THE EVOLUTION OF GENDER INTEGRATION IN THE DEPARTMENT OF THE NAVY

In the nearly half century since the advent of the All-Volunteer Force, women's share of active component personnel in the Department of the Navy (DON) increased from just 2 percent of total inventory to more than 15 percent. As background research for a major study on DON personnel costs and gender, sponsored by the Assistant Secretary of the Navy (Financial Management and Comptroller), CNA surveyed the events, policies, and research that surrounded this increase in female representation. In the course of our investigation, we identified three phases of gender integration that delineate the DON's evolving approach to women's roles in its forces and, ultimately, their contributions to its warfighting missions.

Policy research during the three evolutionary phases has been associated with changing assumptions about women's place in the military, as well as in society at large. Over time, cognitive biases have eroded, leading to increasingly objective approaches to policy questions and analysis. Some of the latest research even turns early assumptions on their heads. The evolution is not yet complete, but a better understanding of these developments can accelerate progress toward a fully integrated Navy and Marine Corps.

RESEARCH DURING THE DON'S GENDER INTEGRATION EVOLUTION

The **early phase, 1973–1993,** began with the introduction of the All-Volunteer Force. Female representation increased from a very low base, but growth was limited by a complete formal prohibition on women serving in combat roles. The DON raised only a few issues to resolve analytically, due to a lack of appropriate data and a sense that the question of whether and how women should serve was mostly a political and social issue. The main questions raised during this phase reflected an uneasiness with change:

- Do women have the physical strength to do various military jobs?

- Will the introduction of women have a negative effect on morale and efficiency?

The **transitional phase, 1994–2007,** began with the repeal of the combat exclusion laws and the subsequent decision by Secretary of Defense Les Aspin to open surface combatant vessels and combat aviation to women. The accession of greater numbers of women led to a demand for analysis of the costs of integration. Lower female retention was accepted as an immutable fact, and changes were measured against the historical norm of an all-male force. It also happened to be a period of focus on the effectiveness of targeted special and incentive pays, which are not well suited to addressing gender issues, primarily because explicit gender-based pay differentials are illegal. This environment was reflected in typical questions of the transitional phase:

- What are the readiness and cost implications of pregnancy?

- How large is the gender retention gap, and what are its costs?

- How can the DON use targeted compensation as a force management tool, regardless of gender?

In both the early and transitional phases, decision-makers and analysts alike may have been prevented from thinking objectively and creatively about personnel policy by

early phase
transitional phase
modern phase

1970   1980   1990   2000   2010   2020
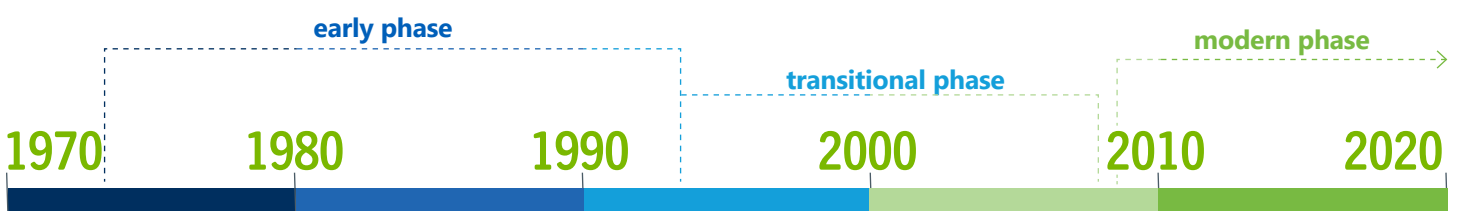
cognitive bias. Research has shown that cognitive bias commonly distorts both decision-making processes and their outcomes. CNA identified several forms of interrelated bias that have tended to limit the questions asked and the data used to examine DON gender integration.

For example, *status quo bias* can cause decision-makers to overweight the potential costs of a change relative to its potential benefits. Hence, a great deal of attention was devoted to the costs of women in terms of lower retention, while very little attention was given to the potential benefits of including women in the force or to the ways that men might impose costs that women do not. In *anchoring bias,* the mind gives disproportionate weight to the first information it receives. For example, as the share of women in the services increased in the 1990s, a gender retention gap emerged. In this context, anchoring bias contributed to a general impression that this retention difference was immutable—a fact to be managed around.

These biases have weakened in the third, **modern phase** of the DON's gender integration evolution. This current period begins in **2008**, a point at which female representation picked up after plateauing at the end of the transitional phase. In the modern phase, the Department of Defense eliminated the last restrictions on female participation, such as serving on submarines and in direct ground combat roles.

Policy questions during the modern phase have begun to focus on how to achieve full gender integration. The widespread participation and leadership of women in the Navy and Marine Corps eroded the notion of an all-male force as the baseline expectation. At the same time, the former emphasis on targeted pay incentives has broadened to include nonmonetary benefits. These evolving ideas in the modern phase have led to new analytical questions:

- What are the causes of gender retention differences?

- How can nonmonetary benefits minimize the retention gap and improve conditions for all servicemembers?

- What is the full list of costs and benefits—including costs associated with men and benefits associated with women—that leads to more accurate cost-benefit analyses of gender integration?

FIVE ANALYSES OF GENDER AND PERSONNEL COSTS

CNA's new quantitative analyses for the DON are best understood in the context of the historical evolution described above.

1. *What are the cost implications of gender differences in misbehavior among enlisted personnel in the Navy and the Marine Corps?* This modern-phase question demonstrates the erosion of the status quo bias. The results are a reversal of older assumptions about the costs of integrating women: **Higher rates of male misbehavior**, which generated more than 3,000 extra misbehavior incidents annually**,** cost the DON at least $250 million a year.

2. *What are the drivers of gender differences in Navy post-bootcamp, pre-fleet enlisted attrition rates?* This question avoids the anchor bias that made women's retention rates seem immutable. Following from previous research, it seeks to identify the precise times in Navy careers when the retention gender gap increases and to examine potential causes of retention differences as a first step toward their elimination. In fact, the analysis showed that, **at the post-bootcamp, pre-fleet stage, lower retention of women appears to be limited to a small number of high-skilled positions** and persists even after controlling for other factors. These findings suggest a need to better understand what makes women's experiences different in these training pipelines.

3. *How did the 2015 increase in maternity leave for uniformed personnel affect female reenlistment and manning in the Navy?* Modern analyses of nonmonetary benefits, such as maternity leave, demonstrate a creative approach to retention incentives. This analysis showed that after the policy change, **female first-term reenlistment rates increased relative to male rates**. The weeks lost to the Navy in extra maternity leave were more than compensated by higher reenlistment levels.

4. *What is the effect of colocation on retention for married servicemembers?* This analysis demonstrates an important feature of nonmonetary benefits: while incentivizing retention of women, they also can improve conditions for men. The analysis demonstrated that, for certain reenlistment zones, female *and* male servicemembers colocated with their same-service military spouses were **more likely to reenlist** than their noncolocated counterparts. In performing this research, CNA analysts uncovered another insight that questions previous assumptions: in their first six years in service, single women were more likely than single men to reenlist. Among Marines, the difference was especially pronounced; the estimated reenlistment probability was 40 percent for single women versus 25 percent for single men.

5. *How does the cost-minimizing combination of accession and selective reenlistment bonus (SRB) policies vary as the gender mix of Navy enlisted accessions changes?* Unlike the previous four analyses, this question does take lower retention for women as a given. In that way, it resembles questions from the transitional phase. Nonetheless, it is an important update of a practical approach for near-term accession and retention planning decisions. CNA created a prototype stochastic inventory project model (SIPM) that is the first of its kind to aid in determining cost-minimizing combinations of accession and SRB strategies in light of changes in the female share of accessions over time. The prototype has **demonstrated the potential to achieve savings** with accession-SRB combinations tailored to individual communities.

FURTHER READING

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ABOUT CNA

CNA is a nonprofit research and analysis organization dedicated to the safety and security of the nation. It operates the Center for Naval Analyses — the only Federally Funded Research and Development Center (FFRDC) serving the Department of the Navy — as well as the Institute for Public Research. CNA is dedicated to developing actionable solutions to complex problems of national importance. With nearly 700 scientists, analysts and professional staff, CNA takes a real-world approach to gathering data. Its one-of-a-kind field program places analysts on carriers and military bases, in squad rooms and crisis centers, working side-by-side with operators and decision-makers around the world. CNA supports naval operations, fleet readiness and great power competition. Its non-defense research portfolio includes criminal justice, homeland security and data management.