

中国军事改革：现在与未来（下篇）



中国军队的结构性改革吸引了全世界的注意，同时军事改革也是中国正在进行的、更广泛改革的核心部分。中国正在发生的体制改革规模与其涉及的领域如此广泛，以致研究中国政治的学者和观察家们有时难以判断情况，更难以解释伴随改革而来的各种变化。这份分为上下篇的报告来自第一手资料，以中文原文和英文翻译的形式呈现。旨在通过探究中国军事改革的实质和逻辑，丰富此变化中的研究主题的文獻。

中国此次军事改革引起了世界的广泛关注。观察家们普遍认为，这是中华人民共和国成立以来人民解放军历史上规模最大、内容最丰富、涉及面最广、影响最为深远的一次军事改革。此次军事改革，无论在形式上还是在内容上，也无论在理论层面还是在操作层面，都比解放军建军以来历次整编、调整、裁军等行动更具有改革的本质特征。此次军事改革的总体论证、组织实施、进程把控等，都充分体现了以习近平为核心的党中央、中央军委高瞻远瞩、科学务实，要把人民解放军推向历史新高度的战略智慧、果敢行动和使命担当。此次军事改革，必将在中国共产党绝对领导下的人民解放军的历史上留下浓重的一笔。

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三、关于军事改革的评估

此次军事改革不仅是中国的大事，也是国际上的一件大事，引起了世界的广泛关注和评论。这些关注与评论实际上是关于如何评价军事改革成败与否的问题。在探讨该问题之前，让我们首先从众多评论中选取两篇具有代表性的评论文章，它们分别从乐观和悲观的角度，对中国此次军事改革进行了针对性评论。这两篇文章同时刊登于美国参联会国防大学的联合部队

季刊第83期（2016年10月第四期），一篇是Michael S. Chase and Jeffrey Engstrom¹ 合写的文章：“中国的军事改革：乐观的评价”（China's Military Reforms: An Optimistic Take）；另一篇是Roger Cliff² 撰写的“中国的军事改革：悲观的评价”（China's Military Reforms: A Pessimistic Take）。在本部分的最后，笔者愿与读者分享一下对军事改革评价的理论上的认识。

（一）外界的评论

首先，让我们看看乐观的评论。Michael S. Chase and Jeffrey Engstrom在文章中说，中国此次军事改革，“是1949年以后中国人民解放军历史上最重要的事件。国家主席、党的总书记和军委主席习近平，正在努力将解放军转变为全面现代化和信息化的作战力量，以便能够担负联合作战和非战争军事行动任务，为中国利益面临的挑战提供战略威慑并限制潜在之敌的决定……（改革）的目的就是将各军种从以前以陆军为主体变为能够更有效利用空间、网络空间和电磁空间进行作战。”“此次改革将在提高联合程度、优化作战组织结构和强化信息主导等方面为解放军带来好处。”作者认为，这三大好处，一是成立了陆军领导机构，使其与海军、空军和新成立的火箭军地位相同，将有助于提升解放军的联合作战和非战争军事行动的能力；二是对作战力量组织结构进行优化调整，特别是将过去的七大军区改变为现在的五大战区，将有利于“推进解放军的战备（水平）和进行现代化高强度的联合军事行动”，也将使解放军从平时转入战时更加顺畅，因为改革后的战区司令部将是战时的“联合战役最高指挥机构”，“战区司令也将是联合部队的司令”，而不必像以前那样临时组建战时司令部和任命战区司令，这将减少不必要的变更部署和兵力调动；三是新成立的战略支援部队，由于能够将网络、太空、电子战以及情报、侦察和探测等统管起来，将为解放军在多领域作战“提供机动灵活和快速反应能力”，从而保证了信息主导作用。

其次，再看看比较悲观的评价。Roger Cliff在他的文章中认为，中国此次军事改革并没有从本质上解决解放军长期存在的问题：一是陆军高级军官的比例仍居高不下，特别是战区陆军将领比例过高，将对解放军真正实施联合作战产生不利影响；二是作者运用组织学原理分析

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了改革后的解放军组织结构，认为解放军的组织结构越来越强调纵向上的集中（向上集中），而某一组织层级的横向上跨度不够，这将导致下级视情做出自主决定的权限很小。这种组织的文化实质上并不鼓励“积极主动和创新”，而这些都与解放军自上世纪90年代以来在军事条令中强调的“机动灵活和分散配置”理念不相协调。

（二）军事改革评估方法论探讨

通常，对任何事物的现状及其发展进行评估，系统科学为我们提供了两种基本方法：理论评估和实践检验。然而，对于军事改革的评估，人们很难用实战来检验。因为，这个世界上还没有哪个国家纯粹为了验证改革成败而发动战争的。因此，对军事改革这一特殊事物的评估，就不得不从理论分析上着手。

首先，实践检验军事改革。任何改革的成效都必须由实践来检验，这似乎是世人的共识，并由此得出论断：即军事改革成败最直接、最终的检验是战争。但是，当今世界能用战争来检验军事改革成功与否的，恐怕也只有美军做到了。据有关资料，从20世纪40年代以来，美军大约进行了3次大的和若干次小的军事改革或转型，特别是20世纪90年代兴起的“新军事革命”，美军的转型不断通过海湾战争、伊拉克战争、阿富汗战争等实践来进行检验，以期使其新军事革命能够按照理论-实践-修正-新理论的周期良性滚动发展。然而，实际上多数国家的军事改革是没有战争检验机会的。这就带来一系列问题：和平时期的军事改革是否在理论层面有检验的标准？所有的军事改革是否都必须经过战争的检验？或者说，能否为了检验军事改革成败而去发动一次战争？再进一步设问：即使抛开战争的性质、战争法以及战争中所涉及到的人权、禁用武器等问题而纯粹为检验某一军事改革或军事理论是否成功而设计出来的“纯战争”真的存在，恐怕也难以担当检验包括军事改革在内的军事理论正确与否的重任，因为自古以来没有一次战争是对上一次战争的重复再现。从这个意义上分析，“军事改革必须要经过战争检验”本身就是一个悖论。

其次，理论检验军事改革。从理论层面对事物发展状况特别是对军事改革进行评估，是平时最见也是行之有效的方法。理论评估的方法有很多，这要归功于系统科学的发展。中国著名的科学家钱学森在系统科学领域有很多建树，其中他提出的“综合研讨厅”方法论，对处理复杂巨系统问题提供了十分有效的方法，包括领域专家们的“头脑风暴”、建立仿真模型、大数据运算分析、虚拟环境建立等多种综合方法的运用。而军事（不仅仅是军事改革）作为一个复杂巨系统，自然可以运用系统科学原理和方法，结合非战争试验方法如训练、演习等对其进行评估，虽然军事演习终究不能跟“流血的战争”相提并论，但这正是各国军队常用的方法。鉴于篇幅所限以及这并非本文的主题，因此不必在此论述军事改革的理论评估的具体方法。仅从军事改革的基本内涵，我们也能够发现此次中国的军事改革并没有向个别评论所说的“偷换概念”。

按照军事理论界普遍的认识，军事改革是由最高军事领导人及领率机关做出对军事力量体系重建、军事组织重构、领导指挥关系重塑、机构组织精简、政策制度完善等的活动和过程，目的就是改变过去的不足和缺陷，使其军事力量走向更好。从这个意义上看，中国此次军事改革不愧为解放军有史以来规模最大、范围最广、内容最丰富、体制结构等变化最大的具有真正意义的军事改革，将对中国乃至世界的未来产生深远的影响。

四、未来展望

改革是国防和军队建设发展的重要而有效的手段。此次中国军事改革在建立了军事体制新格局、优化了军队组织结构和不断完善相关政策制度的基础上，可以预见，中国人民解放军必将走上质量建军的道路。习近平在十九大报告中指出，适应世界新军事革命发展趋势和国家安全需求，提高建设质量和效益，确保到二〇二〇年基本实现机械化，信息化建设取得重大进展，战略能力有大的提升；同国家现代化进程相一致，全面推进军事理论现代化、军队组织形态现代化、军事人员现代化、武器装备现代化，力争到二〇三五年基本实现国防和军队现代化，到本世纪中叶把人民军队全面建成世界一流军队。这段话包含了“机械化”“信息化”“现代化”和“世界一流”四个关键词。了解了这些关键词的含义，或许就能够对中国人民解放军的未来有所了解。

关键词：机械化和信息化。“化”在汉语中带有一种“趋势”和“程度”以及“某种程度的趋势”的意思。汉语“机械化”一词是从英语直接翻译过来的。而英语的“机械化”，据有关资料，又与一战后德军的“机械化步兵（mechanized infantry）”有关。在当时，机械化步兵与步兵的最大不同是前者操控、使用装甲车辆及其车载武器进行战斗，后者只是利用车辆等交通运输工具达到移动目的，主要还是使用轻武器进行“脚踏实地”的战斗。后来，随着军队特别是陆军装甲装备的增多，机械化的内涵在不断丰富，逐渐成为衡量陆军现代化程度的一项指标。随着科技的发展，“机械化”术语的内涵与外延也在不断地发展变化。如今，随着机械装备中电子元器件、计算机软硬件成分比例的日益增多，特别是随着无线通信、无线网络、影视图像等信息技术的广泛应

用，使得机械装备变得越来越“聪明”，再加上网络、人工智能等技术的发展，使得信息这一过去藏在战争背后的因素逐渐成为显性的甚至决定战争胜负的关键性因素，也使信息战成为信息化战争的一个主要作战样式。

值得一提的是，“信息化”一词还是由中国人民解放军军事科学院一位资深研究员所创造的，如今已成为全世界认可的术语。近几十年来军事领域的专家学者的普遍认识是，在现代条件下，不能孤立地分别讨论机械化和信息化，两者之间并非相互独立。相反，信息化的实现离不开机械化的基础。而事实证明，并不是简单的机械化就能承载信息化，只有现代意义的机械化才能承载现代甚至未来意义上的信息化。中国人民解放军开展机械化和信息化双重任务建设的时间，可以追溯到20世纪90年代。期间，在军事理论界还有过关于机械化和信息化跨越式发展、超越式发展、并行发展、融合发展等的讨论。但无论如何，事实已经证明，没有符合现代条件的机械化，所谓的信息化必定是“空中楼阁”。这也是十九大报告中首先说“确保到二〇二〇年基本实现机械化”，然后说“信息化建设取得重大进展”的含义所在。此外，机械化问题更多地表现在装甲装备的质量和数量方面，而且更多地存在于陆军中；而信息化问题则是全军各军兵种的问题。

“机械化”和“信息化”是中国改革开放以来人民解放军使用最为频繁的术语之一。它更多地反映了解放军向现代化前进的决心和意志。目的就是要能打赢未来信息化战争。

关键词：现代化。可以说，中国人民解放军的发展史也是不断追求现代化的历史。解放军现代化的进程，一直与党和国家现代化发展进程保持同步。1954年召开的第一届全国人民代表大会，第一次明确提出了要实现工业、农业、交通运输业和国防的四个现代化任务，1956年又把这一任务列入党的“八大”所通过的党章中；1964年12月21日，周恩来在第三届全国人民代表大会政府工作报告中宣布，“在不太长的历史时期内，把我国建设成为一个具有现代农业、现代工业、现代国防和现代科学技术的社会主义强国”³。从那时起，四个现代化即“工业现代化、农业现代化、国防现代化、科学技术现代化”成为中国长期以来的国家发展战略目标。历经几代党和国家领导人带领全党和

全国人民，不仅使社会主义国家取得了令世界瞩目的辉煌成就，也使中国人民解放军彻底改变了“小米加步枪”的旧貌，日益壮大起来。如今，党的十九大提出的“力争到二〇三五年基本实现国防和军队现代化”，又明确具体地将解放军的现代化细分为“军事理论现代化、军队组织形态现代化、军事人员现代化、武器装备现代化”四项目标任务。

1、军事理论现代化。理论源于实践并对实践具有指导作用。党的十九大提出的全面推进军事理论现代化的根本目的，就是要立足中国实际，在借鉴外军先进军事理论成果的基础上，广泛深入地开展具有中国特色的创新性军事理论，使之既能指导和平时时期中国国防和军队的建设发展，又能在未来担负维护世界和平、打赢信息化战争的使命中发挥作用。

2、军队组织形态现代化。军队组织形态，是指军队组织结构的表现形式，通常与一定的战争形态和作战方式相适应。组织形态的优劣，直接反映了军队整体结构科学与否，影响和制约军队整体作战效能的发挥。组织形态既是军队战斗力的载体，又是决定军事效能能否正常发挥的决定性框架，因为结构决定功能。此次中国军事改革，可以说是在组织形态现代化的道路上迈出了革命性的一步。随着改革的继续深化，中国人民解放军的组织形态将愈加精干，更加富有活力，更加灵活高效，具有中国特色的现代化的军队组织形态正在呈现，将在任何时候任何情况下都能担当起维护国家主权、安全和发展利益的重任，将更加从容自信地面对任何挑战。

3、军事人员现代化。习主席明确指出，“人才资源是第一资源”“强军兴军，要在得人”。军事人员现代化，就是要解放军的全体官兵具备与未来战争要求相适应的思想观念、知识结构、科学素养和作战技能。而现代化的军事人员，来自于更加科学、结构合理、覆盖全面、层层递进的军事教育和训练体系，和坚持面向战场、面向部队、面向未来的军事教育和训练理念。可以预见，未来的解放军将拥有“一大批高素质、敢担当的建军治军骨干”和“联合作战指挥与参谋人才、新型作战力量人才”。

4、武器装备现代化。武器装备是军队战斗力的重要组成，是军队建设水平的外在反映，是

打赢战争的重要基础，也是衡量军队现代化的显著标志。武器装备的现代化，要求支撑武器装备的科学技术、物质材料以及融入其中的信息化、智能化要素符合现代科技水平、战争形态和作战方式的要求，适应高科技、信息化的战场环境，真正具备“以戈止武”的能力。因此，所谓“现代化武器装备”，就是那些在战场上与对手的武器装备没有“代差”或“代差”不大的武器装备。建军九十多年来，中国人民解放军的武器装备发展，经历了十分艰难曲折而又令世人瞩目的历程。如今，解放军武器装备的发展正在从“机械化时代”向“信息化时代”迈进。此次军事改革也在中国国防工业领域产生了有益的影响，各种先进的武器装备正在陆续列装各军兵种部队。然而，客观地讲，解放军的现代化武器装备无论在数量上还是在质量上，仍与发达国家军队的武器装备存在较大差距，这也正是党的十九大报告提出要实现武器装备现代化的用意所在。

关键词：世界一流军队。十九大报告指出，“到本世纪中叶把人民军队全面建成世界一流军队”。那么，何为一流军队？按照世人的普遍观点，当今的一流军队就是以美、俄等军事强国为参照的军队，他们的面貌是现代甚至是超现代的，他们的武器装备是最先进的，他们的组织结构是更合理的，他们的组织指挥是更高效的，他们的官兵素质是更强的，等等。这些当然能在相当程度上描绘出什么是一流军队，但笔者认为，真正的一流军队，绝不是动辄以武力相威胁甚至侵略的只有“强壮肌肉”的军队，而是“内外兼修”的具有高尚宗旨的军队，是能够遏制战争、创造并维护和平的“威武之师”“和平之师”，这正是中国共产党要建设的人民军队。未来的人民解放军无论怎样强大，都不会成为称霸世界的战争工具。正如习近平于2015年9月3日在中国人民抗日战争暨世界反法西斯战争胜利70周年纪念大会上向全世界所庄严宣告的那样：为了和平，中国将始终坚持走和平发展道路。中华民族历来爱好和平。无论发展到哪一步，中国都永远不称霸、永远不搞扩张，永远不会把自身曾经经历过的悲惨遭遇强加给其他民族。中国人民将坚持同世界各国人民友好相处，坚决捍卫中国人民抗日战争和世界反法西斯战争胜利成果，努力为人类作出新的更大的贡献。

尾注

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2. Dr. Roger Cliff is a Senior Research Scientist at the Center for Naval Analyses.
3. <https://baike.so.com/doc/2163968-2289832.html>
词条：四个现代化

China's Military Reform: Present and Future - Part 2



Changes made to the structure of the Chinese armed forces have occupied much attention the world over, and are a central part of a wider program of reform being carried out within the People Republic of China (PRC). To help contribute to the burgeoning discourse on the subject with material directly from the source, this two-part report, available both in the original Mandarin and in English translation, seeks to explore the substance and logic of China's military reform.

China's military reform has attracted worldwide attention. Observers generally agree that this is the largest, most informative, most extensive, most far-reaching military reform in the history of the People's Liberation Army (PLA) since the founding of the People's Republic of China. This military reform, both in form and in content, as well as in theory and in practice, has more essential features of military reform than the PLA's previous actions of reorganizing, adjusting and disarming since its founding. The general argumentation, organization and implementation of the military reform and the control of the process have all fully demonstrated the far-sighted, scientific and pragmatic attitude of the party central committee and the Central Military Commission (CMC) with Xi Jinping as the core, that is willing to push the PLA to a new height of strategic wisdom, bold action and mission bearing. This military reform will leave a heavy mark on the history of the PLA under the absolute leadership of the communist party of China.

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III. Assessment of Military Reform

This military reform is not only a major event for China, but also an international event, which has attracted extensive attention and comments from the world. These concerns and comments are actually about how to evaluate the success or failure of military reform. Before we explore this issue, let's first select two representative articles from a large number of comments,

which respectively made targeted comments on China's military reform from an optimistic and pessimistic perspective. The two articles were published simultaneously in joint forces quarterly 83 (October 4, 2016) by Michael S. Chase and Jeffrey Engstrom¹: "China's Military Reforms: An Optimistic Take". Another was "China's Military Reforms: A negative Take" by Roger Cliff.² At the end of this part, I would like to share with the readers the theoretical understanding of the evaluation of military reform.

i. External Comments

First, let's look at the optimistic comments. Michael S. Chase and Jeffrey Engstrom wrote that China's military reform is "the most important in the post-1949 history of the People's Liberation Army (PLA). Xi Jinping, who serves as China's President, General Secretary of the Chinese Communist Party, and Chairman of the Central Military Commission (CMC), seeks to transform the PLA into a fully modernized and "informatized" fighting force, capable of carrying out joint combat operations, conducting military operations other than war (MOOTW), and providing a powerful strategic deterrent to prevent challenges to China's interests and constrain the decisions of potential adversaries.

The reforms aim to place the services on a more even footing in the traditionally army-dominated PLA and to enable the military to more effectively harness space, cyberspace, and electronic warfare capabilities." "The reforms are likely to offer benefits in several areas, including achieving enhanced joint capabilities, optimizing organizational structures for combat, and ensuring information dominance." The authors argue that these three benefits, first of all, are the creation of an army leadership agency that would be on par with the Navy, Air Force and the newly established Rocket Force, and would help improve the PLA's ability to conduct joint and MOOTW. The second major benefit of the reforms derives from the elimination of MRs and their replacement with theater commands. The purpose of reorganizing the military regions into a smaller number of theater commands is to improve the PLA's ability to prepare for and execute modern high-intensity joint military operations, because after the reform, "the theater command is the 'top joint

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operational commanding institution,' and, therefore, the theater commander is also the joint forces commander", rather than as a temporary form of wartime command and appointed theater commander, this will reduce the unnecessary change deployment and force transfer. The third major benefit is "creation of the Strategic Support Force—which is responsible for cyber, space, electronic warfare, intelligence, surveillance, and reconnaissance—offers improved flexibility and responsiveness that enhance the PLA's ability to fight multi-domain conflicts", thus ensuring information dominance.

Second, look at the more pessimistic assessment. Roger Cliff argues in his article that China's military reform does not fundamentally solve the PLA's longstanding problems: first, the high proportion of senior army officers, especially those at the theater level, will have a negative impact on the actual implementation of joint

operations by the PLA; second, the author analyzed the organizational structure of the PLA after the reform based on the histological principle, and believed that the organizational structure of the PLA increasingly emphasizes the vertical concentration (upward concentration), while the horizontal upper span of an organizational level is insufficient, which will lead to the lower level to make independent decisions according to the situation. In essence, the culture of such organizations does not encourage "initiative and innovation", which is incompatible with the PLA's emphasis on "maneuver and indirection" in its military doctrine since the 1990s.

ii. The Methodology of Military Reform Evaluation

In general, systems science provides two basic methods for assessing the status and development of anything: theoretical and practical. Assessing military reform, however, is hard to put to the test. For no country in the world has ever waged war purely to test the success or failure of reform. Therefore, the evaluation of military reform, is a special thing and has to start from the theoretical analysis.

First, practice tests military reform. There seems to be a consensus that the results of any reform must be tested through practice, and that the most immediate and ultimate test of success or failure of military reform is war. But if the world can test the success of military reform with war, only the U.S. military can. According to relevant data, since the 1940s, the U.S. military has undergone about three major and several minor military reforms or transformations, especially the 1990s, the rise of new military revolution, the transformation of the military was made continuously through the gulf war, the war in Iraq, and Afghanistan among others. In practice, however, military reform in most countries has no chance of testing in war. This raises a number of questions: Do peacetime military reforms work effectively? Do all military reforms have to be tested by war? Further inquiry: even if the "pure war" designed purely to test the success of a military reform or military theory, regardless of the nature of the war, the laws of war and the human rights and banned weapons involved in the war, exists, it may be difficult to test the validity of military theories, includ-

ing military reform, because there has never been a war which is an exact repetition of the last. In this sense, "military reform must be tested by war" is a paradox in itself.

Second, the theory tests military reform. It is the most common and effective way to assess the situation of things from the theoretical perspective, especially the military reform. There are many methods of theoretical evaluation, thanks to the development of systematic science. The famous Chinese scientist, Qian Xuesen, with many successes in the field of system science, proposed the; "comprehensive discussion hall" methodology, for dealing with complex giant systems. It provides a very effective method, including experts in the field of "brainstorming", to set up the simulation model, big data computation analysis, the use of virtual environment, and other comprehensive method. The military (not just military reform), as a complex and massive system, can be assessed by the use of systematic scientific principles and methods, combined with non-war experimental methods such as military training and exercises. Although military exercises cannot be compared with "actual war", they are the common methods used by all armies. Given the limitations of space and the fact that this is not the subject of this article, it is not necessary to discuss here specific methods of theoretical evaluation of military reform. Only from the basic connotation of military reform, we can also find that China's military reform is not what some critics call a "stealthy concept".

According to the military theoretical understanding, military reform is an activity and process conducted by the top military leaders and the leading bodies for the reconstruction of military force system, reconstruction of military organization, remodeling of leadership and command relationship, streamlining of organizational structures, and improvement of policy and system, the purpose is to change the past deficiencies and defects, make its military power towards better. In this sense, China's military reform deserves to be regarded as the biggest and most extensive military reform in the history of the PLA, the most diversified in content and the most changing in institutional structure, which will have a profound impact on the future of China and even the world.

IV. Looking Forward

Reform is an important and effective means for national defense and military construction and development. In his report to the 19th CPC national congress, Xi Jinping pointed out that China should adapt to the trend of the new military revolution and national security needs, improve the quality and efficiency of construction, and ensure that mechanization will be basically achieved by 2020, the informatization construction will have significant progress, and the strategic capacity will be greatly improved; In line with China's modernization process, we should comprehensively advance the modernization of military theories, military organization, military personnel and weapons and equipment, strive to basically modernize national defense and the armed forces by the year 2035, and turn the people's armed forces into a world-class military by the middle of the century. It contains four key words: "mechanization", "informatization", "modernization" and "world class". Knowing the meaning of these key words may give some insight into the future of the PLA.

Mechanization and Informatization. In Chinese, "化(hua)" means "trend", "degree" and "trend of some degree". The word "mechanization" in Chinese is directly translated from English. And the English "mechanization", according to relevant data, is related with the term of "mechanized infantry" which emerged in Germany after the First World War. At that time, the biggest difference between mechanized infantry and infantry was that the former operated and used armored vehicles and vehicle-mounted weapons to fight, while the latter only used vehicles and other means of transport to achieve the purpose of moving, mainly using light weapons for "on-the-ground" fighting. Later, with the increase of the armored forces' armor equipment, the connotation of mechanization was constantly enriched, and gradually became an indicator of the army's modernization degree. With the development of science and technology, the connotation and extension of the term "mechanization" are constantly changing. Now, with mechanical equipment in the electronic components, computer hardware and software composition ratio increasing, especially with the

wireless communication, wireless networks, the wide application of information technology such as film and television, mean the mechanical equipment is becoming more and more "smart", combined with the development of network, such as artificial intelligence technology, making the past information hiding behind the war factors gradually become dominant even war decided in key factors, also make the information become one of the main patterns of information war.

It is worth mentioning that the term "informatization" was coined by a senior researcher at the PLA Academy of Military Science and has become a globally recognized term. It has been widely recognized by military experts and scholars in recent decades that under modern conditions, mechanization and informatization cannot be discussed in isolation, and that they are not independent of each other. On the contrary, the realization of informatization is inseparable from the foundation of mechanization. But the fact proves, not simple mechanization can bear informatization, only the mechanization of modern meaning can bear the informatization of modern even future meaning. The PLA has been carrying out the dual tasks of mechanization and informatization since 1990s. During this period, there were also discussions on the leapfrog development, transcendental development, parallel development and integrated development of mechanization and informatization in the military theoretical circle. This is also the meaning of the 19th CPC National Congress Report, which first says "ensure the basic realization of mechanization by 2020" and then states "great progress has been made in informatization". In addition, the problem of mechanization is much more present in the quality and quantity of armor, and much more present in the army; The informatization problem is the problem of the whole armed forces.

"Mechanization" and "informatization" are terms used most frequently by the PLA since China's reform and opening-up. It is more a reflection of the PLA's determination and will to advance towards modernization. The aim is to win the future information war.

The modernization of the PLA has kept pace with the modernization of the party and the country. The first

National People's Congress, held in 1954, clearly set forth for the first time the four modernization tasks of industry, agriculture, transportation and national defense. On December 21, 1964, Zhou Enlai declared in the government work report of the third National People's Congress that "in a not too long historical period, China will be built into a socialist power with modern agriculture, modern industry, modern national defense and modern science and technology."³ Since then, the four modernizations, namely, industrial modernization, agricultural modernization, national defense modernization, and scientific and technological modernization, have become China's long-term national development strategic goals. After several generations of party and state leaders, the socialist country has not only made brilliant achievements that attracted worldwide attention, but also made the PLA completely change the old appearance of "millet plus rifle", which has been growing stronger day by day. At present, the party's 19th national congress proposed to "strive to basically modernize national defense and the armed forces by the year 2035", and explicitly divided the modernization of the PLA into four objectives and tasks, namely, modernization of military theory, modernization of military organization form, modernization of military personnel and modernization of weapons and equipment.

Modernization of Military Theory. Theory comes from practice and has a guiding effect on practice. The essential purpose of comprehensively promoting the modernization of military theory, put forward by the party's 19th national congress (in reference to foreign advanced on the basis of military theory achievements), is based on China's actual, in-depth ability to carry out innovative military theory with Chinese characteristics. This can guide the peacetime construction development of China's national defense and armed forces.

Modernization of Military Organizational Form. The military organizational form refers to the expression form of the military organizational structure, which is usually adapted to a certain war form and operational mode. The advantages and disadvantages of the organizational form directly reflect whether the

overall structure of the military is scientific or not, and affect or restrict the performance of the overall combat effectiveness. Organizational form is not only the carrier of the combat effectiveness of the military, but also the decisive framework to determine the normal functioning of military effectiveness, because the structure determines the function. This military reform is a revolutionary step on the road of modernization of organizational form. As the reform continues to deepen, the organizational form of the PLA will become more capable, more energetic, more flexible and efficient, a modern military organization with Chinese characteristics is taking shape, will under any circumstances be able to assume the responsibility of safeguarding national sovereignty, security and development interests, and will face any challenge more confidently.

Modernization of Military Personnel. President Xi made it clear that "talent resource is the first resource", "strengthen the army and rejuvenate the army, the key is talent." The modernization of military personnel means that all the officers and men of the PLA should be equipped with ideology, knowledge structure, scientific literacy and operational skills appropriate to the requirements of future wars. The modern military personnel come from the more scientific, well-structured, comprehensive and progressive military education and training systems, and adhere to the military education and training concepts that face troops on the battleground. It can be predicted that the PLA in the future will have "a large number of high-quality and courageous cadres of military construction and administration" and "joint operational command and staff personnel, new type of operational forces personnel".

Modernization of Weapons and Equipment. As an important component of the combat effectiveness of the armed forces, weapons and equipment are an external reflection of the level of military construction, an important basis for winning wars and a significant indicator of military modernization. The modernization of weapons and equipment requires that the material and intelligence elements that support weapons and equipment should conform to the requirements of modern science and technology, war form and combat mode. Moreover, they need to adapt to the high-tech

and information-based battlefield environment. Therefore, the so-called "modern weapons and equipment" refers to those weapons and equipment that have no "generation gap" or small "generation gap" with their opponents on the battlefield. Since the founding of PLA, the development of its weapons and equipment has undergone a very arduous and remarkable process. Nowadays, the development of PLA weapons and equipment is progressing from "mechanization era" to "information era". The military reform has also had a beneficial impact on China's defense industry, with various advanced weapons and equipment being successively assembled into various military units. However, objectively speaking, there is still a big gap between the PLA's modernized weaponry in terms of quantity and quality and that of the armed forces of developed countries. This is precisely why the party's 19th National Congress report proposes to modernize weapons and equipment.

World-Class Military. The party's 19th national congress report pointed out that "the people's army should be fully built into a world-class army by the middle of this century". According to the general view of the world, today's world-class military refers mainly to the military forces of the United States, Russia and some European military powers, they are the face of modern even the ultra-modern military world, their weapons and equipment are extremely advanced, their organizational structure is more reasonable, command of their organization is more efficient, and their officers and soldiers quality are better etc. These certainly paint a fair picture of what a world-class army is, but a truly first-rate army is by no means a "muscular" army that threatens or even invades with force, but an army of high purpose built on both the inside and the outside, it is the "mighty force" and "the force of peace" that can contain war and create and maintain peace. This is the people's army that the CPC wants to build. No matter how powerful the PLA will be in the future, it will not become a tool of war to dominate the world. Just as Xi solemnly declared to the world on September 3, 2015 at the commemoration of the 70th anniversary of the victory of the Chinese people's war of resistance against Japanese aggression and the world anti-fascist war: For the sake of peace, China will always adhere to the path of peaceful development. No

matter how far it goes, China will never seek hegemony or expansion. It will never impose on other nations the tragic experience it has experienced. The Chinese people will stay on friendly terms with the people of the world, resolutely defend the achievements of the Chinese people's war of resistance against Japanese aggression and the world anti-fascist war, and strive to make new and greater contributions to mankind.

Endnotes

1. Dr. Michael S. Chase is a Senior Political Scientist at RAND, Adjunct Professor in the School of Advanced and International Studies at The Johns Hopkins University, and Adjunct Professor at Georgetown University. Jeffrey Engstrom is a Senior Project Associate at RAND.
2. Dr. Roger Cliff is a Senior Research Scientist at the Center for Naval Analyses.
3. See also: <https://baike.so.com/doc/2163968-2289832.html> Entry: four modernizations