PRACTICAL DESIGN: THE COERCION CONTINUUM

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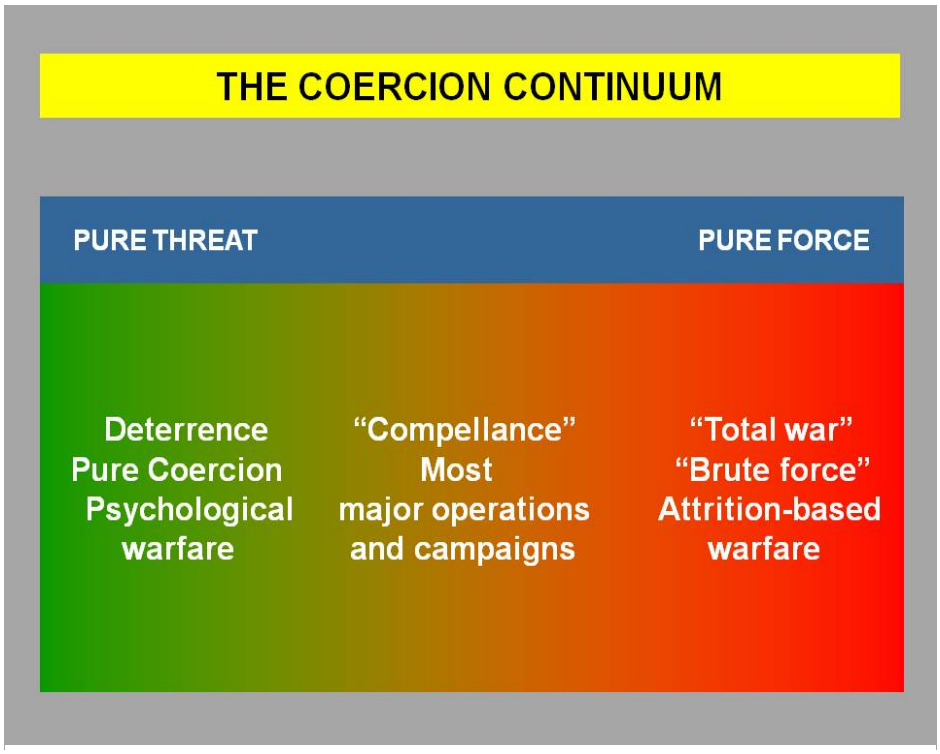
All military strategy seeks to coerce or persuade an adversary or other actor to do one's will. *Coercion* is convincing an adversary to behave differently than it otherwise would through the threat or use of force. All coercive military action works along a continuum from pure threat (only implied use of force, or using peaceful means to defeat adversary strategies) to pure force (engaging military forces and government control mechanisms, as illustrated in "The Coercion Continuum").



The Coercion Continuum

Most combat operations, regardless of size or intensity, reside near the middle of the continuum, however many conflicts may span the entire spectrum. Each conflict has its own character. Many campaigns in World War II (WW II), for example, were close to the "pure force" extreme of the continuum. Operation ALLIED FORCE (OAF), relatively limited in scope and violence, was much closer to the left end of the spectrum. The degree of violence and "brute force" required depends very much upon the national interests at stake, the "target audience," and that audience's determination to resist one's will.

Effective use of airpower can help facilitate conflict resolution closer to the "pure threat" end of the continuum, helping achieve objectives and the end state on more favorable terms, in less time, and more efficiently than might otherwise be possible. However,

airpower is capable of creating effects anywhere along the continuum. The destruction of German industry from the air during WW II represented one form of near-pure force strategy, as did the attrition of Iraqi tanks and artillery during Operation DESERT STORM. US maintenance of a credible deterrent during the Cold War approximated the "pure threat" end of the spectrum, helping prevent major combat operations. The Berlin Airlift of 1948-49 was an example of using peaceful means (albeit backed by implied force) to defeat an enemy's strategy ("pure coercion"). Law of armed conflict (LOAC)-compliant air attacks upon key sites from which Serbian leader Slobodan Milosevic's associates derived their income and influence probably helped compel him to withdraw Serbian troops from Kosovo during OAF. OAF's limited but threatening use of force is common to many operations and is in the middle of the coercion spectrum.

Notes on the Terms

"Lethal" "Nonlethal" "Kinetic" and "Non-kinetic"

The terms "lethal" and "nonlethal" are currently recognized, although not formally defined, in joint doctrine. The existing dictionary definitions of these words describe them adequately. Joint doctrine refers to "lethal or nonlethal military force" (Joint Publication [JP] 3-0, *Joint Operations*), "lethal and nonlethal fires" (JP 3-09, *Joint Fire Support*), and "lethal and nonlethal effects" on targets (JP 3-09). This volume refers to the effects that both lethal and nonlethal weapons and fires have on targets exactly as joint doctrine does.

Two other terms are in widespread, if informal, use as well: "Kinetic" and "non-kinetic," intended to mean, roughly, weapons or actions that cause destruction of targets and those that don't. To avoid confusion, the joint doctrine community deliberately removed all references to "kinetic" and "non-kinetic" in joint doctrine, substituting lethal and non-lethal. Nonetheless, the terms, even though informal, have a somewhat different meaning. They have attained general recognition in the military and elsewhere in the US government, so that even the President and his close advisors use them. President Obama, for instance, referred to "non-kinetic support to [operations in Libya]" in a letter to Congress concerning compliance with the War Powers Resolution (15 Jun 11).

Since the terms show no signs of disappearing from common use, this publication proposes definitions that convey useful and distinct military meaning while keeping them as close as possible to the technical meaning of the terms in physics. **Kinetic***: Relating to actions designed to produce effects using the forces and energy of moving bodies and directed energy, including physical damage to, alteration of, or destruction of targets. Kinetic actions can have lethal or non-lethal effects.* **Non-kinetic:** *Relating to actions designed to produce effects without the direct use of the force or energy of moving objects and directed energy sources. Non-kinetic actions can have lethal or nonlethal effects.*

Attrition and Annihilation.[1] The larger the campaign and the greater the stakes for the actors involved, the more likely a conflict as a whole will approximate a "brute force" approach. Even in limited contingencies, however, attrition-based or "pure force" means may have to be used if the enemy's willpower cannot be broken by other means. Attrition-based strategies have the advantage of being relatively simple. The links between cause and effect are easy to understand: Enemy capability and enemy casualties tend to be inversely proportional. Unfortunately, strategies based on attrition are usually the most costly. Recent developments in precision munitions and targeting capability enable modern aircraft to attrit enemy fielded forces much faster than in previous conflicts. An effects-based approach to strategy development, however, requires that attrition and annihilation be considered when they are the only means of effectively achieving the objectives and end state. Attrition is seldom the most *efficient* way of attaining an objective, but it is sometimes the most *effective and timely* means of doing so.

Decapitation is a very specific, modified form of attrition that has been used as part of US strategy that entails the removal of enemy leadership through direct attack when that leadership constitutes a legal target in accordance with the LOAC and applicable US laws. It can also entail the use of direct attack to sever command and control (C2) links between enemy leadership and its fielded military forces. Decapitation supports punishment and denial (see below) by threatening the enemy leadership's survival or their basic ability to command and control their forces. Attacking the military chain of command supports annihilation or denial by rendering enemy C2 ineffective. This sort of decapitation can be accomplished or greatly aided by information operations (IO) conducted by air, space, and cyberspace forces. Attacking national leadership, when it is a legal target, can support risk and punishment strategies by putting at risk the regime's ability to maintain power. Enemy regimes either comply with the coercer's demands or risk removal from power. Airpower is well suited to conducting either form of decapitation because it can often strike enemy leadership targets without having to first engage enemy fielded military forces that protect them. Air, space, and cyberspace effects can be created in concert to make such attacks more effective.

Decapitation tends to be most effective when an adversary is led by a single charismatic figure who cannot be easily replaced or when the their organization has a rigid, hierarchical leadership structure where the leaders and their potential replacements can all be identified, located, and removed. It may be ineffective against a diffuse, cellular organization or one that has multiple leadership succession plans available—such as the United States' democratic government. Furthermore, when considering a decapitation strike, even if such an option exists, planners at all levels should anticipate who or what a potential replacement will be and consider if that will be better or worse in terms of desired effects than leaving the existing leadership intact, and instead attempting to coerce or compel them to change their behavior. In cases of strategic decapitation, no effective replacement for a charismatic leader may exist and the long-

[1] "Attrition strategy" is also referred to as "exhaustion" and "erosion" in some contexts, but they all have essentially the same meaning. See Russell Weigley, *The American Way of War*, and Hans Delbruck, *History of the Art of War*, for examples.

term stability of a country may be jeopardized, resulting in civil war and the long-term commitment of US and Allied/Coalition resources to attempt to recover and maintain stability.

Compellance.[2] Compellance aims to change an adversaries' behavior forcibly, whereas deterrence intends to change behavior without the actual use of force. Compellance generally takes one of three forms: *denial, risk*, or *punishment*, or consists of a combination of these. Denial attempts to reduce the probability that resistance will yield benefits; risk tries to raise the probability of suffering costs; and punishment tries to raise the costs of continued resistance.

- *Denial*. Destroying or neutralizing a portion of the adversary's physical means to resist or of otherwise denying them the ability to execute a desired course of action (COA). This may take the form of limited attrition, or may entail a less direct mechanism, such as destruction of key war-making resources. Credible threat of force may also be used to deny certain strategy choices. Denial seeks to change adversary behavior by making his action seem pointless. Denial tries to convince adversaries that defeat is inevitable because their means of resistance will be removed, and thus it is better for them to capitulate. Most major operations and campaigns in traditional war involve use of denial as a coercion mechanism. Generally, the smaller and less intense the conflict, the less attrition-based denial is necessary. Most conflicts require some degree of denial, however. Air Force forces are well suited to conducting denial-based strategies against enemy fielded military forces because persistent and pervasive ISR allows the pinpointing of military targets and precision engagement enables discriminate and reliable action against those targets.

  - *Paralysis*. A form of denial in which wide-spread, parallel attacks across the adversary's entire system, including his leadership and C2 mechanisms, render the adversary largely incapable of running his society or selected systems. Parallel attack is usually a valuable complement to other forms of denial, helping lessen military resistance and increasing the psychological effectiveness of attrition and destruction. Airpower is uniquely suited to inducing paralysis because it can strike the widest possible array of targets in the shortest time across the depth of the operational environment, potentially leaving no parts untouched, and all components of airpower can be used to facilitate inducing paralysis.

- *Risk*. Placing that which the adversary values at credible potential for loss. Typically, risk strategies slowly raise the probability of damage to the adversary's systems. The key is to increase costs at a gradually increasing rate in order to convince the opponent that much more severe damage may follow if concessions are not made. Operations are slowly escalated in intensity, extent, or both. The coercer should signal clearly that the attacks are contingent on the adversary's

[2] The term was coined by Thomas Schelling in *Arms and Influence* and has been used extensively in the technical literature on coercion and deterrence.

behavior and will stop upon compliance with demands. At the same time, the coercer should be careful not to destroy everything of value to the adversary, for then it would be impossible to threaten more to come. For this reason, space and cyberspace capabilities may offer useful options by providing reversable effects that effectively coerce without causing permanent damage to adversary systems. Risk strategies have an uneven historical record, failing most notably during the Vietnam War's early bombing campaigns against North Vietnam; the early days of OAF used a form of risk strategy and were of limited success against Serbia. Risk strategies may have limited value in some contingencies, however, and may allow achievement of objectives at a lower cost than denial and attrition strategies. Airpower is generally the instrument of choice in pursuing risk strategies because of its ability to bypass enemy fielded military forces and put targets with strategic value at risk.

- *Punishment*. Administering some form of damaging action against adversaries until they act in a desired manner (or ceases undesired action). The word is often used to refer to a strategy, "which attempts to inflictenough pain on enemy civilians so that they cause their leaders to change their behavior…. The hope is either that the government will concede or the population will revolt."[3] While any such consideration of a punishment strategy may conflict with the LOAC, depending on the nature of a conflict, it may nonetheless be a feasible, if not always acceptable strategy. The elements of this strategy may also be executed against elements of an adversaries' personal or national power, as was done to some extent during OAF.

  The term "punishment" in this context *does not mean "reprisal"*—it simply means inflicting damage (against any variety of target types) once an adversary has initiated undesired behavior in order to coerce a change in that behavior. *The United States does not conduct operations simply for the sake of reprisal.* Like risk strategies, punishment has a checkered history—it has worked less often than denial-based strategies—but it may be effective against an adversary with relatively low will or staying power. Such was the case in OAF, where a punishment strategy against the Serb leadership's income-producing industries (which were LOAC-validated military objectives) may have helped coerce a Serbian troop withdrawal from Kosovo. As with risk strategies, punishment may permit accomplishment of objectives at less cost than attrition or denial strategies. Strategists should clearly understand the adversary and his motivations for punishment strategies to work. Airpower enjoys unique advantages in pursuing punishment strategies, due to its ability to discriminately engage targets anywhere within an adversary's system across the entire operational environment, in all domains.

Deterrence, Assurance, and Dissuasion. The "pure threat" end of the coercion continuum involves the implied, rather than actual, use of force—where the *threat* of force alone may be sufficient to coerce. An overarching purpose of strategies at this end of the coercion spectrum is *prevention*—averting or hindering the emergence of

[3] Robert A. Pape, *Bombing to Win: Air Power and Coercion in War*.

conflicts and discouraging others from developing undesirable capabilities or COAs (for example, preventing proliferation of weapons of mass destruction [WMD]), thus advancing US interests without the direct use of force. This requires the integration of all instruments of power (IOPs) and may entail various forms of military coercion executed in concert. Subordinate commanders, such as the commander, Air Force forces (COMAFFOR), may be called upon to perform detailed planning and execution in these scenarios, even though they may be working to create effects that directly meet the objectives the joint force commander (JFC), combatant commander (CCDR), and higher-level leadership have established. In many cases, airpower can offer CCDRs and other JFCs strategy options that can effectively coerce adversaries and still be available very quickly and offer great flexibility. The key to these forms of coercion is to threaten or assure with sufficient strength and credibility that opponents choose one's preferred actions (or decide not to act), due to the perceived cost of non-compliance.

Purely coercive strategies may be implemented independently or in conjunction with operations at any point across the range of military operations (ROMO), including major wars. The "pure coercion" end of the spectrum consists of several distinct types of strategy options:

- *Deterrence* is defined as "the prevention of action by the existence of a credible threat of unacceptable counteraction and/or belief that the cost of action outweighs perceived benefits. Deterrence is a state of mind brought about by the existence of a credible threat of unacceptable counteraction.[4] For 60 years, the Air Force has provided a flexible, responsive, and stabilizing deterent, through both nuclear and conventional forces. Nuclear deterrence remains a crucial, but not the only, means through which the Air Force deters. The ability to destroy targets using conventional weapons with pin-point accuracy anywhere on the globe with very little notice is a vital contribution to deterrence, as is the ability to forward-deploy a variety of capablities swiftly; operate securely from forward-located, unimproved facilities; provide accurate, globally-integrated ISR; and use air mobility to deploy assets of all the Services rapidly around the world.

  Deterrence today is not only a matter of averting nuclear war between global powers, but involves preventing use[5] of WMD by "rogue states," non-state actors, regional powers in their own conflicts, and lesser states in conflict with the United States and its partners. It also involves using both nuclear and conventional means to deter adversaries from taking undesirable COAs. To a greater extent than during the Cold War, deterrence is also tied to uses of other elements of strategy, particularly compellance in the form of denial and risk. Deterrence is a *state of mind* and creating it in the leaders of rogue states or non-state (often radical and terrorist) actors may be considerably more difficult than doing so in more rational actors, such as major nation-states with clear interests to protect. Thus, a threat of punitive action that may have been effective in the Cold War may not be against an opponent

[4] Joint Publication (JP) 3-0, *Joint Operations*.
[5] As well as transfer, procurement, and production of WMD, a fact as true of the subsequent discussions of assurance and dissuasion.

willing to accept great risks and losses. Conversely, such a "reckless" opponent may be militarily deterred by denying that opponent a practicable chance of success in ways that were not possible against Cold War adversaries without serious threat of war. Joint doctrine provides significant guidance for uses of deterrence during the approach to conflict through flexible deterrent and response options.[6] Non-nuclear deterrence is also sufficiently fixed in joint doctrine that the joint phasing model includes a "deterrence phase," dedicated to preventing "undesirable adversary action by demonstrating the capabilities and resolve of the joint force. It includes activities to prepare forces and set conditions for deployment and employment of forces in the event that deterrence is not successful."[7] For deterrence to be effective, several conditions should be met:

- The threat must be communicated accurately to the target.[8]
- The target must clearly understand the threat.
- The target must believe that the anticipated cost of their undertaking the action outweighs potential benefits.
- The target must believe that the "deterrer" will take the threatened action(s).

- *Assurance* (also known as extended deterrence in relation to some nuclear deterrence discussions) is a set of strategy options closely related to deterrence, intended to persuade actual and potential partners not to pursue COAs contrary to friendly interests (for example, pursuit of their own WMD arsenals), because the United States and its allies can assure security under the umbrella of US and allied deterrent capability. Although nuclear deterrence has always been a vital aspect of assurance, there have always been diplomatic/political and non-nuclear military aspects to it as well. The creation of the North Atlantic Treaty Organization (NATO) is an example of where political and conventional military aspects played as large a part in assuring our allies as did nuclear deterrence. Today, assurance extends to non-nuclear military capabilities, like anti-missile defenses, to an even greater extent than in the Cold War.

- *Dissuasion* is also closely related to deterrence, consisting of actions taken to persuade an actor that costs will be too high or benefits too low to justify embarking on a COA contrary to US interests. It evolved from the world of nuclear deterrence, to describe a form of "pre-deterrence" in which a potentially threatening actor is disuaded not only from using threatening military capability (such as WMD), but from even developing or aquiring it in the first place. Dissuasion requires a whole-of-government approach to succeed. It can also have a place in preventing a neutral or

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6 JP 5-0, *Joint Operation Planning*, Appendices E and F.
[7] See JP 5-0, Chapter III.
[8] "Target" in this context refers to the term in its broadest possible meaning (the first definition given in JP 1-02, Department of Defense Dictionary of Military and Associated Terms: "An entity…considered for possible engagement or other action."

allied party from taking undesired action(s). There are several critical considerations for successful dissuasion:

- ✪ ✪ The party employing dissuasion should be able to elevate the target's perception of anticipated costs. This can be done through means like economic sanctions, political/diplomatic pressure, and military actions designed to lower the target's belief that it can prevail in conflict (exercises, arms sales to opponents, etc.)

- ✪ ✪ The "dissuader" should be able to lower the target's perception of anticipated benefits. This can be done by persuading the target that the capability it seeks is not survivable or the action it contemplates can be easily neutralized in the event of hostilities. It can also be done by diminishing the target's perception of the operational effectiveness of the capability or action,often through active and passive defenses. Finally, a target's benefit perception can be lowered by changing the character of the competition.

Deterrence, assurance, and dissuasion strategies will most often be implemented by US national leadership in conjunction with geographic CCDRs in a whole-of government approach, but Air Force forces can provide very capable and flexible coercive forces-in-being, equally useful in assuring international partners and of being instruments in dissuasive strategies. In many cases, the COMAFFOR's forces may be the coercive "tools of choice," due to their ability to be deployed and employed farther and more quickly than some other forms of military power, enabling them to form a more credible threat in some situations.

General Coercion Considerations. Past operations have shown that successful coercion of all types is a product of one or more of the following factors:

- ✪ *Escalation dominance*—The ability to increase the adversaries' cost of defiance while denying them the opportunity to neutralize those costs (e.g., the threat of a major increase in the tempo of operations against them).

- ✪ *Defeating the adversary's strategy*—Denying the adversary certain strategic options through deterrence or compellant mechanisms (e.g., preventing use of chemical, biological, radiological, and nuclear (CBRN) weapons through maintenance of a credible nuclear deterrent).

- ✪ *Magnifying threats from third parties*, such as internal dissidents or hostile nations external to the conflict.

- ✪ *Credible threat or use of force*—The adversary should have reason to believe that the coercing power will use force, even if that use is only implied (as in deterrence).

- ✪ *Enemy susceptibility to coercion*—The adversary must be vulnerable in some way to the coercive mechanism chosen. The susceptibility of an adversary to any coercive

mechanism is usually inversely related to its willpower and the potential stakes of the conflict—the less it wants to be in the fight, the more susceptible it will be to coercion.

Understanding of the adversary's thinking and level of motivation—Failure to understand the conflict as the adversary does generally results in "mirror imaging," or projecting one's own values, motivation, and perception of what is "rational" onto the adversary—which can be a formula for defeat. Motivation determines how susceptible an enemy is to coercion, so determining how strong the enemy's will to fight is can help determine how much punishment and risk they are willing to assume before they change behavior.[9] Assuming equivalent perception of rationality may be equally dangerous: What US observers consider "irrational" may be entirely logical in the context of the adversary's culture, religion, institutional structures and pressures, and psychological factors (such as the degree of stress adversary citizens or leaders are accustomed to). Commanders and strategists should attempt to understand what motivates their adversaries and how they think.

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[9] For greater detail concerning these factors and other coercive mechanisms, see Annex 3-70, *Strategic Attack*.