# 到温星野经历

主编 戚建平 邬江兴



# 新编军事英语教程

主编 戚建平 邬江兴 编者 宋明武 马晓军 王 理 绍广纪 问 斌 李印海 孙学涛 林 易 张 骁 杨金良

阅 广 工 菜 出版 社·北京·

### 内容简介

本书内容涉及美军和其他主要北约成员在军事变革中最新的作战观念、未来太空战、战区导弹防御、C<sup>4</sup>ISR 一体化、信息战、海陆空军的最新军力介绍、最新电子对抗手段、战场敌我识别系统、隐形技术、精确制导武器等。全书共设 22 个单元,每个单元配有一篇课文和一篇课后阅读文章,其中课文后附有生词表和练习,练习包括了英语口语训练、阅读理解、难句翻译等。最后,附录包括总词汇表和美军大型军事武器装备英汉缩略语以及部分代码。

本书适合军事院校高年级学生使用,也适合军队干部培训人员使用。对研究西方军事的我军指挥和科研人员,本书也是一部有用的参考书。

#### 图书在版编目(CIP)数据

新编军事英语教程/威建平,邬江兴主编. 一北京:国防 工业出版社,2007.5 ISBN 978-7-118-05118-6

Ⅰ.新... [Ⅰ.①威...②邬... [Ⅱ. 军事一英语一教材Ⅳ. H31

中国版本图书馆 CIP 数据核字(2007)第 046660 号

(北京市海淀区紫竹院南路 23 号, 海滨省 (100044) 家中印刷厂印刷

**开本** 787×1092 17 16 17 18 21分 学数 413 千字 2007 年 5 月第 1 版第 1 次印刷 印数 1—4000 册 定价 36.00 元

#### (本书如有印装错误,我社负责调换)

国防书店:(010)68428422

发行邮购: (010)68414474

发行传真: (010)68411535

发行业务: (010)68472764

## 前言

随着信息技术的快速发展、武器装备的不断更新以及国际形势格局的变化,美军和其他北约成员正在加速推进新的军事变革,形成新的作战观念,推出新的武器装备,落实新的作战原则,建立新的作战平台。所有这些变化对传统的作战原则和手段提出了严峻的挑战,正在引起越来越多的非北约成员国家的关注。因此,及时跟踪、综合分析并深入掌握这些变化的现状和发展趋势,对建设我军的现代化正规化、制定相应的战略战术、做到知已知彼并打赢未来战争,具有十分重要的意义。

我国的军事院校担负着培养能适应未来战争的新型军事人才的重任。这种培养需要相应的教学大纲和教材。而英语教材历来是诸多教材的重要组成部分。虽然它们在培养基础英语方面发挥着重要的作用,但是随着学生英语水平的不断提高,加上军事变革的快速发展和推进,无论是基于普通基础英语的大学英语还是基于科普的科技英语,都难以满足培养能适应未来战争的新型军事人才的需求。编写一部能够较为全面地介绍当今美军和其他北约成员军事变革、作战原则和新型武器装备现状和发展趋势的英语教材,将能更好地体现军校的特色,对培养高素质的新型军事人才具有积极的意义。

长期以来,我们一直在跟踪外军作战观念和新型武器装备的变化趋势,尤其是美军的有关军事动态,并对 1000 多种相关英文材料进行了筛选,精选出 44 篇具有代表性的材料,编写了本书。本书内容涉及美军和其他主要北约成员在军事变革中最新的作战观念、未来太空优势的保持、美国国家和战区导弹防御、C<sup>4</sup> ISR(指挥、通信、控制、计算机、情报、监测和侦察)一体化、美国信息战以及平台的分析、美国海军的最新军力介绍、美国空军的指挥系统和作战能力、美国军事情报的组织架构和功能、未来战争中的联合后勤、最新电子对抗手段、战场敌我识别系统、隐形技术、精确制导武器等。全书共设 22 个单元,每个单元包含课文与课后阅读文章,其中课文配有生词表与练习题,练习包括英语口语训练、阅读理解、难句翻译等。最后,附录配有总词汇表和美军大型军事武器装备英汉缩略语以及部分代码。

本书适合军事院校高年级学生使用,也适合军队干部培训人员使用。对研究西方军事的我军指挥和科研人员也是一部有用的参考书。

在本教材的编写过程中,我们得到了国防大学、军事科学院、信息工程学院、国防信息中心等单位有关领导和专家的大力支持和帮助,对此,表示衷心的感谢。

# **Contents**

| Unit | 1                 |   | 1                          |
|------|-------------------|---|----------------------------|
|      | U.S. Military Tra | nsformation                               | 1                          |
|      | Extra Reading C   | hallenges, Counter-challenges and Readi   | ness Assessment 10         |
| Unit | 2                 |   | 16                         |
|      | U.S. Plan for Sus | taining the Strategic Space Advantage (   | I) 16                      |
|      | Extra Reading U   | S.S. Plan for Sustaining the Strategic Sp | oace Advantage ([]) ··· 25 |
| Unit | 3                 |   | 32                         |
|      | Reforming Pentag  | on Strategic Decision-making ( I ) ······ | 32                         |
|      | Extra Reading R   | eforming Pentagon Strategic Decision-m    | naking ( [] ) 41           |
| Unit | 4                 |   | 48                         |
|      | U.S. Theater Mis  | sile Defense ( [ ) ······                 | 48                         |
|      | Extra Reading N   | lational Missile Defense (NMD) ·······    | 56                         |
| Unit | 5                 | ······································    | 61                         |
|      | U.S. Theater Mis  | sile Defense ( [[ )                       | 61                         |
|      | Extra Reading I   | ntroduction to New Cruise Missiles ····   | 69                         |
| Unit | 6                 |   | 76                         |
|      | Today and Yester  | day of the U.S. Navy ( [ ) ······         | 76                         |
|      |                   | oday and Yesterday of the U.S. Navy (     |                            |
| Unit | t 7 ·····         |   | 91                         |
|      | Command System    | and Operational Capabilities of the U.S   | 6. Air Force ( [ ) 91      |
|      |                   | Command System and Operational Capab      |                            |
|      | t                 | ne U. S. Air Force ( [] ) ······          | 100                        |
| Unit | t 8 ······        |   | 106                        |
|      | USSOCOM Meeti     | ng the Challenges of the 21st Century     | 106                        |
|      | Extra Reading F   | orce Multiplier for Special Operations    | 116                        |

| Unit   | 9                |  | 124   |
|--------|------------------|--|-------|
| ]      | Precision Guided | Weapons  | 124   |
| 1      | Extra Reading    | U.S. Army's Plan for Improving the Readiness and                               |       |
|        |                  | Availability   | 132   |
| Unit   | 10               |  | 140   |
|        | Analysis of Ame  | erican Information Warfare   | 140   |
|        |                  | Cyber-terrorism  |       |
| Unit   | 11               |  | 154   |
|        | Network Attack   | -oriented Intuition and Reasoning  | 154   |
|        | Extra Reading    | Hacker Attacks Hitting Pentagon  | 161   |
| Unit   | 12               |  | 166   |
|        | Platforms of Inf | ormation Warfare ( I ) ······  | 166   |
|        | Extra Reading    | Platforms of Information Warfare ( ]] )  | 173   |
| Unit   | 13               |  | 178   |
|        | U.S. Space Rec   | onnaissance ( I )·····   | 178   |
|        | Extra Reading    | U.S. Space Reconnaissance (II)   | 185   |
| Unit   | 14               |  | 190   |
|        | New Stealth Te   | chnologies   | • 190 |
|        | Extra Reading    | Modern Electronic Countermeasures ·····  | 197   |
| Unit   | 15               |  | 206   |
|        | -                | Arrangements and Functions of U.S. Military Intelligence ( I )                 |       |
|        |                  |  | • 206 |
|        | Extra Reading    | Organizational Arrangements and Functions of U.S. Military Intelligence ( [] ) | · 213 |
| Unit   | 16               |  | · 218 |
|        |                  | itelligence Strategy ······  | . 219 |
|        |                  | Intelligence Capability of the European Union                                  |       |
| T T 24 |                  | Intelligence Capability of the European Chion                                  |       |
| Unit   |                  |  |       |
|        |                  | the Joint Intelligence Center ( [ )  |       |
|        | Extra Reading    | Development of the Joint Intelligence Center( [] )                             | • 240 |

| Unit 18  | · 247 |
|--|-------|
| Fratricide Prevention & Combat Identification( I )                 | · 247 |
| Extra Reading Fratricide Prevention & Combat Identification ( [] ) | • 256 |
| Unit 19  | • 263 |
| Joint Logistics in the Future                                      | • 263 |
| Extra Reading Acquisition for the Information Age                  | • 269 |
| Unit 20  | · 273 |
| Military Weapons for Future Space Warfare                          | • 273 |
| Extra Reading Future Space Warfare in Perspective                  | · 280 |
| Unit 21  | · 286 |
| Future Combat System ·····   | • 286 |
| Extra Reading United States Army Military Readiness                | • 294 |
| Unit 22  | - 300 |
| New Kill Chains and Weapons in the Near-future Warfare             | • 300 |
| Extra Reading Operational Risks Versus Concepts of Operation       |       |
| Appendix I Vocabulary  | . 312 |
| Appendix II English-Chinese Abbreviations and Codes for Major      |       |
| U.S. Military Weapons  | . 322 |



#### **U.S. Military Transformation**

The National Defense Strategy calls for the transformation of the U.S. military and the Defense establishment over time. Yet a balance must be struck between the need to meet current threats while transforming the force for the future. The Department is committed to undertaking a sustained process of transformation—based on clear goals—and strengthening the spirit of innovation in its people, while remaining prepared to deal with extant threats.

Fashioning joint concepts to guide the conduct of joint operations is the U.S. leading priority for transformation. In order to advance U.S. transformation efforts, the 2005 National Defense Strategy identified eight key operational capabilities for deterring conflicts and conducting military operations; 1) Strengthen intelligence; 2) Protect critical bases of operation; 3) Operate from the global commons; 4) Project and sustain forces in distant anti-access environments; 5) Deny enemies sanctuary; 6) Conduct network-centric operations; 7) Improve proficiency against irregular challenges; 8) Increase capabilities of partners, both international and domestic.

These capabilities are used to focus the Department's investment resources and improve the linkage between strategy and investments.

The goal of the Department's experimentation program is to rapidly convert innovative war-fighting concepts to prototypes to fielded capabilities. Accordingly, the April 2003 Transformation Planning Guidance directed the development of the Joint Concept Development and Experimentation (JCDE) Campaign plan to describe the role of joint experimentation as a major generator of transformational change. The JCDE follows two paths: joint concept development and joint prototyping. The joint concept development program explores innovative concepts for improving future joint war-fighting. These concepts result from an iterative experimentation program that relies on frequent, small-scale sets of experiments conducted in a joint war-gaming environment. Once concepts prove viable through continuous refinement and experimentation, they are transferred to the prototype team. The joint prototype program improves current war-fighting capabilities and matures new capabilities through continuous experimentation as part of Combatant Command joint exercise programs. The JCDE will identify capability proposals for rapid prototyping and

provide actionable recommendations for future resource investments based on experimentation results.

It is imperative that the U.S. should invest in researches and developments to transform its forces and capabilities. Its ultimate objective is to fund S&T at a level adequate to ensure its technological superiority—specifically, sufficient to provide the technology foundation it needs to modernize its forces, and develop "leap ahead" technologies that produce transformational capabilities. Accordingly, it must continue to invest broadly in defense-relevant technologies, because it is not possible to predict in which areas the next breakthroughs will occur or what specific capabilities will be required to meet the challenges of the uncertain future. To make sure key priorities are supported by investment funds, the Director of Defense Research and Engineering continues to set targets and monitor performance for basic research, applied research, and advanced technology development.

As discussed above, U.S. continuing change in culture allows DoD to shift its focus to enabling joint operations—the ability of its land, sea, air, and space forces to be combined under the control of a single combatant commander and used in ways that are most appropriate to achieving the objectives of the campaign that he has laid out. Yet it is not enough to say DoD wants to *fight* joint—DoD has to *think* joint, too. Accordingly, U.S. is dedicating a substantial amount of funding to bring a joint perspective to how U.S. structures, trains, deploys, and manages forces and organizations.

To win militarily in the new global operational environment, U. S. forces must be trained effectively to decisively overcome asymmetric adversaries and deal with surprise. Its vision for training transformation, therefore, is to provide dynamic, capabilities-based training in support of national security requirements across the full spectrum of service, joint, interagency, intergovernmental, and multinational operations. Specifically, its long-term goal is to be able to measure training "value" by evaluating the: throughput, innovation, and transparency of training.

Four years ago U.S. took steps to create a permanent joint headquarters for each of its combatant commanders worldwide. Staffed with a 58-person core, the SJFHQ serves as a planning staff during day-to-day operations. In the event of a crisis, the in-place SJFHQ is immediately prepared to execute command and control functions for the integrated employment of air, land, maritime, and information forces. Furthermore, the SJFHQ is made up of joint-trained personnel skilled in using computer-based analysis tools and joint information and processes.

U.S. has fashioned a new National Defense Strategy and sustained its approach to balancing challenges—one that takes into account not just the challenges to immediate war plans, but also the challenges to people and transformation. U.S. has moved from a "threat-based" to a "capabilities-based" approach to defense planning, focusing not only on who might threaten them, or where, or when—but more on how U.S. might be threatened, and what portfolio of capabilities it will need to deter and defend against those new threats. In acquiring these capabilities, DoD must be able to develop and test them in the

requisite joint mission environment.

Continuous defense transformation is part of a wider governmental effort to transform America's national security institutions to meet 21st-century challenges and opportunities. Just as its challenges change continuously, so too must its military capabilities. The purpose of transformation is to extend key advantages and reduce vulnerabilities. U.S. is now in a long-term struggle against persistent, adaptive adversaries, and must transform to prevail. Transformation is not only about technology. It is also about: 1) Changing the way DoD thinks about challenges and opportunities; 2) Adapting the defense establishment to that new perspective; 3) Refocusing capabilities to meet future challenges, not those DoD is already most prepared to meet.

U.S. science and technology investments are focused and guided through a series of defense technology objectives (DTOs), developed by senior planners throughout the Department. Each of these objectives highlights a specific technological advancement that will be developed or demonstrated, the anticipated date the technology will be available, the specific benefits that should result from the technological advance, and the funding required (and funding sources) to achieve the new capability. These objectives also specify milestones to be reached and approaches to be used, quantitative metrics that will indicate progress, and the customers who will benefit when the new technology is eventually fielded. Every two years, independent peer review panels assess the DTOs—at least two-thirds of the panel members are from academia, private industry, and other U.S. government agencies. The reviews are conducted openly and observation by stakeholders is welcomed. The teams assess progress against three factors—technical approach, funding, and technical progress. The ratings not only reflect the opinions of independent experts, but are also accepted and endorsed by stakeholders. These reviews result in near real-time adjustments being made to program plans and budgets based on the awarded rating.

U.S. global intelligence capability is the foundation of its military power. It enables its leaders to decide how and when to apply military force, and provides a capability to ensure allies and friends of its purpose and resolve, dissuade adversaries from threatening ambitions, deter aggression and coercion, and decisively defeat an adversary on their terms. U.S. is committed to developing capabilities that provide insights into its adversaries' intentions and secrets without their knowing that DoD knows. This means closing the gap in time and culture between intelligence and military operations. To do so is to enable a seamless transition from the collection of information, to its employment, to assessments of the effects of that employment. A critical step on this path is shifting from a collection-focused intelligence system to a user-driven system. This will fundamentally change the way in which U.S. plans and operates. It will facilitate joint and combined intelligence operations and will exploit the advantages of information technology to provide knowledge to its customers when they need it.

History has shown that rapid and unexpected change can transform the geopolitical landscape. New technologies can revolutionize the character of armed conflicts in ways that render previous doctrine and capabilities obsolete. Although contending with such uncertainty is a key challenge for the Department, certain features and trends of the security environment not only define today's geopolitical and military-technical challenges, but also highlight critical challenges that DoD must master in the future.

DoD's trend is clear; the Department's transformation will be shaped by the emerging realities of the information age. Just as the move from the industrial age to the information age is changing the relative value of the sources of economic wealth (land, capital, and labor), it is also altering the relative value of capabilities, assets, and skills that underwrite national security. Processes and organizations that cannot adapt to a networked, interoperable environment will not provide the knowledge, speed, precision, and agility U.S. will need in the future. More important, old ways of thinking will not foster the human skills demanded by its emerging security environment. Intellectual agility, adaptability, and the capacity to act in the midst of dynamic complexity and uncertainty have increased importance in information-age warfare. Integral to the Department's transformation, are the initiatives being conducted by each of the Military Departments. These coordinated efforts are fundamentally changing processes and products by enhancing efficiency, joint interoperability, and war-fighting effectiveness. These initiatives, furthermore, will make Net-Centric Operations/Warfare an operational reality by integrating weapons, sensors, command/ control, platforms, and warriors into a secure networked, distributed joint combat force as part of the DoD Global Information Grid, To guide transformation efforts and help keep the Department on track, the Director of the Office of Force Transformation prepares an annual assessment of progress being made toward transformational goals. The appraisal emphasizes defense-wide transformational trends and recommends whether plans or resources should be adjusted to maintain progress toward the Secretary's transformational priorities.

To better meet future warfare challenges, DoD must be able to network and integrate combat organizations to fight jointly, experiment with new approaches to warfare, develop transformation capabilities through technological innovation and ensure U. S. Armed Forces have a skilled, trained and ready workforce for the future landscape.

Information technology is a key element of the Army's transformation. The long-term goal of the information-age transformation is network-centric operations, both military and business, conducted in a totally joint fashion, to include our allies and partners. U.S. will spend \$3.4 billion on the Future Combat System (FCS) program in fiscal year 2006. The FCS program, in combination with the Joint Tacital Radio System (JTRS) and the Warrior Information Network-Tactical (WIN-T), is the principal means through which advanced information and communication technologies will be spiraled into the current force. U.S. has restructured this program in order to accelerate the spiraling of information as well as other technologies to the current force while continuing to develop the future force which will eventually include FCS Units of Action with 18 different platforms (manned and unmanned, ground and air) connected by one network. Accelerating the fielding of battle

command capabilities to establish a more capable and reliable network will support the Defense goal to bring the joint community closer to a common operational picture. The linkage brings improved situational awareness, which will allow its units to see first, understand first and strike first. The deployment of three systems: Force Battle Command, Brigade and Below (FBCB2), digital battle command information; Single Channel Ground and Airborne Radio System (SINCGARS), digital and voice radio communications; and Enhanced Position Location Reporting System (EPLRS), mobile wireless data communications; lay the groundwork for a more capable network in the future. In fiscal year 2006, the Army plans to spend over \$146 million for equipment that will form the backbone of the Army Tactical Internet.

U.S. has accelerated Sea Warrior initiatives in training and detailing. Specific initiatives have included: alignment of its training and education processes to better target needed skill sets; institution of Navy-wide, web-based counseling and professional development tools giving Sailors the ability to map progress toward skill and educational goals, to include professional and college-level objectives; continued promotion of a culture of personal and professional development; establishment of the Human Performance Center to apply Human Performance, Human Systems Integration, and Science of Learning principles in research, development, and acquisition. The DON is actively involved in DoD-wide training initiatives associated with the Joint National Training Capability (JNTC) and Joint Knowledge Development and Distribution Capability.

U.S. continues to develop transformational capabilities enhanced through new systems/platforms, including: next-generation aircraft carrier (CVN-21) development; Littoral Combat Ship (LCS) and DD(X); Virginia class SSN with Advanced Sail; SSBN to SSGN conversion; accelerated investment in transformational platforms to move troops and equipment (MPF(F) and LPD 17). The DON is also increasing war-fighting capabilities by modernizing Ticonderoga class cruisers and attack submarines, commissioning the new USS Virginia, and continued timely delivery of Arleigh Burke class guided missile destroyers. The DON's plan continues to maximize the return on procurement dollars, primarily through the use of multi-year procurement for the F/A-18E/F, EA-18G, E-2C, and MH-60S programs. Development funding is provided for Joint Strike Fighter (JSF), MV-22, AH-1Z/ UH-1Y, CH-53X, EA-18G and the Multi-mission Maritime Aircraft (MMA). The plan reflects an amended acquisition strategy for the V-22 to fund interoperability issues and cost reduction initiatives. Additionally, DoD's investment of \$18B in RDT&E accounts reflects its commitment to future transformational capabilities and technology insertion for major platforms including DD(X), LCS, CVN-21, V-22 etc. U.S. also achieved an important milestone in the continued development of Aegis Ballistic Missile Defense. USS Curtis Wilbur conducted the Nation's first ballistic missile defense patrol on 27 September 2004.

To accelerate the transformation of its Naval forces, U.S. is also continuing to improve the inter-operability among networks, sensors, weapons, and platforms through

FORCEnet. FORCEnet is the warfare capability enabler that networks sensors with platforms with weapons to make Network Centric Operations/Warfare an operational reality. A critical subset application already being procured is the Cooperative Engagement Capability (CEC), which will enable real-time data exchange between battle force units, each having the identical tactical picture. CEC will be installed on 40 ships and the aircraft of five squadrons by the end of FY 2006. U.S. FY 2006 performance plan supports the development and fielding of equipment used by the Marine Corps ground forces. As the number one Marine Corps ground priority, the Expeditionary Fighting Vehicle will join the MV-22 and the LCAC as an integral component of the amphibious triad required for executing Expeditionary Maneuver Warfare. Marine Corps modernization efforts within the FY 2006 plan also include the Lightweight LW-155 Howitzer (M 777), the High Mobility Artillery Rocket System, the Expeditionary Fire Support System, High Mobility Multi-Purpose Wheeled Vehicle program and the Light Armored Vehicle Product Improvement Program.

National security realities have forced U.S. to redefine its enemies as well as its concepts of defense. As U.S. prepares to fight these new enemies, it recognizes the campaigns of the future will involve all elements of its Nation's might—economic, diplomatic, information, investigative, and military power—and will require U.S. to develop new CONOPS, technologies, and organizational constructs that will enable U.S. to address these new challenges. It is these new challenges, as well as historic opportunities to exploit revolutionary technology, that underscore the absolute necessity of transforming its military capabilities.

Despite significant gains in information superiority capabilities over the past decade, there are still many obstacles to achieving the full potential of information superiority under many circumstances today: 1) There is still significant progress to be made in getting timely, accurate, and relevant intelligence from sensors to shooters (actionable intelligence in a usable format) in single-digit minutes. 2) Battlespace awareness information is often reactive in nature and rapidly loses relevance. 3) Targeting decisions often are made too far away from the warfighter to effectively engage mobile targets. (NOTE; assumption is "too far away" is defined as outside the Area of Responsibility). 4) It is still very difficult to integrate rapidly expanding data streams from multiple sources in a timely manner. 5) Commanders often do not have a clear, accurate, real-time integrated picture of the battlespace.
6) The military still cannot assess, plan, and direct air and space operations from anywhere or from multiple locations in near real-time, something the Air Force believes will be necessary in the future to give the commander the greatest flexibility to meet national tasking.

The ability to protect and ensure the survivability of vital space systems is essential to make certain that an adversary cannot disrupt, deny, degrade, deceive, or destroy America's ability to exploit space-based C<sup>4</sup>ISR assets as previously described. This capability encompasses: 1) space-based space surveillance systems that provide details of space objects unattainable by ground-based systems; 2) an attack detection and reporting architecture capable of detecting, characterizing (identify and geo-locate), and reporting attacks

on space systems and of assessing the resulting mission impacts; 3) onboard capabilities to protect friendly space systems from man-made or environmental threats; 4) adequately protecting key ground systems, to include backup command and control capabilities; and 5) fielding space systems that can withstand attacks without the benefit of tactical warning. This transformation will be enabled by both material and nonmaterial solutions such as doctrinal and organizational changes and improvements to tactics, techniques, and procedures. The ability to deny an adversary's access to space services would be essential if future adversaries choose to exploit space in the same way the United States and its allies can. It would require counter-space systems capable of preventing unauthorized use of friendly space services and negating adversarial space capabilities if needed. The focus will be on denying adversary access to space on a temporary and reversible basis. In addition, offensive counter-space may be used to generate or support counter-air, counter-sea, counter-land, counter-information, or strategic effects when the adversary's vulnerable node is a space system. Effective space situational awareness is a key enabler of this capability.

The ability to field adequately trained operators and proven space systems are also an essential element in achieving space superiority. These Space Test and Training Range capabilities include dedicated space-based assets and ground control/processing centers. The development, operations, and management of an integrated Space Test and Training Range capability will support combined air, space, sea, and land operations testing and training operations under realistic "battlefield" conditions. In addition, these capabilities will interact with Distributed Mission Operations and OSD's Joint National Training Capability initiatives. Currently, striking targets conventionally across the globe from the United States requires employing long-range bombers, which takes many hours and enables mobile targets to hide before the strike force arrives. In addition, legacy bombers can only operate in permissive and moderate threat environments. A non-nuclear, prompt, global attack capability will provide the United States with a range of options for deterrence and a flexible, rapid response. This global attack capability would be a key enabler of the Global Strike CONOPS' mission of holding terrorist-related targets at risk everywhere. It would also allow the United States to project power almost immediately in areas with no forward-deployed forces or easy access. Indeed, the traditional U.S. method of deploying air and ground forces at or through ports and airfields will grow more problematic as adversarial access to government and commercial reconnaissance satellite services increase, and the threat of missiles, and chemical, biological, radiological/nuclear, and explosive (CBRNE) technology rapidly evolves. This capability would also buy valuable time should additional forces need to be deployed to the theater.

#### **New Words and Expressions**

academia n. 学术界

actionable adj. 可采取行动的

adversary n. 敌人,对手 alignment n. 结合,结盟 asymmetric adj. 不对称的 coercion n. 强迫 combatant n. 战士 commission v. 使……服役 conventionally adv. 按照惯例 deter v. 阿止 dissuade v. 劝阳 enabler n. 使能者 encompass v. 包含 fashion v. 使······适应 field v. 使·····用于战场 geopolitical adj. 地理政治的 highlight v. 突出 imperative adj. 必要的 innovation n. 革新,创新

integral adj. 整体的 littoral adj. 沿海的 metrics n. 度量 obsolete adj. 陈旧的 panel n. 小组 peer n. 同等人 permissive adj. 许可的 quantitative adi. 数量的 S&T (science and technology) 科学和技术 sanctuary n. 避难所 seamless adj. 无缝的 spiraling adj. 螺旋的 n. 盘旋 stakeholder n. 利害关系人 survivability n. 幸存 transformation n. 变革 triad n. 三个一组 withstand v. 抵挡,经得住

#### **Exercises**

#### 1. Topics for discussion.

- 1) What are the key operational capabilities which the 2005 National Defense Strategy identified for deterring conflicts and conducting military operations?
- 2) What does the term "joint operations" mean according to the text?
- 3) What measures does the author say that U.S. should take to improve its intelligence system?
- 4) Why does the author believe that military transformation is urgent to U.S.?
- 5) What does the author think of the relationship between the information technology and the military transformation?

#### 2. Choose the best answer.

- 1) The two paths which JCDE follows are \_\_\_\_\_.
  - A. joint concept development and joint prototyping
  - B. joint intelligence and joint operations
  - C. joint planning and joint implementation
  - D. joint preparation and joint fighting
- 2) Which of the following statement is false?
  - A. The U.S. ultimate objective is to fund S&T at a level adequate to ensure its technological superiority.
  - B. U.S. military transformation is solely based on their need to fight against terrorists.
  - C. DoD is committed to undertaking a sustained process of transformation and strength-

- ening the spirit of innovation in its people.
- D. Coming up with new joint concepts to guide the conduct of joint operations is the U. S. leading priority for transformation.
- 3) Which of the following is true?
  - A. DoD is satisfied with its approach to think and fight in a joint fashion.
  - B. The focus of the military transformation is on improving the combination of the air, sea and land forces.
  - C. Military training is not part of the transformation.
  - D. DoD claims to have moved from a "threat-based" to a "capabilities-based" approach to defense planning.
- 4) How does the author define the military transformation according to the text?
  - A. Changing the way Americans think about challenges and opportunities.
  - B. Adapting the defense establishment to that new perspective.
  - C. Refocusing capabilities to meet future challenges.
  - D. All of the above.
- 5) What does the author say about the transformation in military intelligence?
  - A. A seamless transition from the collection of information, to its employment, to assessments of the effects of that employment requires a better collection-focused intelligence system.
  - B. A user-driven system is critical to transformation in intelligence.
  - C. New technologies are required for better military intelligence.
  - D. Cooperation with its allies is the key to the U.S. intelligence transformation.

#### 3. Translate the following into Chinese.

- Fashioning joint concepts to guide the conduct of joint operations is its leading priority
  for transformation. In order to advance U.S. transformation efforts, the 2005 National
  Defense Strategy identified eight key operational capabilities for deterring conflicts and
  conducting military operations.
- 2) Continuous defense transformation is part of a wider governmental effort to transform America's national security institutions to meet 21st-century challenges and opportunities. Just as U.S. challenges change continuously, so too must its military capabilities. The purpose of transformation is to extend key advantages and reduce vulnerabilities. U.S. is now in a long-term struggle against persistent, adaptive adversaries, and must transform to prevail.
- 3) U.S. science and technology investments are focused and guided through a series of defense technology objectives (DTOs), developed by senior planners throughout the Department. Each of these objectives highlights a specific technological advancement that will be developed or demonstrated, the anticipated date the technology will be available, the specific benefits that should result from the technological advance, and the funding required (and funding sources) to achieve the new capability.
- 4) U.S. global intelligence capability is the foundation of Its military power. It enables its

leaders to decide how and when to apply military force, and provides a capability to ensure allies and friends of its purpose and resolve, dissuade adversaries from threatening ambitions, deter aggression and coercion, and decisively defeat an adversary on their terms. U. S. is committed to developing capabilities that provide insights into its adversaries' intentions and secrets without their knowing that U.S. knows. This means closing the gap in time and culture between intelligence and military operations.

- 5) History has shown that rapid and unexpected change can transform the geopolitical landscape. New technologies can revolutionize the character of armed conflicts in ways that render previous doctrine and capabilities obsolete. Although contending with such uncertainty is a key challenge for the Department, certain features and trends of the security environment not only define today's geopolitical and military-technical challenges, but also highlight critical challenges that U.S. must master in the future.
- 4. Write a summary of the text.



#### Challenges, Counter-challenges and Readiness Assessment

Military challenges and counter-challenges, in simplest terms, are about whether we can overcome today's threats—about our ability to create plans that can be adapted quickly as events unfold, train for the next real-time mission, and supply the warfighters with what they need now. They are about achieving near-term objectives, not long-term outcomes—thus, it is an important dimension of the National Defense Strategy, but not the entire strategy.

Today we increasingly rely on forces that are capable of both symmetric and asymmetric responses to current and potential threats. For example, we must prevent terrorists from doing harm to our people, our country, and our friends and allies. We must be able to rapidly transition our military forces to post-hostilities operations, and identify and deter threats to our people while standing ready to assist civil authorities in mitigating the consequences of a terrorist attack or other catastrophic event. These diverse requirements will demand that we integrate and leverage other elements of national power, such as strengthened international alliances and partnerships. To meet these new missions, and to hedge against an uncertain future, we are developing a broader portfolio of capabilities, and realigning our forces using a building-block approach to match those capability portfolios with mission goals. We have used this building-block approach to construct a multitude of operational availability assessments. For example, we used this approach to investigate how an alternative mix of active and reserve forces and their capabilities can be aligned to a range of missions, including horizenal defense, and also to begin developing the mid-to long-term scenarios being developed alongside emerging warfighting concepts.

Before we deploy forces to deter or fight an adversary, we must first decide whether