

Information



U.S. Marine Corps

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FOREWORD

Information is the foundation of all human interaction. It is the basis for how we sense, make sense of, and interact with our environments and each other. Rapidly evolving modern technologies have accelerated and expanded our ability to process, store, and communicate information with a tempo and scale previously unimaginable. Our globally interconnected world has deepened our collective dependence on information to the extent that the slightest vulnerability in how we handle, store, or transmit information could endanger Marines, their families, and all that we have sworn to defend. In a contest between hostile and irreconcilable wills, information is as powerful a tool as any weapon system in our military arsenal. Therefore, it is vital to the future of our Corps.

As our 29th Commandant, General Alfred M. Gray, wrote in his preface to Marine Corps Doctrinal Publication 1, *Warfighting*, “Like war itself, our approach to warfighting must evolve. If we cease to refine, expand, and improve our profession, we risk becoming outdated, stagnant, and defeated.” Our competitors and adversaries prey on worldwide technological and social vulnerabilities by using information as a target and as a weapon to destabilize our systems, networks, and partnerships, thereby

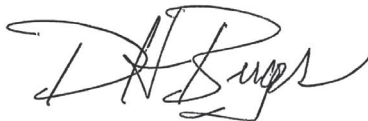
eroding our trust in each other and our institutions. We must meet this threat with an evolutionary approach to warfighting, which includes daily engagement at every level of the force. The purpose of *Information* is to introduce a conceptual framework for understanding and employing the information warfighting function and to provide Marines with increased flexibility in their operational approaches across all phases of the competition continuum, in all warfighting domains.

To aid in introducing the information warfighting function to Marines, this publication uses a series of vignettes to illustrate the enduring theory and principles that make up our newest warfighting function. Enclosed vignettes may use current events to highlight important ideas and provide current context with the expectation that future changes may be required as the events unfold and draw to a conclusion. While our theory and principles of the information warfighting function will endure, we must continually examine and adapt our application of them to keep up with the ever-changing characteristics of the information environment.

This publication must, therefore, be updated with a frequency that keeps it relevant. It is not a checklist and does not contain all the answers. It should be read from cover to cover to provide a baseline for all Marines. How we employ this foundation is limited only by the creativity, ingenuity, and foresight of all Marines, all of whom are practitioners of the theories and applications discussed within these pages. Every Marine has a role in information. Therefore every Marine should focus on their

role as discussed in this publication, whether as a commander, planner, or squad member.

The fight for and with information is a nonstop competition. Information is not the realm of specialists. It is a part of who we are, and our approach must reflect that mentality every day, at every level, in all things. We must rethink how we employ our traditional combat capabilities as part of this effort. To compete and fight effectively, we must evolve across every domain. We must engage daily or run the risk of ceding the advantage to our adversaries. We will challenge our competitors and adversaries at every turn, and we count on every Marine working together to ensure our Nation prevails.

A handwritten signature in black ink, appearing to read 'D. H. Berger', with a stylized, cursive script.

DAVID H. BERGER
General, U.S. Marine Corps
Commandant of the Marine Corps

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INFORMATION

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Chapter 1.

The Nature of Information

The essence of maneuver is taking action to generate and exploit some kind of advantage over the enemy as a means of accomplishing our objectives as effectively as possible.¹

—MCDP 1, *Warfighting*

These words from the Marine Corps' warfighting philosophy frame the way Marines should think about information. They provide a starting point for understanding information from two perspectives: a source of exploitable advantage and a potential source of disadvantage to overcome.

Information serves a vital role in every activity that Marines undertake. It is fundamental to intelligence, command and control, situational understanding, decision making, and all forms of behavior. It is central to the functioning of all societies, governments, and organizations. Information is also an instrument of national power, employed in concert with the diplomatic,

military, and economic instruments to influence strategic outcomes, impose our will, or achieve other policy goals.

Beginning in the mid-20th century, a series of information and technological advances made information a global phenomenon. Competitors and adversaries have since become skilled at navigating and exploiting this phenomenon to challenge some advantages the United States held throughout, and immediately after, the Cold War. The current era, often referred to as the information age, fundamentally undermines the presumption of persistent US information-based advantages.

Marines should never assume they will benefit from a specific information advantage without competing and fighting for it. We must approach information with a maneuver warfare mindset. Marine Corps Doctrinal Publication (MCDP) 1, *Warfighting*, states, “It is through maneuver in all dimensions that an inferior force can achieve decisive superiority at the necessary time and place.”² From an information perspective, the essence of maneuver is taking action in all dimensions, the warfighting domains (land, air, maritime, space, cyberspace), as well as the electromagnetic spectrum, to create and exploit information advantages. These actions apply to any competitive engagement or form of warfare.

MCDP 1-4, *Competing*, states that even when Marines are not at war, they are still in a state of competition. The very existence of the Marine Corps is a competitive act that signals to potential adversaries there are vital maritime interests the Nation will go to war to protect.³ Every Marine, therefore, has the potential to help

or hinder the Nation's competitions by reinforcing or detracting from the Marine Corps' narrative. Through their actions, words, and deeds—on and off duty—Marines can help or harm the Marine Corps' reputation of acting with boldness, professionalism, and high competency.⁴

We all, from private to general officer, leverage information to succeed in competition and war. Whether taking a mindful action to reinforce the Marine Corps' reputational narrative, selectively revealing capabilities to send a message, or applying technical acumen to defend or attack critical information networks—Marines need to know how to leverage information to accomplish the mission and ultimately impose our will at the decisive time and place. The purpose of this publication is to describe our foundational theory for leveraging the power of information through the information warfighting function and to guide Marines in thinking about information as a primary means to mission accomplishment.

INFORMATION EXPLAINED

The word *information* conveys different meanings depending on its use. However, to make the most effective use of the information warfighting function, it is essential to understand other relevant uses of the word.

Information as an Instrument of National Power

The diplomatic, informational, military, and economic instruments of national power provide a framework the United

States uses to assess potential competitors and describe the security environment. At the strategic level, competition and war involve using all instruments of power brought to bear by one political group over another. International actors apply information at the strategic level in two primary ways. First, they seek to synchronize their communication activities to influence the perceptions and attitudes of political figures, organizations, and other groups, or individuals they deem vital to their strategic objectives.⁵ Second, they strive to protect and secure their critical information capabilities, to include the means of gathering, exploiting, processing, and projecting information at the strategic level.⁶ The Marine Corps serves a supporting role in advancing US interests through the informational instrument of power.

Information in Command and Control and Intelligence

Information is the foundational element of command and control and intelligence. However, the command and control and intelligence disciplines use the word *information* differently. MCDP 6, *Command and Control*, describes information as “...all manner of descriptions or representations from raw signals on the one hand, to knowledge and understanding on the other.”⁷ According to MCDP 6, information categories range from data—raw or unprocessed signals—to more highly developed forms evaluated and integrated into meaningful knowledge and understanding, such as symbols, intelligence reports, and ideas.

MCDP 2, *Intelligence*, describes information as “unevaluated material of any kind... [used as] raw material from which intelligence is derived.”⁸ From this perspective, information is

data that can be processed and put into an understandable form. It is the basic building block of knowledge and understanding and is essential to intelligence. Intelligence production generally involves gathering information about the enemy and environment from any source, then synthesizing it into meaningful knowledge to inform decision making.

Marines will encounter these and other perspectives of information routinely. They must learn to recognize the context in which the word *information* is used in order to avoid confusion or the possibility of miscommunication.

Information Environment

The Marine Corps uses the term *information environment* to refer to the global competitive space that spans the warfighting domains, where all operations depend on information.⁹ It includes information itself and all relevant social, cultural, psychological, technical, and physical factors that affect the employment of forces and bear on commanders' decision making. Information is inseparable from the physical environment, allowing commanders to plan and conduct operations in all warfighting domains to create or exploit information advantages.

The information environment's impact on operations, as well as in broader society and international relations, cannot be overstated. Global communications, the Internet, and digital media make the world a smaller place by making it possible for anyone to communicate with virtually anyone else almost

instantly. The hyper-connected modern world effectively puts the power of information, with its global reach, into the hands of any individual with access to modern communications and digital media technologies.

Information Advantages

Marines apply our maneuver warfare philosophy to gain and maximize advantages over competitors or adversaries. Information advantage is an exploitable condition resulting from one actor's ability to generate, preserve, deny, and project information more effectively than another. Marines seek to create and exploit three types of information advantage: systems overmatch, prevailing narrative, and force resiliency, along with other decision, temporal, spatial, or psychological advantages—through rapid, flexible, and opportunistic maneuver.

Competitors and adversaries compete to exploit pre-existing information advantages or create and exploit new ones. They do this by using information to shape public opinion, attract partners, weaken the competitor's alliances, and sow discord within their populations. Chapters 2 and 3 discuss information advantages in more detail.

Information as a Warfighting Function

Information is a Marine Corps warfighting function. Like all the warfighting functions, the information function encompasses a grouping of similar activities that aid in planning and executing operations. The outcome Marines seek by applying the

information warfighting function (its purpose) is what distinguishes it from the other warfighting functions. Marines apply the information warfighting function to create and exploit information advantages in pursuit of mission objectives. This is accomplished most effectively when Marines consider and integrate the information warfighting function with the other functions to achieve focus and unity of effort in their operations.¹⁰

All Marines need to know how to leverage information as an inherent aspect of military operations. Every Marine consumes, communicates, and relies on information to accomplish the mission. To compete for and fight with information advantages more effectively, it is vital to understand the importance and characteristics of the information environment and how our competitors approach information.

HOW IMPORTANT IS INFORMATION?

The adage, “knowledge is power” was applicable in the industrial age when information provided a competitive advantage to industrialized nations with superior know-how in leveraging value-producing resources, such as land, labor, capital, and material resources.

While information was important in the industrial age, it is central to life in the information age. This change stems from advanced societies' dependency on information, coupled with the ongoing revolution in information technology and digital communications that have come to define the post-industrial era. With dependence comes potential vulnerability, and with

vulnerability comes possible opportunity to seize information advantages to achieve our objectives and impose our will.

To comprehend the vulnerabilities associated with our dependence on information, we need to look no further than our homeland. All societal institutions such as banking, health care, manufacturing, transportation, energy, trade and commerce, and all governmental functions rely on digital information. Institutional ability to function now depends on digital databases, communications networks, and advanced digital computing systems and algorithms. Competitors can use advanced communications and global networks from the sanctuary of their borders to expose our institutions. This reality marks a significant change from the industrial age when these institutions were insulated from external threats because of their localized manual means of data storage, processing, and communication.

In addition to exploiting system vulnerabilities to cause disruption, our competitors constantly use digital media to spread disinformation and sow or intensify divisions among people, leaders, or large groups. This constant competition for the minds and behaviors of our populace, and by extension our Marines, requires persistent vigilance and resiliency. This challenge describes a form of continuous hostile social manipulation that was not possible during the industrial age. This form of hostility will become increasingly concerning and consequential as artificial intelligence and compelling but artificially created images and videos improve and become weaponized over time.¹¹

Societal information dependency is a vulnerability shared by all information-age militaries. During the second half of the 20th century, US technological superiority contributed to the nation's global reach and relative information superiority. This superiority was evident in the numerous ways through which information could be gathered, processed, and exploited to some effect—such as bringing combat power to bear with speed and accuracy at any time or place across the globe. However, due to the characteristics of the post-industrial information environment, we must never assume that we benefit from an inherent information superiority—or any type of information advantage without having to compete and fight for them.

CHARACTERISTICS OF THE INFORMATION ENVIRONMENT

Instant and Persistent Global Visibility

Light-speed digital and wireless communications and media technologies provide instant, global, and persistent access to information. The information environment gives virtually anyone with access to these technologies the ability to observe and influence events across most geographic and political boundaries. The moment an event occurs or a new idea is created, it instantly travels to a potentially global audience. Hyper-connectivity in a global information environment increases the potential for our actions to generate unexpected second- and third-order effects.

Every Marine's actions and words are now potentially visible locally, regionally, and globally. Whether training in the field, conducting operations or posting pictures online while on leave, Marines must remember that everything they do or say could become headline news within a few hours. This visibility has significant implications for operations security, readiness, the friendly narrative, and force resiliency. The demands of global visibility force us to maintain a keen awareness of all the messages we communicate, explicitly and implicitly, through our individual and unit actions, as well as our words. Armed with this awareness, Marines must recognize they could be subject to targeting and influence by actors far outside their home station or area of operations.

Compressed Levels of Warfare and Battlespace

Information's instant, global, and persistent nature compresses the levels of warfare and increases the chances a local action will have a global impact. The ease with which information flows worldwide allows people to continuously monitor local events on a global scale. This phenomenon is unique to the information age. It is powerful because political actors (state or non-state), interest groups, and individual people can scan the globe for local events and use them to reinforce their cause or narrative of choice.

This access, combined with the relative ease with which our adversaries can distort and manipulate information about events through various media, makes every tactical action—even if beneficial or benign to the local population—a potentially disruptive regional or global incident. Therefore, Marines must

assume that their actions will be exposed and communicated globally and distorted and manipulated by their adversaries to achieve a disproportionate or a globally significant effect (see figure 1-1).

In light of such compression, commanders now have additional factors to consider, such as which tactical actions can have an operational or strategic impact. Though commanders and planners generally think two levels up from their units, they must now consider the strategic implications of their operations across

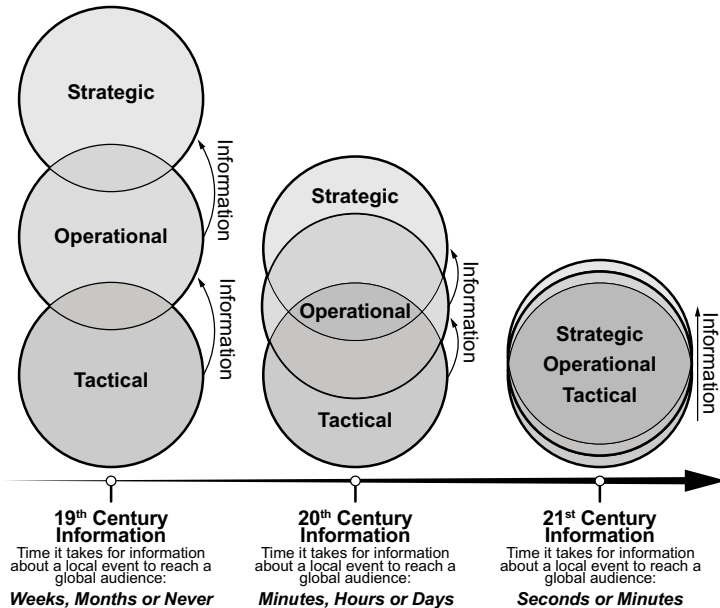


Figure 1-1. Information Compresses the Levels of Warfare.

geographic and political boundaries. Commanders must train their Marines to conduct themselves in ways that promote a credible narrative about their command and mission, making it as difficult as possible for their adversaries to distort the picture and gain the initiative. Commanders must also prioritize the use of official command information through various media to support operations and the larger Marine Corps and higher command narratives.

Just as global visibility makes the world a smaller place and compresses the levels of warfare, we see a similar shrinking effect on our concept of the battlespace. The information environment has circumvented many traditional, hierarchical communication channels and often bypasses traditional supervisory or controlled distribution methods. This allows our competitors to penetrate traditional battlespace boundaries from a distance and provides them the opportunity to disrupt, distort or manipulate information across our areas of interest, influence, and operations.¹²

Even if the information is inaccurate or lacks context, its immediate transmission can impact individuals, groups, and Marine Corps operations worldwide. We now live in an age where competitors can even influence domestic support for Marine Corps operations within our own borders, which places an even higher emphasis on command and individual actions on and off duty. In the 21st century, commanders must develop an appreciation for the flow of information within the battlespace and how it will impact, or be impacted by, friendly, enemy, and neutral groups across boundaries.

While Marines do not conduct actions (on their own) to create global or strategic effects, they must understand the characteristics and consequences of a global information environment in relation to their specific area of operations. This means that Marines must perceive their area of operations as a connected space within the areas of interest and influence and a global information environment. They must think beyond their immediate surroundings and be prepared to respond to near and far threats across boundaries to achieve their objectives.

Truth, Trust, and Belief

Societies, cultures, and organizations develop cohesion through communication and collaboration, but increasingly people do not communicate directly with one another.¹³ It is rare that individuals experience significant events or engage directly with others outside their immediate presence without the aid of communications technologies. Reliance on technology to receive news and other information requires a high degree of trust in the technology. For example, when banking online, people trust that what they see on the screen is accurate and the transaction is proceeding as intended.

Trust in information and information sources is the primary basis for believing whether something is true or false. The more people depend on communications technologies to select, filter, and view information about events and facts, the more critical the technology becomes in shaping one's perception of reality. This dependency highlights the importance of the human-machine interface and the possibility of targeting this interface to influence

perceptions. Marines need to safeguard their morale and unit cohesion as they navigate today's complex technology and media landscape and must be able to recognize the various sources of misinformation and disinformation aimed at them.

Misinformation is false information that is not deliberately intended to cause harm. This type of false information is commonly spread by individuals who unknowingly share false information that they believe to be true. On the other hand, disinformation is false information that is deliberately intended to cause harm or create an effect. Disinformation is used by adversaries to spread propaganda or to sow uncertainty or discord among individuals or targeted groups.

Information Volume, Velocity, and Value

Recognizing that information can be managed and manipulated, we must accept that information can be used or exploited for many purposes, including those never intended by the information owner or originator. For instance, two enemies in battle know the other side requires timely access to relevant, trusted information to make effective decisions, drive tempo, and outmaneuver the other. They understand that some kinds of information can be counterproductive. Too much information, too little information, late information, or information that misleads, spreads panic, or causes self-doubt can bring victory to one side and defeat to the other.

Gaining information advantages depends on how quickly and effectively one side can develop and maintain situational

understanding relative to the other side. The side that is faster at acquiring, processing, and exploiting information, for the purpose of generating understanding, will make faster and better decisions, and will drive tempo. In addition to truth, trust, and belief, information characteristics such as volume, velocity, and value provide tangible levers to create and exploit information advantages.

Information volume refers to the quantity of information stored, processed, or communicated. Velocity refers to the speed and direction information is moved or transmitted. The speed at which information is moved or transmitted is a function of information volume relative to the capacity (bandwidth) of the communication pathway and the resistance or interference (noise) obstructing that pathway.

Users must judge information's value relative to how it contributes to the decision, task, or mission at hand. Information is valuable when it contributes to situational understanding, timely and effective decision making, the attraction and retention of partners, or the exploitation of some advantage. Information's value is a function of many factors, including timing, accuracy, situational relevance, cultural context, and trust. Marines must find ways to protect, leverage, or exploit these factors in their pursuit of information-based advantages.

Thinking and Non-thinking Information Processes

The information environment is a complex and pervasive element of everyday life. The behaviors of political leaders, populations,

computers or machines, or opposing military organizations can be understood by the way they process information.¹⁴ No matter how simple or how complex the interplay of action and response is, we can reduce all information processes down into two categories: *thinking* and *non-thinking* processes.¹⁵ We associate thinking processes with human perception, cognition, decision making, and behavior, and non-thinking processes with pre-programmed, “hard-wired,” or algorithmic decision making and behavior—such as simple or complex tasks performed by machines or computers.

Familiar military examples of complex human thinking processes include planning, command decision and feedback, intelligence analysis and production, decisions made by instinct, persuading key leaders through engagements, and anticipating and influencing foreign public opinion. Familiar military examples of complex non-thinking processes include automated air defense and fire control; fly-by-wire flight control; positioning, navigation, and timing; battlespace display; radio transmission; and all forms of computer processing.

By distinguishing between thinking and non-thinking processes, we can establish that information is the substantive input to both. This approach sets up a framework for understanding how we can use, manipulate, or deny information to directly affect human perception, cognition, decision making, behavior, and will; or affect the basic functioning of information-dependent systems; or both. The result is effectively two “avenues of approach” in the information environment to aid in planning capabilities and specific actions to create the effects required of the mission. The

relationship between thinking and non-thinking processes lies at the core of competitor theories of information in warfare. Chapters 2 and 3 discuss this in more detail.

HOW COMPETITORS APPROACH INFORMATION

The method by which competitors approach information significantly shapes the characteristics of the information environment. We use the term *competitors* generally to refer to governments or non-state actors who use competitive methods that run counter to accepted international norms or clash with US interests.¹⁶ Competitors are often rival states with authoritarian governments or non-state actors who follow an extremist ideology.¹⁷

Competitors in the 21st century security environment value information as central to their way of war. Their efforts stretch across the entire spectrum from blurring the peace-war divide, controlling access to information, shaping the information environment with narratives and propaganda, and denying their opponents information in conflict through systems confrontation or destruction.

Blurring the Divide between Peace and War

To help Marines understand how competitors use information to their advantage, it is helpful to highlight first the differences between competitor and US views of peace and war. To illustrate these differences, we use the concept of political warfare as applied during the Cold War between the United States and the

former Soviet Union. At the beginning of the Cold War, US diplomat George F. Kennan introduced political warfare to describe a universal competitive theory at work among nations. Kennan defined “political warfare” as “... the employment of all the means at a nation's command, short of war, to achieve its national objectives.”¹⁸

In competitions short of war, competitors seek political outcomes by orchestrating all elements of power through actions that span from the strategic to the tactical levels. Kennan's work highlighted that in 1948, at the dawn of the Cold War, the United States was handicapped by a tendency to view an artificial divide between peace and war. This view persists today, as we still tend to think of our Nation as in either a condition of “at peace” or “at war.”¹⁹

This view differs from that of some competitors who see themselves in a constant state of struggle or war. For example, to understand how the People's Republic of China views war, we note Mao Tse Tung's quote: “... politics is war without bloodshed while war is politics with bloodshed.”²⁰ The word *war* here describes the enduring relationship between political competitors. This relationship may never involve violence. This permanent-struggle mindset is common among other competitors, including non-state actors, who hold similar views on the enduring nature and blurred divide between peace and war.

Marines need to understand the different words our competitors use to describe concepts of peace and war and compare them with how we view the competitive environment. For example, the Marine Corps uses the phrase *competition continuum* to

describe the constant interaction between competitors. This interaction spans every action possible below or above the threshold of armed conflict, making war itself a type of competition.²¹ To help make sense of the competition continuum, we introduce the word “opponent” to refer to any actual or potential competitor, adversary, or enemy against which we are taking action on any point of the competition continuum. The main point is that the competition continuum is a US term that describes the United States as in a constant state of competition against a range of opponents. It is also a model that Marines can use to determine how certain actions would apply on that continuum.

The method by which competitors seek to gain information advantages is deeply connected to their theories and descriptions of peace and war and the cultural, economic, and legal paradigms that influence their actions. While competitor viewpoints vary, it is helpful to describe common characteristics to illustrate how information serves a central role in achieving their objectives. The following sections describe how competitors use information and technology to blur the peace-war divide and seek relative information advantages.

Unrestricted and Irregular Methods of Warfare

Competitors share a common goal in competing with the United States and our allies, and that is to “win without fighting.” This goal reveals the competitors’ theory of attaining victory in competition yet avoid armed conflict, preferring to achieve their goals through coercive gradual increments or opportunistic

lunges.²² These strategies not only intentionally blur the divide between peace and war to create ambiguity, uncertainty, and hesitation in an opponent, but also employ unrestricted or irregular methods of warfare to achieve their goals. These methods involve the prominent use of information—words, images, propaganda, and psychological warfare in an attempt to coerce, persuade, and weaken our will and compel us to act in ways favorable to the competitors' interests.

Unrestricted or irregular methods of warfare refer to the observed behavior of our competitors that shows they do not feel bound by standing international agreements and norms unless they can use those agreements to their advantage.²³ For example, competitors believe it is acceptable to take aggressive information actions (such as offensive cyberspace operations, interference in another state's internal politics, or disinformation) to change the status quo in international relations.²⁴

One primary unrestricted strategy used by the People's Republic of China to achieve objectives short of open conflict is called the "Three Warfares." Marines should understand the Three Warfares as China's comprehensive approach to strategic competition that involves three pillars: public opinion and media warfare, psychological warfare, and legal warfare. The overall objective of the Three Warfares is to control the narrative and influence perceptions in ways that advance China's objectives while thwarting its competitors' ability to respond.²⁵

“The Three Warfares” Strategy in the South China Sea

The People's Republic of China employs the Three Warfares as a campaign strategy to assert control of key maritime terrain in the South China Sea without triggering a strong response from, or conflict with, regional neighbors or the United States. Since 2013, China has constructed and militarized many artificial islands across the South China Sea, despite international condemnation.

This has effectively undermined the psychological ability of China's neighbors to oppose its pursuit of a territorial *fait accompli*.²⁶ To sow doubt and confusion among its neighbors, China employs paramilitary forces—primarily its maritime militia—to reinforce its claims and prevent a military response.²⁷ By not taking overt military actions with flagged navy combatants against international ships, China effectively maintains the freedom to operate, enforce claims, and exploit natural resources in the disputed waters unopposed.

Additionally, China has engaged in aggressive media messaging through regional and global news outlets and digital media to promote its narrative of rightful historical claim.²⁸ Even though this narrative is not accepted by most political leaders in the international community, it is consistent and has become normalized. China's observed behavior in the South China Sea demonstrates its practical application of the Three Warfares as a way of combining civil-military posturing, propaganda, and legal obfuscation to buy China time, which serves to further strengthen its position and prevent counteractions by its neighbors.²⁹

The People's Republic of China is not the only political actor to employ methods that involve aggressive use of psychological warfare or disinformation. Russia's approach to competition is similar to China's unrestricted approach and involves advanced thinking in irregular methods of warfare. To create exploitable ambiguity and blur the divide between peace and war, Russia's political strategy toward conflict asserts that nations should no longer declare wars.³⁰ This concept for blurring the peace-war divide mobilizes elements who engage in the undeclared irregular form of warfare. This could involve aggressive military actions conducted under the pretense and narrative of an exercise or peacekeeping operations, or it could involve their asserting historical claims.

One way that Russia engages in irregular warfare is through the imaginative use of its special operations forces. These forces are employed with regular Russian military forces, as well as with Russian civilians, saboteurs and foreign proxies. In this irregular form of warfare, civilian actors actively coordinate with irregular and conventional military elements to accomplish Russia's goals. This civil-military fusion includes Russian business owners, media organizations, and political leaders working in lock-step with the Russian military and security forces under an orchestrated political narrative and set of objectives.

Underpinning Russia's irregular method of warfare is the concept of reflexive control. Marines should understand reflexive control as an information-centric theory rooted in manipulating perceptions and the actions taken to create confusion and paralysis or to influence competitor or adversary behaviors.³¹

Reflexive control is a concept that scales from geopolitical competitors at the strategic level to enemies on the battlefield at the tactical level.

Russia's Annexation of Crimea

Russia's annexation of Crimea in 2014 was a stunning example of the use of information to shape conditions for operations.

In February 2014, the pro-Russia Ukraine government was ousted in Kyiv, leading to widespread protests and instability throughout Ukraine. In Crimea, protests against the interim government and demonstrations by pro-Russia separatists were widespread. Russian forces used the ensuing chaos to insert large numbers of troops into the region. As this happened, fiber-optic communication lines were cut, telephones and radios were jammed, and news outlets and websites were severely degraded by cyberspace operations, effectively creating an information blackout.

Russian forces entered Crimea wearing no identifying insignia and took swift control of key government infrastructure. Rather than being identified as invading Russian forces, they were simply referred to as 'little green men' from Russia.

Russia's control over information sowed doubt and confusion, delayed the Ukrainians' ability to communicate and make decisions, and prevented Ukrainian forces' capacity to organize and resist. In short order, a large-scale surrender of Ukrainian forces occurred, and Russia took control of Crimea.³²

Like China's Three Warfares concept, Russia's approach to competition involves a strong emphasis on disinformation, media, and psychological warfare to target competitor societies, governments, and military organizations. Other US competitors, such as Iran and non-state actors like al Qaeda and Hezbollah, utilize similar theories and concepts to gain information advantages and persist or prevail over stronger powers. The main point is that information is a central aspect in our competitors' approach to warfare. This centrality is amplified by cultural attitudes that promote the use of information in warfare, which translates into far fewer restrictions on its use than what is permitted in the United States. Marines can therefore expect competitors to take aggressive information actions against them, as well as our government, institutions, and society as a whole. Much like what Marines witness in adhering to the law of armed conflict throughout the battlespace, the Marine Corps must find ways to prevail over adversaries within the limits of our democracy. This challenge leads us to consider how competitors use the relentless advancement of information technologies to pursue their objectives.

Information Systems Confrontation and Destruction

By the end of the 20th century, technological superiority helped to firmly establish the United States as the world's sole superpower. Assured access to trusted information contributed to the United States' ability to apply combat power anywhere on the globe. In the 21st century, The United States can no longer assume that assured access to trusted information will result in combat power overmatch.

The competitor theories and concepts of warfare discussed previously are well suited to challenge the United States by exploiting the never-ending development and widespread availability of advanced information systems and technology. The term *information systems* as used here refers to the structures of technology that gather, use, and relay information worldwide as an element of influence and power projection. Marines should expect competitors to engage in information systems confrontation and destruction to shape the strategic competitive environment and manipulate or deny access to critical communications on all points of the competition continuum, below or above threshold of armed conflict.

Our competitors exploit information systems and advanced information technologies to achieve three primary goals. First, they use technologies in an attempt to gain a decision advantage over their competitors.³³ These technologies include the tools for understanding the environment and to support the political actor's decision making.³⁴ Secondly, they use technologies to cause disruption within their competitor or adversary. These are the tools used to disrupt the flow of information, manipulate perceptions, and extend power projection.³⁵ Finally, they use technologies to destroy their enemy's ability to function or to make decisions. These tools include the technical means used to defeat an enemy in battle by inflicting paralysis.³⁶

Technologies of Decision Advantage

Technologies of decision advantage help our competitors study the United States and our elements of national power and find

seams or offsets to US advantages.³⁷ Their goal in using these technologies is to prevent strategic surprise and support well-timed political and military decisions.³⁸ Our competitors combine public and private entities to gather intelligence and report information back to decision makers.³⁹ Additionally, competitors such as the People's Republic of China employ commercial dual-use communications networks and media technologies for global surveillance. The persistent global coverage of these networks is a significant threat that Marines must be aware of wherever they operate, including while training at a home station on US territory. Marines must remember that their location and actions are observable to potential adversaries through these commercial dual-use networks.

Technologies of Disruption

Technologies of disruption can influence and shape perceptions and ultimately cultivate a favorable prevailing narrative. Narratives serve an essential part in competition between competitors because they give meaning to a set of facts.⁴⁰ The prevailing meaning of facts greatly influences popular support; individual, political, and military decisions; and will. Competitors conduct aggressive influence campaigns to shape opinions and control the narrative by combining disinformation, mass promotion, propaganda, and censorship with economic incentives and punitive measures.

Influence campaigns involve aggressive schemes that depend on advanced communications and media technologies. Our competitors use these technologies to incentivize or deter certain

behaviors, thereby conditioning people to adopt certain narratives or to self-censor.⁴¹ The technologies give competitor actors the reach needed to surveil and monitor what people say and do, as well as disseminate information to influence specific individuals, groups, or political actors. A prime example of this scheme is China's social credit system. This system monitors, rewards, and punishes what its citizens say and do.

Marines need to understand how our competitors use technologies of disruption to conduct influence campaigns. Marines have been and will continue to be targeted by foreign influence schemes.

Technologies of Destruction

Competitor concepts for defeating the US military on the battlefield emphasize technologies of destruction, meaning that competitors engaging in armed conflict will target the flow of information required to make decisions and for weapon systems to function. The US victory in the 1990-1991 Gulf War demonstrated to the world that overwhelming information and technological superiority can directly translate into overwhelming combat power and rapid, decisive victory.

Since the Gulf War, US competitors have invested heavily in technology modernization and have updated their warfighting doctrines to shift from mechanized to information-based warfare. Therefore, Marines should expect competitors to aggressively target critical information-dependent systems and functions, including command and control networks and systems;

intelligence, surveillance, and reconnaissance systems; logistics systems; and weapons systems. The objective of denying or disrupting information flows is to disintegrate, paralyze, and destroy the enemy's ability to function cohesively, and ultimately to defeat their will to fight.

CONCLUSION

Information is a fundamental component of all human interaction. It is the core element of intelligence, command and control, situational understanding, decision making, and all forms of behavior. It is central to the functioning of all societies, governments, and organizations. Information is also an instrument of national power, employed in concert with the diplomatic, military, and economic instruments to influence strategic outcomes and achieve national policy goals.

The characteristics of information have evolved. The pervasive nature of information in the modern global information environment compresses the levels of warfare and the battlespace, increasing the chances a local action will have a global impact. The information environment gives virtually anyone with internet access the ability to observe and influence events across geographic and political boundaries. Information, therefore, serves a vital role in every activity that Marines undertake. We all, from private to general officer, need to understand how to leverage information to succeed in competition and war. We also need to know how to guard against its pitfalls.

Our competitors in the 21st century security environment value information as integral to their way of war. Their efforts stretch across the entire spectrum from blurring the peace-war divide, controlling access to information, shaping the information environment with narratives and propaganda, to denying their enemies information in armed conflict through systems confrontation or destruction.

Capable competitors will strive to put the United States in a position of information disadvantage. Marines should never assume they will benefit from an inherent information advantage without competing and fighting for it. This is why we must approach information with a maneuver warfare mindset. This is also why the Marine Corps adopted the information warfighting function. Commanders and all Marines must know how to apply the warfighting function in operations to create and exploit information advantages.

Chapter 2.

The Theory of Information

*While less tangible than the others, the power of ideas and information is real and should not be underestimated.*⁴²

—MCDP 1-1, Strategy

*Marines know that in combat, sometimes we fight to gain information about the enemy.*⁴³

—MCDP 1-4, Competing

Having achieved a common understanding of the nature of information and how our competitors approach information, we can develop a theory of information. This theory provides a foundation on which we can create and exploit information advantages as a means to achieve our objectives as effectively as possible and ultimately—impose our will.

INFORMATIONAL POWER

It is hard to overstate the impact of the information environment on society and how it shapes the character of international relations and the global security environment. The modern information environment puts the power of information into the hands of any individual or group with access to advanced communications and media technologies. This information empowers individuals, nations, and non-state political actors who seek to exert influence.

War, like all forms of competition, is fundamentally about the distribution and redistribution of power through a contest of wills.⁴⁴ Power can amount to material means such as the economic power of money, or the possession of the physical means for coercion or national defense (e.g., weapons, and armed personnel). Power can also manifest through legal, religious, or scientific authority; intellectual or social prestige; or a charismatic individual's ability to excite or persuade.⁴⁵

Informational power refers to the use of information, narratives, and technical means to advance interests and achieve the Nation's objectives.⁴⁶ The purpose of leveraging informational power is to influence the perceptions and decisions of political actors and any stakeholder deemed vital to national objectives. It defends government institutions, businesses and industries, critical infrastructures, and services against information disruptions.

The Marines Corps' theory of information stems from the idea that information is a form of power—informational power—that our Nation leverages, in concert with diplomatic, military, and

economic power, to influence events and achieve outcomes in support of the national interest.

The Marine Corps' view of informational power is broadly applicable across the competition continuum—below and above the threshold of armed conflict. This means there is a special relationship between information and combat power—which is the total destructive or disruptive force we can bring to bear on an enemy at a given time.⁴⁷ The side with the ability to manipulate, deny, or destroy the information required for the basic functioning or decision making of the opposing military system, while preventing the opponent from doing the same, achieves significant advantages—including combat power advantages.

However, there are times when the mission is not favorable to using combat power. In these situations, Marines still harness the power of information by influencing the perceptions, decisions, and behaviors of others in our favor. Such actions can range from persuading local leaders through key engagements, exposing and highlighting adversary malign behavior in local media, and disrupting adversaries' communications networks used to spread disinformation and propaganda.

It is vital to consider how information relates to the familiar attributes of competition and war to help Marines understand our theory of information. In many respects, these attributes are information-centric, and understanding them equips Marines to devise ways of exploiting them for advantage. Whether below or above the threshold of armed conflict, the main point is that our theory of information involves leveraging the power of information by creating and exploiting information advantages.

INFORMATION AND THE ATTRIBUTES OF WAR

Ambiguity, Uncertainty, and Friction

Ambiguity and uncertainty are two inseparable pervasive attributes of competition and war that cause friction. Marines strive to reduce uncertainty to a manageable level by gathering and fusing information to understand the situation and make timely decisions. However, our opponents seek to use ambiguity as a weapon, injecting uncertainty into our decision-making process. Their goal is to cause us to hesitate—ceding them the initiative.

Marines must consider every possible way to create ambiguity and uncertainty in an opponent to cause friction while defending against it. For example, Marines can conduct or coordinate a cyberspace attack against an enemy's airspace control center to create uncertainty in the enemy's mind about the air picture. The intent of this attack is to cause them friction in the form of indecision over how to defend their airspace against our aircraft. That indecision results in an avenue of approach for our attack—effectively creating spatial and temporal advantages in the air domain.

Complexity, Fluidity, and Disorder

Like friction and uncertainty, complexity, fluidity, and disorder are attributes of competition and war. The character of every contest is shaped by a unique flow of complex conditions, fleeting opportunities, and unforeseen events. This fluidity requires flexibility of thought and adapting to rapidly changing circumstances and conditions. A force not capable of coping with complexity and fluidity will devolve quickly into disorder or slow its tempo until it can make sense of the situation.

Complexity, fluidity, and disorder also impact situational understanding. This understanding is impacted because it is often impossible to discern the relationship between cause and effect in complex fluid situations, which results in additional ambiguity or uncertainty. Every element engaged in competition or war, friendly and enemy, is part of a larger whole. Each must cooperate within their system to accomplish the mission, and each must deal with friction, uncertainty, and disorder at every level within their system.

The Human Dimension

Because war is a contest of human will, the human dimension is vital.⁴⁸ The concept of will exists solely in the human mind, and each person's will is subject to numerous physical, mental, and moral factors unique to their situation. The ultimate aim of creating and exploiting an information advantage is to influence our opponents' will and cause them to act in ways favorable to our objectives.

Additionally, war is a social phenomenon.⁴⁹ Whether we discuss competitive actions below armed conflict or full-scale war, we think of them as interactive social processes. Marines must consider the many facets and drivers of human behavior in all situations. From the effects of culture, traditions, language, pride, and religion, to fear, anger, exhaustion, and privation—the human dimension infuses competition and war with innumerable physical, moral, and mental factors. All operations and activities throughout the competition continuum are subject to the complexities, inconsistencies, and peculiarities that characterize

human behavior—all of which contribute to ambiguity, complexity, fluidity, and disorder.

Physical, Moral, and Mental Factors

Like all human endeavors, war is governed by the interaction of physical, moral, and mental factors.⁵⁰ Physical characteristics include equipment capabilities, supplies, force ratios, units and personnel, and posture. These interact with less tangible—but very appreciable—moral characteristics such as will, leadership, fear, morale, and *esprit de corps*. Additionally, we understand intangible mental characteristics such as our ability to grasp complex battlefield situations, create accurate estimates and calculations, make decisions, and to devise strategies, plans, and tactics.⁵¹ It is important for Marines to understand the connection between information and the physical, moral, and mental characteristics of war.

First, Marines must recognize that all military activities are physically detectable and observable and can therefore communicate a message—whether intentional or unintentional. These messages affect the observer's moral or mental factors—such as perception, attitude, fear, or enmity. Most importantly, the messages we communicate by our actions could affect people who were not previously interested in the matter at hand but who could decide to enter the fray depending on how they interpret our activity.

Less tangible moral and mental characteristics of war are equally important considerations for commanders. Determination, leadership, morale, and *esprit de corps* contribute to combat power

and are targets for our enemies. We oppose direct or indirect attacks on our moral and mental factors by using the tangible means of information. For example, we can conduct a cyberspace attack or a physical attack to counter enemy disinformation and propaganda campaigns targeting friendly forces.

WHAT IS AN INFORMATION ADVANTAGE?

The concept of information advantage scales from the strategic to tactical levels of warfare. At the strategic level, state and non-state actors seek to protect and advance their interests by competing continually for advantage.⁵² The United States gains information advantages by successfully defending vital information and information-dependent institutions, infrastructures, and services from disruption and attack. We defend while simultaneously employing information and other forms of power to persuade or compel favorable perceptions, decisions, and behaviors of relevant leaders or individuals toward our national policy objectives.

The Marine Corps supports the Nation in achieving information advantages at the strategic level by contributing to a narrative that the United States is the strategic partner of choice in the world. Our forward presence, demonstrated capabilities, professionalism, and actions promote this narrative by deterring potential adversaries and reassuring allies and partners. Sustaining this particular information advantage is an essential element of a national effort that leverages the military exercises, campaigns, and operations we conduct to achieve specific military objectives.

At the operational and tactical levels of warfare, an information advantage is an exploitable condition resulting from one actor's ability to generate, preserve, deny, and project information more effectively than another (in all the warfare domains and the electromagnetic spectrum). Specifically, we seek to create and exploit three types of information advantages as a means to achieve our objectives and ultimately impose our will: systems overmatch, prevailing narrative, and force resiliency. Marines achieve these information advantages—along with other decision, temporal, spatial, or psychological advantages—through rapid, flexible, and opportunistic maneuver.⁵³

From conducting operations or exercises with allies and partners to increase leverage over a strategic competitor, to demonstrations of resolve and general warfare, Marines are called on to achieve a wide range of objectives. We achieve these objectives most effectively when our campaigns and operations benefit from any one or more types of information advantage. Figure 2-1 summarizes our overall information advantage doctrine logic in relation to generating, preserving, denying, and projecting information.

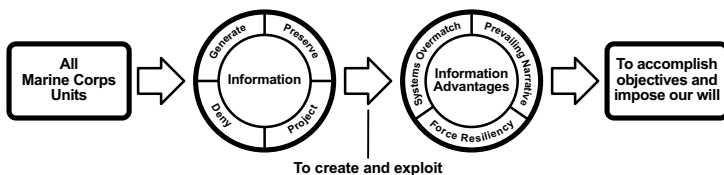


Figure 2-1. Marine Corps Information Advantage Doctrinal Logic.

Systems Overmatch

Systems overmatch refers to the technical advantage of one side over another, yielding fires, intelligence, maneuver, logistics, force protection, or command and control advantages. All warfighting functions, and the systems we use to perform these functions across the range of military operations, depend on assured access to trusted information. The same holds true for our enemies and adversaries and their respective functions and systems. By denying, degrading, manipulating, or destroying the information flowing to or within an enemy's systems, such as weapons systems and command and control systems, Marines can sow doubt or confusion in their minds, or disrupt their ability to function in a cohesive way. Confronting and destroying information systems involve ongoing offensive and defensive actions in the battle for systems overmatch. These actions, combined with disinformation, deception, and supporting actions, can result in significant military advantages. The battle for systems overmatch is discussed in more detail in chapter 3.

Prevailing Narrative

Narratives are essential underpinnings to every operation and activity because they give meaning to a set of facts.⁵⁴ Credible narratives are the most effective. The prevailing narrative is the one that is credible and resonates most with the intended audience. The crafter's goal is to achieve a prevailing narrative that results in a public opinion or perception advantage by eliciting trust, credibility, and believability in our presence, mission, and objectives. The prevailing narrative between any

Preempting Russia’s Narrative in Ukraine

On 24 February 2022 Russia invaded Ukraine. This marked a significant escalation in the armed conflict between Russia and Ukraine that began with the Russia’s annexation of Crimea in 2014.

In the weeks and months prior to the invasion, the United States and our allies engaged in a deliberate information campaign to inform domestic and international audiences about Russia’s military build-up and intent to invade. The information campaign preempted Russia’s narrative by denying them the false pretext needed to justify military action in Ukraine. The information campaign involved a steady stream of selective intelligence disclosures combined with widely available open-source information to expose Russia’s capability, disposition, propaganda, and intent.

The information campaign included senior US officials disclosing Russia’s irregular warfare playbook and the specific actions Russia would undertake from this playbook. For example, US officials disclosed intelligence about an expected “false flag” operation and a graphic film that Russia would use to fabricate a justification for invasion.⁵⁵ As a result, the information campaign laid the foundation for the North Atlantic Treaty Organization to act quickly and with a unified voice against Russia. While the effort to expose and discredit Russian actions preemptively did not deter Russia from invading, it did deny Russia their justification and element of surprise. The resulting prevailing narrative worked against Russia at the onset of the invasion and helped to galvanize global condemnation of Russia’s action. This, in turn, made Russia’s ability to pursue its objectives in Ukraine more difficult.

two opponents can be compelling, might not be truthful, and can lead to the success or failure of one side over another. For example, several negative prevailing narratives about US involvement in Vietnam eroded US popular support. The loss of popular support undermined US tactical and operational successes and ultimately led to US withdrawal from the conflict. The competition for the prevailing narrative is discussed in more detail in chapter 3.

Force Resiliency

Resiliency is a defining characteristic of every Marine. Marines train to thrive in adversity. We adapt and overcome. We find a way. We get back up and carry on with the mission. We never quit. These traits are imbued in every Marine from day one, and they continue to influence us throughout our careers and lives after service in the Corps. From an information perspective, resiliency embodies these traits, carried forward by a Marine's ability to resist, counter, and prevail against enemy and adversary reconnaissance, technical disruptions, and malign activity such as misinformation, disinformation, and propaganda. In short, Marines resist, counter, and prevail against any threat that targets our systems and our psyche. Therefore, commanders must develop and instill the familiar “assault through the ambush” mentality against information disruptions and attacks. They must follow this up by developing unit and individual action drills and by making training in response to the enemy and aggressive adversaries a regular part of unit development. Building force resiliency is discussed in more detail in chapter 3.

Other Information-Based Advantages

Systems overmatch, prevailing narrative, and force resiliency represent the three primary information advantages that Marines seek to achieve by applying the information warfighting function. These advantages, and the creative use of information, can lead to other information-based advantages, such as increased decision speed, surprise, faster targeting cycles, increased operational tempo, or psychological advantages.

FUNCTIONS OF INFORMATION

Marines apply the information warfighting function to create and exploit information advantages. Specifically, systems overmatch, prevailing narrative, and force resiliency. The information warfighting function provides a framework for understanding and leveraging the pervasive nature of information, its military uses, and its applications across the competition continuum and the range of military operations. Furthermore, it provides Marines with the context and methods necessary to integrate the generation, preservation, denial, and projection of information while leveraging the inherent informational aspects of all military activities to achieve their objectives.

Commanders and planners coordinate information capabilities and activities across all warfighting functions to ensure unity of effort. The information warfighting function enables commanders and planners to view the warfighting domains, the information environment, and the electromagnetic spectrum as interconnected and contested spaces. The following functions of information

must always be planned and used in combination, as they are mutually supporting, mutually reinforcing, and, in many instances, overlapping.

Information Generation

Information generation is the function of information that Marines apply to gain and maintain access to the information environment; build awareness of information-based threats, vulnerabilities, and opportunities; hold systems at risk; and create the necessary information to plan and conduct operations. Whether operating from home station or deployed overseas, Marines are always in contact in the information environment. Information generation is the function of information that couples a persistent presence in the information environment with a robust effort to understand all relevant aspects of it. Maintaining this situational awareness provides the basis for identifying and exploiting any opportunities that should be exploited and pursued.

Information generation, therefore, includes gaining physical or virtual access to systems; issuing tasks, orders, and other command and control information; collecting raw data to feed the intelligence cycle; and developing plans and friendly force status information. In essence, information generation describes all information accessed, held, or created to facilitate planning and operations. It also includes creating information products to be retained for possible future use. Examples of information generation include recording and storing a radio broadcast or capturing screenshots of a competitor's digital media campaign for future use.

Code Breaking and the Battle of Midway

One of Japan's main goals during World War II was to remove the United States as a Pacific power to gain territory in East Asia and the southwest Pacific islands. Japan hoped to defeat the US Pacific Fleet and use Midway Island as a base to secure dominance in the region.⁵⁶ The December 1941 attacks on Pearl Harbor underscored the power of carrier aviation by crippling much of the US Pacific Fleet. Though the losses at Pearl Harbor were significant, the US Navy still maintained its aircraft carriers.

In June 1942, the fateful events at Midway saw the beginning of the end of the Imperial Japanese Navy. In early 1942, US Navy cryptanalysts had partially broken the Japanese communications code. Code breaking is a form of information generation that allowed the United States to develop insights into Japanese operations. Specifically, analysts were able to determine that the Japanese Combined Fleet intended to conduct a major attack against Midway Island on 4 or 5 June 1942.⁵⁷ Timely code breaking provided the opportunity for US naval forces to plan ahead for the Japanese attack.

Early in the morning of 4 June, aircraft from four Japanese aircraft carriers attacked and severely damaged the US base on Midway. However, the Japanese did not know that US carrier forces were lying in wait just to the east of the island and were ready for battle. After their initial attacks, the Japanese aircraft headed back to their carriers to rearm and refuel when the US Navy engaged the Japanese in battle. By exploiting the element of surprise, the US Navy won the battle and delivered a critical blow to the Japanese. Midway is credited by historians as a key battle that helped turn the tide of the war in the Pacific in favor of the United States.

Information Preservation

Information preservation is the function of information that Marines use to protect and defend the information, systems, and networks used to facilitate planning and friendly operations against internal and external threats. The fight to preserve information is continuous and involves activities such as network operations, cybersecurity, defensive cyberspace operations, electromagnetic spectrum operations, and physical security measures.

Information preservation also entails actions to build and maintain the historical record. This process includes documenting unit histories and historical events with accuracy to support the credibility of a command or broader narrative. Given that narratives often compete with one another over time, preserving and then reintroducing the facts of a historical record can compel an opponent to accept a friendly narrative over its own.

Another important element of information preservation is recognizing and dispelling misinformation and disinformation. This requires training in critical thinking skills to recognize untrustworthy information sources, and to understand how one's own potential cognitive biases may increase one's susceptibility to manipulation. Marines with these skills know instinctively how to act and communicate in ways that support and preserve the friendly narrative. Overall, information preservation describes the use of available capabilities to protect and defend our information, systems, networks, narrative, and ultimately our people from enemy and adversary information manipulation, denial, and disruption.

Information Denial

Information denial is the function that Marines apply to disrupt or destroy the information needed by the opponent to understand the situation, make decisions, or act in a coordinated fashion. This includes disrupting an opponent's ability to gather information. We can achieve this by exploiting an opponent's vulnerabilities as a primary means of denying them vital information. Information denial includes offensive cyberspace operations, electromagnetic attacks, directed energy attacks, and physical attacks, among other activities. Preventing opponents from unauthorized access to our information is also a means of information denial.

Overall, information denial describes the use of available capabilities to gain an advantage over an opponent by concealing, disrupting, or destroying information the opponent seeks. A passive way to deny the opponent vital information is to selectively alter or suppress the visual, electromagnetic, and digital signatures emanating from friendly forces. This includes implementing operations security measures, communication discipline, camouflage, counterintelligence, and signature management.

Information Projection

Information projection is the function of information that Marines use to communicate, transmit, or deliver information of any type to inform, influence, or deceive an observer or targeted system. This ranges in scope from using official communication to inform allies and the US population to using various creative methods to deceive an enemy. The Marine Corps projects information in many ways, including by direct communication

Digital Media, Charisma, and Resiliency in Ukraine

The scale of the Russian invasion into Ukraine on 24 February 2022 shocked the world as it ushered in a level of violence and destruction not seen in Europe since World War II. Russia's strategy at the onset was to quickly overwhelm Ukraine with a sustained and far-reaching bombardment of key targets across the country. Russian President Vladimir Putin and his military leaders assumed that swift overwhelming force through bombardment would cause the Ukrainian government and military to quickly capitulate. This would allow Russia to install a favorable puppet government in Ukraine and allow opportunity for Russia's approximately 200,000 troops massed on Ukraine/Russia border to enter as an occupying "peacekeeping" force.

What Putin did not count on was a unified North Atlantic Treaty Organization, overwhelming international condemnation, and the potency of Ukrainian President Volodymyr Zelensky. In combination with preemptive US and North Atlantic Treaty Organization intelligence disclosures to deny Russia the false pretext it sought to justify military action, President Zelensky emerged in the crisis as a charismatic leader whose actions had global impact. His masterful use of digital media and inspirational messaging (a form of information projection) not only rallied people and leaders worldwide, but most importantly, the will of the Ukrainian people to stand and fight. President Zelensky's actions, words, and effective use of media to inspire his people stands in stark contrast to the information control efforts (a form of information denial) President Putin imposed within Russia. To control the narrative domestically, Russian authorities enforced strict censorship, shut down access to digital media, arrested protesters, and approved all news stories prior to their broadcast or print. Public knowledge of some Russian dissent and of Russian efforts to control information domestically served to bolster Ukrainian morale and resiliency.

such as radio and television broadcast, print media, cellular communication, face-to-face communication, and various digital media.

We can also intentionally project information by taking physical actions, knowing they are observable, to create specific information effects. An example of this technique would be to amplify a message of resolve by staging a military demonstration. Other actions could include putting on a prominent training exercise or conducting freedom-of-navigation operations in strategic locations. We should always consider and coordinate information projection methods and objectives with information denial.

THE COGNITIVE AND FUNCTIONAL COMPONENTS OF MILITARY OBJECTIVES

The Marine Corps' doctrine for winning in uncertain, chaotic, and fluid environments is based on rapid, flexible, opportunistic maneuver.⁵⁸ MCDP 1 states "the essence of maneuver is taking action to generate and exploit some kind of advantage over the enemy as a means of accomplishing our objectives as effectively as possible."⁵⁹ Objectives are "clearly defined, decisive, and attainable goals toward which an operation is directed."⁶⁰ It is through maneuver in all dimensions that an inferior force can achieve decisive superiority at the desired time and place.⁶¹

From an information perspective, we maneuver in all warfighting domains and the electromagnetic spectrum to achieve objectives by exploiting the cognitive (human) and functional (machine) components of a military objective. All objectives have a

cognitive and functional component that can be directly or indirectly exploited for advantage.

Exploiting the Cognitive Component

Exploiting the cognitive component is possible when we aim directly at our opponent's thinking processes, such as perceptions, decision making, and ultimately their will to compete or fight. Human cognition is highly susceptible to manipulation and deception. Marines manipulate and leverage information attributes such as volume, rate, transmission medium, and style of presenting information to impact how an opponent interacts with the environment, perceives reality, and makes decisions. Additionally, Marines seek every opportunity to exploit the physical, mental, and moral factors relevant to a specific mission and environment to manipulate or alter an opponent's perceptions, beliefs, morale, and decisions to our favor.

Exploiting the cognitive component means we deliberately manipulate or influence what the opponent senses, perceives, and thinks about the situation and the environment. To achieve this, it is critical to understand how the opponent's system (human-machine interaction) works—how it receives, processes, and uses information. This understanding allows us to develop the tactics and to employ the capabilities necessary to shape their perceptions and bend the situation, and their behavior, to our favor.

Exploiting the cognitive component of a specific objective can be accomplished either by direct or indirect methods. The direct method involves presenting information that drives human perceptions and decisions in our favor. For example, when an

enemy radar operator misidentifies a decoy instead of the real target, that operator still has the will to fight, but their perception of reality has been altered. By manipulating the human-machine interface (radar display) and denying the operator accurate information, we prevent the operator from effectively using the system.

Indirectly exploiting the same radar operator focuses more on mental and moral factors. For example, the radar operator may be affected by propaganda or disinformation that sows self-doubt in the mission or the cause and lose the will to fight. An operator who is overwhelmed with concern for family or fear of the enemy can no longer effectively accomplish the mission. In this example, the direct approach exploits perception and the ability to fight, while the indirect approach exploits the mental and moral factors needed to stay in the fight.

Exploiting the Functional Component

Exploiting the functional component is possible when we aim directly at our opponent's non-thinking processes, such as a weapon system itself or supporting systems. While exploiting the cognitive component focuses on the person, exploiting the functional component focuses on the system's ability to function. In this approach, Marines focus on the information and information processing required by the system. This involves engaging in information and systems confrontation and destruction to defend friendly systems from attack, and to disrupt or destroy adversary systems, leading to systems overmatch.

The direct approach to exploiting the functional component of a system denies the operator its use. Using the example of the radar operator again, we seek to damage or destroy the system to deny the operator the ability use it. This can be accomplished in various ways, such as physical attacks, directed energy, offensive cyberspace operations, and electromagnetic attacks. Using an indirect approach, we can select some supporting capability or resource needed for the radar transmitter and receiver to function. For example, Marines can destroy the radar system's command and control link through coordinating a cyberspace attack, denying critical information it requires to perform its function.

There are many examples we could use to illustrate how Marines exploit adversary systems and process information. The main point is to understand that every objective has a cognitive and functional component that requires the use of information. Marines can directly or indirectly exploit each component to accomplish the mission. Table 2-1 illustrates the radar operator example used in this section. The example and table are meant to foster thinking and discussion among Marines and encourage every Marine to consider mission objectives from the cognitive and functional component perspectives.

Table 2-1. Exploiting the Cognitive and Functional Components.

Objective: Render the enemy radar system unable to support air defense		
	Cognitive Component	Functional Component
Direct Approach	Aim point and desired effect: Human operator deceived through the human-machine interface (radar display). <hr/> Action: Employ decoys to generate false radar returns.	Aim point and desired effect: Radar transmitter and receiver (transceiver) rendered inoperable. <hr/> Action: Electromagnetic attack against transceiver overpowers (burns) system circuitry.
Indirect Approach	Aim point and desired effect: Human mind manipulated resulting in doubt in mission or cause. <hr/> Action: Tailored propaganda through direct messages (email and cell phone texts).	Aim point and desired effect: C2 node disabled and unable to provide radar information. <hr/> Action: Denial of service attack through cyberspace.

INFORMATION AND DECEPTION

Sun Tzu’s maxim, “All warfare is based on deception”⁶² is central to our competitors’ ways of thinking about the continuous struggle between political actors or two enemies locked in battle. Deception is also central to how Marines think about competition and war. This is particularly true at the tactical level of warfare,

where Marines plan and train to achieve an element of surprise in any operation.

Achieving surprise through deception is the art of convincing the enemy or adversary we will do something other than what we are actually planning to do.⁶³ Deception is therefore an information activity because we endeavor to deceive the human mind, the machine the human relies on, or both. Deception is most effective when we exploit ambiguity and the fog of war. We use all available capabilities to not only conceal our location, or capability, or intent, but also to create false impressions in our enemy or adversary's mind leading to a specific enemy or adversary action or inaction. There are three categories of deception activities that Marines must be aware of—tactical deception, joint military deception, and deception in support of operations security.

Tactical Deception

Tactical deception refers to deceptive activities that any Marine Corps unit can conduct to gain advantages, such as surprise. Achieving surprise increases the chances a unit will succeed in its mission.⁶⁴ Tactical deception creates disproportionate advantages based on how much time and resources an enemy or adversary diverts toward our ruse or trap.⁶⁵ Generally, the greater the surprise, the smaller the force required to accomplish the mission, and the fewer the casualties the force sustains.⁶⁶ Therefore, planning for tactical deception in most, if not all, operations must be a primary concern for commanders.

In addition to using camouflage and decoys to frustrate enemy or adversary sensing and decision making, Marines conduct a wide range of tactical deception operations, including feints, demonstrations, ruses, and displays to draw the enemy or adversary away from our main effort. At the smallest unit level, Marine snipers employ deception to maximize stealth, concealment, and surprise. Similarly, Marine forces at any level could employ deception techniques to bait an ambush. The main point is that deception of any kind, at any scale, is worth the cost (time and personnel) in almost all situations. Marines must therefore adopt and apply an “ambush mindset,” not only in combat, but also in our competitive actions below the threshold of armed conflict.

Joint Military Deception

Unlike tactical deception operations, which any tactical unit can plan and conduct to achieve military advantages, joint military deception activities are conducted to support operational-level campaigns and objectives.⁶⁷ Marines support joint military deception activities by taking specific actions or by employing special technical capabilities to deceive a specific target or decision maker. These activities are sensitive undertakings, will always be conducted within approved authorities and permissions, and must balance the mission's objectives with potential second- and third-order effects to Marine Corps and US credibility.

Ideally, Marines support joint military deception activities to limit the enemy's ability to apply accurately focused combat power. Military deception supports offensive and defensive objectives.

Military Deception and the Allied Invasion of Europe

On 6 June 1944, the Allies launched the largest amphibious operation in history to liberate occupied France from Germany. Operation Overlord, the Allied invasion of north-western Europe, opened the western front that ultimately led to the demise of Nazi Germany and the end of World War II in Europe.

To enable the invasion, the Allies conducted a large-scale deception operation, codenamed Bodyguard, from July 1943 to 6 June 1944. The deception's objective was to mislead the Germans about the timing and location of the Allied invasion.⁶⁸ Operation Fortitude South, a main element of Bodyguard, specifically aimed to convince the Germans that the Allied landing would occur at the Pas-de-Calais, instead of the actual intended landing site at Normandy. Fortitude South involved many forms of information projection to create effects. This included leaking select information, deliberately disbursing force concentrations throughout Great Britain, employing dummy vehicles, decoy tanks and equipment, and conducting radar deception techniques to create false signatures. The deception also included broadcasting fake communications to convince the Germans the Allies would land at Calais.

Overlord's success not only depended on the effective use of decoys and other techniques to create false impressions, but also on preventing the Germans from learning of the plan itself. Operations security (a form of information denial) was therefore critical to the plan's success. Lauded as one of the most successful military deceptions in modern history, Operation Fortitude South caused the Germans to distribute forces along the western coast of France. Once Overlord began, Adolf Hitler and the German high command were convinced that the Normandy landing was a diversion, and delayed sending Panzer divisions from the north for several weeks. Ultimately, Fortitude South caused the Germans to mis-allocate forces at the most critical time and place, and contributed greatly to the success of the Allies in Europe.

Staff integration is essential to ensure official and unofficial communication efforts are coordinated, synchronized, and leveraged toward common goals. Any staff at any level can be integrated into a higher-level military deception plan. To do so effectively requires education on how to perform joint military deception, understanding where authorities reside, and the tight security controls needed to coordinate such actions.

Deception in Support of Operations Security

Deception and operations security are complementary activities. Deception in support of operations security manipulates the information available to a foreign intelligence entity and limits their overall ability to collect or accurately analyze critical information about friendly operations, personnel, programs, equipment, and other assets. Deception in support of operations security is a form of information denial. It differs from the other two deception categories in that it only targets foreign intelligence entities and is not focused on generating a specific enemy or adversary action or inaction. The intent of deception in support of operations security is to create multiple false, confusing, or misleading indicators to make friendly force intentions harder to interpret by the foreign intelligence entity.

CONCLUSION

Information is power. Competition and war are fundamentally about the distribution and redistribution of power through a contest of wills. Informational power refers to the use of information, narratives, and technical means to advance our

Nation's interests and achieve organizational objectives. Our theory of information informs the way we leverage its power to influence the behavior of others, their will, or the course of events in any situation—including combat and many other situations.

The crux of our information theory applied by commanders is in creating and exploiting information advantages to achieve objectives that range across the competition continuum. Information is an inherent aspect of the familiar attributes of competition and war. Attributes such as ambiguity, uncertainty, complexity, and fluidity relate to information because of their effect on situational understanding, perception, and behavior. Marines can exploit these attributes through the information environment to induce friction and disorder in an enemy or adversary.

Marines apply the information warfighting function to leverage the attributes of competition and war by exploiting the cognitive and functional components of threat systems (human and machine) to create relative advantages. We seek to create and exploit three types of information advantages: systems overmatch, prevailing narrative, and force resiliency. Marines exploit these advantages to influence the environment and the behavior of others, and to impose their will. Information advantages result from one actor's ability to generate, preserve, deny, and project information more effectively than another.

Chapter 3.

Effective Use of Information

“As Churchill noted, ‘A lie gets halfway around the world before truth gets its pants on.’ In our age, a lie can get a thousand times around the world before the truth gets its pants on.”⁶⁹

—James Mattis

“With public sentiment, nothing can fail. Without it, nothing can succeed.”⁷⁰

—Abraham Lincoln

Having reached a common understanding of the nature of information, and having explained the elements of our theory of information, we now turn to the effective use of information. This chapter establishes principles of the information warfighting function and provides a more detailed discussion of how the functions of information are used to create and exploit information advantages.

PRINCIPLES OF THE INFORMATION WARFIGHTING FUNCTION

Marines must adopt a maneuver warfare mindset to apply the information warfighting function and to compete and fight effectively as part of a joint force. To maximize the use of the information warfighting function, the following principles provide a starting point for Marines to think about and apply information as an element of their daily activities, planning, and in warfighting.

The Information Environment is Global and Enduring

The global nature of information, and the instant visibility it affords, makes the information environment relevant at all times. Marines must therefore gain and maintain awareness of their surroundings, understand how to protect themselves from foreign observation and influence, and leverage information to their advantage. Whether at home station or forward deployed, Marines must remember that our competitors continually compete aggressively in this space—there is no turning off the information environment. There is always an opportunity to gain or lose an advantage in or through it.

All Warfighting Domains Apply

Information is generated and exists in every warfighting domain. Therefore, information advantages can be created and exploited in every domain, either by us, or by our opponents. Cross-domain

information advantages can be exploited through physical maneuver or any warfighting function to create combined-arms effects. For example, achieving systems overmatch against an enemy's land-based, antiaccess and area denial systems allows the US Navy to maneuver deeper into a contested maritime zone.

Conversely, if we lack an understanding of how to gain cross-domain information advantages we risk undercutting our efforts. Marines must remember that some information advantages already exist, most are temporary, and all can be exploited by us or our enemy. Therefore, commanders must seek to create and exploit information advantages in any and all domains.

Information is the Commander's Business

Information is the commander's business because the information environment is always relevant and information advantages can be gained or lost in any domain. Commanders must think of information as a primary means to induce ambiguity, uncertainty, and friction within an opponent. They use the information warfighting function to penetrate the enemy's decision-making process, exploit information dependencies, achieve surprise, and disrupt the enemy from within. This requires the information warfighting function to be deliberately integrated with the other warfighting functions and included in plans and orders to create maximum effect.

The modern information environment adds complexity to a commander's area of operations. Consequently, commanders must focus on protecting and leveraging information capabilities

needed to make sense of the situation and to accomplish the mission within their assigned area of operations. This requires knowing how to request and coordinate support from external units, agencies, or non-governmental organizations that exist far outside a commander's area of operations. For example, a commander may need to request specific space-based or cyberspace capabilities from distant commands or agencies to protect critical command and control systems or to attack an enemy operating in the assigned area of operations.

All Marines Have a Role

Information considerations in Marine Corps operations are not just for commanders and planners. All Marines must protect and leverage the information inherent to their operations, help overcome their unit's disadvantages, and create and exploit information advantages. Every Marine consumes, communicates, and relies on information to accomplish the mission. As representatives of the Marine Corps and the United States, Marines must also understand that their presence, posture, and actions will always communicate a message that is open to interpretation.

High visibility offers great opportunity and potential risks within narrative competition. Marines at all levels must understand the impact that their actions and messages communicate—particularly in the context of local and international narratives. This requires a firm understanding of the broader strategic narratives transpiring among all relevant stakeholders. It also

requires practicing operations security and disciplined communication through all forms of media.

Direct and Indirect Approach to Information Advantages

The word *approach* refers to the way a commander chooses to contend with an opponent's advantages or strengths.⁷¹ Commanders generally choose between direct and indirect approaches to create and exploit information advantages. The direct approach is applying our strengths against an opponent's strengths of a similar nature. The indirect approach (sometimes called an asymmetric approach) occurs when we apply our strengths against our opponent's critical vulnerabilities or weaknesses. This tactic indirectly undermines or weakens our opponent's strengths. The direct approach is sometimes thought of as an attrition tactic and the indirect approach as a maneuver warfare tactic. Reiterating Table 2-1 examples, Marines must think of ways to directly or indirectly exploit both the cognitive and functional components of any objective to accomplish the mission as effectively as possible.

ACHIEVING INFORMATION ADVANTAGES

Equipped with an understanding of the principles of the information warfighting function, Marines can apply the functions of information to create and exploit specific information advantages. Table 3-1 provides a summary and quick reference to illustrate the alignment of the four functions of information with the three types of information advantages that Marines achieve by applying the information warfighting

function. This table provides a general guide and starting point from which Marines can understand, think about, and apply the information warfighting function in planning and operations.

Table 3-1. Information Advantages and the Functions of Information

<p>Systems Overmatch</p> <p>Technical advantage of one side over another yielding fires, intelligence, mobility, logistics, or command and control advantages.</p>	Generate	Build situational awareness, gain access to the opponent’s information and systems, develop plans and orders, obtain permissions.
	Preserve	Prevent an opponent from accessing, manipulating, or destroying friendly information; guard against internal threats.
	Deny	Defeat or disrupt the opponent’s ability to gather, make sense of, or use information.
	Project	Manipulate, corrupt, or deceive the opponent’s sensors, systems, human-machine interfaces, and computer processing.
<p>Prevailing Narrative</p> <p>Public opinion or perception advantage of one side over another, yielding trust, credibility, or believability.</p>	Generate	Build understanding of key pre-existing and potential narratives (friendly, neutral, opponent) to include all relevant contexts and nuances.
	Preserve	Protect and defend the friendly narrative from opponent disruption and replacement; document and maintain unit histories and historical events with accuracy.
	Deny	Deny the opponent’s ability to effectively communicate their narrative.
	Project	Communicate the friendly narrative by coordinating and synchronizing all communication, messaging, and actions, nesting them within the strategic and joint force narratives.

**Table 3-1. Information Advantages
and the Functions of Information (Continued)**

Force Resiliency Ability to resist and prevail against adversary technical disruptions that malign activities (disinformation and propaganda).	Generate	Build understanding of own force information vulnerabilities, actual and potential threats; identify risks and opportunities for action.
	Preserve	Recover from opponent information disruptions (functional or cognitive); educate and train against cognitive biases; conduct robust media literacy training.
	Deny	Defeat or disrupt the opponent's ability to access, gather, make sense of, or use information; guard against cognitive biases, conduct media literacy training to ensure Marines recognize and stop foreign influence.
	Project	Manipulate, corrupt, or deceive the opponent; communicate by action (exercises, demonstrations, freedom of navigation operations) to reassure allies and partners and send deterring messages of resolve to actual or potential adversaries.

Battle for Systems Overmatch

Table 3-1 begins with systems overmatch, which is the information advantage that results in superior fires, intelligence, maneuver, logistics, force protection, or command and control relative to an opponent. We achieve systems overmatch by causing information disruption in opposing systems, while protecting our own warfighting and support systems from disruption. This is non-stop, never-ending work that occurs on every point of the competition continuum. Marines exploit systems overmatch to generate other forms of advantage such as speed, surprise, tempo, mass, and superior decision making.

Gaining and maintaining access to opponent systems is a crucial pre-condition to achieving overmatch. Access refers to any action taken to enter a system to collect intelligence or hold the system at risk. These actions include conducting cyberspace operations to penetrate the system, intercepting supply chains to tamper with systems, and conducting clandestine operations to physically access the system. Additionally, gaining physical access to opposing systems is greatly enhanced when Marines can operate in proximity to the competitor or enemy's systems—such as through exercises or partner agreements that allow for our presence or stationing. Gaining and maintaining access to opponent systems allows Marines to build situational awareness, assess risk and opportunities, and develop plans and orders or requests for higher headquarters support, permissions, or approval.

Preserving friendly information and information-dependent capabilities in a systems overmatch contest allows Marines to apply focused combat power by maintaining communications and preserving the ability to gather, process, and exploit the information needed to plan and conduct operations. Information preservation is continuous and involves all activities and capabilities Marines use to protect and defend information (e.g., intelligence, fires, and cyberspace operations).

To bolster information preservation activities, Marines actively deny information or disrupt information within an opposing system by exploiting technical vulnerabilities or by physically attacking the opposing system. Active techniques to deny information include offensive cyberspace operations, electromagnetic spectrum operations, fires, and manipulating or suppressing the physical and digital signatures emanating from

friendly forces. Information denial activities also include implementing operations security measures, communication discipline, camouflage, counterintelligence, signature suppression, and cybersecurity measures. Overall, information denial involves using any available capabilities to gain an advantage over an opponent by denying, disrupting, or destroying the information needed by the opponent.

Marines enhance information generation, preservation, and denial activities by projecting information to achieve systems overmatch.

Systems Overmatch in the Gulf War

In the 1990-1991 Gulf War coalition forces quickly achieved systems overmatch by disrupting Iraqi communications, command and control, and targeting abilities. Using advanced weapons systems and technology, the coalition degraded Iraq's ability to sense and make sense of the environment, which induced a state of operational paralysis in the Iraq armed forces. By exploiting systems overmatch, coalition forces penetrated air defenses, identified and engaged targets with precision, and advanced almost unhindered at a speed previously thought impossible.

The Iraq army was one of the largest and best equipped in the world at the time. However, they were so outmatched that their mass and firepower were almost negated. The condition of systems overmatch was an unparalleled and undeniable advantage for the coalition that resulted in a short duration ground campaign and the expulsion of Iraqi forces from Kuwait.

Information projection in support of systems overmatch refers to the act of transmitting or communicating information to manipulate an opposing system's ability to gather, process, or make sense of the information it needs. There are two primary ways Marines can project information to manipulate, confuse, or mislead opposing systems: information overload and deception.

Marines can overload opponent systems by projecting more information than the opponent's systems can process. Some common examples that Marines should be familiar with range from using tempo to confuse the enemy of a fast-changing situation to using multiple decoys to overwhelm opposing radar systems. Other techniques to cause information overload include conducting cyberspace or electromagnetic spectrum operations to bombard adversary networks and computer systems with digital "noise."

In addition to overloading an opponent with too much information, Marines can project information to deceive opposing systems. This includes any action taken to misdirect or render the opponent's sensing ability incapable of discerning our location, capability, disposition, or intent. Techniques that Marines employ to deceive opposing systems range from tactical deception, to highly sensitive joint military deception activities, to deception in support of operations security. See chapter 2 for more information about deception.

Competition for the Prevailing Narrative

Table 3-1 also discusses the prevailing narrative. All societies and cultures have multiple existing narratives within them. They are supported by long histories and untold numbers of stories and

myths. This makes narrative a powerful means of conveying a specific understanding of our intentions, values, and objectives. Because people understand the world and their place in it through stories that are translatable to real-world experiences, a positive and credible narrative backed by real-world actions offers the greatest potential to strengthen our relationships with allies and partners, build trust and confidence, and strengthen resolve.⁷²

By controlling the credible prevailing narrative one also influences enemy and adversary audiences, potentially sowing doubt and affecting their morale and will. Whether it is the result of humanitarian actions following a catastrophe or a major exercise demonstrating coalition resolve to an enemy or adversary, advantage in the narrative competition can yield tangible effects. As then-Major General Mattis stated in his letter to the 1st Marine Division prior to the 2003 invasion into Iraq, “Demonstrate to the world there is ‘No Better Friend, No Worse Enemy’ than a U.S. Marine.”⁷³

Because all actions and messages can either reinforce or undermine a narrative, and thereby affect the mission, Marines must be mindful about what they say and do at all times. Furthermore, since narratives already exist, Marines will rarely have the opportunity to create brand new ones. Instead of trying to create a new and unfamiliar narrative, commanders and planners must find ways to nest a credible command narrative within the existing cultural narratives. To do this effectively, Marines must strive to identify and understand key aspects of relevant narratives. This includes identifying key stakeholders

within the surrounding population who can help shape the command's narrative.

Non-credible narratives can be harmful or ineffective. To make them credible, messages communicated through written or spoken words or through various media must be reinforced by visible actions on the ground. Crafting a credible narrative backed by supporting command and individual actions provides the best chance of replacing an existing unfavorable narrative with one that helps to achieve the objective. Marines should understand however, that some existing narratives are so deeply entrenched in a society that no amount of effort can replace them within a reasonable timeframe. This should not deter commanders and planners from building credible narratives. Instead, this underscores the importance of knowing what narratives exist and the importance of determining how best to work within them.

To achieve advantage through narrative, Marines must use all available resources to generate information about the intended audience. This includes studying the mental and moral factors underpinning key populations. Marines can use encyclopedic knowledge that already exists within government, open-source, and agency resources, but may also conduct or leverage informal and formal research to build knowledge. Armed with research, Marines can adopt new methods and actions to tailor messaging to create a more favorable environment.

Another critical aspect of generating a credible narrative is measuring the narrative's effectiveness with the intended audience. Although assessing narrative effectiveness can be

subjective and time consuming, it must be prioritized by commanders. Generating a credible narrative and assessing its effectiveness go hand in hand with preserving it over time. Preserving the narrative means protecting the integrity and believability of friendly communication and actions. This requires a keen awareness and the deliberate nesting of the command's narrative within higher-level strategic and joint force narratives.

Narrative preservation can be difficult in the face of opponents who seek to advance their objectives by distorting the actions and messages of Marine Corps units. As soon as specific messages are communicated, Marines should expect competitors to immediately attack their credibility by highlighting or fabricating contradictory actions. This is why narrative preservation requires consistent proactive messaging through multiple, redundant communication channels and media.

To help with narrative preservation, Marine Corps units should record and archive historical information about the unit's operations. Through information collection and archiving (photographs, video, audio, or documents), Marines can provide detailed, fact-based evidence of unit activities and history to maintain their narrative and counter malign adversary behavior that seeks to distort friendly-force narratives.

Actions to preserve friendly narratives must occur at the same time Marines act to frustrate the opponent's narrative. From a narrative contest perspective, this means that Marines must simultaneously communicate their narrative while seeking to deny an opponent the ability to make their narrative resonate. There are two primary ways to accomplish this. First, Marines must

aggressively highlight discrepancies in the opponent's narrative by providing evidence of the gap between what they say and what they do. Second, Marines must exploit systems overmatch to physically disrupt opponent message distribution and the opponent's ability to communicate with their intended audiences.

Marines must combine information-denial activities with information-projection activities to promote and reinforce friendly narratives. Projecting information in a narrative contest refers to nearly everything that Marines do, because our actions either reinforce or weaken a particular narrative. The goal of projecting information in this context is to align actions with official communication and other messaging to gain a public opinion or perception advantage with key audiences.

We project information through deliberate activities, including key leader engagements, military-to-military training exercises, community relations projects, news releases, or presence. The various actions used to communicate specific elements of a narrative are limitless and cannot be listed here. The critical point for Marines is to understand how all actions, both planned and unplanned, either reinforce or harm established narratives.

Building Force Resiliency

Table 3-1 illustrates the concept of force resiliency as the third type of information advantage that Marines seek. From the individual Marine in combat to installation commanders overseas and the supporting establishment—the entire Marine Corps is subject to information disruptions by aggressive opponents.

Overcoming and prevailing against these disruptions is something to which every Marine can and must contribute.

We distinguish between two types of information disruption that opponents seek to impose on us. The first is cognitive disruption, which includes any action (e.g., disinformation and propaganda) that directly targets how Marines perceive themselves, their situation, and the surrounding environment. The second is functional disruption (e.g., cyberspace and electromagnetic attack) that directly targets the systems and facilities that Marines use to perform their mission (e.g., computers, weapons, vehicles).

Whether Marines are targeted cognitively or functionally, commanders must ensure they are trained and equipped to recognize, counter, and prevail over the threat when being targeted. Commanders must develop and instill the familiar “assault through the ambush” mentality against information disruptions and attacks. They must follow this up by developing unit and individual action drills and by making training in response to aggressive adversaries a regular part of individual and unit development.

Our mindset toward force resiliency must be offensive because aggressive adversaries target Marines through the information environment. Advantage can never be assumed, but when present must be exploited. The information environment is continuous, dynamic, and pervasive. As such, Marines must constantly evaluate and assess it, taking positive steps to know and understand the terrain, and taking actions to shape the information environment in their favor. This continuous

observation and evaluation, or running estimate of threats, vulnerabilities, and opportunities, prevents complacency and enables proactive engagement.

Force resiliency is greatly enhanced when we are leading in systems overmatch and narrative contests. However, winning these contests is never guaranteed. Force resiliency means that Marines can overcome adversity and prevail despite setbacks experienced in these contests. Therefore, force resiliency is an information advantage that allows Marines and Marine Corps units to continue fighting when the battles for systems overmatch and the prevailing narrative are ongoing and perhaps uncertain.

Building force resiliency involves generating, preserving, denying, and projecting information in ways that increase resistance to adversary malign behaviors and all forms of information disruption. Effective force resiliency begins with understanding of our own functional and cognitive vulnerabilities. Armed with this understanding, Marines develop estimates of actual and potential threats and identify risks and opportunities for action.

Developing situational understanding is centered on leveraging intelligence and operational reporting. From this, Marines understand competitor and adversary perspectives, playbooks, malign behaviors, or other disruptive information actions. Equipped with an understanding of opponent motives, capabilities, and actions, Marines can focus on preserving, denying, and projecting information to increase force resiliency.

Information preservation activities that support force resiliency focus on recovering from and mitigating all forms of information disadvantage that result from setbacks in a systems overmatch or narrative contest. Setbacks can occur from many sources, from committing actions that contradict our own narrative to disruptive systems effects caused by enemy cyberspace or electromagnetic attacks.

From the narrative setback perspective, if an individual Marine or unit acts in a way that contradicts the intended narrative the commander must act quickly to resolve the situation. Actions include being transparent and truthful about the event, issuing an apology if applicable, re-affirming the narrative that Marines must support, and directing actions consistent with the narrative. The commander must then use all available resources to showcase and highlight those actions taken to correct the misstep and promote the narrative.

From a system overmatch setback perspective, Marines must rehearse isolating a threat, disabling a threat, and restoring a system to its proper working order as quickly as possible. These actions occur continually in cyberspace, where threat actors target our warfighting and support systems. Network operations, intelligence, defensive cyberspace operations, and physical security must all be considered when adjusting networks and recovering information to facilitate continuity of operations.

Preserving friendly information and denying information to the opponent go hand in hand to enable force resiliency. This requires well-educated and trained Marines who understand the

Building Force Resiliency through Media Literacy

Today's world is characterized by widespread use of mobile digital communications and media, which overlaps traditional media, such as radio and television. This overlap blurs the line between the largely ungoverned digital spaces and the regulated news industry. This blurring effect makes people unknowingly susceptible to misapplied or withheld trust in specific information and sources.

A prime example of the dangers related to this vulnerability is the Myanmar military's use of digital media in 2016 to spread anti-Muslim propaganda and incite widespread violence against the country's Rohingya population. Myanmar military officials used Facebook's reach and popularity to create false accounts, including news and celebrity pages. They then flooded the people with incendiary comments and posts timed for peak viewership.⁷⁴ The accounts served as distribution channels for false news and inflammatory posts. This included "sham photos of corpses that they said were evidence of Rohingya-perpetrated massacres."⁷⁵

In 2017, the Myanmar military spread rumors of an impending attack to both Muslim and Buddhist Facebook users and spread warnings via Facebook Messenger through the fake accounts. The warnings stated that "jihad attacks" would occur on September 11, which put the country on edge. The goal of the campaign was to "generate widespread feelings of vulnerability and fear that could be solved only by the military's protection."⁷⁶ The Myanmar example illustrates the importance of digital media literacy. Marines must be resilient to this type of weaponized use of information, and learn to

think critically about the differences between primary sources, news, commentary, manipulated media, parody, satire, and opinion. No individual can fully know or understand the breadth of available information that amplifies cognitive shortcuts, biases, and assumptions. However, media literacy instills a necessary level of critical thinking in everyday interactions with digital and traditional news and information environments. Effective training in this area reduces Marines' vulnerabilities to malign influence and supports force resiliency through unity of effort.

opponent's targeting and influence methods and use that information to make themselves harder to influence. By knowing and guarding against one's cognitive biases, combined with effective media literacy training, Marines can recognize and stop foreign influence and deny the information the opponent seeks.

Just as preserving and denying information work together to support resiliency, Marines (as part of the joint force) also project information to build force resiliency. For example, in competing for the prevailing narrative, the US Navy and Marine Corps team often conducts freedom of navigation operations, training exercises, and military demonstrations in strategic locations with joint and allied partners. These operations are a form of information projection that communicates a reassuring message to allies and partners and sends deterring messages of resolve to actual or potential adversaries. These operations and activities contribute greatly to geopolitical stability and partner resiliency against competitor coercive strategies.

Finally, when faced with inevitable setbacks, continuing action despite a degraded capability supports resiliency by maintaining tempo. Marines continue the mission by taking the initiative based on the commander's intent and any information still available, forcing the opponent to react to our action

INFORMATION ADVANTAGES ACROSS THE COMPETITION CONTINUUM

Competitive actions between potential adversaries are continuous and often involve a complex mix of cooperative actions and ambiguous activities below the threshold of armed conflict, and combat—all of which ebb and flow somewhere between perfect peace and total war. We refer to this range of actions as the competition continuum, with war being a form of violent competition.⁷⁷ Marines apply the information warfighting function to create and exploit information advantages on all points of the competition continuum.

When we think of competitive actions below or above the threshold of armed conflict—including war—the main point is to acknowledge that competition is a political act that involves various violent, non-violent, and information-based actions to achieve our aims and thwart those of our competitors. The actions between the United States and any potential competitor could be in a state of diplomatic, informational, military, or economic cooperation, irregular competition, or armed conflict—or perhaps even all of these simultaneously.

For example, the United States sometimes cooperates with a competitor concerning common interests, such as freedom of navigation in disputed areas. At the same time, the United States could be forced to defend against the same competitor's efforts to steal intellectual property or classified military information through cyberspace. These cooperative actions and cyberspace defense actions could be occurring even as the United States is in armed conflict with a proxy belligerent who is equipped, funded, and ideologically driven by the competitor.

In all of these cases, the Marine Corps could be tasked to support policy objectives above or below the threshold of armed conflict. In every case, Marines will have the opportunity to create and exploit information advantages to achieve their objectives. From cooperating with allies to waging war against enemies, Marines must leverage the power of information at all echelons. The following sections discuss how Marines can apply the functions of information and create information advantages across the range of military operations in the competition continuum.

Information and Shaping the Security Environment

Every day the Marine Corps protects our Nation's interests within a dynamic and complex security environment. This environment is inherently uncertain, globally interconnected, and continuously changing. The security environment requires Marine Corps leaders to engage and communicate with domestic audiences to maintain support at home, and to establish and maintain advantageous relationships with allies and partners for the Marine Corps and the United States.

Marines shape the environment by conducting military engagement, which is the deliberate contact and interaction between military personnel or units and those of another nation's armed forces or civilian authorities and agencies. All engagements should shape a credible prevailing narrative that builds trust and confidence by sharing information and coordinating mutually beneficial activities.⁷⁸

Military engagements and other cooperative actions are often combined with credible force presentations (a form of information projection) to influence adversary or potential adversary perceptions and decisions—with the ultimate goal of deterring them from taking undesired actions. Military engagement, security cooperation, and credible force presentations are inherently information-centric activities employed as part of a campaign to create and exploit information advantages that can lead to favorable decisions and behaviors of relevant actors within the security environment.

For example, when Marines engage allies and partners, we amplify messages of resolve and reassurance (a form of information projection) to foster positive perceptions and attitudes toward our presence, posture, or objectives. This, in turn, creates a degree of certainty among our allies and partners. Conversely, we often conduct engagement and cooperative activities to sow trepidation or doubt in the minds of competitors.

When we conduct military engagement, security cooperation, and deterrence activities, commanders must preserve information by remaining vigilant against disruptive adversarial attempts to

confuse our estimate of the situation or to spoil the positive relationships we have with our partners and allies. Additionally, Marines must expect our competitors to conduct information campaigns designed to sow distrust or doubt among domestic audiences within the United States and among foreign partners.

The Marine Corps conducts engagements with US domestic and international audiences to put operations in context and maintain our storied reputation as a trusted, professional military service. Even garrison and community events, such as Marine Corps recruit depot graduations, Marine Corps air station air shows, Marine Week, and Fleet Week, actively support the Marine Corps' narrative. These events can promote, inform, educate, and influence a relevant audiences' positive perceptions and attitudes toward the Marine Corps—and thereby maintain a favorable prevailing narrative.

Ultimately, military engagement, security cooperation, and deterrence provide an indirect approach to influence ideas and events toward our favor. Marines conduct military engagement, security cooperation, and deterrence to complement the activities of other US Government agencies, such as the Department of State.

Information and Competition below the Threshold of Armed Conflict

Competition between nations takes many forms. It can encompass a wide range of ambiguous, incremental, and coercive activities sometimes referred to as gray-zone operations. The goal

for each side is to achieve certain objectives or advantages without triggering a wider armed conflict. Competition occurs continuously as a contest of wills, in which actors seek to attract partners, deter or subdue competitors, and influence perceptions and behaviors throughout their area of influence.

Activities below the threshold of armed conflict range from small-scale, limited-duration operations to operations executed in support of extended campaigns, sometimes involving the threat of violence.⁷⁹ If the use of violence appears beneficial or necessary at any point, most actors usually seek to achieve their goals quickly through violence, and then return to a state of competition below armed conflict without provoking a retaliation strong enough to negate the value of their gain.

This contrasts with some actors, particularly non-state actors, who consider the permanent state of war to be an objective unto itself. This view involves weaving the idea of permanent struggle into their narrative to support their long-term goals. More than a few violent extremist organizations use their ongoing state of war to raise funds, drive recruiting, and sell their message to their intended audiences.

The Marine Corps supports the Nation's competition goals by maintaining a persistent forward presence in contested zones, engaging with partners and allies, conducting security cooperation, and providing credible deterrence. Competition below the threshold of armed conflict is inherently information-centric because we support joint force efforts to influence the behavior of international actors in pursuit of policy aims.

**A Hypothetical Scenario: Information Advantages
in Expeditionary Advanced Base Operations**

A modernized Marine Corps meets the challenges of enemies and peer adversaries and provides the joint force with credible lethal capabilities. Forward deployed Marines conduct expeditionary advanced base operations at the leading edge of the joint force within the enemy's contested area. As Marines deploy and reposition, they constantly sense and make sense of the operating environment, process data forward (generate information), and share it with the joint force.

The Marine Corps' presence is visible (projects information). It thus reassures allies with a credible narrative while effectively deterring the enemy and adversaries. In this environment, Marines operate from expeditionary advanced bases as sensors and shooters to support sea control and sea denial missions. With these missions in mind, they know they are under constant observation and thus employ strict communication discipline, deceptive tactics, and operations security to frustrate adversary targeting (deny information). Additionally, knowing their intelligence, command and control, and weapons systems are under constant threat of intrusion and cyberspace attack, they implement strong cybersecurity measures to protect and defend critical information (preserve information).

Taken together, information denial and preservation activities contribute to systems overmatch, allowing Marines to have confidence in their ability to perform their mission. Finally, Marines in this environment know they are also targets of aggressive enemy and adversary influence and propaganda efforts. Not only have Marines become resilient to potential technical disruptions to critical information and weapons systems, but they are also trained to recognize and reject enemy and adversary disinformation and propaganda messages targeting them and their units.

Marines must expect that in competition below the threshold of armed conflict, there will be situations where achieving an information advantage requires proactive actions. Because competition straddles our traditional thinking about a clear peace-war divide, Marines must find novel ways to use every available capability. This includes planning for capabilities typically reserved for wartime use, but which can be approved for use in competition activities below the threshold of armed conflict under the right circumstances.

For example, a common competitor irregular tactic is to use paramilitary forces to encroach upon and assert illegitimate claims on our ally's territory. In this situation, and under the right circumstances, Marines may be given permission to jam (a form of information denial) the encroaching force's communications to disrupt the coercive activity. In another example using the same encroachment situation, Marines may be given permission to "name and shame" the activity by intercepting, filming, and broadcasting the coercive activity in foreign or domestic news media (a form of information projection).

Information in Armed Conflict and General Warfare

From time to time, it is in the US national interest to conduct a major operation or campaign involving armed conflict or full scale war.⁸⁰ When faced with these situations, the United States' goal is to prevail against the enemy, minimize the expenditure of resources and human lives, conclude hostilities, and establish conditions favorable to restore peaceful competition and security.⁸¹

Warfare in the information age is information-dependent. Therefore, creating and exploiting information advantages can lead to decisive results against an enemy. In armed conflict and general warfare we seek to achieve systems overmatch, exploit a favorable prevailing narrative, and maintain force resiliency as means to attack and destroy the enemy's ability and will to fight.

For example, in war, we must seek to manipulate, disrupt, or destroy aspects of the enemy's command and control, intelligence, and weapons systems to confuse, shatter their cohesion, and deny their ability to function and fight. These actions leave the enemy even more vulnerable to maneuver, physical attack, and all forms of influence. Additionally, in armed conflict, we directly target the enemy's will to fight by using aggressive disinformation and propaganda to manipulate their perceptions of self, trust in their leaders, one another, and their ability to endure the hardships of battle.

Conversely, in armed conflict, our enemies will use available capabilities to gain information advantages by disrupting, denying, and destroying our data and information networks, and by conducting disinformation and propaganda campaigns. Preserving data and information networks is a critical concern of commanders during armed conflict and general warfare and requires careful study and planning, coupled with forceful offensive and defensive actions. These actions include using combat power to ensure the survival of critical friendly information networks and nodes.

CONCLUSION

Competitors are skilled at leveraging the characteristics of the modern information environment in their pursuit to undermining our Nation's strengths. To compete and fight effectively as part of a joint force, Marines must be able to apply the information warfighting function on every point of the competition continuum. Marines must always consider the principles of the information warfighting function when assessing the environment, developing plans, or conducting operations of any kind.

The purpose of the information warfighting function is to create and exploit information advantages as a means to achieve our objectives as effectively as possible. We seek to create and exploit three types of information advantages: systems overmatch, prevailing narrative, and force resiliency. Marines achieve these advantages by maneuvering in all warfighting domains and the information environment to generate, preserve, deny, and project information more effectively than our opponents. All Marines, and particularly all commanders, use information to shape the security environment and to achieve objectives below and above the threshold of armed conflict.

Chapter 4.

Institutionalizing Information

“Rather than wearing down an enemy's defenses, maneuver warfare attempts to bypass these defenses in order to penetrate the enemy system and tear it apart.”⁸²

—MCDP 1, *Warfighting*

Our warfighting philosophy leads us to consider how we institutionalize information as a warfighting function and as an instrument of maneuver warfare. Rather than systematically wearing down an enemy's strengths our warfighting philosophy directs us to penetrate the enemy's system and tear it apart from within. The goal of our philosophy is to render the enemy incapable of resisting by shattering their moral, mental, and physical cohesion.

Institutionalizing information, therefore, means we make it a primary instrument of maneuver warfare—such that we generate, preserve, deny, and project information more effectively than an opponent in competition or an enemy in battle.

DISTINGUISHING THE INFORMATION WARFIGHTING FUNCTION

Institutionalizing the information warfighting function begins with understanding the function's distinct purpose. All warfighting functions are both distinct and mutually supporting. To reiterate, the purpose of the information warfighting function is to create and exploit three types of information advantages as a means to achieve our objectives as effectively as possible. These advantages are: systems overmatch, prevailing narrative, and force resiliency. The purpose of the information warfighting function stems from our theory of information, which is focused on leveraging the power of information to influence the behavior of others, their will, or the course of events in any situation. Other warfighting functions must be applied to support the creation or exploitation of information advantages. When this occurs, these other functions are mutually supporting functions.

Additionally, *Information* was established as a Marine Corps warfighting function to provide commanders and staffs with a framework to think about, understand, and leverage the pervasive nature of information, its military utility, and its application across the range of military operations. This function provides Marines with the ability to integrate the generation, preservation, denial, and projection of information while leveraging the inherent informational aspects of all military activities to achieve objectives and attain desired end states.⁸³

The information warfighting function enables the deliberate integration of information across all other warfighting functions during all phases of operations. Because information is pervasive throughout all warfighting domains, is the business of commanders, and is an essential source of advantage or disadvantage, Marines must understand how information relates to all other warfighting functions.

INFORMATION AND THE OTHER WARFIGHTING FUNCTIONS

Each warfighting function is a grouping of tasks and systems that provide a critical capability to help commanders plan, synchronize, integrate, and direct operations. Marines leverage the capabilities of all these functions during planning and operations to achieve their objectives.

Command and Control

The command and control function gives commanders authority and direction over assigned and attached forces as they work to accomplish their mission.⁸⁴ That authority and direction are exercised through a command and control system that consists of the facilities, equipment, communications, staff functions and procedures, and personnel essential for planning, preparing for, monitoring, and assessing operations. Command and control systems enable the force to maintain communications with higher, supporting, and subordinate commands to control all aspects of current operations while planning for future operations.

The command and control function enables the commander to balance the art of command with the science of control and to integrate the other warfighting functions.

Effective command and control requires assured access to trusted, timely, and relevant information to facilitate command decisions and feedback. Resiliency to disruptions in communications and information flow, combined with mission-type orders and commander's intent, allow Marines to persist through and even exploit the inherent uncertainty of the battlespace to maintain tempo. Trust is a significant component of any command and control method. Whether Marines are making decisions based on implicit or explicit communication, they must have trust in the information on which they base their decisions, as well as the systems used to communicate it between commanders and units.

Maneuver

Maneuver is the employment of forces in the operational area through movement, in combination with fires and information, to gain advantages over the enemy.⁸⁵ Maneuver involves deploying forces and capabilities into an area of operations and positioning them within that area to gain operational advantage in support of mission objectives, including accessing and, as necessary, controlling key terrain.

The maneuver of forces has inherent informational aspects that create effects and must be accounted for during planning and execution. These include signaling intent, demonstrating capability, and driving tempo to cause confusion and disorder

within the enemy system. Additionally, we must sometimes maneuver for the purpose of gaining information about the enemy. In these instances, we maneuver to stimulate the environment and cause the enemy to act so we can observe them.

Fires

The fires warfighting function uses weapon systems, as well as information capabilities, to create effects in support of a friendly objective. Fires include the collective and coordinated use of any capability that can create physical (functional) or cognitive effects on the target or target system. Our maneuver warfare doctrine calls on commanders to use fires (lethal and nonlethal) more for their cognitive effect—their impact on the enemy’s will—than for their physical effects. To that end, Marines can employ lethal fires to deny the enemy vital information, sow doubt and confusion, and create other advantages in any warfighting domain by targeting and destroying critical enemy command and control nodes and systems.

Fires are used in conjunction with maneuver to shape the battlespace and set conditions for decisive action in combat. However, nonlethal fires, for the purposes of projecting or denying information, can also serve a prominent role in affecting people’s behavior or actions. Just as with operational or tactical maneuver, fires are often planned and conducted for psychological impact (fear, paralysis), by sending a message through firepower. This results in other types of competitive or combat power advantages that can be exploited.

Intelligence

The need to understand and adjust for those aspects of a situation that lie beyond friendly control is fundamental to all military operations. The intelligence function helps to inform the commander and staff about the enemy's intent, capabilities, vulnerabilities, and anticipated actions. It also helps them to understand friendly, neutral, and threat information networks and information systems; the ways that information is received, transmitted, and processed; and how information impacts the enemy's decision making.

This understanding can enable the commander to orient, decide, and act within the enemy's decision cycle. Intelligence products can provide insights into relevant actors' decision-making processes, norms, beliefs, power structures, perceptions, attitudes, and other drivers of their behavior. They can also reveal how those actors might apply information to exploit vulnerabilities in the force's own information networks and systems, or how they might leverage information to affect certain drivers of friendly force behavior. Intelligence operations also support requirements for combat assessment, which are critical to understanding the effects of information in the battlespace. Intelligence support to information activities follows the same all-source intelligence cycle used by all other operations, with an emphasis on the unique data, context, and other attributes necessary to support them. Just like effective command and control, effective intelligence requires assured access to trusted, timely, and relevant information.

Logistics

Logistics encompasses all activities required to plan, move, and sustain military forces with the requisite resources to conduct operations through mission accomplishment and redeployment. By determining how to provide and sustain combat power, the logistics warfighting function significantly influences the design and execution of strategy, campaigns, and tactics. Furthermore, by determining how long a commander can provide and sustain combat power, logistics can pinpoint the limits of this combat power. Thus, logistics sets the outer limit on what is operationally possible.⁸⁶

Like the other functions, an effective logistics function requires assured access to trusted, timely, relevant, and accurate information to support operations and maintain tempo. Logistics unit commanders must therefore be concerned with how they will preserve information within the logistics system. They must consider all available capabilities to protect and defend logistics information and their communications networks.

From another perspective, logistical operations and footprints are highly visible and can expose friendly force capabilities and intent. These indications could prove harmful or beneficial to friendly force objectives. As a protective measure, logistics planners and personnel seek to reduce signatures to support operations security and force protection. Additionally, logistics planners and personnel apply the functions of information to deliberately manage their visibility (signatures) and support the creation or exploitation of information advantages.

Force Protection

Force protection encompasses the collective actions and measures required to preserve the potential of a force to be applied at the appropriate time and place.⁸⁷ It includes using active and passive defensive measures to ensure protection from the enemy, maintain safety standards and employ procedures that reduce the risk of friendly fire, and bolster emergency management and response to health threats, accidents, and natural disasters.

Information is essential to ensuring adequate force protection in several ways. Protecting friendly information is a critical defensive measure involving active and passive methods. Standard methods of protecting friendly information and denying it to the enemy include signature management, cybersecurity, and operations security. Additionally, highly visible defensive measures (e.g., barrier construction) are used to communicate messages of resolve to potential adversaries or enemies, while other less visible defensive measures are used to conceal, reduce, or eliminate friendly critical vulnerabilities. Effective force protection also requires assured access to trusted, timely, accurate, and relevant information about threats to the force—to include enemy and adversary malign behavior, such as disinformation and propaganda. Protecting the force against harmful or hostile information activities contributes greatly to force resiliency.

INFORMATION IN THE PLANNING PROCESS

To make the most effective use of all available capabilities, the planning process must include functional and detailed information-planning considerations. Planning is an essential part of the broader field of command and control. It supports decision making by helping the commander and staff understand the situation and the purpose of their mission. Planning supports execution by identifying intent and detailing the specifics of implementation. The nature of the situation and the mission determine which information-planning considerations are relevant. An essential starting point for information planning is understanding that any unit or element within the command can be used to generate, preserve, deny, or project information to create specific effects or achieve specific objectives. Information must be as ingrained in the Marine Corps Planning Process as any other warfighting function.

PRIORITIZING INFORMATION

The global information environment creates countless opportunities to generate and leverage ambiguity, uncertainty, and friction. It also offers many pathways for world and military leaders to communicate with one another and with relevant populations. Regardless of the situation, commanders, by the very nature of their roles, must prioritize activities that place information considerations at the forefront.

For instance, consider a single, hypothetical aspect of a defense strategy communicated to enemies, adversaries, competitors, and allies alike. Communicating a strategy's mere existence—as an act of informing—can be enough to elicit a specific response from a potential adversary. Furthermore, when the strategy narrative aligns with the visible deployments, movements, posturing, and the demonstrated readiness of military forces, we communicate the intent and resolve implicit in our actions—thus reinforcing the strategic message. The employment and demonstration of combat power capabilities—if present—would go even further to reinforce our intentions.

At the tactical level, the situation could require a commander to prioritize information by tasking a unit to create specific informational effects. This unit, and the effects they are tasked to create, could serve as the overall main effort. There could also be instances when denying the enemy's access to or use of specific information could serve as the focal point of a unit's efforts.

Deception operations are a prime example of such information-focused efforts. The application of combat power is most effective when we deny relevant information to the enemy while simultaneously working to convince enemy forces that our intentions lie somewhere other than where we intend to focus.

Furthermore, prioritizing information in unit operations includes intentionally monitoring the effects of its messages and actions on the surrounding population, opponents, and on other relevant individuals or groups. Based on this feedback, the commander can adjust command actions to support friendly narratives and objectives.

LEVERAGING ALL CAPABILITIES, AND ALLY AND PARTNER NETWORKS

All capabilities, including those available through allies and partners, must be leveraged to create information effects. Marine Corps planners and leaders must lay the groundwork and develop plans to leverage the placement, access, and authorities afforded by our allies and partners. To reiterate, our competitors aim to divide and separate us from our allies and partners. By strengthening partnerships and leveraging available capabilities we not only achieve tangible combined-arms benefits, but we also strike directly against our competitors' strategic aims. It is vital that Marines develop a partnership mindset to meet the challenges posed by our peer competitors. Furthermore, as new technologies are developed, to include those developed by our partners, it is critical to remain abreast of them and to incorporate them into our units and operations where feasible.

Marines must also use their creativity and find innovative ways to combine new technology with legacy capabilities for maximum effect. This is particularly true in rapidly changing high-tech areas such as cyberspace, electromagnetic spectrum operations, and space-based capabilities. It is up to the commander and staff to combine these capabilities with fires, maneuver, and relevant partner activities to adhere to our combined arms and maneuver warfare philosophy. By forging strong partnerships with ally nations and other US agencies, Marines can combine these complementary capabilities with their own in novel ways to create and exploit information advantages.

USING TRAINING EXERCISES FOR REAL-WORLD EFFECT

Training exercises have taken on new relevance in our hyper-connected modern world. Instant global visibility allows competitors and adversaries to readily observe Marine Corps units in training at any exercise location. This can create opportunities to exploit, and vulnerabilities for us to overcome.

To make use of training exercises for real-world effect, commanders must first develop an understanding of how a particular competitor or adversary is likely to observe the exercise. This includes understanding the various methods and timing of adversary collection (e.g., overhead satellite collection windows, ground-based observers).

Armed with this understanding, commanders must then design and plan their exercises with the deliberate intent of using them to communicate messages and then shape or deny adversary observation to accomplish the commander's information objectives. To achieve this, commanders should consider all available means by which they can selectively protect, alter, or suppress visible, administrative, electromagnetic, and digital signatures. They should also consider the timing and location of exercise events, at both home station and while deployed.

Additionally, sharing information about training events with public audiences presents a path for communicating to a wide range of audiences including competitors, adversaries, and allies. In the realm of public communication, training exercises

have always been, and continue to be, used to reinforce a strategic narrative.

Overseas exercises—particularly with partner nations and allies—should be treated like any tactical mission because competitors will always be observing them closely. Exercises with allies and partners provide unique opportunities to selectively suppress or amplify readiness or capability indicators. They also represent significant operations security and force protection risks. Units participating in overseas events with international partners face a greater number of challenges and opportunities than they do when training at their home bases within the United States.

The increased risk to friendly forces participating in exercises overseas with allies and partners is due, at least in part, to their being immersed in less familiar surroundings—thus making them easier targets for foreign collection and influence. Furthermore, the cultural, social, and organizational norms of their exercise partners create numerous exploitable opportunities by which competitors could discredit the Marine Corps, the United States, or our exercise partners.

Even after an exercise concludes, our adversaries often attempt to exploit the event to their advantage by using imagery from the exercise to generate false stories in various media to support their narrative and propaganda campaigns. While we cannot prevent an adversary from using imagery from our exercises in their influence campaigns, through a persistent presence, an accurate recording of unit histories, and concerted efforts in the

information environment, can we develop resiliency against their efforts and mitigate their effects.

PRACTICING DISCIPLINE IN THE INFORMATION ENVIRONMENT

Knowing the information environment compresses the levels of warfare, Marines must remember that their individual behavior and actions can have a significant impact on the mission and the Marine Corps. Therefore, every time a Marine engages in the information environment (e.g., in various digital media) the communication or visible action must be carefully evaluated for potential unintended consequences. Marines must also maintain heightened awareness when using digital media in order to preserve operations security and not inadvertently reveal friendly force information to an actual or potential enemy or adversary.

The main point is that Marines must practice continual discipline in the information environment. Regardless of where Marines are located, they must consider the second- and third-order effects of their communications and actions. In some form or fashion, all actions performed by Marines have the potential to affect perceptions and attitudes—intentionally or unintentionally—and carry the potential to benefit or harm the mission.

COMMAND AND SERVICE NARRATIVE

To help achieve a prevailing narrative advantage, Marine Corps commanders must establish and maintain a credible command

narrative. The command narrative is distinct from commander's intent. While commander's intent can be expressed in narrative form, the command's narrative is broader than the commander's intent for a single operation. A command narrative anchors and guides all public communication activities, exercises, and operations that a unit performs. Furthermore, a command narrative can be used for both internal and external audiences.⁸⁸ An effective command narrative underpins operations, is credible, and provides greater understanding and context to the unit's presence and mission. When done well, the command narrative inspires confidence among friends and allies, and deters and undermines competitors and adversaries.⁸⁹

Commanders develop their command narratives by first identifying US strategic narratives and relevant higher commander narratives.⁹⁰ Narrative development is a staff process that begins during problem framing. It runs concurrent with planning and operational design. All planning objectives are developed with the command and higher-level narratives in mind.

In addition to US and higher-level narratives, commanders must also refer to public affairs guidance to gain a general understanding of what can and cannot be communicated.⁹¹ After developing a command narrative, commanders and staffs then develop supporting themes and messages. Nesting narratives from the strategic level down to the tactical level ensures continuity with the broader Service, Department of Defense, and US Government narratives.

III Marine Expeditionary Force Command Narrative

The official III Marine Expeditionary Force (MEF) command narrative reads: “III MEF, as the only permanently-deployed Marine Expeditionary Force, lives and works inside the contact layer envisioned in the National Defense Strategy’s Global Operating Model. The 38th Commandant’s Planning Guidance clearly identifies III MEF as the Corps’ focus of effort and the ‘stand-in’ force that will be first to fight in the western Pacific.

To succeed in this space, III MEF maintains the highest level of readiness for contingencies across the spectrum of military operations while simultaneously modernizing and transforming to meet emergent threats. Further, III MEF is competing daily for influence, access, and support from, and alongside, our regional partners and allies to maintain a free and open Indo-Pacific.”⁹²

III MEF’s command narrative provides the enduring context necessary for anyone to understand the MEF’s overall purpose in the Pacific, and its contribution to securing the Nation’s interests. The narrative is designed to synchronize communication internally among all Marines while communicating III MEF’s value to relevant external audiences, which includes the Indo-Pacific combatant commander, other Service components, and allies and partners.

The narrative also communicates a message of resolve to competitors and potential adversaries. The narrative is nested under service and combatant command narratives and supports all MEF plans, operations, and the day-to-day activities of our Marines at home station and abroad.

From a Marine Corps perspective, narrative is essential to our success in service to the Nation. To gain information advantages, the Marine Corps must leverage the power of compelling, credible narratives that achieve objectives across all levels of warfare. The Marine Corps, as an institution, continues to cultivate a Service narrative designed to maintain relevancy to the US public and foster a shared connection among Marines about who we are, what we do, and why we do it. Although other narratives exist in support or opposition, the Marine Corps engages constantly to ensure its narrative is the prevailing one. Commanders must develop their command narratives to support the Marine Corps narrative.

DOCTRINE, TRAINING, AND EDUCATION

Doctrine provides the overall philosophy and practical framework for how we compete and fight.⁹³ Training follows doctrine to develop the tactical and technical proficiencies that underlie all successful military action.⁹⁴ Education cultivates the understanding, creativity, military judgment, and the background knowledge necessary for effective leadership.⁹⁵

The Marine Corps' information doctrine builds on our maneuver warfare philosophy. This philosophy serves as the basis for all the tactics, techniques, and procedures associated with all Marine Corps functions and operations. Through training and education, this publication, and other information doctrine and training publications will help develop new generations of Marines equipped with the knowledge and skills needed to compete and fight with information.

Marine Corps training programs must develop sound technical skills to be applied day-to-day and in every situation. There are two primary focus areas for information training programs. The first is training common to all Marines—basic skills that every Marine must know and apply to protect information and information systems, understand and support narratives, recognize threats, and become resilient to all forms of information disruption. The second training focus area is for Marines who require specific technical skills to apply information capabilities or conduct specific information activities to create or exploit advantages.

Our educational programs must develop Marines and leaders with an understanding of the information contest we face day-to-day and in combat. We must begin by educating Marines in the many ways our competitors use information and technology as they seek to undermine the United States on a societal and global scale.

Drawing from an understanding of competitor strategic approaches, our education programs must then provide an understanding of the technical and social means our competitors use to achieve information advantages against the joint force, and the Marine Corps specifically. Marines, and the Marine Corps, will be most resilient and effective in the information environment when they fully comprehend our information vulnerabilities and how our opponents seek to exploit them for advantage.

FORCE DEVELOPMENT AND DESIGN

Enduring strategic competitions between the United States and state and non-state actors will remain a feature of the future security landscape. While competitions will persist, the character of the competitive information environment will remain dynamic and rapidly changing. To apply the information warfighting function most effectively, the Marine Corps must be agile in this dynamic environment.

Relentless technological advancement and the use of information to manipulate perceptions of truth, mobilize people *en masse*, and impede our ability to command and control forces will continue to challenge our traditionally held military advantages. Additionally, opponents armed with long-range precision weapons and the ability to integrate them with information capabilities pose an enduring challenge.

To meet these challenges, our acquisition programs must keep pace with continual change. The Marine Corps must rapidly acquire and integrate new technologies to outpace opponents. The Marine Corps must also continually and aggressively test, experiment, and wargame new ideas and approaches to learn and leverage new technologies and tactics, techniques, and procedures in every warfighting domain.

CONCLUSION

For the Marine Corps to remain competitive as a joint-force contributor, Marines must embrace the information warfighting function as a core element of their planning, training, and education. We must also recognize that the global visibility afforded by the modern information environment demands that we leverage all our exercises and training, particularly with allies and partners, for maximum effect and influence. This requires us to change the way we think about competing and fighting with information. This includes integrating information with all warfighting functions, maintaining command narratives, ensuring information is central to planning, and keeping pace with an ever changing information environment, emerging technologies, and swiftly evolving threats.

Notes

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4. *Ibid.*, p 2-15.
5. The Joint Staff, Joint Doctrine Note 1-18, *Strategy*, 25 April 2018, p. II-6.
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7. MCDP-6, *Command and Control*, p. 66.
8. MCDP-2, *Intelligence*, p.1-7.
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29. Ibid.

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31. “Russia’s Renewed Military Thinking: Non-Linear Warfare and Reflexive Control.” NATO Defense College, Can Kasapoglu, accessed 15 September 2021, <http://www.jstor.com/stable/resrep10269>.

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33. Ainikki Riikonen, “Decide, Disrupt, Destroy: Information Systems in Great Power Competition with China,” *Strategic Studies Quarterly*, Winter, 2019. p. 124.

34. Ibid.

35. Ibid. p. 130.

36. Ibid. p. 135.

37. MCDP 1-4, *Competing*, p. 4-8.

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40. MCDP 1-4, *Competing*, p. 2-15.

41. Ainikki Riikonen, “Decide, Disrupt, Destroy: Information Systems in Great Power Competition with China,” *Strategic Studies Quarterly*, Winter 2019. Pg. 132.

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45. MCDP 1-1, *Strategy*, p. 10.

46. Ibid, p.48. The description of the informational instrument of national power was modified by replacing the “and” in between “formation” and “ideas” with a comma, by adding “, and technical means” after “ideas,” and by replacing “objectives of the Nation.” with “the Nation’s objectives.” The informational instrument of national power in the modern strategic environment goes beyond the use of information and ideas to influence the perceptions and attitudes of allies, adversaries, and interested observers. It also now includes all of the technical means of securing the Nation’s critical information-dependent infrastructures and services. This involves the widespread use of cybersecurity and defensive cyberspace operations practices to secure governmental functions, the defense industrial base, commercial sector services and products, and all critical infrastructure from persistent attack by adversaries and criminal organizations.

47. Combat power: “The total means of destructive and/or disruptive force that a military unit/formation can apply against the

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opponent at a given time.” (*DOD Dictionary of Military and Associated Terms*)

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49. *Ibid.*, p. 19.

50. *Ibid.*, p. 15.

51. *Ibid.*, p. 39-40.

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75. Ibid.

76. Ibid.

77. MCDP 1-4, *Competing*, p. 1-10 - 1-11. Our warfighting philosophy informs us that war is a violent clash of interests between or among organized groups characterized by the use of military force. War is fundamentally an interactive social process. Its essence is a violent struggle between two hostile, independent, and irreconcilable wills, each trying to impose itself on the other. War's character can take many forms, from using military force to simply restore order during disaster relief operations to completely overturning the existing order within a society. War resides on the competition continuum above the threshold of violence. From a military perspective we also call the points along this scale above the threshold various forms of armed conflict. There are many descriptors of the forms that war takes, such as insurgency,

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irregular, conventional, etc. When we think of competition and war, the main points are to acknowledge that war is a political act that uses violence to achieve its aims, but it is also part of a spectrum of other competitive acts that do not use violence.

78. Military engagement. Military engagement is the routine contact and interaction between individuals or elements of the Armed Forces of the United States and those of another nation's armed forces, or foreign and domestic civilian authorities or agencies, to build trust and confidence, share information, coordinate mutual activities, and maintain influence. Military engagement occurs as part of security cooperation but also extends to interaction with domestic civilian authorities. GCCs seek out partners and communicate with adversaries to discover areas of common interest and tension. This military engagement increases the knowledge base for subsequent decisions and resource allocation. Such military engagements can reduce tensions and preclude conflict or, if conflict is unavoidable, allow a more informed USG to enter into it with stronger alliances or coalitions. (JP 3-0, *Joint Operations*)

79. MCDP 1-4, *Competing*, p. 1-6 – 1-10.

80. JP 3-0, *Joint Operations*, (17 January 2017, Incorporating Change 1, 22 October 2018), p. VIII-1.

81. For guidance on Law of Armed Conflict and the DoD Law of War Program see reference *Department of Defense Law of War Manual* (updated 2016) and *Marine Corps Law of War Program* MCO 3300.4.

82. MCDP 1, *Warfighting*, p.73.

83. MCDP 1-0, *Marine Corps Operations*, w/change 1,2,3, p. B-4.

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84. JP-1 *Doctrine for the Armed Forces of the United States*, (25 March 2013, Incorporating Change 1, 12 July 2017), p. 1-18.

85. JP 3-0, *Joint Operations*, (17 January 2017, Incorporating Change 1, 22 October 2018), p. III-38.

86. MCDP-4, *Logistics*, p. 27-28.

87. MCDP 1-0, *Marine Corps Operations*, w/change 1,2,3, p. B-3.

88. William Marcellino, Christopher Paul, Elizabeth L. Petrun Sayers, Michael Schwille, Ryan Bauer, Jason R. Vick, Walter F. Landgraf III, “Developing, Disseminating, and Assessing Command Narrative, Anchoring Command Efforts on a Coherent Story,” RAND Corporation, p. ix

89. JP 3-61, *Public Affairs*, (17 November 2015, Incorporating Change 1, 19 August 2016), p. I-11.

90. *Ibid.*, p. 4.

91. *Ibid.*

92. III Marine Expeditionary Force Communication Strategy, (7 December 2020), p. 3.

93. MCDP 1-3, *Tactics*, p. 113.

94. *Ibid.*

95. *Ibid.*

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