



Reconceiving Modern Warfare ——A Unified Model 重新思考現代作戰——統一的模式

譯者簡介



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The U.S. military has numerous ways it describes, conceives of, and organizes for war. Added capabilities and new technologies continually spur new terms and efforts, even new warfare types, to describe operations in a way that is helpful for organization, planning, and execution. These definitions and paradigms are useful in disaggregating the challenge or technology to understand it better, but they work in opposition to a comprehensive understanding of 21st-century warfare, even while attempting to further it.

美國軍方有許多種方式對戰爭進行描述、構想、組織。新出現的能力與科技一再滋生出新詞彙和新作為，甚至新的戰爭型態，用以闡釋相關行動如何對組織、規劃和執行層面能有所助益。這些界定與範例對於克服挑戰與深入瞭解技術內涵有很大幫助，但其執行面卻對全面瞭解21世紀戰爭，甚至達成這個目標的企圖，會有負面影響。

Joint war-fighting requires a new model that enables integrated thinking across the many

disparate capabilities, technologies, and applications of the tools, concepts, and personnel used today and in the future, while simultaneously enabling tactical planning, operational design, strategic discussion, and execution. This article proposes a unified model of warfare, tailored for modern technologies and emerging concepts as well as strategic thought, which bring together several existing paradigms in use today. Unifying these models enables broader consideration, integration, and innovation in warfare, but most important, allows discussion of, planning for, and prosecution of modern warfare to be simple and mission-focused.

聯合作戰需要新的模式能夠整合許多不同能力、技術、工具、概念及人員，以便在現今及未來都能加以運用，並能同步增強戰術規劃、作戰設計、戰略研討與執行。本篇提供了一套統一的作戰模式，對於現代技術、新興概念與戰略思維，列舉出數個能在今日加以運用的現行規範。將這些模式一致化，能把作戰的思維、整合與創新等視角加以擴大；但最重要的是，能讓現代作戰的研討、規劃與執行更為簡化，更聚焦於任務之完成。

What is *war in the 21st century*? Often, this phrase expresses a warfare that is more complex, multifaceted, faster-paced, and more human-centric and/ or more dependent on technology than warfare in earlier centuries. As used here, 21st-century warfare is simply warfare as prosecuted in the 21st century. It includes every weapon or tool from the most basic to the most advanced; state and non-state actors as adversaries, third parties, and partners; and military, paramilitary, and ad hoc forces. It is not relegated to two irreconcilable wills; there can be many.

何謂21世紀的戰爭？這個詞語經常會被解釋成更為複雜、更多面向、節奏更快、更以人為中心，以及(或)比早先世代戰爭，更依賴科技。字面上來看，21世紀戰爭簡單來說就是在21世紀執行的戰爭；它所使用的工具或武器從最原始到最先進的都有，對手可能是國家或非國家行為者、第三勢力或其黨羽、軍隊、準軍事部隊，或是特殊部隊。它不能歸類為兩個互不妥協團體之間的對立與鬥爭；牽涉其間可能還有更多不同的團體。

Existing Models 現有模式

Most existing paradigms rise from a Clausewitzian championing of conventional force-on-force warfare. Carl von Clausewitz declares that "[physical] force ... is thus the means of war; to impose our will on the enemy is its object."¹ Problematically, many newly emphasized



war-fighting technologies and capabilities either are not physical in nature or have a debatable physical nature—is a cyber capability part of physical warfare if the result is merely different data? What if the result is temporarily incapacitating a computing capability?

大部分現有範例，起源於克勞塞維茨所倡議的傳統部隊與部隊的戰鬥。克勞塞維茨言明：「(實體)部隊……是戰爭的方式；將我之意志強加於敵，為戰爭之目標。」¹ 令人質疑的是，很多新近所強調的戰爭技術與能力，不再具備實體的特質——但是，戰爭結果如果只剩一些數據資料，網路能力是否可視為實體戰爭的一部分？那麼短暫性癱瘓電算能力呢？

Interpreting the means of war as physical force restricts thinking to the physical realm, when the focus should be, as Clausewitz points out, "To secure that object we must render the enemy powerless; and that, in theory, is the true aim of warfare."² To this end, the frame used to think about, plan and prepare for, and prosecute war should focus on accomplishing the mission rather than another aspect of the fight, such as where it is prosecuted or what capabilities are used. Instead of restricting thinking about how to fight, the model should free thinking to enable integration and innovation.

從思考的側重方向來說，以實體部隊的思維闡釋作戰，會限定了所謂實體的思考範圍。正如克勞塞維茨所指出：「確保我方所需固守的目標，免於敵人武力的威脅；這在理論上，就是作戰的真正目的。」² 要達成這個目標，思考的架構主軸應該是計畫、準備與執行，焦點應投注於完成目標，而非其他無關結局的戰鬥，或是像在何處執行、用什麼武器這些細微末節。不受限於思考如何戰鬥，思維模式應對如何整合與創新，採取完全開放的態度。

This model overlays several predominant warfare models, each with a different focus area and original intent, to identify a unified paradigm that is comprehensive yet simple to understand and work within to enable mission-focused planning and operations. These models are domains, Marine Corps forces, joint functions, the continental or general staff system, and information-related capabilities. The existing models are not necessarily unsound, but each

1 Carl von Clausewitz, *On War*, ed. and trans. Michael Howard and Peter Paret (Princeton: Princeton University Press, 1989), 75.

2 Ibid.

frames warfare such that new models must be generated as modes of war develop and change. The result is many models, all of limited utility, and a resulting inability to discuss modern warfare in clear, concise language that can be shared among strategic, operational, and tactical levels.

這套思維模式，包含了許多主要作戰模組，每個都有其不同的側重區塊與最初目標，卻歸屬於一個統一範例，能全面而簡單的理解並相互協作，確保在任務規範下，審慎規劃與執行。這些作戰模組牽涉到戰域劃分、海軍陸戰隊、聯合作戰職掌、各大洲或整體參謀系統，以及與資訊相關的各項能力。現有模組不一定存在某些缺陷，但某些新模組卻需要在原有架構下，啟動改進作為，以肆應戰爭發展及變化。其結果就會變成有許多的模組，每個在效用上都不盡完美，但在探討現代作戰時，這些缺失透過清楚簡要的語彙，可以分享到戰略、作戰和戰術等不同階層。

Domains. Domains for war-fighting- land, maritime, air, space, and cyberspace in joint doctrine- pose three problems when considering 21st-century warfare.³ First, discussions of new domains needed to keep the model relevant are nearly continuous. Pundits in 2017 discussed the domain of the mind or the individual, while the special operations community discusses the human domain.⁴ Military doctrinaires debate whether the electromagnetic spectrum should be a domain. In 1998, generals discussed information as a domain, as some still do today.

戰域劃分。作戰的區域劃分——從聯合作戰準則上來說，包括了陸域、海域、空域、太空以及網路空間。面對21世紀作戰，這裡要列舉三件麻煩事。³ 第一，只要談到新的戰域劃分，就不得不認定這個模組所說的劃分，幾乎是連續性的。2017年，一群權威學者在探討特種作戰中人的認知域相關議題時，提到了心理與個人等因素。⁴ 軍事準則專家主張，電磁頻譜是否也應該列入空間戰域。1998年時，將領們普遍認定資訊所及之處即為戰域，至今日仍有人持此看法。

Second, attempts to integrate the domains succeed mostly in subordinating to one domain all the others. A white paper jointly developed by the Marine Corps and Army, though signed

3 Joint Publication 3-0, Joint Operations (Washington, DC: The Joint Staff, January 17, 2017), xiv, available at <www.jcs.mil/Portals/36/Documents/Doctrine/pubs/jp3_0ch1.pdf?ver=2018-11-27-160457-910>.

4 Ray Alderman, "Domains of Warfare and Strategic Offsets," Military Embedded Systems, January 31, 2017, available at <<http://mil-embedded.com/guest-blogs/domains-of-warfare-and-strategic-offsets/>>.



only by the Army, defines multi-domain battle (MDB) as "an approach for ground combat operations," clearly emphasizing the land domain over others.⁵ Although it does discuss capability integration and acknowledges the need for superiority in other domains, the MDB nevertheless focuses on how other domains can support the land domain. Vice Admiral Charles Richard, USN, former deputy commander of U.S. Strategic Command, put forward the concept of multi-domain integration, noting, "Whether you're guiding ships, jets, drones [or] missiles, space is the domain that enables all the others."⁶ One domain's dominance is not an issue in itself, but when the model focuses on how other domains support one, it skews thinking toward that predefined relationship-in support of land or space, for instance-rather than true integration.

第二，試圖整合各作戰領域形成一個包含各戰域的多領域作戰模式。一份由海軍陸戰隊和陸軍聯合撰寫的白皮書，最後只有陸軍簽署；其中定義了多區域作戰(MDB)為地面作戰的延伸，並且清楚強調陸戰重要性涵蓋其他領域。⁵ 這份白皮書也探討到能力整合並認知其他作戰區域的重要性，但MBD還是著重於其他兵力如何支援地面作戰。美國海軍中將戰略指揮部前副指揮官查爾斯·理查，將多領域整合的概念加以延伸，表示：「只要能調動戰艦、戰機、無人機或飛彈，那個空間就是主要作戰區域」。⁶ 一個作戰區域的支配地位重點不在其本身，端賴作戰模組何時將重點轉移到如何驅動其他戰域對其加以支援；偏偏有人要曲解這種關係——舉例來說，跨大陸戰或其他戰域的重要性——卻忘記了重點是真正的整合。

Third, the domain structure anchors thinking in where the fight occurs, rather than what needs to be accomplished. It is useful for understanding what capabilities can accomplish in each domain, but it more often inspires a mine-theirs mentality relating to capabilities based on where they have effects. It also gives fighting locality primacy over the capability in terms of importance and thinking. When discussion focuses on "What domain are we fighting in?" rather than "What capabilities do we have to prosecute the mission?" the domain focus impedes not only integration but also innovative capability combinations.

5 "Multi-Domain Battle: Combined Arms for the 21st Century," white paper, U.S. Army, U.S. Marine Corps, February 24, 2017, available at <www.dupuyinstitute.org/blog/wp-content/uploads/2019/03/U.S.Army-Marine-Corps-Multi-Domain-BattleCombined-Arms-For-The-21st-Century-2017.pdf>.

6 "U.S. Vice Admiral Calls for Code of Conduct for Space, VOA News, March 29, 2017, available at <www.voanews.com/science-health/us-vice-admiral-calls-code-conduct-space>.

第三，部隊把思考重心放在「戰鬥起於何處」，而非「應達成什麼任務」。瞭解每個戰域具備哪些能力是很有幫助沒錯，但若能清楚的掌握這些能力會在哪些地方產生何種影響，無疑更有建設性。這也會形成一個錯覺，認為戰鬥發生地點，在重要性方面凌駕能力本身。當探討重點集中在「我們該在哪個區域作戰？」而不是「我們具備哪些能力完成此次任務？」只關注於戰域本身不只將阻礙戰力整合，而且還有創新能力之間的結合。

Forces Model. The forces model used in Marine Corps Doctrinal Publication ¹⁰ (MCDP-1), War-fighting, is broad and encompasses many warfare aspects, such as moral and mental capacities, which are not present in most other models. In MCDP-1:

戰力模組。這部分在海軍陸戰隊準則出版品1(MCDP-1)，戰鬥，裡面的敘述範圍甚廣，甚至包括道德與心理素質，在其他模組裡並不見相關描述。¹⁰在MCDP-1裡面記述：

- The physical characteristics of war are generally easily seen, understood, and measured—for example, equipment, capabilities, supplies, physical objectives seized, force ratios, losses of materiel or life, terrain lost or gained, and prisoners or materiel captured.

- 戰爭的實體特徵通常顯而易見，易於瞭解與測算——例如裝備、能力、補給、實體目標奪取、兵力比、物資或人員傷亡損失、特定地形失去或攻占，以及敵人俘虜或物資的攫奪。

- Moral forces are difficult to grasp and impossible to quantify, including national and military resolve, national or individual conscience, emotion, fear, courage, morale, leadership, and esprit.

- 道德力量就比較難觀察或量化，包括國家與軍事決心、國家或個人良知、情緒、恐懼、勇氣、士氣、領導統御，還有團隊精神。

- Mental forces provide the ability to grasp complex battlefield situations; to make effective estimates, calculations, and decisions; to devise tactics and strategies; and to develop plans.⁷

- 心理狀態的力量可發揮獲取戰場複雜情況的能力，藉此進行有效評估、計算與決

7 於下頁。



策，並策劃戰術、戰略，發展相關計畫。⁷

A key drawback, however, is that it pushes the user to focus on the physical, given that it openly states an entire aspect of war cannot be understood or measured. In a superficial cost-benefit analysis of exploring or thinking about moral forces that are "difficult to grasp and impossible to quantify," the effort hardly seems worth it.

然而最關鍵的缺點是，這會讓準則使用者專注於實體，即使眾所皆知，無法瞭解或測知戰爭的全貌。在表面的成本效益分析中，對於部隊的心理或精神戰「很難加以掌握，且不可能予以量化」，只能是徒勞無功。

Given the vernacular definition of physical meaning "tangible" rather than "governed by physics," the line between what is physical and what is not in 21st-century warfare becomes blurry, in particular with cyberspace, cyber security, and electromagnetic spectrum operations.

以一般通俗性定義來說，所謂實體，意謂「有形體的」，而非「由物理定律支配的」；對於何者為實體，這界線在21世紀作戰中變得很模糊，尤其涉及網路空間、網路安全、電磁頻譜這些議題的時候。

Joint Functions. Defined in Joint Publication (JP) 1, Doctrine for the Armed Forces of the United States, and JP 3-0, Joint Operations, the joint functions are "related capabilities and activities grouped together to help Joint Force Components integrate, synchronize, and direct joint operations." They are often used in planning processes to form the planning cells and develop courses of action. They include:

聯合作戰職掌。在聯合出版品(JP)1-美軍準則，以及JP 3-0-聯合作戰這些準則中，聯合作戰的定義是：「將能力與行動組合起來，協助聯合部隊各單位進行整合、同步，並主導作戰的進行」。這套方法經常用於規劃程序，形成計畫小組，藉以發展行動方案。這包括了：

- command and control: exercising authority and direction over assigned or attached forces in the accomplishment of a mission

7 Marine Corps Doctrinal Publication 1 (MCDP-1), Warfighting (Washington, DC: Headquarters Department of the Navy, 1997), 15-16, available at <www.marines.mil/Portals/1/Publications/MCDP%201%20Warfighting.pdf>.

- 指揮與管制：運用權威與指導，下令所屬或配屬部隊完成任務。

• maneuver: employing forces in the operational area through movement in combination with fires to achieve a position of advantage in respect to the enemy in order to accomplish the mission

- 機動：在作戰區藉著移動部隊，配合火力對敵人形成優勢，以達成任務。

- fires: using weapons systems to create a specific lethal or nonlethal effect on a target

- 火力：使用武器系統，對特定目標造成致命或非致命傷害。

• intelligence: providing the commander with an understanding of the adversary and the operational environment and identifying the adversary's centers of gravity and critical vulnerabilities

- 情報：提供資料使指揮官瞭解敵情與作戰環境，藉以掌握敵人重心與關鍵弱點。

- logistics: all activities required in moving and sustaining military forces

- 後勤：所有行動都要求移動，並維持軍事部隊所需。

• force protection: the measures taken in preserving the force's potential so that it can be applied at the appropriate time and place.⁸

- 部隊防護：保護部隊戰力完整的諸多措施，得以在適當的時機和地點發揮戰力。⁸

• information: managing and applying information and its deliberate integration with other joint functions to influence relevant actor perceptions, behavior, action or inaction, and support for human and automated decisionmaking.⁹

• 資訊：將各方訊息及資料，經分析、管理之後與其他聯合作戰職掌單位審慎整合運用，以影響相關各方的看法、行動、作為或不作為，協助人員及自動化決策之制

8 Marine Corps Warfighting Publication 5-10, Marine Corps Planning Process (Washington, DC: Headquarters Department of the Navy, May 2, 2016), B1-B2, available at <www.marines.mil/Portals/59/Publications/MCWP_5-10_FRMLY_MCWP_5-1.pdf?ver=2017-08-28-140131-227>.

9 Ibid.



定。⁹

The joint functions are helpful in forcing planners and operational planning team (OPT) members to consider various capabilities and requirements of warfare during the joint planning process (JPP). Even if intended as a paradigm to serve as a checklist, over time checklists shape and usually limit thinking to only those things on the checklist. In practice, therefore, its categories also limit thinking about capabilities. As an example, logistics usually includes health services, but the personnel accountability aspect for which personnel staff would be responsible is rarely part of the discussion. Personnel functions are required for actual war-fighting, and participation in exercises enhances skills, knowledge, and experience for seasoned staff and is especially important for less experienced staff.

聯合作戰職掌的劃分，對規劃人員和作戰計畫團隊(OPT)成員，在聯合規劃程序(JPP)期間，考量作戰諸般能力與要求時很有幫助。但是如果要依此範例製成一份檢查清單，按時間流程規劃出來的檢查清單也會讓執行人員只想到清單上列出來的事項。因此，在實際執行時，清單上列出來的項目往往也限制了思維能力。舉個例子來說，後勤項目經常會把健康勤務納進去，但在實際人員管控時，負責的參謀就不太會把這部分考慮進去。人事業務直接與作戰相關，實際參與業務運作，可以提升資深參謀的技能、知識與經驗，對於欠缺經驗的參謀來說，這部分尤其重要。

General Staff System. While the joint functions are used to plan for military operations and exercises, day-to-day functions in garrison are compartmentalized differently despite the fact that those same joint functions are executed in and by these same staff organizations in garrison and combat. The JPs and doctrine follow this organization in their numbering and categorization:

總體參謀系統。當聯戰職掌被拿來規劃軍事作戰與行動時，原本營區裡日復一日的運作被劃分成由多個不同聯戰職掌單位負責的狀態；事實上，相同的聯戰職掌，不論在平時或戰時，都是由相同的幕僚單位負責。聯合出版品(JPs)和軍事準則都遵循下列編號，將其職掌加以歸類：

- J1, Personnel ，聯一，人事，
- J2, Intelligence ，聯二，情報，
- J3, Operations ，聯三，作戰，

- J4, Logistics , 聯四, 後勤,
- J5, Plans , 聯五, 計畫,
- J6, Communications. 聯六, 通信。

Many staffs use additional sections to cover the range of activities that they engage in. While application varies widely, often the military activities included are training, finance, and civil affairs. The organization varies over time as a function of personality, activity, leadership requirements, and functional emphasis.

許多參謀會增加分支單位來處理其負責業務。當運用範圍擴大，原本的軍事行動就要將訓練、財務和民事等等都納入掌握。同一單位經過些時日，就會隨著人員個性、行為、領導統御和職務重點等因素而產生差異。

The staff sections coincide partially with joint functions. J1 (Personnel) is not included as a joint function, whereas J2 (Intelligence) and J4 (Logistics) are explicitly and directly such. J3 (Operations) is divided into joint functions of maneuver, fires, force protection, and (often) information. J5 (Plans) typically orchestrates the longer term planning efforts for all the functions and staff sections both in garrison and deployed environments. J6 (Communications) only roughly correlates with command and control. The J2, J3, J5, and J6 sections all have a role with the newly added information function. In fact, regarding "support for human decision-making," every staff section could be said to have a role in executing the information joint function, greatly complicating the actual inclusion of this in a planning process.

參謀系統與聯戰職掌有部分重疊。聯一(人事)並未被歸入聯戰職掌之中，聯二(情報)與聯四(後勤)很明顯也是。聯三(作戰)所業管在聯戰職掌中就分別占有機動、火力、部隊防護與資訊等項目。聯五(計畫)一般指的是對所有職掌與參謀業管，不分平時戰時較長期程的規劃活動。聯六(通信)可以勉強歸類到指揮與管制。聯二、聯三、聯五和聯六各參，都有一個新增加的資訊職掌。事實上，只要提到「協助完成人員決策」，每一個參謀都會說在執行資訊聯戰職掌時，自己不能置身事外；這也使得在規劃程序這部分該如何區分歸類，增加了很大的難度。

In garrison, as well as in operations, the general staff system is used to organize forces, yet in exercises and sometimes operational planning, not all the staff sections participate. Personnel, training, and finance staffs rarely participate in JPP applications while remaining



critical in preparing for and prosecuting war. If included in operational planning, those sections may be better able to identify creative, innovative ways to enable operations.

不論平時或戰時，參謀系統的作用都是用來組織兵力，但在演練或作戰規劃時，不見得所有參謀都會參與其中。負責人事、訓練和財務的參謀，甚少參與JPP(聯合計畫程序)，但在準備與執行作戰時，卻仍然扮演重要角色。如果在作戰規劃中能被收編進去，這些業管參謀或許可以更積極創新的方式，協助任務之達成。

Left out of the joint functions altogether, though addressed nominally by the "Green Cell" that is tasked with playing transnational groups, human factors are so important that some are considering an entire domain dedicated to civil affairs. Civil affairs can serve an important role in pre-conflict, post-conflict, and fighting stages of both counterinsurgency and major contingency operations by demonstrating U.S. intent to nearby populations, engendering good will, undermining adversary efforts, engaging with groups in the vicinity of friendly forces, and liaising with international and other nongovernmental organizations.

被聯戰職掌排除在外，卻被專責跨國運作的「綠色細胞」小組認為非常重要的人的因素，在進行民事工作時具有舉足輕重的地位。民事工作在衝突預備、善後和衝突階段，不論是執行反暴動任務或處理偶發的意外事件，都能藉著表達美國期望、展現善意，發覺敵人意圖、與鄰近友善勢力結盟、取得國際合作等非政府組織作法，完成任務。

Information-Related Capabilities. Information-related capabilities (IRCs) are a key part of information operations (IO) doctrine, which includes the physical attack and physical protection IRCs. This acknowledges that a missile on target sends a message simultaneously with the target's physical destruction. It also brings conventional physical fires into the IO tent as an IRC. Physical ways of communicating are included in IO doctrine and, if applied accurately, are integrated with it. Doctrinally, IRCs are tools, techniques, or activities that affect any of the three information environment dimensions (physical, informational, and cognitive). JP 3-13, Information Operations, includes fires, targeting, physical security, legal, and counterintelligence along with J4, J5, J6, and J7 in the notional information operations cell, but specifies 14 IRCs:

資訊相關能力。資訊相關能力(IRCs)在資訊作戰(IO)準則中，扮演關鍵角色，包含了對資訊相關能力的實體攻擊和實體防護。這種技術就像飛彈瞄準了目標，只要傳送一個訊號，立刻就可以把目標實體摧毀掉。這也把傳統的實體火力帶進資訊作戰領域，成

為資訊相關能力之一。實體的傳遞路徑本來就包括在資訊作戰準則中，如果運用得當，還是整合選項之一。從準則立場來看，資訊能力是可以影響資訊環境三個面向(實體、虛擬與認知)的工具、技術或是活動。聯合出版品JP3-13，資訊作戰中，闡述內容就包含了與聯四後勤、聯五計畫、聯六通信和聯七部隊發展等概念上的資訊作戰單位都有關的火力、目標鎖定、實體安全、適法性以及反情報等業務。14種資訊相關能力具體說明如下：

- strategic communication，戰略溝通，
- joint interagency coordination group，聯合跨機構協調小組，
- public affairs，公共事務，
- civil-military operations，民事作戰，
- cyberspace operations，網路空間作戰，
- information assurance，資訊確保，
- space operations，太空作戰，
- military information support operations，軍事資訊支援作戰，
- intelligence，情報，
- military deception，軍事欺敵，
- operations security，作戰安全，
- special technical operations，特種技術作戰，
- joint electromagnetic spectrum operations，聯合電磁頻譜作戰，
- key leader engagement。關鍵領導人交涉。

If taken as a modern warfare model-which is possible when aspects like physical protection and joint fires from the doctrinal, notional IO cell are included-this not only expands consideration of capabilities focused on undermining the enemy's will but also runs the danger of overemphasizing IO's communication aspects at the expense of the more tangible physical aspects.

如果將資訊作戰視為現代作戰模組之一，就像準則上或抽象的資訊作戰單位執行的實體防護和聯合火力，不只對於發現敵人的意圖方面，可以更擴大思維能力，甚至可能冒著過分強調資訊作戰溝通的風險，犧牲掉對實體防護的投入。

A Unifying Paradigm 統一的範例



Aligning the models reveals four key elements of any military operation, while providing enough flexibility within each to enable analysis of new and emerging concepts and technologies without having to create a new warfare type or model with each technological development or change in era. This model can be used for tactical planning, operational design, strategic discussion, and execution. World War II, Cold War, and post-Cold War eras fit as easily into this model as the post9/11 era. It addresses actions to be taken, audiences to address, capabilities to apply, approaches and perspectives to maintain, and even processes to incorporate.

將各種模組羅列出來，會發現任何軍事作戰都會有四個關鍵因素；將每一個關鍵因素都賦予足夠的彈性，去分析一些新的概念和技術，就不必為了當代技術發展或改變，而去創造新的作戰方法或模式。這個模式可以用四個作為來貫穿，分別是戰術規劃、作戰設計、戰略研討和執行。二次世界大戰、冷戰和後冷戰時期的作戰模式，與後911時期的狀況基本可以吻合——此模式能妥善因應採取有效作為、處理受眾問題等，運用適當能力保留正確方法與想法，甚至進程序合併。

This alignment of models is domain- and Service-agnostic, freeing thought about military operations from limitations, such as where it is prosecuted or by whom, and enabling focus on missions and capabilities. It can be used, perhaps, in place of all the paradigms examined beneath. In short, it simplifies warfare enough to understand it easily, while enabling much more detailed discussion and integration of capabilities and technologies not yet conceived.

這些模組的羅列並未提及領域和各種勤務，對軍事作戰而言少了些限制，也就是說它不強調是由哪些單位在哪裡執行的，這樣比較能聚焦於任務與能力。或許這樣就能如表1一般，對所有範例進行適切檢查。換句話說，表1將作戰簡化到很容易理解，但是也讓尚未思考到的能力與技術的整合，留下進一步討論的空間。

表1 21世紀作戰的統一模式

精神戰力			
整合規劃與作戰			
分析與決策	攻擊與防護	通信	授權與支援

There are two element types in this paradigm: foundation and application. Foundation elements are those that underlay military actions, specifically moral and mental forces and integrated planning and operations. Application elements are those that focus on specific

actions to be taken, namely analyzing and deciding, attacking and protecting, communicating, and enabling/supporting. They are not arranged in any particular order, but are equal in their importance and contribution. Each element is defined below to enable an in-depth understanding of them. In most cases, doctrinal definitions are used because they are good, known, and relevant. Where definitions deviate from doctrine, they are defined and justified.

這些因素區分為兩種型態：基本與應用。基本因素是軍事行動的基石，特別是對精神戰力以及整合規劃與作戰而言。運用因素則聚焦於特定行動，就是分析與決策、攻擊與防護、通信，以及授權與支援。他們之間沒有特別的順序，但有同樣的重要性與貢獻。每一種因素在下方均有解釋，以利更深度的瞭解。多數情況下，吾人使用準則性的定義，因為適切、為人熟知且互有關聯。若這些定義與準則有所悖離，則予以重新定義與合理解釋。

Foundation Element: Moral and Mental Forces. These are almost the same as in MCDP-1. Moral forces are national and military resolve, national or individual conscience, emotion, fear, courage, morale, leadership, or esprit. Mental forces are the ability to grasp complex battlefield situations; to make effective estimates, calculations, and decisions; to devise tactics and strategies; and to develop plans.¹⁰ As used in MCDP-1, these forces exist and can be affected, but most focus is placed on undermining the adversary's mental and moral forces. Usage here differs in that it emphasizes that these mental and moral forces can be undermined as well as enhanced for enemy, friendly, and third-party personnel. Included here are activities that may not reside in the general staff system, such as enhancing individual resilience, teaching critical thinking and decision-making skills, monitoring behavioral health, and so forth. Mental and moral forces-including force resilience-underpin not only the entire mission but also the entire battlespace including adversaries and third-party actors.

基本因素：精神戰力。這部分跟在海軍陸戰隊準則出版品1(MCDP-1)敘述的幾乎完全一樣。這支部隊體現的是國家與軍隊的決心，國家或個人的良知、情緒、恐懼、勇氣、士氣、領導統御，或是團隊精神。精神戰力要能掌握戰場上複雜的狀況，做出有效的評估、計算與決策，策劃戰術與戰略，並研擬行動方案。¹⁰在MCDP-1的敘述中，這類部隊存在的目的，最重要的還是在於暗中破壞敵人的精神戰力。這並不表示這類部隊很容易受敵人、友軍或第三方勢力的影響而被侵蝕或強化；要達到這個目的，所需的能力

¹⁰ MCDP-1, Warfighting.



並不包含在總體參謀系統之中，例如提升個人的復原力、學習批判性思考及決策技巧、監看行為健康程度等等。精神戰力及部隊的復原力，不只是完成任務，也是整個戰鬥空間的重要基石，包含面對敵人及第三方勢力時。

Foundation Element: Integrated Planning and Operations. This incorporates the J5 and J3 roles. J5 conducts, and is responsible for, integrated planning to achieve the four categories of action in support of the mission. J3 is responsible for the execution of those categories to achieve the mission.

基本因素：整合規劃與作戰。這部分和聯五計畫及聯三作戰的角色部分重疊。聯五負責整合規劃，以達成行動的四個項目，支援任務之完成。聯三則負責執行該四個項目。

Application Element: Attacking and Protecting. Lacking a joint definition, attack is, as defined in Marine Corps Reference Publication 1-10.2, Marine Corps Supplement to the DOD [Department of Defense] Dictionary of Military and Associated Terms, an offensive action characterized by movement supported by fire with the objective of defeating or destroying the enemy. Protection is defined in the 2019 DOD Dictionary of Military and Associated Terms as active and passive defensive measures to ensure preservation of the effectiveness and survivability of mission-related military and nonmilitary personnel, equipment, facilities, information, and infrastructure deployed or located within or outside the boundaries of a given operational area. This includes overcoming an adversary's attempts to negate them and to minimize damage if negation is attempted.

運用因素：攻擊與防護。攻擊一詞，在海軍陸戰隊參考出版品1-10.2裡面，並沒有針對聯合作戰所下的定義；在國防部軍事與關聯詞字典中，陸戰隊增補了：以移動為基礎所發起的攻勢行動，藉火力支援施加至目標，擊敗或摧毀敵人。防護，在2019年同本字典中提出的定義是：積極且被動的防禦手段，以確保與任務相關，部署或設置在特定軍事區域內或外的軍事、非軍事人員、裝備、設施、資訊、基礎設備等的效用與存活。另外還包含反制敵人的破壞意圖，並降低破壞的損傷程度。

Application Element: Analyzing and Deciding. The term analysis included in the DOD dictionary relates only to intelligence. Therefore, this model leans on facilitation and instruction theory to define analyzing as drawing connections among ideas through various

means, including but not limited to differentiating, organizing, comparing and contrasting, distinguishing, and examining available information. Deciding is making a decision; a decision is defined in the DOD dictionary as, in an estimate of the situation, a clear and concise statement of the line of action intended to be followed by the commander as the one most favorable to the successful accomplishment of the assigned mission. In this paradigm, analysis is done specifically in informed decision-making.

運用因素：分析與決策。分析一詞在國防部字典裡，僅僅與情報相關。因此，本模組傾向於將其內涵解釋成：透過不同方式，包含但不限定於區分、組織、比較、對照、識別、檢查所有可得訊息，在各個主題之間勾勒出關聯。決策就是做出決定；所謂決定，在國防部字典中是說：對情況進行評估，在所賦予任務中由指揮官藉著清楚簡明的對行動底線的掌握，挑選最適切的方式達成。在此範例中，分析工作必須在資訊充分的決策中完成。

Application Element: Communicating. Communicate was removed from the DOD dictionary in its 2019 revision, but the definition included in earlier versions is retained here: to use any means or method to convey information of any kind from one person or place to another. In this model, it includes communication internal to, and external communication from, the operating forces to any audience including the adversary, third-party actors, internal forces, and other commands.

運用因素：通信。通信一詞，在2019年版國防部字典中已經被移除，先前版本對它的定義是：採取任何手段、方式，將任何形式的訊息，從一個人或一個地方，傳遞給另一個人或到另一個地方。在此模組中，包括了內部和外部訊息的傳送，作業單位傳遞的對象，也包括敵人、第三方勢力、內部單位，和其他單位的指揮官。

Application Element: Enabling/ Supporting. The DOD dictionary does not include a definition of enabling. This model modifies the legal definition of enabling as conferring new powers, capacities, means, abilities, competences, capabilities, or authorities on an element of the force to enhance mission accomplishment. Supporting modifies the dictionary's definition of support as providing a force or element of a command that aids, protects, complements, or sustains another force in accordance with a directive requiring such action. This definition replaces "the action of a force that aids" with "providing a force or element of a command that aids" in order not only to address the different verb form but also to expand the concept to



incorporate the idea of giving resources to another force or element.

運用因素：授權與支援。國防部字典並未將授權納入解釋。本模組將其定義修改為：授予新的權力、職能、方法、能力、權限、功能或是職權給某一單位或個人，以提升完成任務的概率。支援，修改原先字典的定義，變成：提供一個部隊或單位以幫助、保護、補充物品，或根據其要求，維持其他部隊運作所需的行動。這個定義取代了原先「協助部隊的行動」和「依命令提供部隊或單位所需」，避免只是換了不同的詞講同一件事，也能將純粹把資源給予其他單位的行動，予以擴充概念。

With the model elements defined, this overlay can assist thinking about this new model by showing how the older models fit within its construct. Each model is indicated by different text type or color. For instance, portions of the forces model are red text. Note the information joint function must be divided among the application elements; this speaks to the premise of this article, that the existing models fall short and therefore inhibit the ability to discuss warfare in a holistic, broadly applicable yet flexible and nuanced manner.

隨著模式裡的各種因素一一被定義，得知舊模式如何配合總體構想，也已經漸漸能協助理解新模式的思維。每一個模組都用不同字型和顏色來顯示，舉例來說，部隊模組用的就是紅色(如表2)。請注意資訊聯戰職掌必須被劃分到運用因素，這就要說到這篇文章的前提：現存模組已經不敷使用，因此必須對作戰方式的研討有些限制；某些具全面性、可廣泛運用且具備彈性、差異微小的部分，只能略過不提。

表2 21世紀作戰的統一模式——附加其他模組

精神戰力			
整合規劃與作戰			
分析與決策	攻擊與防護	通信	授權與支援
聯二 指揮與管制 情報 資訊(部分) 情報	實體部隊 聯六 地面 海上 網路空間 太空 火力 部隊防護 資訊(部分) 網路空間作戰 太空作戰 作戰安全 特種技術作戰 聯合電磁頻譜作戰 聯合火力 實體防護	民事分隊 資訊(部分) 軍事欺敵 軍事資訊支援作戰 戰略溝通 聯合跨機構協調小組 公共事務 民間-軍事作戰 資訊確保 關鍵領導人交涉	聯一 聯四 訓練分隊 財務分隊 空域 後勤 機動
顏色區分： 美國海軍陸戰隊 一般參謀 作戰區域 聯戰職能 資訊相關能力			

This paradigm will be applied to different areas of planning, organization, and execution in the next sections to illustrate the ways in which it alters thinking and enables, encourages, or enhances coordination, integration, and innovation in warfare. These applications are neither comprehensive nor conclusive; there may be many other ways this paradigm can be applied to enhance war-fighting. The intent is both to spur and to challenge ways the U.S. military describes, conceives of, organizes for, and prepares for war.

這種範例可以運用到規劃、組織、執行等各個不同領域，底下內容將會描述這種方式如何改變思維且引發、促進或提升作戰中的協調、整合與創新。這些運用既不是無所不包，也不是最終定案的，還會有其他很多方式可以在這範例中加以運用來提升作戰能力。其目的是要刺激並且挑戰美國軍方想出更多法子對戰爭加以描述、構想、組織，並且充分準備。

An Enduring Model 持久的模式

Military thinkers propose new warfare types and models when discussing changes in prosecuting war under certain circumstances, even when the change is simply different combinations of existing technologies and capabilities. Russia's heavy use of information operations and social media, combined with guerrilla tactics and heavy artillery to annex Crimea while managing to avoid a military response from Ukrainian allies, is labeled "hybrid warfare" or "operations in the gray zone," somewhere between peace and war. These efforts merely categorize a specific combination of capabilities but do little to enhance the ability to integrate, coordinate, and innovate in warfare.

軍方智庫努力提出新的作戰方式，並在特定情況下探討執行方式的改變，即使這些改變只不過是現有技術、能力的不同組合而已。俄羅斯大量運用資訊作戰及社群媒體，結合游擊戰術及重裝砲兵強行併吞克里米亞時，刻意避開烏克蘭及其盟邦的軍事反應，已經被視為遊走在和平與戰爭邊緣的「混合式作戰」或「灰色區作戰」。俄羅斯的作法只不過是將其所具備能力做特定組合，但僅僅這樣，就大大提升了他們在作戰中整合、協調與創新的能力。

Drones, robots, cyberspace operations, and artificial intelligence create different effects on the battlefield and should change thinking about force protection, signature management, and electronic countermeasures. Appreciating the changes that new technologies bring is



critically important to shaping expectations, planning for operations and acquisition, countering effects, application, and exploring the ways friendly and adversary forces may use them. Yet introducing a new lexicon every time this occurs obscures the key elements of warfare as well as the mission.

無人飛機、機器人、網路空間作戰，以及人造情報等手段，在戰場上創造出了不同的效應，也改變了關於部隊防護、特徵訊號管理，以及電子反制措施等的思維。多虧有這些改變，讓新技術塑造出來的期望、行動與獲得規劃、反制效應、運用，及探索友軍與敵人都可能會使用的方式，都變得如此重要。但每次引進新詞彙，都難免發生讓作戰關鍵因素以及任務變得混沌不清的狀況。

At the core, warfare is accomplishing a mission with the resources and capabilities available. Constantly inventing new types of warfare-or new labels for application of new and old technologies and capabilities-distracts from the mission and from innovation. This model can be used to talk about warfare during the Cold War and also in an era of precision-guided munitions, drones, offensive cyberspace operations, and anti-satellite weaponry. It is technology independent, while still enabling discussion of any kind of technology within its elements.

從根本上說，作戰必須在有相應的資源和可用能力的情況下，才能完成任務。不斷開發出新型態的作戰方式——或運用新、舊技術與能力的組合——可能會阻礙創新與任務執行。這套模式可以運用在冷戰時期的作戰，也可以在精確導引彈藥、無人機、攻勢型網路空間作戰，以及反衛星武器的時代大展身手。它不一定需要依賴新技術，然而還是可以在它所包含的諸多因素中，探討任何形式的技術。

Impact on Planning and Operations 規劃與作戰的衝擊

Overlaying this model with the JPP highlights some key differences in thinking as it is now and as it would be using this model. The model does not alter the key steps in JPP-mission analysis, course of action (COA) development, COA analysis and wargaming, COA comparison and approval, and plan or order development. This model does alter the way in which these steps are executed by adjusting the frame used to engage with JPP and design. Moreover, it can be applied to friendly forces as well as enemies, adversaries, and third parties, making it useful as a check for Intelligence Preparation of the Battlespace (IPB), as well as monitoring friendly

forces' readiness, which typically falls outside the JPP.

用JPP(聯合計畫程序)含括所有這些模組，可以凸顯某些思維上的關鍵差異，就如同目前這些模組的運用一般。模式無法改變聯合計畫程序的關鍵步驟——任務分析、行動方案(COA)發展、行動方案分析與電腦兵棋、行動方案比較與認可，以及計畫或程序發展。模式改變的是調整與聯合計畫程序有關的架構與設計時，執行的步驟與方式。此外，這模式也可運用於友軍與對手、敵人、第三方勢力，將它作為檢查戰場空間情報準備(IPB)，以及監測友軍單位戰備整備的有用工具；這就超出聯合計畫程序的運用範圍了。

Design. This involves understanding the current and desired future states and the problem set, producing an operational approach, and reframing. It is really part of the first phase of the JPP but is continuous and always subject to revision. Using this unified model of warfare provides a more comprehensive and integrated framework within which to deconstruct (and reconstruct) the current and desired future states. In addition to standard brainstorming for current and desired conditions, the application elements are good testers to ensure that key areas are considered and included. For instance, they inspire questions such as, "How are we and the enemy analyzing and deciding?" or "In what ways are we and the enemy communicating to different audiences-friendly, enemy, third party, and so forth," and "Where might we use deception, and where might it be used against us?"

設計。這是有關於瞭解目前和未來狀態以及相關問題，以便產生行動方案並予以重新構建。設計是聯合計畫程序的第一階段，但必須持續不斷加以修正。使用這套統一的作戰模式，可以有更全面的整合手段以拆解並重新架構目前及未來的狀態。除了對目前及未來情況進行腦力激盪之外，運用因素還可以確保關鍵部分已經被考量並包括在內。舉例來說，經常碰到的問題像是「我們和敵人是如何進行分析與決策的？」或是「我們和敵人是如何與不同的受眾——友軍、敵人或第三方勢力等等溝通？」以及「我們該在何處使用欺敵策略？又或者我們必須在何處加以反制？」

Mission Analysis. This model brings to the forefront the moral and mental forces at play in the scenario. Applied to friendly forces, what is the moral and mental status of friendly troops? How do they view the conflict in general, and what are external influences conveying about the conflict that might affect friendly force morale at the individual, unit, and commander levels? Do friendly forces have the resilience needed to take on a clever, insightful adversary who



adjusts to changing situations rapidly and does not follow laws of war? Have friendly forces been adequately educated to problem-solve, innovate, and fulfill their functions at the time and place required?

任務分析。這個模組將精神戰力帶進作戰場景的最前線。對我軍來說，目前友軍單位的士氣和心理狀況如何？他們對這次衝突的整體看法如何？這次衝突的外部影響會對友軍部隊個人、單位和指揮階層產生那些效應？友軍部隊是否有足夠的韌性，對付反應迅速，又不按牌理出牌的聰明敵人？友軍部隊是否對於解決問題、創新作法、在適當的時間地點發揮功用，已經有足夠的教育訓練？

For all actors-enemy, third party, host nation, partner nation, other U.S. Government organizations in the situation-what is their resolve? How does their culture view this conflict and armed conflict in general? What kinds of actions are seen as honorable or unacceptable in warfare, both overtly and covertly? How determined or committed to the cause is the enemy as a whole, and how determined or committed is it at a given unit level? What are the strengths and weaknesses of key leaders on all sides? These and other similar questions would provide insight into the moral and mental status of adversaries and third-party actors as well as regional or international groupings relevant to the scenario.

對各方行為者來說——敵人、第三方勢力、當地國、夥伴國家，以及其他美國政府組織——他們的決心為何？從文化角度，他們是如何看待這些衝突？哪些公開的或秘密的行為被視為高尚或在作戰中無法被接受？整體而言，敵人的動機有多果斷，多全力以赴？相對於同級單位，我們的部隊又有多果決，多全力以赴？各方關鍵領導人的強項和弱點何在？以上及其他類似問題，將有助於瞭解敵人及第三方勢力的士氣和心理狀態，以及與作戰場景相關的地區性或跨國性組織。

While some of these questions are often answered through IPB, not all are. Questions (and answers) related to the cultural perspectives of varying groups, levels of commitment or determination, and morale are often left unanswered, if they are even asked, because they are difficult to measure and evaluate. They are also not solely the purview of intelligence; rather, some of these questions are answered through other resources entirely, such as culture-focused organizations, civil affairs, or even other departments or agencies. They are rarely included as part of exercises because doing so requires deep expertise on adversaries or other parties at many levels, and they are even more difficult to measure, quantify, and apply with any rigor in

a fictive scenario than a real one.

雖然這些問題有的透過戰場空間情報準備(IPB)可以得到答案，但並非全部如此。與文化層面有關的問題(或答案)在不同團體中，忠誠度或決心，以及士氣方面，即使提出疑問，因為很難測量與評估，往往無法找到解答。這也不全是因為情報權限的問題；有些問題反而完全透過其他資源獲得解答，就像與文化有關的組織、民事甚或其他業管部門，他們不常被納進實際運作範圍內，因為這需要在許多階層，對敵方有深刻且專業的理解，而且更難加以測度及量化，也很難藉著虛擬場景的嚴格訓練，將成果運用於真實戰場上。

Each of the elements (foundation and application) can be used to frame IPB and enable deeper analysis and better understanding of adversaries and the environment as systems, rather than discrete parts. Rather than focusing on examining an adversary with PMESII-PT (political, military, economic, social, infrastructure, information, physical environment, time) or another similar tool, PMESII-PT could be used within each element. This would mean that enemy moral and mental forces are examined with PMESII-PT, but so would their planning and operations, how they attack and protect, their surveillance and decision-making processes, all aspects of their communication, and enabling/supporting their forces.

每一個因素(基本因素和運用因素)都可以用來建構戰場空間情報準備(IPB)，使分析更深入、更系統性的瞭解敵人與環境，而不至於只是零碎的資料。不同於用PMESII-PT(政治、軍事、經濟、社會、基礎設施、資訊、實體環境、時間)或其他類似工具檢測敵人，PMESII-PT可以用在每一個因素之中。這也意味著敵人的精神戰力可以用PMESII-PT加以檢測；不只如此，敵人的規劃與作戰、他們如何攻擊防護、他們的監視與決策制定程序、溝通的所有面向、其部隊如何授權、支援等這些問題，也都可以比照這方式尋求解答。

Using the application element of attacking and defending in mission analysis enables thinking about friendly or enemy capabilities as a whole, rather than offensive and defensive. This can help prevent assumptions about how a capability could be applied, which assumptions limit military planners' ability to conceptualize how the enemy might act or react in a given circumstance, resulting in unpleasant surprises. Similar results could come from using the other application elements in other areas of problem-framing, such as identifying implied tasks, assumptions, centers of gravity analysis, and more.



在任務分析中，使用攻擊與防禦等運用因素，當思考到友軍或敵人的能力時，一般都會跳脫攻勢或守勢的思維。這樣可以預防在能力運用時有太多設想，而這些設想會限制軍事規劃人員將敵人在特定情況中的可能行動或反應概念化，而導致不利後果。類似結果當在其他領域的問題框架中使用其他運用因素時，也可能會發生；例如在確認任務、設想，或分析兵力重點時。

COA Development. Development can benefit from this paradigm by ensuring that all aspects of warfare and ways to target the enemy's will are addressed within the commander's intent and mission statement. Typically, when moving into COA development, OPTs will break into working groups along the lines of the joint functions to dig deeper into the capabilities each joint function can bring to the mission. Rather than aligning to joint functions, OPTs can divide into groups that are aligned with the application elements of this paradigm, which force greater cohesion and integration across military capabilities than the joint functions.

行動方案發展。在這個範例中，確保所有方面的作戰安全，以及把敵人的意志作為鎖定目標，都將是指揮官的意圖及任務內容，行動方案發展對此可以有所幫助。一般來說，當進入行動方案發展階段，作戰計畫團隊(OPT)將會打破聯戰職掌的作業編組，試圖發揮潛力完成任務。OPT區分出運用因素中有所關聯的各團隊，而不是只把聯戰職掌羅列出來而已，這樣在相關能力方面，足以激發出更高的凝聚力與整合程度。

Analyzing and deciding brings together intelligence and the ability to control operations and forces from the initial planning stages, enabling better streamlining and integration of intelligence and friendly knowledge management for the commander's advantage.

分析與決策讓情報、能力兩者結合起來，以便從初始規劃階段就能控制作戰與部隊，讓指揮官可以更有效推動及整合資訊與友軍知識管理。

In attacking and protecting, fires and force protection assets can work together, perhaps identifying areas in which one capability can fill two functions. Fires, cyberspace operations, space, special technical operations, and network exploitation and protection are all present, truly integrating lethal and nonlethal (and/or kinetic and non-kinetic) capabilities to the commander's best advantage in the battlespace. Operations security and force protection are together, able to leverage mutual gains from the outset of planning, rather than as a result of de-confliction later in the process.

攻擊與防護、火力與部隊防護這兩個項目可以合併起來運用，證明了同一種能力可以滿足兩種職能。火力、網路空間作戰、太空、特殊技能作戰、網路運用與防護等等這些都可畫入同一個範疇，整合致命與非致命[以及動態與(或)非動態]能力，在戰場上讓指揮官可以最大程度的發揮。作戰安全與作戰防護實為一體，在計畫一開始就可以相輔相成，不必等到後來才設法避開衝突與損失。

Communicating brings together all the capabilities that play a role in this element, synchronizing overt and covert communications for all the various audiences-friendly forces, adversaries, third-party actors, and various external audiences.

通信能將所有能力結合起來，將明確的和隱晦的通信方式同步化，再結合各方——友軍、敵人、第三方勢力，以及其他不同的外部受眾。

Given that maneuver is dependent on logistics, it makes sense that these two capabilities be in lockstep from the beginning phases of planning in the enabling/ supporting group. Likewise with aviation capabilities, finances, personnel, and training, which are used for logistics and as enablers for all the other application elements. Training is not usually included in exercises because that staff is busy preparing units actually deploying. Having a training representative in exercise design could leverage training's expertise to identify efficiencies where mission-essential tasks for existing and potential future missions can be developed or planned for simultaneously.

部隊調動或運作一定要依賴後勤，不難理解授權、支援這部分能力從規劃的初期階段就具備其重要性。就像航空、財務、人事、訓練這些，後勤部門都在運用，在其他運用因素中也占據一定重要性。訓練不常被包括在實際作戰中，因為業管參謀光是處理單位部署的事情就夠忙的了。在作戰單位增設訓練部門，代表任務設計同時也考量到訓練的專業；而當前和未來任務，也可同步完成發展與規劃。

COA Analysis and War-gaming. Foundation elements are particularly useful during COA war-gaming, when the plan is examined in order to identify issues, shortfalls, and other challenges. While the pieces and parts of the plan will be discussed and perhaps mapped out on a table, this is a key part in which to ensure the foundation elements are consciously addressed. Is the COA truly integrating various friendly capabilities? When the staff walks through what a unit will do, are they discussing the physical impact on the enemy and on friendly mental and



moral forces?

行動方案分析與兵棋推演。基本元素在行動方案電腦兵棋期間特別有用；審查計畫是為了確認問題、不足事項，以及其他挑戰。雖然計畫細項會相互研討，也可能會在桌上畫出來，這是確保基本因素會被仔細檢查的關鍵步驟。可是，行動方案真的能整合各友軍單位的能力？當業管參謀真正涉入單位的實際運作時，他們會對敵人和友軍精神戰術力面臨的實體衝擊加以研討？

COA Comparison and Approval. Each mission and each commander will have a unique set of circumstances that evaluation criteria will spring from. Both foundation and application elements can be used as part of the evaluation criteria for COA comparison and approval, either as subsets of commander-established criteria or in framing those criteria. For instance, commander-provided criteria might include speed of operation, level of risk to forces (or mission, or both), and likelihood of residual resistance after the core mission is accomplished. The staff using the foundation and application elements in their COA analysis and war-gaming would better support its commander's decision-making by being able to discuss as part of the criteria assessments for key decision points, how communicating to different audiences will impact the likelihood of residual resistance, logistical options that can speed or slow the operation, and how integrating certain capabilities undermine the enemy's mental and moral forces, saving friendly forces and resources.

行動方案比較與認可。每一次任務，每位指揮官都會有一套獨特的方法，來評估突然冒出來的狀況。不管是基本因素還是運用因素，都能被用來作為評估行動方案比較與認可的準則，不管是專為指揮官建立的制式準則，還是個人自行構建的。例如，制式準則裡面會包含作戰速度、部隊(或任務)風險等級，還有任務完成之後殘餘反抗的可能性等。參謀在行動方案分析和電腦兵棋中使用基本和運用因素，針對關鍵決策點——研討準則的評估方向、如何與各方溝通可以降低殘餘勢力反抗的可能性、哪些後勤選項可以提高或降低作戰速度、如何整合某些力量來癱瘓敵人的精神戰術力、如何保全友軍部隊與我方資源——等等問題審慎思考，可以更適切的支援其指揮官進行決策制定。

Conclusion

結 論

As an institution, the U.S. military should continually seek to improve its understanding of war. Such efforts typically result in complicating an already cumbersome vernacular and

dialectic, creating new silos of expertise only understood by a small portion of the forces and losing sight of the mission. This is the result of both inadequate models and the misuse and misinterpretation of models.

作為一個專責機構，美國軍方應該持續增進對戰爭的瞭解。這種努力多年下來使已經很龐雜、難解的語言更複雜，創造出一個只有軍方一小部分人才懂的專業圈子，卻喪失了對任務的全面理解。會有這種結果，歸因於不適用的模式，以及對模式的誤解與誤用。

We have an opportunity with this model to unify and simplify that landscape without losing the ability to apply new technologies and combinations of capabilities. Although this is a new way of looking at warfare, it is also a highly flexible one that can be enduring and therefore would not have to be adjusted with the rise of yet-to-be-conceived-of technologies and capability combinations.

採用本文提到的這套模式，我們有機會對未來願景加以統一並簡化，而且不需要喪失運用新技術，或將技術加以組合的能力。這是一個看待戰爭的新視角，同時極具彈性、能夠持續，而且面對尚未出現的新技術與組合能力，這套模式也不須去做太多的修正與調整。

It is not yet clear what the most beneficial and effective application of this model is—whether it is operationally, as in the Joint Operations Planning and Execution System application; analytically, as in the problem-framing in planning; or another. Experimentation with this model will illuminate the benefits and challenges it presents when applied to different areas such as planning, handling emergent technologies, and conducting operations. JFQ

什麼才是這套模式最有幫助、最有效的運用方式，目前還不明確——它是偏向操作性，就像在聯合作戰規劃與執行系統裡用的一樣？還是注重分析，就像規劃作業中的問題框架？或許還有其他屬性。針對這套模式的實驗，當運用到不同領域諸如規劃、處理突然出現的技術，或是執行作戰時，才能顯現出其不凡價值和挑戰。

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