PLA Views on the Information Domain

Dr. Brendan S. Mulvaney

Introduction

      The "Information Age" has been around for decades. Whether you date it to the first transistors of the World War II era, the advent of home computing, or the rise of the internet, the "Information Age" has impacted all of our lives, in deeply important ways and warfare is no exception to this rule. From the 1991 Gulf War to repel Saddam Hussein from Kuwait, the world has seen firsthand the role of information in modern warfare and the overmatch it can create for the combatant that can best leverage it. Although the use of information in warfare is not new, rapid technological advances have put a new emphasis on the role that information plays in warfare. Both the United States and the People's Republic of China, as well as every other military, know and appreciate the impact that information has on the development and conduct of military operations, both warfare itself and within military operations short of armed conflict, and all sides are seeking to harness it for their own advantage. Indeed, the People's Liberation Army (PLA) teaches its officers, "In the modern military, each combat unit and each weapon system are coagulated to become one operational body through the bonding action of the military information system and if it loses this bonding action, then the military becomes a plate of loose sand."[1]

      Although the U.S. military and the PLA understand the importance of information to modern war, but the PLA views information differently from the U.S. military. The PLA sees the "information domain" as a domain of war unto itself; equal to the physical domains of air, land, sea, and space. In fact, the CCP's PLA talks about conducting operations in those physical domains in order to support operations in the information domain. In military speak, the Information Domain would be the "supported" domain, that is to say, the focus of effort.

      This is different from the typical view of the United States and our allies around the world. Broadly speaking, in the militaries of democratic nations, information is seen more as the connective tissue that links and binds all of the other domains. Much like logistics and supply, information is seen as a critical component of any modern warfare efforts. Information helps military forces synchronize and unify efforts in the physical warfighting domains of land, sea, air, space, and cyberspace. Information certainly plays an important role, but it is a cross-cutting and supporting role, rather than a stand-alone one. The PLA conception of information is far broader than that. This view is neither right nor wrong, simply different. But it is critical to understand this difference when we examine how the Chinese Communist Party (CCP) mans, trains, equips, organizes, and plans to use its militarized wing, the People's Liberation Army. For the PLA, superiority in the information domain is necessary to seize and maintain battlefield

initiative,[2] and information dominance has become a prerequisite to being able to achieve decisive effects in any of the physical domains.

When assessing the capabilities, and shortcomings of the PLA, it is important that we approach the analysis through the Chinese lens, and not the "Blue" one.[i] We have to understand that the PLA will come up with "Chinese solutions to Chinese problems", and thus it is imperative that we understand how the PLA views, thinks about, and plans to fight in the information domain.

Foundations in Communism

Because the PLA is the armed wing of the Chinese Communist Party (CCP), it is important to understand the role that 'information' plays in Communism more generally. For Communist parties, the ultimate goal is to transform, or control, the minds of the people. While this can be accomplished for limited times by force, ultimately it is through controlling the narrative, shaping perceptions, and crafting information. In Communist societies, it is this control and use of information that is critical not just to gain and maintain control of the society, but also to shape the conditions of the future, which then ultimately will lead to the success of the Party and realization of its goals. Scholarship on Communism's use of controlling the narrative, framing history, and shaping minds, is abundant, and won't be discussed in detail here.

The CCP has an entire department dedicated to this pursuit, it is in fact called, appropriately enough, the Propaganda Department. Although its official English name was changed to the friendlier "Publicity" Department, the Mandarin name remains the same- 宣传部. Of course, there is plenty of propaganda, in the American use of the term, that comes out of the Propaganda Department, but its main goal is to propagate the CCPs narrative, framing, ideas, and story writ-large. In essence, the CCP employs the Propaganda Department to wage war in the battlefield of the mind, i.e. the information domain.

The Propaganda Department works closely with the Political Work Department of the Central Military Commission, and then down to each Political Work Department at units across all levels of the People's Liberation Army. Unlike most democratic countries, because the PLA is part of the Communist Party, politics plays a key role within the institution, which also then allows the military to work closely with other CCP organizations, PRC state organizations, PRC state-owned enterprises, and media. This allows the PLA to draw on all of those external organizations in order to shape, manage, control, and ultimately fight in, the information domain, in ways that democratic countries like the United States and our allies and partners do not.[ii]

For the PLA, this has a domestic component to it as well as an external one. The PLA also works alongside the United Front Department of the CCP. The goal of the United Front Department is to identify, work with, and co-opt, leaders and those with influence outside of the Community Party, typically outside of mainland China, in order to influence them to support the

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[i] In wargames, the two sides are often referred to as "Blue" and "Red", with Blue typically referring to the United States and its allies and partners (though at times those are called "Green"), and Red referring to the opposing side; recently that has often meant China. China also uses the same terms and concepts, and applies the same color scheme. The two sides simply differ as to who the 'friendly forces' are.

[ii] For more on this, see "How China wins the Cognitive Domain" by Josh Baughman, www.airuniversity.af.edu/Portals/10/CASI/documents/Research/CASI%20Articles/2023-01-23%20How%20China%20Wins%20the%20Cognitive%20Domain.pdf

CCP's cause or viewpoint. In the CCP's conception, the purpose of United Front operations is "to unite secondary enemies in the attack of primary enemies". This is an important dimension to take into account when trying to analyze how the PLA will design and conduct operations in the Information Domain both before and during armed conflict.

In sum, a central tenet of Communism, and thus Communist regimes, is the use and control of information. This certainly applies to the Chinese Communist Party, and to their military, the PLA. It therefore comes as no surprise that the PLA also maintains focus on the use and control of information when planning, developing, and executing military operations.

Scope of the Information Domain

In contrast to the PLA, the U.S. Defense Department describes the idea of the "Information Environment (IE)"[3] instead of a separate domain. The DoD defines the IE as, "The aggregate of social, cultural, linguistic, psychological, technical, and physical factors that affect how humans and automated systems derive meaning from, act upon, and are impacted by information, including the individuals, organizations, and systems that collect, process, disseminate, or use information."[4] Unlike the PLA, however, the U.S. Defense Department does not identify information as a domain of war, which frames those as air, land, maritime, space, and cyberspace.[5] Again, this is neither right nor wrong, simply a different way of approaching the concept.

For the PLA, the information domain not only includes actual information, and often military intelligence and analysis, but it also refers to the digital ones and zeros that make up the signals that travel across computer networks, plus the electromagnetic and cyber spectrum across which those signals travel, plus the cables and fibers that connect the network, plus the computers themselves that constitute the network, plus the end effect of those ones and zeros turned back into information and changing the minds of the people receiving and using that information, that is to say the "cognitive domain". The whole system is the information domain. As such it includes not only cyberspace, which the U.S. sees as its own domain, but also the electro-magnetic spectrum, and hence Electronic Warfare (EW). This stands in contrast to how the U.S. views EW. Crucially, for the PRC, the information domain also includes the end users of that information, that is to say, the humans in the loop, and the cognitive domain.

Because the CCP takes a broader view of the information domain, the PLA is now organized differently than the U.S. military and those of most of our allies. At the end of 2015 and early 2016, CMC Chairman Xi Jinping directed a major reorganization of the PLA, primarily to improve its joint warfighting capability, but also in part to ensure that the PLA was better organized to fight in the information domain.   Additionally, during this massive reorganization, despite drawing down the size of the PLA by 300,000 people, Chairman Xi directed the creation of the Strategic Support Force (SSF), making the PLA SSF, responsible for PLA operations in and across the Information Domain.[iii]

In the lead up to the reorganization, the CCP determined that its most likely geopolitical rival was the United States. The CCP spent decades closely watching the U.S. military and our allies and partners in action, from the 1991 Gulf War to the war in Afghanistan, and then Iraqi Freedom. One of the main lessons they learned was the importance of information in joint

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[iii] In April of 2024, the PLA reorganized again. The PLA removed the SSF as a layer of bureaucracy, leaving the previous SSF departments to function as the Aerospace Force (ASF) and the Cyberspace Force (CSF), and created an Information Support Force (ISF). As of this writing the delineation of roles and responsibilities for the Information Domain between these three forces is still unclear.

operations, which they saw as the key to winning a modern war. When they reorganized the PLA in 2015/16 they assessed that the U.S. relied heavily on space based communications. This included a reliance on its space communications architecture for much of its capability to conduct cyber operations at a distance. Thus, the PLA is thinking about ways to use space or space operations, to impact the U.S.'s ability to conduct cyber operations delivered via space based communications, particularly given the long distance that would likely be involved in any conflict between the U.S. and the PRC. Likewise, the PLA perceives the importance of the electromagnetic spectrum to space because everything related to space operations, from the commands to the satellites, space stations, spaceplanes, etc., to the intelligence, surveillance, and reconnaissance information that those space assets provide, all of that goes through the electromagnetic spectrum all relies on that spectrum. Thus, if one can control, attack, or impact the EM spectrum, to include cyberspace in the Chinese conception of it, you can effectively achieve a space effect or space mission kill, without ever having to 'go kinetic' in space. Thus, the PLA sees space[iv] and cyber as two sides of the same coin, both with a role in the information domain, and hence were put together during the creation of the PLA's SSF.

Informationization

      Anyone who has studied the PLA in the last two and a half decades has come across the term "Informationization". Those not familiar with Mandarin probably wonder at the rendering of this Chinese term into such a stilted English version. But understanding this concept is an important step in understanding how the PLA is focusing for modern warfare. In Chinese, the character "*hua*" (化）is usually translated into English by adding an "ize" or "ized" to the word. For example, *hexiehua* (和谐/harmony+化) becomes "harmonized." Thus, "information" (*xinxi +hua*/信息+化) becomes "informationization" or "informationized". But the real meaning behind this 化 character is really more akin to "being transformed by". So when the PLA speaks of the "informationization of warfare", they are really talking about how warfare is transformed by information; and they mean it in the broadest sense of information. And it takes primary place in how the PLA conceives of military campaign strength. According to the 2006 *Science of Campaigns*, "The basic essential elements of campaign strengths are: information power, firepower, maneuver power, assault power, and protection power…..The military information domain is the functional domain for the essential elements of campaign strength information power."[6]

      This focus on information can be traced back to the former Chairman of the Central Military Commission (CMC) of the PLA, Jiang Zemin, and was reinforced by his successor, Hu Jintao. While the idea had its initial conception phases in the late 1990s, it really started to impact how the PLA conducted force construction, what the United States would call 'man, train, and equip', in the early 2000s. In 2002, the PLA's "Military Strategic Guidelines", the highest set of guidance issued to the PLA from the CCP leadership, first codified the military term "informationization", by making fighting "local wars under informationized conditions" as the PLA's main objective. Informationized warfare is an offensive, operational level concept for the PLA. "The battlefield environment has become transparent. The informationized battlefield is no longer operational space composed of natural topography and simple ground fortifications;

[iv] Of course the PLA recognizes the Space Domain as well, and is planning, and in some cases already exercising, for military operations to, from, and within space, already, and separate from its impact on the Information Domain. But that is outside the scope of this chapter.

instead, it is an operational force and activity space that uses man-constructed informationized network facilities as the basis, systems such as land, air and space integrated reconnaissance, communication, command, control, and intelligence as the core, and the striking power of integrated land, sea, air, space, and electronic dimensions as the main body."[7] Ever since then, the term "informationization", and its expressions in equipment and doctrine, has become ubiquitous across the PLA. In fact, in 2011 the PLA created the Informationization Department as part of a reorganization in the General Staff Department, thereby emphasizing the central role of the Information Domain.

As explained by a member of the PLA's Academy of Military Sciences as part of a delegation visiting the U.S. National Defense University, the process of informationization originally had three parts: "digitization," "networkization," and "smartification."[v]. The process was meant to continue the PLA's modernization drive from an antiquated Soviet-style (and equipped) military, through mechanization (but still analog). First, they had to convert information and equipment to operate with a digital format, so that information could be shared via signals and computers. The next step was to combine those signals into a useable format, one that allowed for the rapid dissemination of the information, hence the networking stage. Finally, the PLA is to pursue the ability to make use of the vast quantities of information that the system could now capture and produce, and do it at speeds relevant for military operations. This would require the application of computers, machine learning, big data, and eventually artificial intelligence. Of note, the PLA is familiar with U.S strategist John Boyd's OODA Loop (Observe, Orient, Decide, Act) and understands that the side in a conflict that can complete each loop iteration the fastest has the advantage in modern warfare, hence the need for processing at computer speeds. Over the course of the intervening years, the 'smartification', or now more properly the 'intelligentization'[vi], appears to have become its own distinct step; but nonetheless still is a critical part of the PLA's future and a driving force in the information domain.

It is this realization by the PLA of the power of information, and its transformative effect on the conduct of war in the modern age, that now drives much of the development of not just platforms and software, but also of doctrine, training, and organization.

Joint Warfare

As mentioned above, the PLA has recognized that warfighting in the modern era is not only "informationized" but must also be joint. They have seen the advantages that joint warfare has brought the U.S. and our allies, and they have seen what happens when a military isn't capable of exercising joint control across domains including the information domain. Not only is it important in the general sense, the information domain also has a special importance in the joint operating environment, "As an important component in a joint campaign, the information operation is a series of operational activities developed to seize and maintain control of information power during the campaign, acts as a lead from the beginning to the end, and is the key to victory in joint operations."[8] Furthermore, information superiority is a prerequisite for air and maritime superiority. The PLA views attacking and paralyzingthe enemy's information systems as critical to gaining and maintaining air and maritime superiority. Information operations not only have an 'active' or offensive role, but also a defensive one as well, in which

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[v] Or Intelligentization
[vi] Intelligentization refers to the use and application of artificial intelligence (AI) in modern warfare. This includes the use of machine learning (ML), large language models (LLMs), and AI more generally, to take advantage of computer processing speeds and thus help speed decision-making whenever possible.

"Information operations serve as important operational activities for blocking and sabotaging the enemy's information acquisition, processing, and transmission channels, and for ensuring friendly information and information system security."[9]

In almost any scenario we can conceive of today, conflict between the PLA and a foreign military will include what the PLA refers to as a "Joint Firepower Strike Campaign." "Joint fire strikes are a series of fire assault activities conducted by concentrating employment of Second Artillery Corps[vii] conventional missile units, and Air Force as well as Navy and Army long-range strike strengths against the enemy's important targets." Whether it is a conflict in the Taiwan Straits, in the South China Sea, or in a border conflict with India, the Joint Firepower Strike Campaign is likely to play a leading role, with emphasis on the first word of that formulation: 'Joint." A key component to the success of this joint campaign will be superiority in the information domain.

Within this broader campaign, the role of information operations "is becoming more prominent every day."[10] In fact, the PLA talks about the leading role of information operations in joint operations saying that due to the nature of the modern battlefield, "the degree of reliance of the operational System of Systems (SoS) on networked information systems is extremely high" and thus, "Network sabotage" operations already have become the most important link in joint fire strikes. Moreover, information attack, with its intrinsic emphasis on "network sabotage," has become the "heavy fist" of SoS attack and destruction. To this end, before conducting a fire assault, [we] should carry out a preliminary information attack."[11]

In short, the nature of modern warfare, as a conflict between systems of systems, has become so reliant on information, i.e. informationization, that it is in the information domain that the first attacks should occur, and these in fact may be the determining factor in the outcomes across the physical domains.   To further emphasize the point, this is not limited to the physical networks, or even the information that is being carried across those cables, wavelengths, or computers, but the domain as a whole, including the people in the loop.

The Human Domain

Finally, at its core, warfare is a contest between humans, and anything one can do to influence or control humans, those on one's side, those in opposition, and those on the sidelines, can have an effect on one's ultimate ability to accomplish military and political goals. It is in this aspect of the information domain where the PLA most differs from the U.S. military in terms of how the PLA approaches it.

In 2003, the People's Liberation Army General Political Department issued a series of guidelines. Included in these guidelines were what has now come to be known as the "Three Warfares". These are public opinion warfare, psychological warfare, and legal warfare. PLA writings on the three warfares highlighted the fact that the People's Liberation Army has both domestic roles and targets, as well as external ones, targeting adversaries. This is in stark contrast to militaries in democratic countries that do not typically engage in information warfare operations against their own populations. These guidelines also highlight the breadth of the PLA's mandate across the information domain. The guidelines further explainedthat there are multiple layers of desired effects, including the political effects, the military effects, and the psychological effects (especially on enemy leadership, and command and control).[12]

As covered at the beginning of this paper, the conduct of psychological operations begins at the foundational level by seeking to shape how information is received and processed, in the

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[vii] Now known as the People's Liberation Army Rocket Force (PLARF)

human brain. The PLA refers to this as cognitive warfare. We will leave the detailed discussion of cognitive warfare to the following chapters which will cover the PLA's approach to the cognitive domain as part of the overall Information Domain in more detail.

The PLA recognizes that warfare in the modern age is not limited to the physical battlefield, and that it must be postured and actively engaged across the information domain, both before and during conflict. The Three Warfares approach gives the PLA not only the leeway, but the direction to actively target people, the humans in the system, ahead of time. This includes not just individuals, but organizations, and also the rules and norms that those people and organizations create. The PLA has an active role in shaping the international environment, even prior to conflict. This is evident in the PLA's role in constructing features across the South China Sea, and in the increasing 'grey zone operations' around Taiwan and across the Taiwan Straits, with ever more flights crossing the centerline, encroaching progressively further on different parts of the Taiwanese Air Defense Identification Zone, more and longer naval exercises around Taiwan, and even UAV and rocket launches into Taiwan's airspace. One can also see it in the PLA's attempts to create more positive views of China, the construction of the Peace Ark PLA Navy Hospital Ship;[viii] the continued support of United Nations Peacekeeping Operations (UNPKO) to which the PLA contributes the highest number of troops to UNPKO of any of the permanent five security council members. Indeed even during the COVID-19 pandemic, the PLA conducted "mask diplomacy" in an effort to improve relations and gain diplomatic support around the world, despite the fact that COVID originated in China. All of these information operations seek to set norms, influence people and systems, and lay the foundation for future military actions, be they kinetic or otherwise.

Suffice it to say that the PLA is right now, as you read this, actively engaged in operations in the Information Domain, attempting to shape the cognitive battlefield, even before the first kinetic shots of whatever the next conflict may be, are fired.

[viii] This was a direct response to the swelling of goodwill and improvement in relations between the United States and Indonesia after the Ache earthquake, when the U.S. Navy was able to offer responsive humanitarian assistance and disaster relief, and the PLA had no such capability.

Dr. Brendan S. Mulvaney is the Director of the Department of the Air Force's China Aerospace Studies Institute. Opinions, conclusions, and recommendations expressed or implied within are solely those of the author(s) and do not necessarily represent the views of the Air University, the Department of the Air Force, the Department of Defense, or any other U.S. government agency. Cleared for public release: distribution unlimited.

Endnotes

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[10] 联合战役信息作战教程, Pg54

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