



CURTIS E. LEMAY CENTER

FOR DOCTRINE DEVELOPMENT AND EDUCATION



A PRIMER ON DOCTRINE

There is no end to the number of people who will line up to make flippant remarks that the doctrine is too long, too short, has too many pictures, is too academic, is not academic enough... The acid test is do we read it, do we understand it, and do we use it, and DOES IT WORK? ...“All else is rubbish” to borrow from Baron von Richthofen. Our doctrine does not mirror the Navy’s, nor the Marine’s, nor the Army’s...it is aerospace doctrine...our best practices...and we should not be bashful about how we write it or what it says.

— From briefing notes by then-Brigadier General Ronald Keys to a doctrine symposium, 1997



Doctrine consists of fundamental principles by which military forces guide their actions in support of national objectives. It constitutes official advice but requires judgment in application.¹ This definition is explained in more detail below.

★ *“... fundamental principles...”*

Doctrine is a body of carefully developed, sanctioned ideas which has been officially approved or ratified corporately, and not dictated by any one individual. Doctrine establishes a common frame of reference including intellectual tools that commanders use to solve military problems. It is what we believe to be true about the best way to do things based on the evidence to date.

¹ The term, “doctrine,” does not have a formal definition in the joint doctrine lexicon. “Joint doctrine” is defined, however, as, “*fundamental principles that guide the employment of U.S. military forces in coordinated action toward a common objective and may include terms, tactics, techniques, and procedures*” Chairman of the Joint Chiefs of Staff Instruction 5120.02D, *Joint Doctrine Development System*.

✦ “...military forces...”

For the purposes of Air Force doctrine, this includes all Airmen, both uniformed and Air Force civilians. These constitute the uniformed warfighters, their commanders, and the capabilities and support that the Air Force employs. They operate across the competition continuum and can be task-organized into the “right force” for any particular joint operation.

✦ “...in support of national objectives...”

Military forces conduct operations in order to support objectives that create continuing advantage for our nation.

✦ “...guide their actions... official advice... judgment...”

Doctrine is a guide to action, not a set of fixed rules; it recommends, but does not mandate, particular courses of action. Air Force doctrine describes and guides the proper use of [airpower](#) in military operations to achieve the joint force commander’s (JFC’s) objectives. It is what we have come to understand, based on our experience to date. The Air Force promulgates and teaches its doctrine as a common frame of reference on the best way to prepare and employ Air Force forces as part of a joint force. Subsequently, doctrine shapes the manner in which the Air Force organizes, trains, equips, and sustains its forces. Doctrine prepares us for future uncertainties and provides a common set of understandings on which Airmen base their decisions. Doctrine is the linchpin of successful military operations. It also provides us with common terminology, conveying precision in expressing our ideas. In application, doctrine should be used with judgment. It should never be dismissed out of hand or through ignorance of its principles, nor should it be employed blindly without due regard for the mission and current situation. Furthermore, following doctrine strictly is not the fundamental intent. Rather, **good doctrine is somewhat akin to a good commander’s intent: it provides sufficient information on what to do, but does not specifically say how to do it.** Airmen should strive to be doctrinally sound, not doctrinally bound.

We have identified danger, physical exertion, intelligence, and friction as the elements that coalesce to form the atmosphere of war, and turn it into a medium that impedes activity. In their restrictive effects they can be grouped into a single concept of general friction. Is there any lubricant that will reduce this abrasion? Only one: combat experience.

— Carl von Clausewitz,
On War

In the current environment of great power competition, expeditionary operations and the arena of homeland security, **doctrine provides an informed starting point** for the many decisions Airmen make in a continuous series of operations. Airmen no longer face the challenge of starting with a blank sheet of paper; **with doctrine, Airmen now have a good outline that helps answer several basic questions:**

- ✦ What is my mission within the joint force? How should I approach it?

- ★ What should my organization look like, and why?
- ★ What are my lines of authority within my organization and within the joint force?
- ★ What degrees of control do I have over my forces?
- ★ How am I supported? Whom do I call for more support?
- ★ How should I articulate what the Air Force provides to the joint force?

From one operation to the next, many things are actually constant. Doctrine, properly applied, often can provide an 80-to 90-percent solution to most questions, allowing leaders to focus on the remainder, which usually involves tailoring for the specific operation. Good doctrine informs, provides a sound departure point, and allows flexibility.

A study of airpower doctrine should draw a distinction between theory and practice. Theory is less constrained by limited empirical context, and designed to encourage debate and introspection with an eye towards improving military advantage. It is part of a vital, iterative investigation of what works under particular circumstances, and why. Theoretical discussion is critical to a successful military. This publication does not present a comprehensive theory for airpower. Instead, it focuses on time-tested military principles and validated concepts, grounded in experience and Service consensus. This is the heart of doctrine.

Finally, a study of airpower doctrine should also distinguish between doctrine and public affairs-like pronouncements concerning the Air Force's role. Some have been developed with an eye towards facilitating the public's and Congress' informed perceptions of the Air Force's role and value. Others have been made in a strategic planning context (e.g., a "vision-mission-goals" development process) that are a normal part of formal, long range corporate planning. Such statements are not enduring and not doctrine; they should be viewed in the context in which they were created.



Although air officers have not been prolific writers, they have expressed their beliefs freely... In fact, one may almost say that the Air Force has developed an oral rather than a written tradition.

— Frank Futrell, *Ideas, Concepts, Doctrine: Basic Thinking in the United States Air Force, 1907 - 1960*

POLICY, STRATEGY, AND DOCTRINE

The term “doctrine” is frequently (and incorrectly) used when referring to policy or strategy. These terms are not interchangeable; they are fundamentally different. Because policy and strategy may impact each other, it is important to first understand their differences before delving into a discussion of doctrine.

- ★ **Policy is guidance that is directive or instructive, stating what is to be accomplished.** It reflects a conscious choice to pursue certain avenues and not others. Thus, while doctrine is held to be relatively enduring, policy is more mutable, but also directive. Policies may change due to changes in national leadership, political considerations, or for fiscal reasons. At the national level, policy may be expressed in such broad vehicles as presidential executive orders. Within military operations, policy may be expressed not only in terms of objectives, but also in [rules of engagement](#) (ROE)—what we may or may not engage with kinetic and non-kinetic capabilities, or under what circumstances we may engage particular targets.
- ★ **Strategy defines how operations are to be conducted to accomplish national policy objectives.** Strategy is the continuous process of developing and applying ways and means to overcome particular challenges and achieve strategic ends (objectives). Strategy provides an overarching construct for conducting activities to create and maintain an advantage, while considering risk.
- ★ **Doctrine presents codified best practices on how to accomplish military goals and objectives.** It is a storehouse of analyzed experience and wisdom. Military doctrine constitutes official advice, but unlike policy, is not directive.

In practice, as leaders develop strategies for particular contingencies, political, economic, or social considerations may dictate strategic and operational approaches that modify or depart from accepted doctrine. As an example, doctrine may support long-range, air-to-air engagements beyond visual range, or high altitude interdiction of surface targets, both using long-range sensors; ROE, however, may require visual identification of all targets before firing due to political concerns over friendly fire or collateral damage. If policy seriously affects the application of doctrine, military commanders should describe for political leaders the military risk and consequences of those adaptations. However, because armed conflict is an instrument of policy, military commanders should ensure that policy governs the employment of military power and thus tailor their operations accordingly.

USES OF DOCTRINE

One way to explore good doctrine is to use a “compare and contrast” model to walk through some key issues. This technique also amplifies that doctrine should be written broadly, allowing decision makers latitude in interpretation and flexibility in application, yet be specific enough to provide informed guidance. This technique also illustrates the use of doctrine in explaining contentious issues and how doctrine can be used to think more effectively about the best means to integrate various aspects of military power and

organization. In the following discussion, there may be overlap among some of the principles expressed; this is desirable in that often there are different aspects or nuances to a particular issue. In doctrine, language is important. Finally, the following discussion presents an Air Force perspective; not all Services may entirely agree with these points.

Doctrine is about **warfighting**, not **physics**. This principle specifically addresses the perceived differences between operations in all domains. The separate domains require exploitation of different sets of physical laws to operate in, but are linked by the effects they can produce together. To achieve a common purpose, airpower capabilities need to be integrated. Therefore, Air Force doctrine focuses on the best means to obtain warfighting effects regardless of the domain in which a platform operates. As an example, Airmen should be concerned with the best means of employing intelligence, surveillance, and reconnaissance (ISR) capabilities, not whether a particular ISR platform is airborne or in orbit. This is requisite to achieving true integration across any given collection of forces.

Doctrine is about **effects**, not **platforms**. This focuses on the desired outcome of a particular action, not on the system or weapon itself that provides the effect. For example, doctrine states that Airmen should seek to achieve air superiority, but doctrine does not focus on which platforms should be used to create that effect. A parallel example of this is seen in the recognition that bombers are not “strategic,” nor are fighters “tactical.” Similarly, it does not matter if an F-16 or a B-52 accomplishes a given task, or whether a particular platform is manned or unmanned, or whether a C-17 or a C-130 delivers a certain load; the outcome of the mission, the objective achieved, is what’s important. Thus, Air Force doctrine does not explicitly tie specific weapon systems to specific tasks or effects.

Doctrine is about **using domains**, not **owning domains**. This illustrates the importance of properly using a domain to obtain the best warfighting effects, not of carving up the battlespace based on Service or functional boundaries. Focusing on using a domain is a vital first step to integration of efforts. “Ownership” arguments eventually lead to suboptimal (and usually at best tactical) application of efforts at the expense of the larger, total effort.

Doctrine is about **how to organize**, not **organizations**. Modern warfare demands disparate parts of different Services, different nations, and even differing functions within a single Service be brought together intelligently to achieve [unity of command](#) and [unity of effort](#). However, merely placing different organizations together in an operational area is insufficient to meet these demands. A single, cohesive organization is required with clearly defined lines of command and commanders with requisite authorities at appropriate levels. Doctrine explains why certain organizational principles are preferred over others and describes effective command relationships and command authorities; this facilitates the rapid standup of joint and Service organizations during rapidly evolving situations. Ultimately, doctrine is not about whether one particular element of a joint force is more decisive than another, nor about positing that element

as the centerpiece of joint operations; it's the total, tailored joint force that's decisive. Getting to that effective joint force requires organizing smartly and a thorough understanding of Service and joint doctrine.

Doctrine is about **synergy**, not **segregation**. True integration of effort cannot be achieved by merely carving up the operational environment. While segregation may have some benefit and may appear the simplest way, from a diverse joint force command and control (C2) viewpoint, it may actually hinder the overall effort. It guarantees that the whole will never be greater than the sum of its parts. For example, Airmen should have access to the entire theater of operations to maximize their ability to achieve joint force commander objectives; they should not be restricted from any area due to unnecessarily restrictive fire control measures. Also, segregating the battlespace into smaller areas of operation may create competition for scarce, high-demand, low-density capabilities and reduce combat effectiveness.

Doctrine is about **integration**, not just **synchronization**. Synchronization is “the arrangement of military actions in time, space, and purpose to produce maximum relative combat power at a decisive place and time” (Department of Defense [DOD] *Dictionary of Military and Associated Terms*). Integration, by comparison, is “the arrangement of military forces and their actions to create a force that operates by engaging as a whole” (DOD Dictionary). Synchronization is, in essence, deconfliction in time and space between different units. It is a useful means to plan and execute operations and to prevent friendly fire. However, it doesn't scale up to the operational level and hence is not the best means for achieving the maximum potential of a joint force. Synchronization emphasizes timing, while integration considers priority and effect to be both efficient and effective with scarce resources. Synchronization is bottom-up; integration, on the other hand, starts at the top with a single cohesive plan and works downward. Synchronization is an additive “sum of the parts” model, while integration may produce exponential results.

Doctrine is about **the right force**, not just **equal shares of the force**. This addresses the proper mix of Service components within a joint force. Some believe that a joint force requires equal participation of all the Services. This is an incorrect view. As has been said, “joint warfighting is not like Little League baseball, where everybody gets a chance to play.” Any given joint force should be tailored appropriately for the operational task. Some operations will be land-centric, others air-centric, others maritime-, space-, cyberspace-, or information-centric. The composition of the joint force and the tasks assigned its various elements should reflect the joint force commander's assessment of the situation.

SOURCES OF DOCTRINE

Doctrine should be based on critical analysis and the lessons of operations rather than driven by rapidly changing policies, promising technologies, individual personalities, budget battles, and politically trendy catch-phrases. **Doctrine should not be written to backwards-justify a policy position or codify a uniquely-tailored organization.** Doctrine reflects operationally proven best practices with full consideration of what has

worked poorly. In those instances in which experience is lacking or difficult to acquire, doctrine may be developed through analysis of exercises, wargames, and experiments. We should also consider the military experience of other nations and non-defense organizations.

Doctrine development is never complete. Any given doctrine document is a snapshot in time—a reflection of the thinking at the time of its creation. Innovation has always been a key part of sound doctrinal development and continues to play a central role. Doctrine should evolve as new experiences and advances in technology point the way to the operations of the future.

Three constantly evolving variables affect doctrine: theory, experience, and technology. Sound doctrine strikes a balance among all three.

★ **Theory** is an excellent starting point, but doctrine based solely on theory may not survive contact with reality. An example of this is the Army Air Corps' advocacy of daylight precision bombing; bombers initially had neither the necessary precision nor the survivability required to implement the theory. On the other hand, theory can support technological investment and experimentation, as in the German Wehrmacht's decision in the interwar years to pursue air-ground integration. A good grasp of operational art can provide the flexibility to adapt new theories within real-world situations, and prevent doctrine from becoming dogma.

★ **Experience** plays a major role in doctrine formulation, while too great a reliance on past experience leaves one open to always fighting the last war. Experience must be tempered with current realities to develop future plans. New technology can provide solutions to long-standing problems, as the advent of mobile, mechanized forces and aviation overcame the stalemate of trench warfare. Theories of war, appropriately taught, should be



[Doctrine] reflects an official recognition of what has usually worked best from observation of numerous trials. These may be reports of actual combat operations, or they may be limited to tests, exercises, and maneuvers. Only when necessary will doctrine consist of extrapolations beyond actual experience of some sort, for example, in the use of nuclear weapons where the nature of the weapon normally precludes the gathering of experience in any but the most limited sense.

— Maj Gen I.B. Holley,
*Technology and
Military Doctrine*

open to reinterpretation in light of current circumstance. The US military experienced this in the formulation of strategy and doctrine for irregular warfare.

- ★ **Technology** constantly evolves, but by itself is not a panacea. While technology may be good at providing single-point solutions, technology should be acquired with due consideration for operational art and design, taking into consideration theory and experience; sound reasoning must accompany realistic projections of what capabilities will actually be available to warfighters. Discussion in the 1990s of the “revolution in military affairs” pointed to a similar interplay of ideas involving technology, organization, and doctrine, and held that all three were necessary to achieve a “revolution.” Thus, technology should not be acquired in isolation.

LEVELS OF DOCTRINE

The Air Force implements doctrine at three levels: basic, operational, and tactical. These levels speak to the intellectual content of the doctrinal concepts, not to the architectural structure of doctrine publications.

- ★ **Basic doctrine** states the most fundamental and enduring beliefs that describe and guide the proper use, presentation, and organization of forces. It describes the “elemental properties” of [airpower](#) and provides the [Airman’s perspective](#). Because of its fundamental and enduring character, basic doctrine provides broad and continuing guidance on how Air Force forces are organized, employed, equipped, and sustained. As it expresses broad, enduring fundamentals, basic doctrine changes relatively slowly compared to the other levels of doctrine. As the foundation of all doctrine, basic doctrine sets the tone and vision for doctrine development for the future. Air Force Doctrine Volume 1 is the Air Force’s basic doctrine publication. Air Force basic doctrine provides the essence of what we are as a Service, what makes us distinct from the other Services, and the focus of what unique or special expertise and capabilities we provide to a JFC. Basic Service doctrine by its nature and design is expected to be Service focused.
- ★ **Operational doctrine** contained in doctrine annexes describe more detailed organization of forces and applies the principles of basic doctrine to military actions. Operational doctrine guides the proper organization and employment of forces in the context of distinct objectives, force capabilities, broad functional areas, and operational environments. Operational doctrine provides the focus for developing missions and tasks to be executed through tactical doctrine. Doctrine at this level changes more rapidly than basic doctrine, but usually only after deliberate internal Service debate. Because operations are conducted by the Air Force Service component to a joint force, operational doctrine will be the most closely aligned with Joint doctrine. Regardless, Air Force operational doctrine will present an Airman’s perspective on how to best organize and employ airpower to accomplish the JFC’s objectives.
- ★ **Tactical doctrine** describes the proper employment of specific Air Force assets, individually or in concert with other capabilities, to accomplish detailed objectives. Tactical doctrine considers particular objectives (e.g., stopping the advance of an

armored column) and conditions (threats, weather, and terrain) and describes how Air Force assets are employed to accomplish the tactical objective (B-1 bombers dropping anti-armor cluster munitions). Air Force tactical doctrine is codified as tactics, techniques, and procedures (TTP) in Air Force TTP (AFTTP) 3- series manuals. Because tactical doctrine is closely associated with the employment of technology and emerging tactics, change will likely occur more rapidly than other levels of doctrine. Due to their sensitive nature, many TTPs are classified.

TYPES OF DOCTRINE

There are three types of doctrine: Service, joint, and multinational.

- ★ **Service doctrine** outlines Service capabilities and guides the application of Service forces. It presents the Service's view of the best way to organize and employ Service forces to accomplish joint force commander JFC objectives.
- ★ **Joint doctrine**, as it applies to [airpower](#) in joint all-domain operations, describes the best way to integrate and employ air and cyberspace capabilities with land, maritime, space, and special operations forces in military action. It presents the Joint view of the best way to employ forces to accomplish JFC objectives regardless of which Service provides them.
- ★ **Multinational doctrine**, as it applies to airpower, describes the best way to integrate and employ US air forces with the forces of allies in coalition warfare. It establishes principles, organization, and fundamental procedures agreed upon between or among allied forces. When developed as a result of a treaty, as in North Atlantic Treaty Organization doctrine, multinational doctrine is directive.

DOCTRINE, EMERGING DOCTRINE, OPERATING CONCEPTS, AND VISION

The doctrinal maxims of this document are based on experience, hard-won with the blood of Airmen, and tempered by advances in technology. If properly employed, doctrine can lead to great success, and if ignored, can lead to disaster. Therein lies the challenge: doctrine should convey the lessons of the past to guide current operations, but should still be flexible enough to adapt to change. Yet while forming that baseline for current operations, doctrine also provides a roadmap for future thinking. One way to put this relationship into perspective is to understand the different uses of vision, operating concepts, emerging doctrine, and doctrine.

If placed along a continuum, doctrine, emerging doctrine, operating concepts, and vision provide a

A hiatus exists between inventors who know what they could invent, if they only knew what was wanted, and the soldiers who know, or ought to know, what they want, and would ask for it if they only knew how much science could do for them.

— Winston Churchill,
The Great War

model for thinking about future technology, operating constructs, and doctrine in a coherent temporal framework.

- ★ **Doctrine is focused on near-term operational issues and describes the proper employment of current capabilities and current organizations.** Doctrine addresses how best to employ, how to organize, and how to command today's capabilities. Doctrine is examined and validated during training, exercises, contingency operations, and times of armed conflict. Exercises, wargaming, and experiments allow us to test emerging doctrinal concepts and better align predicted capabilities with sound operational practices. Experience during conflict refines doctrine in real time. Encounters with unpredictable adversaries often highlight doctrinal gaps and provide fresh perspectives on historic and future challenges.
- ★ **Emerging doctrine generally drives force development in the two to seven year time frame. Still not proven as extant practice, it examines an operating concept for doctrine development. Emerging doctrine is further developed and refined to drive future operational and tactical doctrine.** Emerging doctrine combines operating concepts with near-term practical approaches within the current context of doctrine. Experiments, wargames, and historical study, when honestly and rigorously conducted, are useful methods for evaluating emerging doctrine and providing a basis for doctrinal considerations.
- ★ **Operating concepts generally look out from seven to fifteen years, and postulate reasonable operating scenarios that, through a combination of analysis and the use of descriptive examples, examine a range of issues such as employment, operating environment, C2, support, organization, and planning considerations.** As new technologies mature to the point where their performance can be reasonably bounded as a new, separate system or part of an existing system, they are examined within the framework of an operating concept. Depending on their purpose, operating concepts can speak to the present, near future, or distant future. Operating concepts define the parameters of envisioned capabilities. Like emerging doctrine, experiments, wargames, and historical study are useful methods for evaluating new operating concepts.
- ★ **Vision statements describe key operating constructs and desired operational capabilities well in the future,** usually fifteen years and beyond. Vision serves to focus technology investments toward achieving these capabilities. Emerging concepts and technologies are best investigated through experimentation and wargaming techniques. As future concepts are envisioned, it is important to also examine doctrine to support these potential capabilities. Vision provides the basis for wargaming, and the results of wargaming may point to doctrinal considerations requiring further examination.

Using doctrine, emerging doctrine, operating concepts, and vision, the Air Force can look toward the future and consider the long-term impacts of advanced technologies such as directed energy weapons, new unmanned systems, joint C2 systems, and conceptual advancements. As this framework builds from the general (long-term) to the

specific (near-term), Airmen can investigate a wide range of doctrine, organization, training, materiel, logistics, personnel, and facilities issues at the appropriate point during technology development, concept exploration, and systems acquisition.
