep the system operating.

2. See S. Craig Moore and others, "Measuring Military Readiness and Sustainability" (RAND, Santa Monica, California, 1991), p. 11. The size of these reporting units varies. A tactical Air Force squadron would have from 18 to 24 aircraft, and a mechanized infantry company in the Army might have 150 personnel.

Mission-capable rates are one frequently used measure of equipment condition. They measure the percentage of time, on average, that equipment held by units is capable of performing its wartime tasks. The Air Force, Navy, and Army each calculate mission-capable rates for aircraft, and the Army and Marine Corps also calculate rates for ground equipment. Ground equipment is usually categorized as either fully mission capable or not mission capable, but aircraft can be categorized as fully mission capable, mission capable, or non-mission capable. Although definitions vary somewhat by service, an aircraft is generally considered fully mission capable if all mission-essential subsystems are operating as intended, and mission capable if it is safely usable and can perform at least one (and possibly more, but not necessarily all) of its assigned missions. Unlike the C-ratings for equipment condition, mission-capable rates measure the momentary condition of the equipment (regardless of whether it could be made ready before deployment) and are not affected by shortages or surpluses of equipment relative to required levels.³

The Navy does not report mission-capable rates for its ships, but it does maintain information on the operational availability of each piece of equipment aboard Navy ships through its equipment casualty reporting (CASREP) system. Commanders are required to report equipment malfunctions that cannot be corrected within 48 hours and that reduce the ship's ability to perform its mission. CASREPs are rated on a scale of two to four, similar to the scale used for C-ratings. The percentage of time that a ship is free of equipment problems that critically degrade its ability to perform its mission (that is, it does not have a C-3 or C-4 CASREP) is akin, in some respects, to a mission-capable rate.

THE USES AND LIMITATIONS OF C-RATINGS AND MISSION-CAPABLE RATES

Within each service, commanders directly responsible for military readiness and operations use C-ratings, mission-capable rates, and CASREP data at a very detailed level. For example, the C-ratings for an individual unit or for units of a specific type might signal a potential readiness problem. Even more detailed information from outside the C-ratings system might then be brought to bear to verify that a readiness problem exists, to determine its cause, and to identify a possible solution. Similarly, mission-capable rates for each

3. In the past, mission-capable rates for ground equipment in the Marine Corps and C-ratings for equipment condition in each service have reflected shortages and surpluses of equipment relative to wartime authorizations. Beginning in 1994, however, both mission-capable rates for Marine Corps equipment and C-ratings for equipment condition in each service will be calculated relative to actual equipment inventories rather than wartime authorizations.

specific type of aircraft and detailed CASREP data for each type of shipboard equipment are used by military commanders to help identify equipment readiness problems and, if necessary, to gain the assistance or resources needed to solve them.

Highly aggregated data on C-ratings, mission-capable rates, and CASREPs are used primarily in efforts by DoD and outside analysts to summarize the overall readiness level within the active or reserve components of a service or to describe trends in readiness over time. In addition, the services are developing models that attempt to predict future values of these indicators based on changes in inputs (such as funding for operations, depot maintenance, and spare parts). Both the Navy and Air Force project mission-capable rates for aircraft, the Navy projects future values for time free of C-3 and C-4 CASREPs, and the Army projects overall C-ratings.

Experience, however, suggests that mission-capable rates and C-ratings are at best general indicators of readiness levels and should be interpreted with caution. During the early 1980s, DoD analysts found that these indicators did not improve as much as senior commanders' subjective judgments about readiness or increases in defense spending might have warranted. Part of the explanation may be the time it takes for increases in funding for training, purchases of spare parts, and depot maintenance to translate into higher levels of readiness. Another factor cited by DoD was the introduction of more modern, capable weapon systems during the 1980s that led to declines in mission-capable rates and C-ratings until crews were fully trained on the new systems and the necessary support base was established. These lower readiness levels did not reflect a lack of funding.

Intangible factors--changes in reporting philosophies for C-ratings and in the emphasis given to having equipment mission capable at all times--can also distort trends in these indicators over time and mask underlying changes in readiness. For example, some Navy officials attribute a sharp downturn in both mission-capable rates and C-ratings in the early 1980s to a policy change that encouraged commanders to report, rather than downplay, their readiness problems. Similarly, some of the increase in mission-capable rates for Air Force bombers in the mid-1980s results not from a fundamental change in readiness but from a change in philosophy that placed a higher premium on keeping all aircraft mission capable--even aircraft that the unit might otherwise have an opportunity to repair before deployment.

The failure of these key readiness indicators to register the gains that many people expected to see during the early 1980s led to a demand within

the Congress and DoD for better measures of readiness.⁴ The Joint Chiefs of Staff responded in 1986 by changing the terminology used to describe C-ratings in a way that emphasized their dependence on resource levels and de-emphasized their potential as an indicator of military readiness. Units that were C-1, C-2, C-3, and C-4 were no longer to be designated, respectively, as fully combat ready, substantially combat ready, marginally combat ready, and not combat ready. Instead, C-ratings would be interpreted only as a measure of the extent to which the unit's resources matched those prescribed for wartime. There was little change, however, in the actual procedures and criteria used to report C-ratings.

Clearly, mission-capable rates and C-ratings suffer from serious limitations. Yet they remain among the few indicators that are available to assess overall readiness levels and trends. What do these indicators--to the extent that they are available in an unclassified form--say about the current readiness of U.S. forces?

HISTORICAL TRENDS IN C-RATINGS AND MISSION-CAPABLE RATES

Taken as a whole, the available unclassified data on mission-capable rates and aggregate C-ratings suggest that military readiness is now high. Some of the indicators examined in this paper are at record-high levels. This finding is consistent with then Secretary of Defense Les Aspin's assessment in 1993 that "right now, we've got the best, most ready force in the world."⁵ Based on this evidence, it is misleading to describe U.S. forces as on the brink of a hollow force or on the razor's edge of readiness. Nonetheless, some mission-capable rates and C-ratings have fallen below the peak levels seen in the late 1980s, and in a few cases the declines appear to be significant. At least in these areas, now might be an appropriate time to ask, how much readiness is enough?

Trends in Overall C-Ratings

One useful way to summarize data on C-ratings is to consider the percentage of units reporting an overall resource status of C-1 or C-2. Before the change

4. Congressional concern was reflected in a 1987 requirement for DoD to report on progress in measuring readiness.

5. Office of the Assistant Secretary of Defense (Public Affairs), news briefing by Secretary of Defense Les Aspin, May 19, 1993.

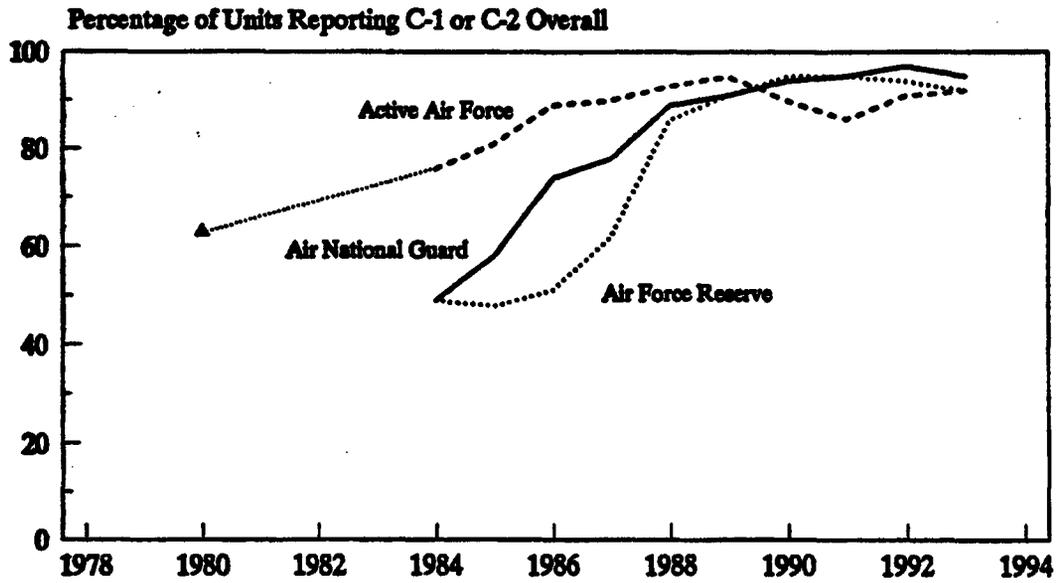
in terminology that DoD adopted in 1986, such units would have been described as either fully or substantially combat ready.

In both the Navy and the Air Force, the percentage of active-component units rated C-1 or C-2 in overall readiness rose appreciably during the 1980s. This increase occurred even though the standards used in the C-rating system were tightened during the early 1980s. In 1993, 93 percent of active Air Force units were rated C-1 or C-2 overall (see Figure 1). This exceeds the level seen throughout most of the 1980s, and it is only 2 percentage points below the record level reached in 1989. The percentage of Navy aviation units reporting C-1 or C-2 is also comparable with the levels seen in the late 1980s, although somewhat below the peak seen during Operation Desert Storm/Desert Shield (see Figure 2). The percentage of active Navy surface ships reporting C-1 or C-2 overall, however, declined sharply in 1990 because of a Navy-wide problem with a specific electronic warfare system (the SLQ-32). Although that readiness indicator has recovered somewhat, it remains 22 percent below its 1987 peak.⁶

Overall C-ratings for Air National Guard, Air Force Reserve, and Marine Corps Reserve units (the only reserve components for which unclassified aggregate data are available) show a strong upward trend from 1984 to 1990. The sharp decline in ratings for Marine Corps Reserve units in 1992 reflects an effort on the part of the Corps to put the reporting procedures used by reserve-component units on a par with those used by the active component (see Figure 3).⁷

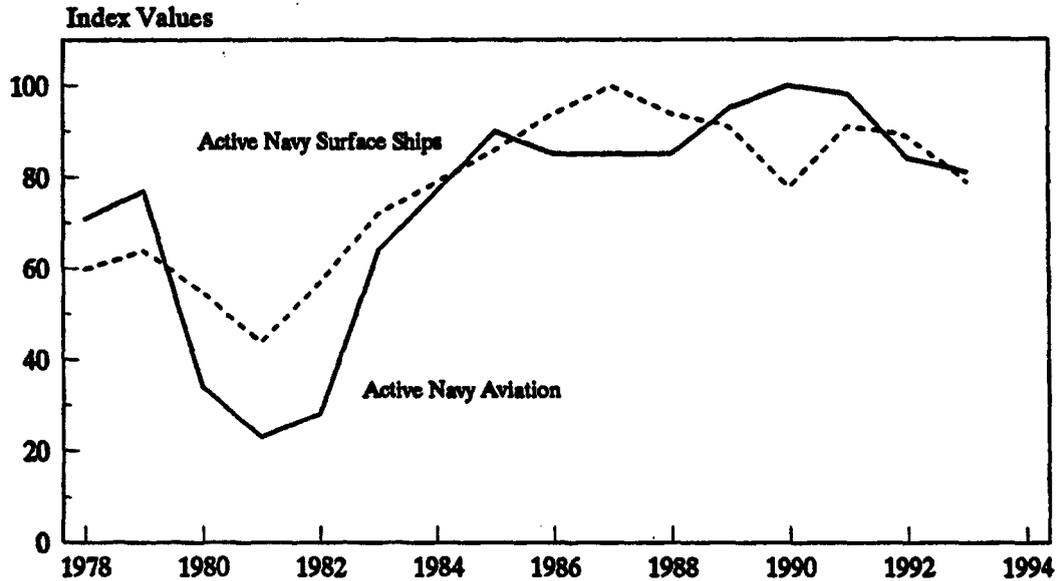
The large downturn in the Navy data seen in 1980 and 1981 illustrates the subjective nature of C-ratings and some of the difficulties encountered in using these data to show trends over time. According to some Navy officers familiar with the data, the downturn reflected a desire on the part of the senior Navy leadership--expressed in a message to the fleet--to ensure that commanders submitted C-ratings that accurately reflected the readiness problems that their units faced at that time.⁸ Similarly, the historical stability of overall C-ratings for the active Marine Corps--a service that has been

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6. The actual percentage of units reporting C-1 or C-2 in the Navy is classified. These estimates are based on an unclassified index that shows trends over time.
 7. Reserve-component equipment that was previously put in a "nonreporting" status will now be included when reserve units determine their C-ratings for equipment condition.
 8. Reported to the Congressional Budget Office in a briefing by the Assessment Division, Office of the Chief of Naval Operations, November 23, 1993.

FIGURE 1. C-RATINGS FOR AIR FORCE UNITS

SOURCE: Congressional Budget Office. Air Force data for 1980 are from Melvin Laird, *The Problems of Military Readiness* (Washington, D.C.: American Enterprise Institute, 1980). All other data are from the Department of Defense.

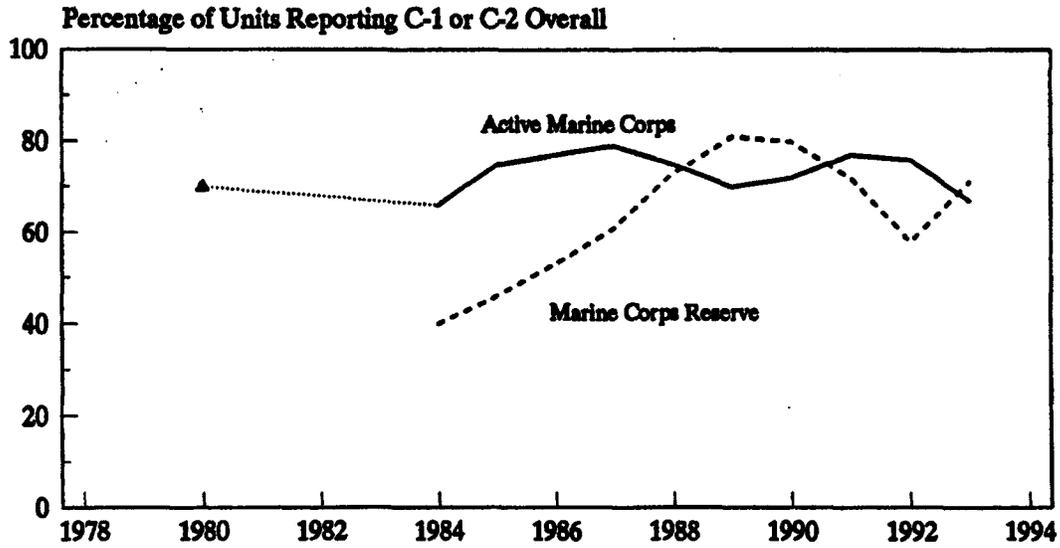
FIGURE 2. INDEXES OF C-RATINGS FOR NAVY UNITS



SOURCE: Congressional Budget Office based on Department of Defense data.

NOTE: These indexes show changes in the percentage of units reporting C-1 or C-2 relative to their peak values; they do not show the actual percentage of units that are C-1 or C-2. The peak value for aviation units was in 1990, so the aviation index in that year has a value of 100. The peak value for surface ships was in 1987, so the surface ship index has a value of 100 in that year. An index value of 50 for a given year means that the percentage of units reporting C-1 or C-2 was half of its peak value.

FIGURE 3. C-RATINGS FOR MARINE CORPS UNITS



SOURCE: Congressional Budget Office. Marine Corps data for 1980 are from Melvin Laird, *The Problems of Military Readiness* (Washington, D.C.: American Enterprise Institute, 1980). All other data are from the Department of Defense.

"ready for 200 years"--may reflect not only that service's commitment to readiness but also an unwillingness on the part of unit commanders to report that their units are not ready.⁹

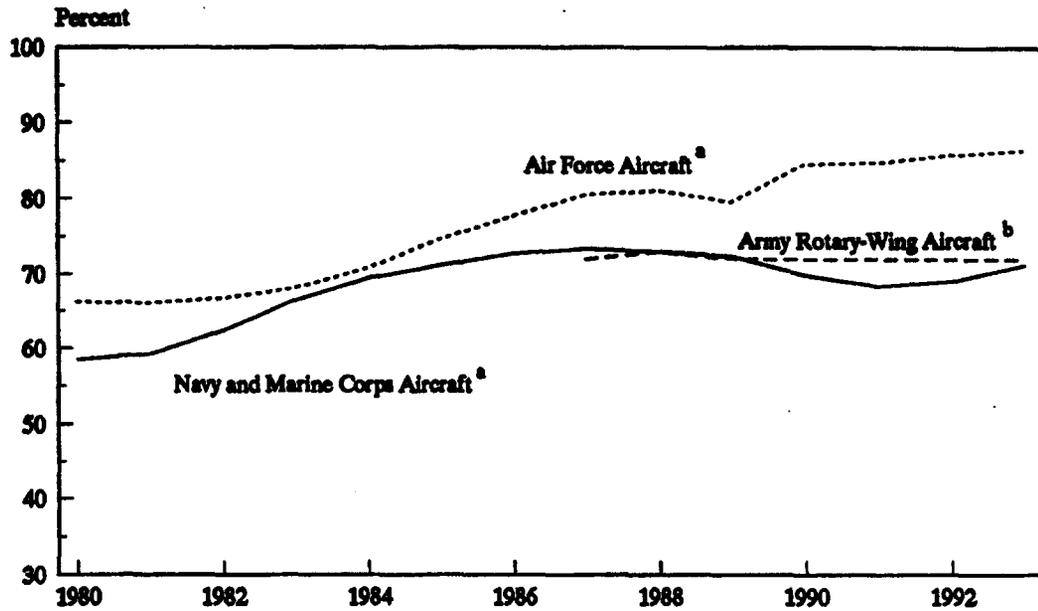
Both the actual percentage of Army units reporting C-1 or C-2 during the 1980s and trends in that data are classified, although it is widely believed that the readiness of both active- and reserve-component units has increased substantially since 1980. According to the Army, "General policy has been to maintain as SECRET any information display or trend which would depict the overall readiness of the ARMY or any component (Active, National Guard, or Army Reserve). Historical readiness trends could prove too revealing in theorizing current readiness status if extrapolated over the near-future horizon. Thus, declassifying (not downgrading) past readiness information allows dangerous speculation which might violate overall security."¹⁰

Trends in Mission-Capable Rates

Today, mission-capable rates for aircraft remain at high levels. The rate for Air Force aircraft (a figure that includes all aircraft in active and reserve units) was at a record level of 87 percent in 1993, although the rates for fighter aircraft and for bombers have fallen from the peak levels achieved during Operation Desert Shield/Desert Storm (see Figure 4 and Table A-2 in the appendix). The mission-capable rate for Navy aircraft (a total that includes all Marine Corps and Navy aircraft, both active and reserve) peaked at 73 percent in 1987. By 1993, however, it was 71 percent and rising.¹¹ Looking at the Marine Corps separately, the rate for fixed-wing aircraft in 1993 was at a historical high, while the rate for Marine Corps rotary-wing aircraft was 3 percentage points below its historical record and rising (see Table A-2). The data for Army rotary-wing aircraft, which that service provided only for the 1987-1993 period, show no trend.

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9. In 1977, the Commandant of the Marine Corps asserted that, "Within the Corps, readiness is the watchword at all levels. . . . I am pleased to report that the morale and esprit of the Marines are at their traditional best"; General Louis Wilson, "CMC Report to Congress: 'We Are Ready. Spirit Is High.' *Marine Corps Gazette* (April 1977), p. 10. Available data suggest that in 1980 almost no Marine Corps commanders reported that their units were C-4 in overall readiness.
 10. Reply by the Department of the Army, dated January 26, 1994, to a Congressional Budget Office request to provide information on aggregate (componentwide) trends in overall C-ratings. The Army is the only service that classifies aggregate readiness trends. Both current and historical C-ratings at the componentwide level are unclassified in the Air Force and the Marine Corps. Navy C-ratings are classified, but the service provided CBO with unclassified indexes showing trends in those ratings.
 11. Although this figure is below the Navy's goal of 73 percent, comparisons between goals and mission-capable rates are difficult to interpret. The goal, set in part to challenge unit commanders, has risen since the mid-1980s.

FIGURE 4. MISSION-CAPABLE RATES FOR AIRCRAFT



SOURCE: Congressional Budget Office based on Department of Defense data.

a. Active and reserve components.

b. Active component only.

The percentage of time that active Navy surface ships are free of equipment failures that critically degrade mission capability (C-3 or C-4 CASREPs) has changed substantially over time. Between 1981 and 1987, it rose from 50 percent to 81 percent (see Figure 5). Between 1988 and 1990, however, it fell sharply. Although the speed of this decline reflects Navy-wide problems with a specific type of equipment, the percentage of time that Navy ships are free of critical equipment failures remains 13 percentage points below the 1987 peak. These data may not justify alarm, but--like the Navy's C-ratings for surface ships--they raise the question of how much readiness is appropriate.

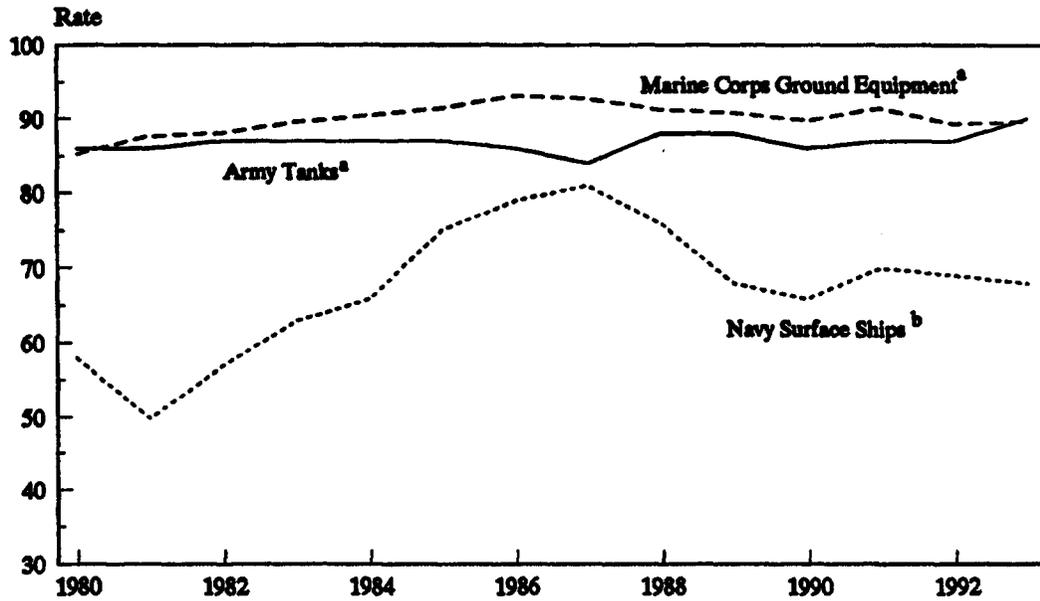
Mission-capable rates for ground equipment may, in general, be less meaningful indicators of overall readiness for ground units than aircraft rates are for aviation units. Although the rate for Army tanks reached a historical high in 1993, it varied relatively little between 1980 and 1993 (see Figure 5). Rates for artillery, Army missile systems, and combat vehicles also varied little over time (see Table A-2). Rapid modernization during the 1980s may have forestalled increases in mission-capable rates. Nonetheless, the failure of rates for ground units to increase significantly during the 1980s--a period in which many officers believe that readiness increased dramatically--casts some doubt on the ability of such rates to identify any future decline in overall readiness.

Aggregate mission-capable rates for Marine Corps ground equipment have also changed little over time and may tend to understate changes in readiness levels. General C.E. Mundy, Commandant of the Marine Corps, recently testified that, "for the first time in 10 years the Marine Corps equipment readiness level is below 90 percent."¹² Yet that mission-capable rate, 89.6 percent, was less than 2 percentage points below the 10-year average. By itself, that might not appear to be a meaningful change, particularly since the non-mission-capable rate for ground equipment in the Marine Corps was also at a low level in 1993.¹³ But a readiness problem could still exist even if it is not reflected in mission-capable rates: General Mundy attributed the lower rate to a lack of funding for depot maintenance, a lack that is supported by funding profiles (see the section on depot maintenance in Chapter III).

12. General Mundy provided this statement in response to a question asked at a May 19, 1993, hearing by the Senate Committee on Armed Services on the Department of the Navy's 1993 Posture Statement.

13. This simultaneous decline in the mission-capable and non-mission-capable rate was possible because the Marine Corps calculated the rates for ground equipment based on the quantity of equipment units were authorized to have rather than equipment they actually had.

FIGURE 5. CONDITION OF SHIPS AND GROUND EQUIPMENT



SOURCE: Congressional Budget Office based on Department of Defense data.

a. Mission-capable rate. Active component only.

b. Percentage of operating time free of C-3 or C-4 equipment casualty reports (CASREPs). Active component only.

Although the picture is by no means uniform, the available data on C-ratings and mission-capable rates suggest that, for DoD as a whole, unit readiness is at a high level by historical standards. These data, however, indicate only that current readiness is high; they do not indicate whether current levels of military compensation will ensure a high-quality force in the future, nor whether DoD is allocating enough resources to activities (such as depot maintenance, facilities maintenance, and supply system inventories) that contribute to future readiness levels. Can DoD maintain its current level of readiness in the future? The review of readiness indicators in Chapter III, which covers some specific functional areas that contribute to future readiness, may provide insight into this question.