



Center for a
New American
Security

Working Paper

AVF 4.0: The Future of the All-Volunteer Force

March 2017

Phillip Carter, Katherine Kidder, Amy Schafer, and Andrew Swick

Bold. Innovative. Bipartisan.

1152 15th Street NW
Suite 950
Washington, DC 20005

CNAS.ORG / @CNASDC
T: 202.457.9400
F: 202.457.9401

About the Authors

Phillip Carter is Senior Fellow, Counsel, and Director of the Military, Veterans, and Society Program at the Center for a New American Security (CNAS). His research focuses on issues facing veterans and military personnel, force structure and readiness issues, and civil-military relations. Carter began his career as an Army officer, serving for nine years in the active and reserve components. In addition to his work at CNAS, Carter serves on the Reserve Forces Policy Board and teaches as an adjunct professor of law at Georgetown University.

Katherine Kidder is a Fellow at CNAS, working in the Military, Veterans, and Society Program. She is a doctoral candidate in security studies at Kansas State University, where she focused on congressional-executive relations and the formation of U.S. foreign policy. She writes extensively on military retention, professional military education, defense budgeting, and foreign aid.

Amy Schafer is a Research Assistant with the Military, Veterans, and Society Program at CNAS, where she focuses on civil-military relations, military personnel reform, and issues facing military families and veterans. Schafer is a master's candidate in security studies at Georgetown University. She joined CNAS having worked at Facebook and previously interned at both the Council on Foreign Relations and the Office of the Secretary of Defense for Policy.

Andrew Swick is a Joseph S. Nye Jr. Research Intern for the Military, Veterans, and Society Program at CNAS, focusing on civil-military relations, rebuilding the bipartisan consensus on national security, and veteran issues. Swick is a master's candidate in security studies at Georgetown University and a former Army infantry officer.

Acknowledgements

The authors would like to acknowledge and thank their CNAS colleagues for participation in this work, particularly Loren DeJonge Schulman, Paul Scharre, Moira Fagan, Dr. Jerry Hendrix, Michele Flournoy, Shawn Brimley, and Bob Work, as well as successive classes of CNAS military fellows. In addition, the authors are grateful to the many members of the AVF Study Group that CNAS has convened during 2016 and 2017 for their feedback on the ideas contained herein.

This report was made possible by support from the National Defense Industrial Association (NDIA). CNAS would like to thank NDIA's President, Gen. Craig McKinley (retired), as well as its former chairman, Arnold Punaro, for their support of this project.

The opinions expressed in this paper are those of the authors alone, and do not necessarily reflect the views of its funders, consistent with CNAS policies on intellectual independence and support, available online at cnas.org.

I. Introduction

The U.S. armed forces are not made up of people; the U.S. armed forces *are* people.¹ Soldiers, sailors, airmen, Marines, and Coast Guardsmen constitute the beating heart of the national security machine. Without them, U.S. strategies are mere words on a page; combat units or systems cannot drive nor fly nor sail, let alone succeed on the battlefield.

And yet as important as human capital is for the success of the nation’s defense, the guiding principle for the services’ approach to human capital tends to be inertia, rather than an affirmative approach rooted in the needs of strategy or future battlefields.

The national security community invests enormous effort to imagine future threat environments and conceive future strategies, weapon systems, and doctrinal approaches to fit these realities.

Unfortunately, this same community invests too little in the design of the military’s human capital. To the extent that the national security field’s leadership focuses on personnel issues, it tends to see these issues through myopic or narrow lenses, such as cost, niche communities (such as how to raise future cyber forces in the near term), or the ability of the force to attract and retain today’s youth (i.e., millennials). These near-term issues are important, but they neither solve the strategic problems facing today’s All-Volunteer Force (AVF), nor begin design of a better AVF.

In early 2016, the Center for a New American Security (CNAS) launched its “AVF 4.0” project – an effort to sketch out visions of the future All-Volunteer Force, and design its components to meet the nation’s needs 10, 20, 30, even 50 years into the future. This paper represents the product of a year-long working-group series and research. It articulates the strategic challenges facing the AVF and defines the problem statement regarding the need for personnel reform. This project aims to inform and influence thinking beyond the range of current “Force of the Future” concepts proposed by just-retired Defense Secretary Ashton Carter and the services, by focusing on the deeper, structural issues that underlie today’s force, and the design principles that should guide development of the next American AVF, defined in this paper as the AVF 4.0.

The choice of the 1.0, 2.0, 3.0, and 4.0 descriptive schema reflects a deliberate choice about the need to pursue an evolutionary approach when imagining and managing personnel reform in the Department of Defense. The nation does not have the option of pursuing a truly revolutionary approach – closing the current AVF and reopening a startup military; the generals and admirals of the future serve in the military of today. Similarly, an approach that imagines the future, and designs a new force for it, that is detached from the limitations of the existing personnel management system cannot succeed as a change management strategy for today’s U.S. military. An evolutionary approach that builds on the best of today’s AVF – and eliminates the worst – must drive change, cultivating a shared vision of problems and solutions at every step of the process. This is particularly true given the complex equities of AVF stakeholders, including civilian political leaders, uniformed military leaders, service members and their families, Congress, civilian defense employees, contractors, and the American people.

¹ This formulation builds on a quote from General Creighton Abrams, as quoted in Lewis Sorley, “A Better War: *The Unexamined Victories and Final Tragedy of America’s Last Years in Vietnam* (Orlando: Harcourt Books, 1999).

This working paper identifies the elements of the AVF that must evolve. First, it outlines the historical evolution of the AVF since 1973, focusing on how each epoch has contributed to the force’s current design. It next describes the strategic problems facing the AVF, including challenges in the quality of recruits and rising costs. Many of these issues have vexed the AVF since its creation; in fact, many were anticipated at the creation of the AVF.² The past 15 years, and the current age of fiscal austerity, have brought many of these problems into sharp relief. In a volatile and uncertain global environment, when we rely so much on the military, we cannot ignore these problems, nor allow the military to drift to solutions through inertia.

II. A Brief History of the AVF

The Nixon administration created the All-Volunteer Force in 1973, in the final days of the Vietnam War.³ During the 15 years that followed, the Department of Defense built AVF 1.0, a force optimized to fight short wars with overwhelming force, and to conduct the occasional “operation other than war,” too. Competitive military compensation and benefits (enabled by larger defense budgets) played a significant role in building this force and retaining sufficient numbers of career officers and enlisted personnel to provide a professional backbone for the AVF. The military’s recruiting campaigns – in particular, the Army’s “Be All You Can Be” campaign – were a cornerstone of accessing talent and burnishing the brand of the AVF during this period. This force evolved during the 1980s into the force that brilliantly fought the first Gulf War.⁴

In the 1990s, the AVF evolved into version 2.0. After the end of the Cold War and the first Gulf War, the military downsized by a third, the most significant force reduction since World War II. With the Soviet threat gone, defense officials linked the AVF’s force structure to a new force-sizing construct, based on a scenario of fighting two major regional conflicts, and transitioned the military from a forward-deployed to an expeditionary posture that could better respond to new conflicts around the globe. Through a series of deployments to Haiti, Somalia, Bosnia, Kosovo, and elsewhere, the military refined this expeditionary focus and developed a new blended force model that relied heavily on reserve component units, civilian government employees, and contractors, particularly for combat support and combat service support functions.⁵

However, fissures began to emerge in the force during this time, including signs of a growing civil-military divide. The 1990s marked a transition to the first peacetime All-Volunteer Force in U.S.

² In the aftermath of the Vietnam War, President Richard Nixon ordered a study on the possibility of ending the draft and moving the U.S. military to an all-volunteer force. The study, “The Report of the President’s Commission on an All-Volunteer Force,” came to be known as the Gates Commission report, named after its lead author. While many on the commission advocated for the transition to an AVF, concerns including cost and the potential for a growing civil-military divide in the absence of the draft were raised as sincere concerns. Thomas Gates et al., *The Report of the President’s Commission on an All-Volunteer Force*, February 1970.

³ Bernard D. Rostker, “I Want You: The Evolution of the All-Volunteer Force,” Rand, 2006 (<http://www.rand.org/pubs/monographs/MG265.html>); Gates et al.

⁴ James Kitfield, “Prodigal Soldiers: How the Generation of Officers Born of Vietnam Revolutionized the American Style of War,” 1997; Colin Powell and Joseph E. Persico, *My American Journey* (New York: Random House, 1996).

⁵ See 2006, 2010, and 2014 Quadrennial Defense Reviews for discussion of the “total force” including military (active and reserve), civilian, and contractor personnel, and how the Department has approached optimizing the mixture of this blended force.

history, raising concerns over the potential for the military to grow isolated from the nation. The apparent separation from society, though contested by some, reflected significant post–Cold War changes to the military. These included a substantial drawdown, base realignment and closure decisions affecting the West and Northeast, and a growing sense of “otherness,” particularly among the officer corps, coinciding with the retirement of the vast majority of draft-era officers.⁶ Increasing social and geographic isolation also fomented apprehension about the divergence in the “characteristics, attitudes, and beliefs of the military and civilian society.”⁷ The rise of voluntary-force military engagements, such as in Somalia and Bosnia, as well as tension with the Clinton administration over the “Don’t Ask, Don’t Tell” policies and a declining numbers of veterans in Congress, contributed to such tensions.⁸ Survey responses from the period indicate increased political conservatism, particularly at the highest ranks and among service members that “civilian society would be better off if it adopted more of the military’s values and behaviors.”⁹ Further, the military had a difficult time competing with the civilian economy for talent, both in recruiting and retention, during the periods of economic growth in the late 1990s.

The nation took AVF 2.0 to war in 2001. Over the course of the Iraq and Afghanistan conflicts, the Defense Department adjusted the AVF into a larger, more robust, more resilient total force, capable of sustaining operations and operating with a greater mix of civilian, contractor, and interagency personnel. As it evolved into AVF 3.0, the force also changed to manage stresses such as the burdens felt by mobilized reservists, military families, and service members deployed for repeated combat tours. Military compensation soared during this period, arguably a necessary premium to sustain the AVF in wartime.¹⁰

The military also tested its authorities for human capital management – stop loss, involuntary reserve mobilizations, retiree recalls, retention bonuses, contractor utilization – and developed a keener sense of what coercive tools and incentives worked best over time. With the exception of retention bonuses, each of these authorities hinted at problems with the human capital management strategy; when the force needed to expand rapidly, it was unable to do so without using coercive tools, or alternative solutions like using contractors to provide missing capability or capacity for the force.¹¹

By 2014, with the conclusion of major combat operations in Afghanistan and Iraq, most experts concluded that the AVF had worked during the nation’s longest wars.¹² However, the fissures that

⁶ Thomas E. Ricks, “The Widening Gap Between Military and Society,” *The Atlantic*, July 1997, <http://www.theatlantic.com/magazine/archive/1997/07/the-widening-gap-between-military-and-society/306158/>.

⁷ Thomas S. Szayna, Kevin F. McCarthy, Jerry M. Sollinger, Linda J. Demaine, Jefferson P. Marquis, and Brett Steele, “The Civil-Military Gap in the United States: Does it Exist, Why, and Does It Matter?” Rand Arroyo Center, 2007, http://www.rand.org/content/dam/rand/pubs/monographs/2007/RAND_MG379.pdf.

⁸ Ibid.

⁹ Peter D. Feaver and Richard H. Kohn, *Soldiers and Civilians: The Civil-Military Gap and American National Security*, (Cambridge, MA: MIT Press, 2001), 460.

¹⁰ Phillip Carter and Katherine Kidder, “Military Compensation and Retirement Modernization: A Primer,” CNAS, January 27, 2015 (www.cnas.org/military-compensation-and-retirement-modernization).

¹¹ John A. Nagl and Richard Fontaine, “Contracting In Conflicts: The Path to Reform,” CNAS Report, June 2010, <https://www.cnas.org/publications/reports/contracting-in-conflicts-the-path-to-reform>.

¹² Robert Gates, “Lecture at Duke University (All-Volunteer Force),” September 29, 2010, <http://archive.defense.gov/Speeches/Speech.aspx?SpeechID=1508>; Thomas E. Ricks, “It’s time to toss the all-

had emerged during the 1990s grew deeper. Leaders on both sides of the civil-military divide worried about the extent to which society had become divorced from the service – and vice versa.¹³ Service leaders began to speak openly about the sustainability of the AVF model, focusing on cost concerns¹⁴ but also the need to better support service members and their families during repeated deployments.¹⁵ The lack of effective talent management systems became more apparent as the services tried to compete directly with industry for talent in key areas such as cyber warfare and also as generational change created more tension between the military’s 20th-century personnel systems and the 21st-century service members and military family members living in them.

III. AVF 4.0?

In March 2015, then-Defense Secretary Ashton Carter launched the “Force of the Future” initiative to begin updating the military’s human capital strategies, policies, and practices to reflect lessons learned from AVF 3.0 during 14 years of war.¹⁶ Under Carter’s leadership, and that of then-Acting Under Secretary (Personnel & Readiness) Brad Carson,¹⁷ this effort produced its initial set of recommendations in November 2015, to be followed by subsequent tranches throughout 2016. Each tranche of reforms centered around a different theme, with the first focusing on “new people and new ideas,” the second pivoting to retention issues, the third focusing on military promotions and the civilian workforce, and later tranches tackling recruiting by aiming to increase diversity and improve ROTC programs.¹⁸ Many of the boldest recommendations for change, however, ran into sharp opposition from the Army, Navy, Air Force, and Marine Corps. Pushback from the services reflected three general concerns. First, many of the suggested changes (such as increased civil schooling opportunities) came with an actual dollar cost, and an impact on readiness, that the service leaders felt they could not afford, especially given current operational demands. Second, the service leaders perceived too many of the “Force of the Future” recommendations to be focused on the

volunteer military,” *The Washington Post*, April 19, 2012, https://www.washingtonpost.com/opinions/its-time-to-toss-the-all-volunteer-military/2012/04/19/gIQAwFV3TT_story.html?utm_term=.5a4edac8ed48; and Rostker, “I Want You,” 9.

¹³ See *Washington Post*/Kaiser Family Foundation poll of post-9/11 veterans, featured in Greg Jaffe et al., “After the Wars,” *The Washington Post*, March-April 2014, <http://www.washingtonpost.com/pb/after-the-wars/>; Phillip Carter and David Barno, “Military bases are our most exclusive communities, and that hurts veterans,” *The Washington Post*, November 8, 2013, https://www.washingtonpost.com/opinions/military-bases-are-our-most-exclusive-gated-communities-and-that-hurts-veterans/2013/11/08/27841b1e-47cb-11e3-a196-3544a03c2351_story.html.

¹⁴ Admiral Michael Mullen, Chairman of the Joint Chiefs of Staff, and Robert Gates, Secretary of Defense, Testimony to the Subcommittee on Defense, Appropriations Committee, U.S. Senate, May 20, 2008, 41–42, <https://www.gpo.gov/fdsys/pkg/CHRG-110shrg79104313/pdf/CHRG-110shrg79104313.pdf>; Walter Pincus, “Paying for the all-voluntary military,” *The Washington Post*, January 14, 2013, https://www.washingtonpost.com/world/national-security/paying-for-the-all-voluntary-military/2013/01/14/3c4bab00-5e71-11e2-a389-ee565c81c565_story.html?utm_term=.759e0a152936.

¹⁵ Admiral Michael Mullen, Chairman of the Joint Chiefs of Staff, Posture Statement, Armed Services Committee, U.S. House of Representatives February 6, 2008, 1,7–10, <http://www.dod.mil/dodgc/olc/docs/testMullen080206.pdf>.

¹⁶ Department of Defense, Remarks by Secretary Ashton Carter on the Force of the Future to Students at Abington High School, Abington, Pennsylvania, March 30, 2015, <http://archive.defense.gov/Transcripts/Transcript.aspx?TranscriptID=5607>.

¹⁷ Brad Carson, “How We’re Planning the Biggest Personnel Overhaul in 45 Years,” DefenseOne, June 8, 2015, <http://www.defenseone.com/ideas/2015/06/how-were-planning-biggest-personnel-overhaul-45-years/114733/>.

¹⁸ Department of Defense, “Forging Two New Links to the Force of the Future,” November 1, 2016, <https://www.defense.gov/Portals/1/Documents/pubs/Forging-Two-New-Links-Force-of-the-Future-1-Nov-16.pdf>.

preferences of junior and mid-career personnel at the expense of overall readiness, or narrow challenges like the creation of a cyber mission corps. Third, and most broadly, service leaders were not persuaded by Carson and Carter that significant problems existed with the All-Volunteer Force beyond those explicitly caused by 15 years of war or resource constraints. As these reforms were percolating in the Pentagon, General Joseph Dunford, Chairman of the Joint Chiefs of Staff, stated in a public forum that “from my perspective, [the AVF] is not broken. . . . I fundamentally believe we are recruiting and retaining an incredibly high-quality force.”¹⁹ These concerns were echoed by congressional leaders and staff, who criticized the Carter/Carson reforms as “solutions in search of a problem.”²⁰

In hindsight, it appears that the services’ objections to the Force of the Future initiative were as much about process as substance. The initiative was rushed by Secretary Carter to fit his time line in office, rather than the normal pace of change in the Pentagon, which can span secretaries or even administrations.²¹ Force of the Future also came on the heels of other major personnel changes, including the repeal of Don’t Ask, Don’t Tell and the opening of combat positions to women, not to mention the strains of a decade and a half of war and the immense fiscal pressures felt across the Department of Defense. The cumulative effects of these strains may have limited the extent to which the military was willing to embrace fundamental change, particularly as the services sought to reshape and refocus their forces back on conventional conflicts with near-peer competitors after 15 years of focus on Iraq and Afghanistan.

Finally, it appears in retrospect that some of the problems with the proposed Force of the Future reforms came from a fundamental rift in the civil-military relationship at the top. An effort to reform the *military* personnel system, led by the department’s *civilian* leaders, was doomed to fail, even with the full involvement of uniformed staff during the development of these reforms. A true civil-military partnership *at the highest levels* was necessary for these reforms to succeed. Such a partnership was made difficult by personnel churn at the senior levels, a difference in priorities between the Pentagon’s civilian and military leadership, and the lack of a legislative champion on Capitol Hill that was either pushing or demanding change on this issue too. Without such a civil-military partnership, and legislative support, civilian defense leaders such as Carson and Carter were unable to build a shared vision of the problem, let alone build broad-based support for their proposals to reform the AVF.

And yet, despite the likely end of many of the Force of the Future initiatives, today’s force does face difficult structural and strategic problems that it cannot ignore. The data shows fissures emerging in a number of areas, such as recruit quality, cost, and productivity, and deeper problems as well in more ephemeral areas such as civil-military relations. The quality and recruiting data alone suggests the AVF model is quite brittle and overly susceptible to economic forces and public opinion trends, particularly in wartime. More broadly, this data also shows a growing divergence between the AVF

¹⁹ General Joseph Dunford, Remarks at the CNAS National Security Forum, (JW Marriott, Washington, December 14, 2015).

²⁰ Jim Garamone, “Force of the Future Looks to Maintain U.S. Advantages,” DoD News Features, November 18, 2015, <http://www.defense.gov/News/Article/Article/630304/force-of-the-future-looks-to-maintain-us-advantages>.

²¹ The efforts that culminated in the 1986 passage of the Goldwater-Nichols Act, and the 1987 establishment of U.S. Special Operations Command, illustrate this point well. Each had its origins in operational problems that occurred in the 1970s and early 1980s, but required multiple years to gain analytical support and political momentum before they became reality.

and the civilian labor market – necessary divergence in many ways, but something that hurts the AVF in its competition for talent, and also hurts it to the extent that its personnel policies are increasingly out of step with social and demographic realities such as long-term trends in assortative mating, female labor force participation, and dual-income families. There is an urgent need to design and build AVF 4.0 – a force that reflects domestic social and economic change, can compete in the dynamic U.S. labor market, and can field a force to meet the security challenges of the next 40 years and beyond.

IV. Understanding the Problem

The next section of this working paper outlines the strategic issues facing the AVF. To the maximum extent practicable, this section relies on data that is publicly available and generally drawn from official or widely cited sources. Mindful of the process challenges that faced previous reform initiatives, this project began with the goal of defining the problems facing the AVF while relying on as much objective data as possible to drain the subject of its emotion and lay the foundation for future discussion on an even playing field. Shared understanding of the problems will help inform future efforts to improve and reform the AVF, bringing together this issue’s many stakeholders around a common set of facts, assumptions, and data. This section describes eight strategic problems facing the AVF. All of these must be better understood, confronted, and resolved to ensure the long-term success of the force.

A. Quality

The general trajectory of personnel quality during the AVF era has been an upward one. However, this overall trend masks several quality problems that have begun to manifest themselves and may only grow in severity over time.

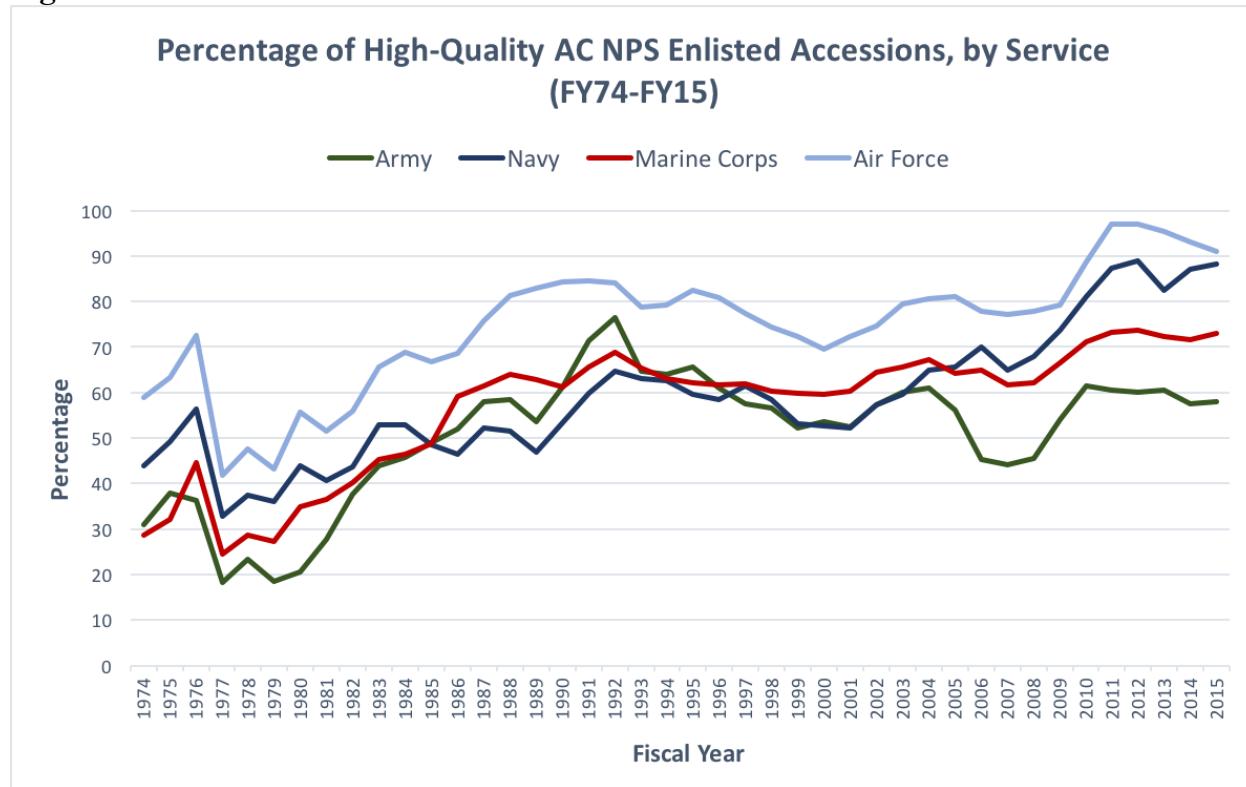
Foremost among these is the lack of consistency in the quality of enlistees entering the military – particularly during wartime or in periods of favorable economic conditions (or both). Figure 1 (taken from an annual demographic profile of the force produced by the Center for Naval Analyses) depicts the percentage of high quality recruits for each service over the life of the AVF, from 1973 to 2015. This data depicts quality of the AVF, as measured by the percentage of new enlisted recruits who are defined as “high quality” based on their aptitude scores and other measures. Based on this data, the quality trend is a generally positive one over the life of the AVF. In the late 1970s, the quality of the force climbed and dropped significantly because of a mis-norming of the Armed Services Vocational Aptitude Battery (ASVAB) test.²² During the 1980s, each service saw its enlistee quality rise steadily, the result of consistent pay and benefits improvements, innovative recruiting campaigns, and a general improvement in the perception of the military in the years following the Vietnam War.²³ Quality indicators plateaued or dipped at the end of the 1980s and then rose sharply

²² Bernard Rostker, “The Evolution of the All-Volunteer Force,” Rand, 2006, http://www.rand.org/pubs/research_briefs/RB9195.html, 394. The ASVAB is normally benchmarked against the U.S. population, also known as “normed,” to assess the quality of recruits. This process was not done correctly, allowing for low-quality recruits who lacked high school diplomas and the requisite scores to be admitted.

²³ The quality of soldiers during and after the Vietnam War is described in Charles Moskos, *The American Enlisted Man: the Rank and File in Today’s Military* (New York: Russell Sage Foundation, 1970) and James Kitfield, *Prodigal Soldiers: How the Generation of Officers Born of Vietnam Revolutionized the American Style of War* (New York: Simon & Schuster, 1995).

between 1990 and 1995, coinciding with the end of the Cold War, the first Gulf War, and the most significant downsizing of the U.S. military since World War II, in which the force was cut by approximately one-third. The shrinking of available entry-level positions, coupled with improved perceptions of the military after the first Gulf War, made recruiting even more competitive, driving up quality significantly. At one point, in 1993, three of every four Army recruits was considered “high quality.”

Figure 1.



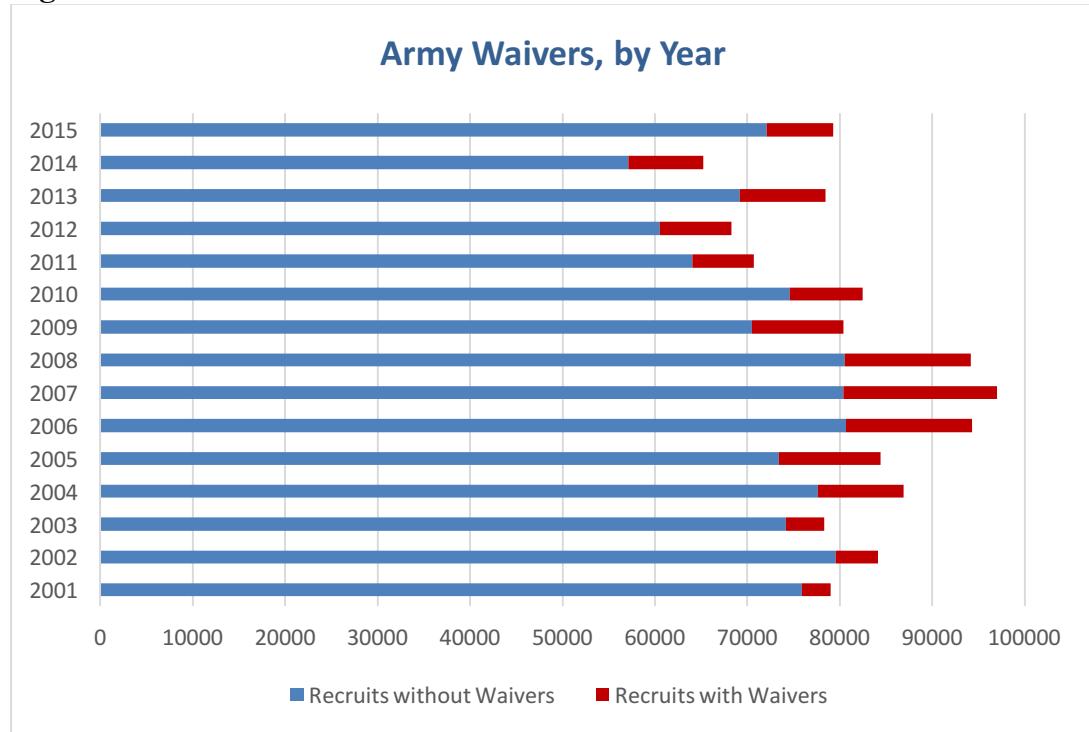
Source: Center for Naval Analyses, "Population Representation in the Military," Fiscal Year 2015, 17. <https://www.cna.org/pop-rep/2015/summary/summary.pdf>

During the late 1990s, the quality of the force plateaued again. This occurred during a time of significant U.S. economic growth, as well as a time when the military was simultaneously taxed by high deployment tempo and relatively scarce resources. After 9/11, quality again rose as enlistment demand rose relative to the supply of available military billets and the nation’s economy struggled in the wake of the 2001 terrorist attacks.

In 2003–04, quality began to suffer once again, particularly for the Army and Marine Corps. The Army’s high quality percentage eventually dropped to less than 50 percent, and stayed there for the years 2005 to 2009, during the height of the Iraq conflict. Marine Corps recruit quality also dropped during this period, although more slightly than that of the Army. During the same period, Navy and Air Force recruiting quality dropped slightly as well but remained significantly above the other services, possibly reflecting a choice by high quality recruits to avoid the ground services during the Iraq and Afghanistan wars.

While the services were recruiting significantly fewer high quality recruits, they also took in more enlistees requiring waivers. Although each service differs, they collectively screen entering recruits for educational attainment, physical and mental health problems, criminal justice involvement, prior drug or alcohol use, or other serious behavioral problems that indicate unfitness for service.²⁴ During the late 2000s, at the height of the Iraq and Afghanistan conflicts, the services accepted significantly more recruits with waivers in order to reach their recruiting targets. The Army did so to the greatest extent. In 2007, as shown in the graph below, approximately one out of every five Army recruits entered the service with a waiver.

Figure 2.



Source: Serial, "Number of Waivers Given to U.S. Army Recruits," <https://serialpodcast.org/maps/number-of-waivers-given-to-us-army-recruits>.

²⁴ Department of Defense, "Qualification Standards for Enlistment, Appointment, and Induction," Instruction No.1304.26, <http://www.dtic.mil/whs/directives/corres/pdf/130426p.pdf>.
DOD's wide criteria for entrance into the armed services is regulated based on many factors, including age, citizenship, education, aptitude, medical fitness, physical fitness, dependency status, character/conduct, and drug and alcohol use, with waivers available for violations of medical, dependents, conduct, and drugs. To enlist in the armed forces a person must be between ages 17 and 42, and to commission as an officer, be 18 years old and able to complete 20 years of service by age 62. Similarly, U.S. citizenship is required, though this may be waived under a variety of conditions, including permanent residence status or if national security requires. If not possessing a high school diploma, enlistees must meet a minimum standard score on the Armed Forces Qualifying Test (AFQT), with baccalaureate degrees required to serve as an officer. Scoring at below 10 percent on the AFQT automatically disqualifies enlistees, with no more than 20 percent of enlistees falling in the 10–30 percent range in any given fiscal year. Individuals also must meet medical standards and pre-accession height and weight requirements. Dependency requirements prevent a married individual with more than two dependents under 18 or a single individual with any dependents under age 18 from enlisting. Character standards preclude those with significant criminal records or certain other legal histories from eligibility without a waiver, as well as positive drug tests or a history of alcohol or drug dependence.

Personnel quality makes a difference in war. All things being equal, smarter soldiers typically perform better on the battlefield.²⁵ Research on personnel quality has shown a link between entrance quality and military effectiveness,²⁶ as measured through such things as proficiency tests or gunnery scores. Recent research also has linked poor quality (measured through the existence of waivers) to a greater likelihood of performance and disciplinary failure.²⁷ Education, training, and overall personnel quality also matter to the extent they increase a military's capability to use sophisticated weaponry or doctrine.²⁸

During the Cold War, the United States embraced the principle of quality through its first and second “offset” strategies, leveraging the qualitative advantages of U.S. technology, doctrine, and people, to counter numerically superior Soviet forces. Personnel quality remains central to U.S. strategic and operational art. At its core, DoD’s “third offset” strategy continues the traditional U.S. preference of quality over quantity. Describing the strategy, then-Deputy Secretary of Defense Robert Work emphasized that in the development of new technologies, “the human is always first,” and that “A.I. [artificial intelligence] and autonomy will be used only to empower humans” and their decision-making.²⁹ The linchpin of the third offset strategy is the AVF – and the caliber of its personnel. In parallel, and at the other end of the conflict spectrum, the U.S. use of special operations forces – who in many ways represent the apotheosis of a qualitative offset strategy based on their skills, education, training, and time in service – illustrates the importance of quality in today’s AVF.

Unfortunately, despite clear benefits and known strategic reliance, today’s DoD does too little to effectively measure quality. At the front end, the services use antiquated tests to gauge cognitive and physical ability and proxies such as high school completion to gauge intangible qualities like grit. These tests have some predictive value, but also enormous blind spots, as partly illustrated by first-term attrition rates that hover around 30 percent. Such tests may also do little to screen candidates for service at higher levels of responsibility, or in increasingly sophisticated fields. And yet, because the military remains a closed system where entry only occurs at the bottom, the military depends on these tests to identify and admit the talent that eventually will lead the force and man its most complex specialties, such as nuclear propulsion, cyber warfare, or satellite communications.

Beyond recruiting, the services do little to measure quality at all throughout a service member’s career. Certain specialties rely heavily on proficiency testing or certification, but these remain limited to technical disciplines such as aviation. The services do not administer cognitive tests to personnel on a regular basis, and military educational institutions do not utilize uniform testing to measure

²⁵ Morris Janowitz, *The Professional Soldier: A Social and Political Portrait* (New York: Free Press, 1964).

²⁶ Tonia S. Heffner, Roy C. Campbell, and Fritz Drasgow, “Select for Success: A Toolset for Enhancing Soldier Accessioning,” U.S. Army Research Institute Special Report 70, March 2011.

²⁷ Omer Alper, Lauren Malone, and Ed Schmitz, “Benefits of Army Recruit Quality: Recruiting 2025 Forum,” Center for Naval Analyses, presentation given June 2015.

²⁸ Max Boot, *War Made New: Technology, Warfare, and the Course of History, 1500 to Today* (New York: Gotham, 2006).

²⁹ Robert Work, “Remarks by Deputy Secretary Work on Third Offset Strategy,” Brussels, Belgium, April 28, 2016.

student performance or cognitive ability across the force in any meaningful or consistent ways.³⁰ When pressed by senior civilian leaders or Congress, the services often describe quality in terms of selection or promotion data, using the results of these processes as proxies for quality within the force. However, there is a certain circularity to such data, particularly in a closed system without external quality benchmarks, where a lack of data on quality after the initial measurement at entry limits the ability to assess the efficacy of promotion systems.

This lack of data on quality creates a blind spot for military leaders: In the absence of objective data, tracked over time, defense leaders cannot judge the overall quality of the force, let alone make informed decisions about how to identify and mitigate any gaps. An absence of quality data also hinders defense leaders' ability to gauge the efficacy of training or education institutions over time, nor judge recruiting or retention efforts in qualitative terms. The absence of such quality data also makes it difficult to assess the relative importance of other issues facing the AVF – such as its poor geographic representation or its demographic composition.

B. Developing Ideas and Innovation

All militaries face a perennial challenge: how best to generate the ideas to win the next war. Failing to meet this challenge can have existential implications for a nation. The U.S. military has a mixed record in this area. Over the past four decades of the AVF, the military has developed many ideas that succeeded brilliantly, such as the succession of Army doctrinal concepts that culminated in AirLand Battle.³¹ However, the U.S. military also has been slow to develop and institutionalize new doctrinal concepts, as illustrated by the slow, uneven, and fitful embrace of counterinsurgency during the first years of the wars in Iraq and Afghanistan. This mixed track record suggests that the U.S. military may not be optimally structured to generate, incubate, or adopt the ideas necessary to prevail in our next war.

This lack of preparation for future warfare is largely due to the incredible focus required to re-learn counterterrorism to fight the Iraq and Afghanistan wars during the past 15 years. The full intellectual energy of the ground services, special operations community, and intelligence community was arguably (and necessarily) focused on these conflicts. Even the air and naval services focused on how they could affect the outcomes of these conflicts – largely to support what was the national main effort, but also to demonstrate relevance and capture budget share during this period. During this same period, however, America's allies and adversaries did not stand still, nor did technology and the broader global environment. The net effect of America's focus on counterinsurgency and counterterrorism may have been to set the United States back relative to the advances of its allies and potential enemies during this period. Such is the opportunity cost of prosecuting the wars in Iraq and Afghanistan: The millions of person years and trillions of dollars spent there were not (and cannot) be used to prepare for the nation's next wars.³²

³⁰ Stephen Gerras and Leonard Wong, "America's Army: Measuring Quality Soldiers and Quality Officers," WarOnTheRocks.com, April 13, 2016, <https://warontherocks.com/2016/04/americas-army-measuring-quality-soldiers-and-quality-officers/>.

³¹ Douglas W. Skinner, "Airland Battle Doctrine," Center for Naval Analyses, Professional Paper 463, September 1988, <http://www.dtic.mil/cgi/tr/fulltext/u2/a202888.pdf>.

³² This reportedly is an argument made by General Martin Dempsey while he was serving as Chairman of the Joint Chiefs of Staff, in a briefing titled "Allies and Adversaries," describing the net effects of the Iraq and Afghanistan wars on the U.S. military and its comparative position with respect to other countries.

In concrete terms, there are at least two big questions to ask of the AVF model with respect to its ability to generate and incubate the ideas and talent for the next war: (1) Does the force adequately recruit, retain, select and reward *people* who generate ideas? (2) Do the AVF's *institutions* effectively generate, incubate, or disseminate ideas? The answers to each are mixed.³³ Indeed, the extent of recent Pentagon efforts to catalyze innovation suggests that existing legacy systems are doing a poor job of generating innovators and ideas, at least in the eyes of the current Pentagon leadership.³⁴

Does the AVF recruit, retain, select, and reward individuals who generate ideas?

Much of the current AVF model is built to recruit, retain, and manage manpower for the operational force. The recruiting, training, and educational functions all exist in subordinate and supporting roles. This system does a good job of selecting, promoting, educating, training, and rewarding leaders for tactical organizations, whether they be battalions, ships, or squadrons. It is not clear, however, that this current personnel system –optimized to produce operational officers and noncommissioned officers capable of leading tactical organizations –simultaneously can select, educate, and reward people for the generation of ideas.³⁵ Just as these functions are typically divided in the civilian sector, it appears that they are divided in the military as well, both in terms of the people who do them, and the institutions necessary to identify and develop them. Further, there is growing evidence to suggest that the current AVF system actually pushes innovators out of the force at various gates throughout their careers, through a variety of mechanisms.³⁶

Do military institutions effectively generate, incubate, or disseminate ideas?

The AVF has embraced education and training as critical elements of its human capital strategy. Broad-based education for officers and enlisted personnel contributes to the aggregate quality of the force, as well as its intellectual agility and ability to respond to myriad missions, environments, and threats. Task-focused training builds the competence of individual service members, crews, and units, and maintains the readiness of these individuals and elements through a constant churn of personnel. However, despite broad recognition of the importance of education for developing the

³³ In his new book, eminent strategist and historian Eliot Cohen notes the mixed track record of the services' educational institutions in this regard, finding they have generally failed to produce the ideas or intellectuals necessary to prevail in the nation's post-9/11 wars, let alone the ones that will follow. See Eliot Cohen, *The Big Stick: The Limits of Soft Power and the Necessity of Military Force* (New York: Basic Books, 2016), 82-84.

³⁴ Department of Defense, "Drell Lecture: 'Rewiring the Pentagon: Charting a New Path on Innovation and Cybersecurity,'" as delivered by Secretary of Defense Ash Carter, April 23, 2015, <http://www.defense.gov/News/Speeches/Speech-View/Article/606666/drell-lecture-rewiring-the-pentagon-charting-a-new-path-on-innovation-and-cyber>.

³⁵ David Barno, Nora Bensahel, Katherine Kidder, and Kelley Sayler, "Building Better Generals," CNAS, October 2013, <https://www.cnas.org/publications/reports/building-better-generals>. This is similar to the argument that the current AVF does an excellent job producing tactical leaders but a poor job of preparing senior leaders, particularly general and flag officers, for leadership and management at the strategic and political levels, or functioning in institutional positions for which tactical assignments are poor preparation.

³⁶ Tim Kane, *Bleeding Talent: How the US Military Mismanages Great Leaders and Why It's Time for a Revolution* (New York: Palgrave Macmillan, 2013). There are promising signs that the Department of Defense is beginning to embrace the role of innovation and idea generators, both demonstrated by the creation of Defense Innovation Units and the Defense Innovation Board, though it is still an open question as to the extent this attitude will begin influencing the military as an institution.

human capital of the AVF, professional military education institutions and military schoolhouses have not uniformly kept up with the pace of change nor served as engines of innovation for the military. The services, particularly the Army and Marine Corps, have responded to immense operational pressures from the Iraq and Afghanistan wars by diverting their best talent into operational assignments, not educational ones.

The Iraq and Afghanistan experience illustrates both the failure and potential of the military educational complex. Prior to the wars, the military's schoolhouses generally had abandoned the fields of peacekeeping, low intensity conflict, counterinsurgency, or the myriad related fields of study that eventually would find utility in Iraq and Afghanistan. Indeed, in 2003, the Army even moved to close down its peacekeeping doctrine center at the Army War College, only to reopen and enlarge the institute later.³⁷ In the years to come, tactical leaders overseas and the military educational leaders struggled to generate ideas to prevail in Iraq and Afghanistan, as well as to institutionalize these ideas through publications, teaching, and training. In a widely told story, it took three years before the Army's flagship educational complex at Fort Leavenworth undertook the task of rewriting Army counterinsurgency doctrine, in an effort led by then-Lieutenant General David Petraeus.³⁸ The Army and Marine Corps jointly published this doctrine at the end of 2006 – more than three and one half years into the Iraq war and more than five years into the Afghanistan war. And even then, it is unclear the ideas contained therein would have found traction in the field had Petraeus not taken command of forces in Iraq and later Afghanistan. Due to operational pressures, as well as a division of labor between military organizations, most military schools have narrowed their apertures to focus more narrowly on training and education, surrendering doctrinal development and innovation to other organizations across the force. Therefore, the services have had to rely on other organizations, inside or outside the Department, to generate ideas, while professional military education institutions increasingly have narrowed their focus and gotten out of the ideas business.

C. Lethargy

Most senior military leaders agree that conflict in the 21st century moves more quickly because of advances in weaponry, transportation, and communications technology. These advances have transformed the very physics and geometry of battle, such that the velocity of conflict today is significantly greater than ever before. Battlefield actions that once took days, weeks, or months to ripple across continents can now be felt in a matter of minutes or seconds. And yet today's military personnel system moves at the pace of the mid-20th century; it cannot respond, let alone change, in time to meet threats that the nation faces.

Whether the challenge has been to mobilize additional reserve forces, strengthen linguistic capability, build and deploy advisor teams, develop and field reconstruction teams, or develop regional expertise in programs like DoD's "AfPak Hands" effort,³⁹ today's military personnel system has

³⁷ Douglas Holt, "Army institute to be shut down," *Chicago Tribune*, April 15, 2003. <http://www.chicagotribune.com/news/nationworld/chi-0304150249apr15-story.html>.

³⁸ Fred Kaplan, *The Insurgents: David Petraeus and the Plot to Change the American Way of War* (New York: Simon and Schuster, 2013).

³⁹ The Department of Defense launched the Afghanistan-Pakistan (AFPAK) Hands (APH) Program in 2009, eight years after the war in Afghanistan began. Named for a group of experts referred to as "China hands" in the 1940s, the program is designed to build and train a cadre of experts with invaluable linguistic and cultural knowledge of Afghanistan and Pakistan. When training is complete, AFPAK Hands deploy overseas to work closely

been slow to respond. In some cases, like that of AfPak Hands, it took the military far too long to identify the requirement, let alone meet it with personnel.⁴⁰ In other cases, such as that of advisors and reconstruction team members, the services took years to field a permanent solution, relying in the short term on patched-together teams of individual augmentees, reservists, and contractors, even though these advising and reconstruction efforts reportedly represented the main effort at the time in Iraq.

To some extent, this problem of lethargy is caused by the very complexity of the AVF, as well as the competing imperatives within the force. Today's military remains designed for expansibility and interchangeability – two key design principles should the military ever need to grow by orders of magnitude to fight a world war, as it did twice during the 20th century. Decisions to move, stabilize, or segment personnel for a particular task can have ripple effects throughout the force, affecting everything from recruiting intake to future schooling and promotion selections. There is an operational imperative, however, for greater flexibility and speed. The military will never be able to predict future war well enough to align its personnel system to the needs of future war in advance. What is necessary is a personnel system that can adapt during war – changing recruiting, training, education, assignments, and other functions to meet demands on the battlefield. The current AVF personnel system is too lethargic to meet these demands and must be changed.

D. Rigidity

In addition to the speed with which the AVF adapts, the force also suffers from a limited range of motion and flexibility. Today's AVF is too rigid and inflexible to new demand signals, making important adaptation an effort that is most often frustrated by the immense bureaucracy of the personnel system. Talented individuals are unable to stray from predetermined career paths or advance at an accelerated rate, and the talent management system continues to place personnel in ill-fit roles reflective of a massive impersonal bureaucracy, when modern “marketplace” alternatives exist that both benefit individual preference and the best interests of the services in aligning talents to roles and maintaining retention and morale.

One particular area where such rigidity is causing immense talent management problems is the cyber field, where traditional hierarchical career paths and team management impedes the best practices in the technology sector. This not only impedes productivity within the cyber military occupational specialty but also precludes competing for the best talent in the field. The military is largely unable to modify rank, pay scale, and benefits to compete for talent in an already saturated and competitive marketplace. Similarly, the Air Force is facing a pilot shortage crisis, but the rigidity of the system prevents offering higher bonuses or other incentives in order to retain critical personnel. These examples highlight how rigidity intended to make personnel interchangeable and replaceable is having the opposite effect on highly skilled service members; the inability to adapt to the modern marketplace is damaging retention efforts for personnel the military struggles to replace.

with senior Afghan and Pakistani military and civil authorities, with the intent to sustain U.S. working relationships with those governments. M. W. Lee, “The Afghanistan-Pakistan Hands Program,” Army.mil, February 11, 2014, https://www.army.mil/article/115523/The_Afghanistan_Pakistan_Hands_Program.

⁴⁰ Jason Dempsey, “Our generals failed in Afghanistan,” The Best Defense blog on ForeignPolicy.com, October 18, 2016, <http://foreignpolicy.com/2016/10/18/our-generals-failed-in-afghanistan/>.

E. Compatibility with the U.S. Labor Market

By necessity, the AVF must be different from the civilian labor force. It must be capable of recruiting, training, and maintaining ready units that can deploy and function in combat, a task unlike any performed by any commercial or non-military organization. Even the most analogous organizations, such as law enforcement agencies or intelligence agencies, do not require their personnel to face the same rigors or dangers on a continuous basis, nor deploy under the same conditions or work in the same unit structure. These operational imperatives require the AVF to manage its human resources differently than any non-military organization.

And yet the AVF must also align to some extent with the civilian labor force. It draws its recruits from the U.S. educational system, and cannot diverge too far from this system, nor the norms taught in schools or employment to American youth. The AVF also discharges its veterans into the civilian labor force, and cannot maintain such a dissonant system that its veterans experience great difficulty when they transition to civilian work.⁴¹ Moreover, nearly half the AVF serves in the reserve components, requiring their military and civilian work obligations to mesh in order to support simultaneous reserve service and gainful civilian employment.

The current AVF may have grown as far apart from the civilian workforce as it should – or perhaps just beyond the threshold of what makes sense. The military's current standards preclude almost 75 percent of youth from being qualified to join the armed forces. This is increasingly problematic for meeting recruiting goals. It also poses challenges due to the fact that not every military role requires the same skill sets and standardized admittance may preclude valuable assets from being able to serve the nation.⁴² Relatedly, the current cohort of young service members are “millennials”⁴³ and have an increased expectation and desire for work/life balance and flexibility. Such expectations may clash with military culture and create issues with respect to first-term attrition and/or retention of millennials and post-millennials.

Finally, major societal changes with respect to marriage, dual-income families, and the interactions between family life and work life have occurred during the past 40 years. Many of those changes place the military at odds with society in problematic ways. One example is the interaction between military life and assortative mating – the scientific term for mating between individuals that share

⁴¹ One of the reasons for stubbornly high post-9/11 veterans' unemployment is, in fact, the stark difference between the military's personnel systems and the civilian workforce. “... leaving the military, as more than 80 percent of service members do well before they reach retirement, may provoke serious culture shock, even for those who haven't recently served in a war zone. For some new veterans, it is the first time they've had to find a house, pick a school for their kids and apply for a job, let alone interview for one. They have enormous experience and expertise relating to their military jobs, but they lack basic life skills and experience.” Phillip Carter and David Barno, “Military bases are our most exclusive gated communities – and that hurts veterans,” *The Washington Post*, November 8, 2013, https://www.washingtonpost.com/opinions/military-bases-are-our-most-exclusive-gated-communities-and-that-hurts-veterans/2013/11/08/27841b1e-47cb-11e3-a196-3544a03c2351_story.html?utm_term=.fb8f34173a11.

⁴² W. J. Hennigan, “Overweight, tattooed, stoned? The Pentagon may still want you,” *Los Angeles Times*, November 3, 2016, <http://www.latimes.com/nation/la-na-modern-military-20161103-story.html>.

⁴³ Millennials are generally defined as those individuals born after 1980, or those who came of age at the start of the new millennium. Paul Taylor, Carroll Doherty, et al., “Millennials in Adulthood: Detached from Institutions, Networked with Friends,” Pew Research Center, March 2014, http://www.pewsocialtrends.org/files/2014/03/2014-03-07_generationsreport-version-for-web.pdf.

traits.⁴⁴ The U.S. military draws upon a relatively elite slice of American society that is, on average, more educated, more likely to pursue further education, and more likely to participate in the labor force than the rest of America. The economic data regarding assortative mating suggests that military personnel are also more likely to marry spouses like themselves, resulting in a military that is increasingly composed of dual-income families in which both spouses have career ambitions and in which both spouses also have career options outside of the military. However, much of the current AVF model continues to revolve around an anachronistic single-income family model, in which the second spouse has no career, or has a career easily subordinated to military service. Over time, this secular trend is likely to continue, creating more and more dissonance for military members married to high performing spouses.

F. Waste and Inefficiency

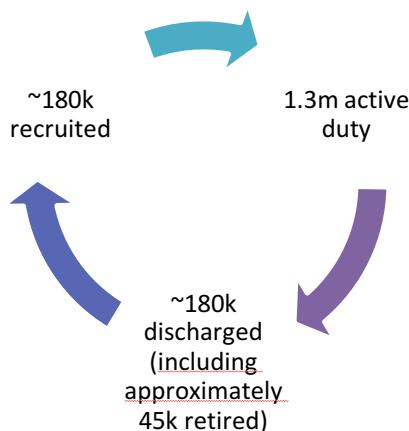
Today's AVF model is an enormously complex machine that brings in roughly 180,000 persons per year for active service, trains them, distributes them around the world, and then discharges a similar number who have reached the end of their military service. A similar number are recruited and discharged each year by the reserves.⁴⁵ This machine creates a large amount of waste in the classic economic sense – the profligate use and discarding of personnel by the service, often with little measurement of efficiency or effectiveness. The current AVF model sacrifices efficiency in service of expansibility, interchangeability, or the military's up-or-out promotion system. This waste or inefficiency is distinct from cost; it is a function of the AVF model itself, and exists apart from how well the military compensates its personnel. Nonetheless, this waste is magnified by the extent to which the military's compensation package has grown, making the waste even more costly because of how costly each individual service member has become.

The massive throughput of the AVF is the first great instance of waste. Figure 3 depicts the intake and discharge throughput of the active force, by service, during FY 2013, the most recent year for which complete data is available.

Figure 3. Annual Recruitment and Discharge Rates, FY 2013

⁴⁴ Jeremy Greenwood, Nezih Guner, Georgi Kocharkov, and Cezar Santos, "Marry Your Like: Assortative Mating and Income Inequality," *American Economic Review*, 104 no. 5 (May 2014), 348–53; Rich Morin, "New academic study links rising income inequality to 'assortative mating,'" Pew Research Center, January 29, 2014, <http://www.pewresearch.org/fact-tank/2014/01/29/new-academic-study-links-rising-income-inequality-to-assortative-mating/>.

⁴⁵ Over the past decade the annual turnover rate for the Selected Reserves has ranged from 133,000 service members in 2010 to a high of 161,000 service members in 2005. End strength and losses were used to estimate average annual turnover and accessions. Office of the Deputy Assistant Secretary of Defense (Military Community and Family Policy), "Demographics Reports," http://www.militaryonesource.mil/footer?content_id=279104.



Source: Department of Defense, Defense Manpower Data Center. Obtained via Freedom of Information Act request, July 2015.

These throughput statistics translate into a 15 percent turnover rate for the active force in a given year. Although this rate is not high by corporate standards, it's notable for a few reasons. First, turnover is highest in the military's junior ranks, in front line air, sea, and ground units, where the need for greater continuity is paramount. Second, the plurality of this turnover occurs at the end of the first or second enlistment, at the precise moment when service members are just acquiring proficiency in their core tasks, or being trusted with their first management responsibilities. In shedding those service members after four to eight years of service, by design, the military is pushing out people before it would get the benefit of having them serve. Third, the high throughput of recruiting and discharge exerts enormous pressure on the rest of the force. The churn and waste caused by this throughput alone warrants further study. The problem of churn lends itself well to scenario wargaming, and would benefit from analysis into the impacts of adjustments in the various independent variables such as enlistment lengths, tour lengths at a duty station, and other policies as necessary to assess the impact on the effectiveness of the force.

A second major source of waste in the current AVF model is the problem of “first-term attrition” – the failure of service members to reach the end of their first term of enlistment. This has been a perennial problem for the AVF since the 1970s.⁴⁶ Service members separate before the end of their first term of enlistment for many reasons, but there are generally two root causes: failure of the recruiting system to bring in the right people and failure of the individual to adjust to expectations and requirements of military life. Current data suggests the first-term attrition rates for the Army hover around 25–30 percent of the force; given that it costs approximately \$22,300 to recruit one soldier (plus salary, benefits, and equipment for new recruits),⁴⁷ first-term attrition results in a significant loss of investment.⁴⁸ In many ways, this problem relates to the first: The services recruit

⁴⁶ Richard Buddin, “Success of First-Term Soldiers: The Effects of Recruiting Practices and Recruit Characteristics,” (Santa Monica, CA: Rand, 2005).

⁴⁷ U.S. Army Recruiting Command, “Frequently Asked Questions,” <http://www.usarec.army.mil/support/faqs.htm#costper>.

⁴⁸ The reasons for first-attrition include, but are not limited to, physical fitness failures, failures to meet initial entry standards, injury or illness, behavioral problems, and military justice problems. To the extent that recruits are injured or harmed in the recruiting process, the government likely incurs a lifetime liability to these recruits in the form of veterans’ health care and disability compensation. Those costs are rarely factored into discussions regarding military recruiting, because they are paid by the Department of Veterans Affairs via separate appropriations.

too many of the wrong people because of the high volume of throughput demanded by the AVF model. The first-term attrition problem also relates to the manner in which new recruits are selected, screened, tested, and accessed into the military through initial-entry training. Better screening mechanisms are needed to identify successful recruits before they enter the service. A more efficient model could also do this selection, assessment, screening and training differently, perhaps through more intense “assessment and selection summer camps,” or less intense but longer programs akin to Junior Reserve Officers Training Corps.

Within the AVF itself, the services generate enormous waste through the churn of the force, defined as the movement of personnel between jobs and locations within the force. Each year, the services move approximately one-third of their military personnel to another physical location through “permanent change of station” moves; these are more frequent for more senior personnel. In parallel, each year, the services move approximately half of all personnel to a new position; these moves also accelerate for more senior personnel, driven by command and staff tours that last 12, 18, or 24 months. These frequent moves generate enormous waste across the force. The actual costs relating to frequent geographic movement of personnel are non-trivial. These frequent moves also impose costs on military families that include, but are not limited to, employment difficulties for military spouses; educational challenges for military children as they matriculate through multiple schools, domestically and abroad; and difficulty building home equity over time, which can have a significant effect on lifetime family wealth. In addition to these pecuniary costs, the AVF’s frequent moves waste expertise and experience by transferring individual service members to new positions just as their expertise and experience peaks. There is also a significant fiscal cost to frequent permanent changes of station, which has been shown to be rising since 2001, and is particularly troublesome given the budgetary shortages facing the DoD today.⁴⁹

A fourth significant cause of waste is the services’ husbanding of non-deployable personnel. This includes two large categories of personnel: first, those in transit, schooling, or otherwise unavailable to the deployable force structure; and second, the percentage of any given deployable unit that cannot deploy for medical, legal, or other reasons. Waste due to personnel movement, schooling, and temporary assignment may be inevitable in a military machine that desires mobility, training, education, and interchangeability. However, the amount of personnel who fall into this category is non-trivial, and particularly costly. Any service effort to make this more efficient – such as by reducing the cyclical churn of the AVF through reassessments and geographic moves – will yield savings. The second type of non-deployable personnel waste is more problematic, because it relates more closely to readiness. At any given time, across the services, according to a broad survey of government data and interviews with senior military officials, approximately 7–10 percent of deployable unit personnel are non-deployable. This percentage includes personnel who are non-deployable for permanent medical reasons (such as injuries or illnesses that make them unfit for duty); personnel with temporary medical issues such as pregnancy or pending immunizations, dental examinations, or medical examinations; personnel facing military justice proceedings; personnel near the end of their enlistments, or facing administrative separation; and numerous other categories of

⁴⁹ U.S. Government Accountability Office, *Military Compensation: DOD Needs More Complete and Consistent Data to Assess the Costs and Policies of Relocating Personnel*, GAO-15-713 (September 2015), 2. Contributing to this rise in per-move price is that, due to lack of complete and consistent data surrounding these moves, DoD is unable to identify specific sources of waste or address systemic inefficiencies.

personnel. To some extent, the advent of “wounded warrior” units has reduced this percentage by giving operational commanders a way to transfer non-deployable personnel out of their line units.⁵⁰

And finally, a fifth kind of waste caused by the AVF is its discarding of personnel at the end of their service. The rigid bureaucracy surrounding promotion and retirement forces personnel out of the military at the height of their expertise. Defense Officer Personnel Management Act regulations prevent those who are not promoted from continuing to serve in their current role, regardless of skill level. Similarly, the 20-year retirement cliff often leads to an exodus of talent once that benchmark has been met, yet limitations on years of service similarly force service members into retirement. The transition to a blended retirement system as recommended by the Military Compensation and Retirement Modernization Commission⁵¹ may serve to mitigate some of these issues.

G. Costs

Setting aside the structural issues of waste and inefficiency described above, the current AVF costs a lot of money on a per-service member basis. The increasing costs of the AVF compound the effects of poor decisions regarding the allocation and management of manpower, such as the choice of active over reserve forces (or vice versa), because the unit cost of each service member is so high. The unit cost of the AVF also creates pressure to reduce manning in ways that may deserve more study, such as reliance on contractor manpower or unmanned systems.

Personnel costs have been increasing steadily since the creation of the AVF, but particularly over the past 25 years, as the AVF has increasingly competed with the civilian economy. As a proportion of the total defense budget, personnel costs make up roughly the same share (approximately 25 percent) of defense spending today as in 1990. However, the uniformed military shrank by a third after the Cold War, meaning that DoD is spending far more today on a smaller force than it did 25 years ago.⁵² Adjusting for inflation, DoD spends 46 percent more on personnel costs than it did in 2000.⁵³ The department also spends considerably more now to compensate retirees – a projected \$55 billion in outlays for FY 2017 – with a generous defined-benefit pension that vests upon 20 years of service.⁵⁴ Alongside compensation, DoD spends more on health care for active and reserve troops, retirees, and their family members; this increase has been driven by the addition of valuable benefits (like TRICARE For Life for retirees) that have enlarged the beneficiary population, and increases in the cost of American health care. Alongside these compensation and health expenditures, DoD also

⁵⁰ A 2010 column by the former Deputy Undersecretary of Defense for Wounded Warrior Care described Warrior Transition Units as “dumping grounds” for non-deployable soldiers. Noel Koch, “Former Pentagon personnel official: The warrior units are holding tanks for misfits,” The Best Defense blog at ForeignPolicy.com, June 16, 2010, <http://foreignpolicy.com/2010/06/16/former-pentagon-personnel-official-the-warrior-units-are-holding-tanks-for-misfits>.

⁵¹ Military Compensation and Retirement Modernization Commission Research Compendium, <http://www.mcrmc-research.us/02%20-%20Final%20Report/index.html>.

⁵² Alex Gold and Mackenzie Eaglen, “Trends in Military Compensation: A Chartbook,” Bipartisan Policy Center and American Enterprise Institute, 2014, 5, https://www.aei.org/wp-content/uploads/2014/07/eaglentrendsinmilitarycompensationjuly2014chartbook_141227584026.pdf.

⁵³ Congressional Budget Office, “Growth in DoD’s Budget From 2000 to 2014,” November 20, 2014, <https://www.cbo.gov/publication/49764>.

⁵⁴ For more on the mechanics of the current U.S. military compensation and retirement system, see Carter and Kidder, “Military Compensation and Retirement Modernization.”

provides a broad array of programs for troops and families including commissaries, tuition assistance, base housing and activities, and other support.

Cumulatively, all of these expenditures have been cited as important factors in the preservation and sustainment of the AVF during 15 years of war. However, uniformed and civilian leaders have expressed grave concern about the pressure exerted by these personnel-related costs on the ability of the department to maintain readiness, particularly in an era of fiscal austerity. “Health care costs are eating the Defense Department alive,” said then-Defense Secretary Robert Gates in 2010.⁵⁵ Retired General Martin Dempsey echoed this concern more recently, saying that “[a]t the current rate of growth, the amount of money that the [Defense] department has to spend to sustain the All-Volunteer Force could place us out of balance, meaning we won’t have enough money to put into training, equipping, and readiness because we will be over-invested in manpower costs.”⁵⁶

To a great extent, these concerns have been magnified over the past five years, as the nation has grappled with an era of fiscal austerity driven by rising national debt, the costs of the wars, the costs of entitlement and other domestic spending, and congressional unwillingness to raise taxes while the nation is still recovering from a sharp recession. Fiscal austerity resulted in the Budget Control Act, and its draconian mechanism of sequestration, that commanded sharp spending cuts across the board in nearly every agency, including DoD. This era of budgetary tightening also creates a “zero sum” dynamic within DoD, in which personnel spending must duel with spending on operations, maintenance, and modernization. The net effect is to place enormous pressure on DoD leadership to find efficiencies within the existing AVF – through cuts to end strength, compensation or benefits, or changes in the business model.

H. A Growing Civil-Military Divide

Today’s civil-military divide reflects the population that has chosen to serve in the AVF. This divide is a function of many things: health, family history, geography, class, educational qualifications, criminal background, and substance abuse, to name a few. Each of these factors narrows the pool of young Americans who are both qualified to serve in today’s military – and interested in doing so. Recent service reports estimate that approximately one quarter of American high school graduates are qualified to serve in today’s military – with high school completion, substance abuse, criminal justice system involvement, and fitness being the major limiting factors. In parallel, the military estimates that roughly 19 percent of American youth have the propensity to serve, defined as respondents ages 16–21 who respond “probably” or “definitely” to the question, “How likely is it that you will be serving in the military in the next few years?”⁵⁷

To get beyond 25 percent of youth eligible to serve, the military has two basic choices: It can relax current recruiting standards, as contemplated by former Secretary Carter’s latest Force of the Future

⁵⁵ Elisabeth Bumiller and Thom Shanker, “Gates Seeking to Contain Military Health Costs,” *The New York Times*, November 28, 2010, http://www.nytimes.com/2010/11/29/us/29tricare.html?_r=0.

⁵⁶ Tom Bowman, “Gen. Dempsey: Better To Get Others To Solve Their Own Problems,” NPR, January 17, 2014, <http://www.npr.org/sections/thetwo-way/2014/01/17/263472598/gen-dempsey-better-to-get-others-to-solve-their-own-problems>

⁵⁷ Andrew Tilghman, “The Pentagon keeps data on millennials. This is what it says,” *Military Times*, July 9, 2016, <http://www.militarytimes.com/story/military/2016/07/09/pentagon-keeps-data-millennials-what-says/86594460/>.

initiatives,⁵⁸ or take a much stronger approach to upstream interventions aimed at increasing future eligibility in American youth. Yet, eligibility is not enough, and the growing civil-military divide not only raises questions of who bears the burden of military service but also increases the propensity challenges facing military recruiting today.

For many, if not most, of the population, military service is an avenue left unexplored and unconsidered. Less than 1 percent of the population has served in the armed forces, and it is an occupation that sees many of its recruits come from families with a history of military service, primarily from the South. Though there are certainly those who feel the call of service from all parts of the nation and across the socioeconomic spectrum, the compartmentalization of military service in the United States has led to an increasing civil-military gap and a concern that the use of military force is so far removed as to be unfelt by the general population. A 2015 Harvard IOP Poll finds a striking imbalance between those who recommend the United States use force and those who would be willing to serve in the armed forces.⁵⁹ Particularly among the youngest generation, there appears to be a missing connection between the use of military force and military service. This outsourcing of responsibility also leads to a disconnect between service members and society, with limited interactions and perceptions fueling dual narratives: Those who serve are seen as either victims or heroes but rarely as relatable people, which may drive down the ability to recruit among the growing majority of the populace who are unfamiliar with military service.

The All-Volunteer Force has led to a decline in general familiarity with the armed forces over time, which is becoming particularly prominent in the millennial generation, with only one-third of those ages 18–29 noting an immediate family tie to the military, down from close to 60 percent among those ages 30–49.⁶⁰ However, examining who does choose to serve, one pattern that emerges is a family history of service. A substantial number of those who choose to serve come from families with a tradition of military service, possibly leading to the creation of a “warrior caste.” Between 77 and 86 percent of new military recruits have a family member who has served in the military, and approximately one-third have a parent who has served.⁶¹ This narrowing of the population seems to create a self-replicating cycle of service that is somewhat contained among military families, who bear a disproportionate burden of service.

When drawing repeatedly on such a narrow pool of people, over time the recruiting pool has shrunk to the point where in times of stress on the force, effective expansion appears to be beyond reach. As eligibility and propensity have made recruiting more challenging, the U.S. economy also has changed substantially since the time of the AVF’s creation, making it increasingly difficult for the force to compete with a dynamic and expanding economy for talent.

In the future, a smaller, leaner military will have to meet the challenges of a volatile, unpredictable world, but also have the ability to rapidly expand if needed to meet potential future threats over the

⁵⁸ Andrew Tilghman, “The military may relax recruiting standards for fitness and pot use,” *Military Times*, November 1, 2016, <http://www.militarytimes.com/articles/recruiting-standards-may-change-secdef-says>.

⁵⁹ Harvard University Institute of Politics, “Survey of Young Americans’ Attitudes Toward Politics and Public Service,” 28th ed., Fall 2015, <http://iop.harvard.edu/survey/details/harvard-iop-fall-2015-poll>.

⁶⁰ Pew Research Center, “War and Sacrifice in the Post-9/11 Era,” October 5, 2011, <http://www.pewsocialtrends.org/2011/10/05/war-and-sacrifice-in-the-post-911-era/>.

⁶¹ Department of Defense, “JAMRS New Recruit Survey, Wave 1,” July 2013.

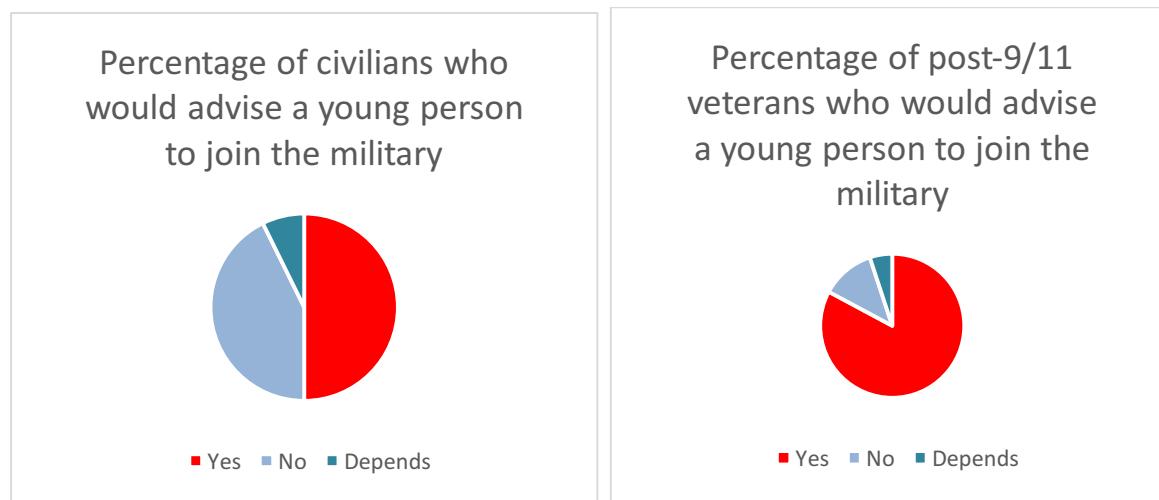
horizon.⁶² The human capital of the military will be the most critical ingredient of its readiness for the future, and a hedge against future uncertainty. The time has come to think about this human capital in a strategic way, and to plan for the All-Volunteer Force of the future – AVF 4.0 – that can provide the U.S. military what it needs to succeed.

I. Transition.

The current All-Volunteer Force model also poses challenges for service members who transition out of the force, a key constituency influencing youth propensity to serve and promoting the armed forces as a viable career option. The annual “churn” of the force provides a key opportunity to promote veteran outcomes as a means by which to encourage military service. Though the current total force is composed of only 3.5 million people, the veteran population is over 22 million and distributed throughout the nation. Veterans are much more likely than non-veterans to recommend military service to youths [see Figure 4], and thus their effective transition may be an important part of sustaining an All-Volunteer Force.

There is an inherent tension for the military services and unit commanders, who must prioritize the readiness of their force over the successful transition of departing service members.

Figure 4. Percentages of Civilians and Post-9/11 Veterans Who Would Advise Military Service



Source: Pew Research Center, “War and Sacrifice in the Post-9/11 Era,” October 5, 2011, <http://www.pewsocialtrends.org/2011/10/05/war-and-sacrifice-in-the-post-911-era/2/#chapter-1-overview>.

However, the AVF has a mixed track record over the past several years with respect to the success of its veterans. Unemployment for post-9/11 veterans soared in 2009–2011, reaching levels of 15 to

⁶² Brigadier General John Brown, U.S. Army (Ret.), “Thoughts on an Expansile Army,” *Army*, April 2014, https://www.usa.org/publications/armymagazine/archive/2014/Documents/april14/HistoricallySpeaking_April2014.pdf.

20 percent for young veterans without a college education.⁶³ Employers reported great skepticism regarding veteran hires, expressing fears regarding post-traumatic stress, suitability for civilian work, reserve mobilization, and other potential problems – even though discrimination against veterans and reservists is generally prohibited by law.⁶⁴ As late as 2013 and 2014, a majority of separating soldiers from the Army filed for unemployment after service, reflecting the continuing difficulty of transition for separating troops. These challenges led to statutory change, as well as a concerted effort by the public and private sectors to boost employment prospects for departing service members. These efforts have met with considerable success, reducing both the overall veterans' unemployment rate and post-9/11 veterans' unemployment rate to historic lows.⁶⁵ Because of the annual throughput of the military, however, and the challenges facing veterans as they transition into the civilian workforce, some level of veteran unemployment challenges will likely persist. This should matter more to the AVF, and the DoD leadership, than it does today. There is arguably a connection between the economic success of veterans after service, the propensity of veterans and non-veteran adults to recommend service, and the propensity of youth to join the military. To sustain itself, the AVF should seek ways to develop a virtuous cycle of service and success after service, that results in veterans recommending service, and non-veterans recommending service, based on their perceptions of the outcomes for veterans after they leave the military.

V. Next Steps

While Congress and senior uniformed leadership wrestled with personnel reforms laid out by the Force of the Future initiative, there remains a set of strategic issues facing the All-Volunteer Force and its ability to succeed in meeting the nation's national security objectives. These problems include those listed above: quality, intellectual capital development, rigidity and lethargy, waste and inefficiency, cost growth, the growing civil-military divide, and transition challenges. This research will further examine the design principles and assumptions underlying the existing structure, such as interchangeability and equity, and challenge those assumptions in light of the needs of the 21st-century mission set.

Moreover, the series will examine the most promising ideas addressing the issues, to include:

- Moving beyond the storefront model of recruitment
- Increasing the standardization of quality among commissioning sources
- Using civilian institutions (universities and private sector opportunities) to build the skillsets of service members
- Using better data analytics to drive efficiency and effectiveness in the system
- Slowing the pace of churn, both geographically and over the course of a career
- Increasing the diversity of experience and geography to drive innovation.
- Using the case study of cyber forces to develop new models of recruiting, retention, training, and talent management to meet emerging and evolving national security requirements.

⁶³ Amy Schafer, Andrew Swick, Katherine Kidder, and Phillip Carter, “Onward and Upward: Understanding Veteran Retention and Performance in the Workforce” CNAS, 2016.

⁶⁴ Margaret C. Harrell and Nancy Berglass, “Employing America’s Veterans: Perspectives from Business,” CNAS, 2012.

⁶⁵ Kimberly Hall, Margaret C. Harrell, et al., “Veteran Employment: Lessons from the 100,000 Jobs Mission” (Santa Monica: Rand, 2014).

An evolving threat environment requires the United States to re-evaluate the capabilities it needs from its individuals in uniform, how it can recruit the right talent pool, and how it can manage its human capital to retain the skills necessary for meeting the threat.