This product is part of the RAND Corporation monograph series. RAND monographs present major research findings that address the challenges facing the public and private sectors. All RAND monographs undergo rigorous peer review to ensure high standards for research quality and objectivity.

Alternative Futures and Army Force Planning

Implications for the
Future Force Era

Brian Nichiporuk

RAND ARROYO CENTER

The RAND Corporation is a nonprofit research organization providing objective analysis and effective solutions that address the challenges facing the public and private sectors around the world. RAND's publications do not necessarily reflect the opinions of its research clients and sponsors.

RAND˚ is a registered trademark.

Summary

Overview

Predicting the future is almost always fraught with uncertainty. However, Army force developers working to plan a force capable of meeting the challenges of the 2025 timeframe (the Future Force era) face more uncertainty than most. Today's world, especially in the wake of the September 11, 2001 terrorist attacks and the Iraq war, exhibits a level of dynamism and change not seen during the comparatively static decades of the Cold War—times when the drivers of U.S. security policy were relatively fixed and their demands upon the Army easily identified.

This study has attempted to help the Army deal with the task of long-term force planning by using the tool of alternative futures analysis. Rather than positing a single point estimate of the 2025 future and trying to defend it, we chose to help the Army bound the future by laying out a representative spectrum of different "future worlds" in the hope that they would illustrate the complete universe of future missions.

Project Methodology

The study's methodology begins with the identification of five development variables: geopolitics, economics, demographics, technology, and the environment. These variables were drawn from drafts of The Army Plan (TAP) that were circulated in late 1997. Conversion of

the development variables into alternative futures was accomplished by varying the slopes of the trend lines of the five according to their impact upon U.S. national interest. Good, medium, and bad slopes were determined for each variable.

A good slope was defined as one that was beneficial to U.S. national interests. A medium slope was defined as one that was largely neutral, while a bad slope was one that was damaging to the United States and its interests. We then labeled the features of each trend line with respect to the given development variable and produced a 5×3 matrix. The five development variables were arrayed vertically and the three types of slopes arrayed horizontally. The cells of the matrix were then filled with the labels for each individual trend line.

Through a process of mixing and matching cells, we produced a set of six alternative futures: "U.S. Unipolarity" and "Democratic Peace" (best cases), "Major Competitor" and "Competitive Multipolarity" (medium-good cases), "Transnational Web" (a medium-bad case), and "Chaos/Anarchy" (worst case).

After the main features of each world were fleshed out, concrete army types for each 2025 world were created. This entailed four steps. Scenario selection was the first of these steps. Each scenario was made as demanding as possible in the world at hand because it was necessary to ensure that the army types we created would be capable of handling all possible eventualities in each world. Secondly, there was a need to set out the capabilities that the Army forces involved would have to possess to carry out their mission in each scenario. This was done by using the strategies-to-tasks methodology. Third, force size and characteristics for each world were determined. Characteristics were formulated as technical system types that meet the needs presented in our capability statements. For each scenario, all the needed characteristics were combined into a bundle that provides the outline of an army type. Fourth and finally, common characteristics seen across all or most of the six army types were identified.

Describing the Alternative Futures

U.S. Unipolarity is a best-case future in which the United States remains the world's dominant power across the board, i.e., militarily, economically, politically, and culturally. The other great powers (China, Russia, the European Union, and India) are both unable and unwilling to challenge the U.S.-led international order. In this world, the security threats to the United States come from rogue regional powers like Iran and Indonesia as well as from scattered ethnic conflicts and humanitarian disasters in the poorest parts of the developing world.

Democratic Peace is clearly an idealistic vision of the future. Democratic Peace holds that liberal democracy and free, open markets have spread to such an extent that they are becoming institutionalized in all of the world's great powers (Europe, India, China, Japan, Russia, Brazil) as well as most middle-ranking powers. Thus, in 2025, liberal democracy is excluded only from some scattered pockets of territory made up of the poorest developing nations. Large interstate wars are not a realistic possibility in this kind of international system. Spreading democracy has virtually eliminated the phenomenon of "rogue regional states" in this vision of the 2025 future, so proliferation of weapons of mass destruction (WMD) is not a major security issue for U.S. leaders in Democratic Peace. In specific terms, the key zones of instability in the Democratic Peace world envisioned here for 2025 are northern Latin America, Sub-Saharan Africa, and parts of South Asia.

Major Competitor Rising is the first of the two medium-good worlds posited in this study. It portrays the emergence of a near-peer competitor to the United States: a competitor with significant conventional and strategic nuclear capabilities that include a power projection force and dedicated military space assets. Specifically, the Major Competitor Rising world holds that a Sino-Russian Entente forms in 2015–2018 with the goal of weakening America's global position as well as that of its key allies.

Competitive Multipolarity is our second medium-good world. In this future, we would see the emergence of two large powers that

are capable of challenging the United States on roughly equal terms. Each of these three powers would attempt to build its own coalition of friends and allies at the expense of the other two. Here, instead of witnessing large-scale warfare in a couple of key theaters, we would see an ongoing competition between fluid defensive alliance systems, with a mix of carrots and sticks being offered to critical small powers in attempts to persuade them to either shift or maintain their present political alignment. In Competitive Multipolarity, the United States, Russia, and China each lead a major alliance system.

Transnational Web is the medium-bad world in our study and represents a more unorthodox view of the 2025 future. It posits a situation in which the nation-state has lost a substantial amount of power to transnational actors, many of whom use the burgeoning Internet to coordinate their actions worldwide much more rapidly than can any national government bureaucracy. It is assumed here that a substantial amount of nation-state power has been usurped upward by transnational, globally distributed actors such as multinational corporations, transnational criminal organizations (TCOs), and terrorist networks. In this hypothetical future, the period from 2020 to 2025 witnesses a dramatic growth in the threat to the United States posed by radical transnational "peace and social justice" groups. Almost all of these groups come to identify the United States as an arch-villain that stands in the way of their drive to reshape the global order.

The sixth and final world produced by this study was the worst-case future—Chaos/Anarchy. Here, the nation-state has lost considerable power to subnational actors. The premise of Chaos/Anarchy is that factors such as overpopulation, environmental degradation, and ethnic strife cause the collapse of the nation-state in large swaths of the developing world. The resulting vacuum is filled by warlords who, lacking a tax base, turn to terrorism and the smuggling of contraband, narcotics, and weapons of mass destruction to support their "regimes." This is a world of massive instability that frequently witnesses mass migrations and virulent epidemics. The national security threats posed to the United States here would often be very shadowy and difficult to grapple with.

The Six Army Types

For each of the six worlds, a distinct Army type was created. It should be noted that some common desired characteristics were observed across all six Army types. These were: secure, reliable wireless communications, robust and flexible logistics networks, and some form of theater missile/air defense.

The U.S. Unipolarity world yielded a 2025 force that is called the "Light Lethal Army." The Light Lethal Army must have weight and volume constraints sufficient to allow for all of its equipment and initial sustainment to be moved over intercontinental distances in C-17s and C-5s. This force would strike a good balance between mobility and firepower. Its combat vehicles would have an all-terrain capability and would use speed rather than armor as a means of protection.

"Democratic Peace" yielded an army we call the "Policing Army." The Policing Army is designed mainly for participation in multinational peacekeeping and cease-fire enforcement operations within the overall context of a benign international system. This force would be made up predominantly of high-quality light infantry, small packets of 2000-vintage armor and armored infantry, significant numbers of Special Forces detachments, and a robust force of reliable transport helicopters.

A force called the "Big War Army" is this study's response to the Major Competitor world. The Big War Army would emphasize survivability over mobility in its maneuver forces, so its armored vehicles would be heavier and slower than those seen in the Light Lethal Army. The Big War Army would possess a large number of sophisticated ground-based deep fires systems for the purpose of attriting enemy armor en masse, aiding the Air Force in the suppression of enemy air defense (SEAD) mission, and targeting adversary supply routes and supply/logistics depots.

The "Global Maneuver Army" was constructed to meet the demands of the Competitive Multipolarity future. This force is broadly similar to the Light Lethal Army that was created to deal with our first alternative future. The Global Maneuver Army will have signifi-

cant self-deployable elements so that it can move into disputed re-
gions very quickly to achieve early forward presence. The characteris-
tics of the Global Maneuver Army that distinguish it from the Light
Lethal Army are its extensive and well-developed command and con-
trol (C2) and logistics networks.

Transnational Web's challenges stimulated the creation of the
"Netwar Army." The Netwar Army is designed to deal with net-
worked, geographically dispersed, hostile transnational actors. It has
three components: (1) an information warfare/cyberintelligence
group; (2) a cyber public affairs corps; and (3) a collection of special
operations forces–like teams designed for rapid movement overseas
and multiple, simultaneous strikes against terrorist cells located in
foreign countries. It is assumed that, in most cases, these SOF-type
units will work in tandem with foreign law enforcement agencies.

The study's sixth and final army is called the "Dirty Environ-
ment Army." The Dirty Environment Army is a response to the mass
disorder found in our worst-case world, Chaos/Anarchy. Essentially,
the Dirty Environment Army is a larger, more capable version of the
Policing Army that was discussed earlier. The Dirty Environment
Army has a very robust force-protection capability, including com-
prehensive defensive systems to protect personnel and equipment
against nuclear, chemical, and biological attack. In case these defenses
should fail, the Dirty Environment Army has a larger-than-usual
complement of medical personnel. This force's combat capability is
oriented toward light infantry with light armor and heliborne sup-
port.

Some Final Thoughts

Although much of the research for this study was done during the
Army After Next (AAN) period that preceded the current Transfor-
mation initiative, the methodology presented herein for assessing the
future is still relevant to the Army because it is tied to general force
capabilities and characteristics and not to specific programs or plat-
forms. This research offers five areas of potential benefit to the Army:

exposure to a spectrum of futures, a set of signposts for monitoring the international security environment, some insights on the changes in force structure size and intertheater mobility requirements across the six worlds, a discussion of opportunities for hedging actions in force planning, and, finally, a set of capabilities taken from across the futures that can form the basis for a Full Spectrum Future Force should the Army proceed with early deployment of the proposed future combat system (FCS) family of platforms and technologies.