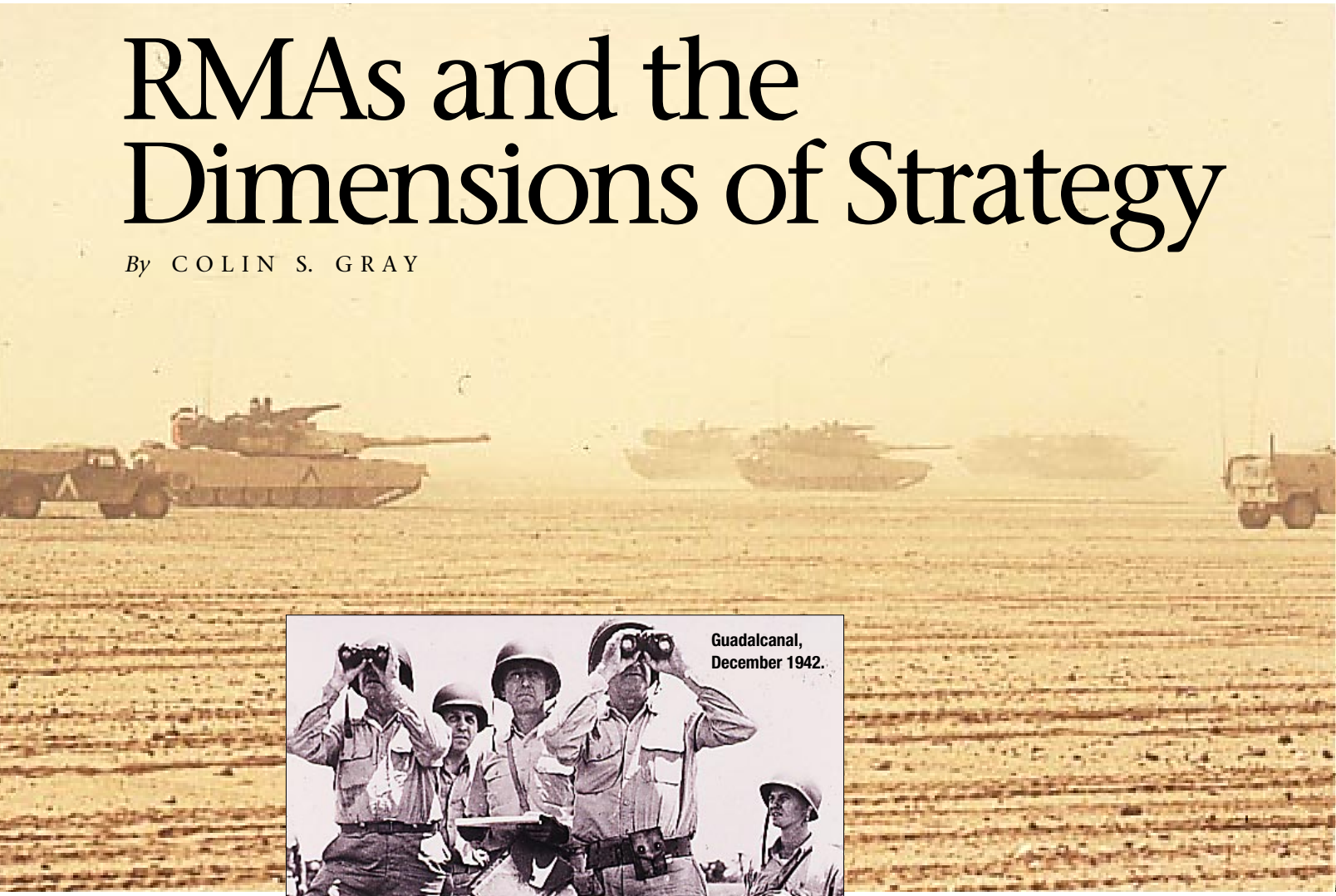
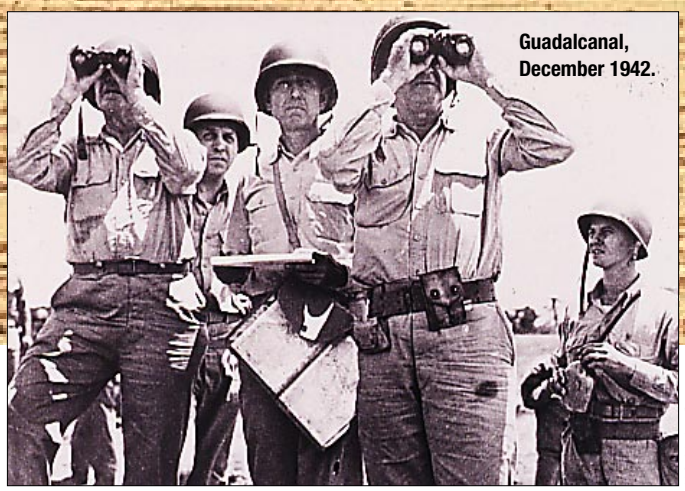
RMAs and the Dimensions of Strategy

By COLIN S. GRAY



On the offensive in Kuwait.

U.S. Army (Robert L. Reeve)



Guadalcanal, December 1942.

U.S. Marine Corps

Strategy and war are holistic enterprises. U.S. strategic culture is wont to function taking one thing at a time on its own merits. Monochronic defense performance leads to a focus on only one or two dimensions of what is almost always a more complex challenge. Strategy has a variety of dimensions, each of which matters though differently from one historical case to another. Each has the potential to undo a strategic venture. The generic dimensions of strategy are ubiquitous and fixed, but their details often change. The grammar of strategy can altar radically, even to the point where one can argue that a revolution in military affairs (RMA) has occurred. Presently I identify 17 working dimensions of strategy: ethics; society; geography; politics; people; culture; theory; command (political and military); economics and logistics; organization (including defense policy and force planning); military preparation (administration, research and development, procurement, recruitment, training, and numbers or mass); operations; technology; information and intelligence; adversary; friction, chance, and uncertainty; and time. Some (like technology or command) figure more prominently than others, but none can be taken for

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granted. Having so many interdependent dimensions means that advantages derived from improving one are seriously limited.

Two Schools

Cultural anthropologists note that America is a preponderantly monochronic culture, which means that it considers challenges one at a time, in isolation, pragmatically.[1] As a result national strategy in the United States reflects this one-thing-at-a-time, each-on-its-merits approach. Defense intellectuals have a way of validating the Watergate investigatory tactic of "following the money." The trail of dollars for studies leads from one "big idea" to another—monochronically. Although there is essential unity, indeed a polychronicity, to strategic experience, defense issues rapidly fall into and out of fashion. There has been controversy over détente, nuclear strategy, ICBM basing, SDI and more SDI, competitive strategies, and so forth. The tide of issues comes in regularly with new or new-sounding ideas, and then inexorably it goes out. Today it is RMA and information warfare. To point out the fluctuating nature of these issues is not to dismiss them; but it is to admit that only historical perspective can reveal just how useful they are.[2]

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Herman Kahn was a defense intellectual whose primary instinct was to put things together rather than disassemble them for monochronic, piece-by-piece analysis.[3] One cannot emulate his genius, but one can follow his methodology. This article presents strategy and war holistically with emphasis on the totality of the subject no matter how formidable it may appear. Indeed, the more a strategic phenomenon is examined, the more complex it seems. Readers may have noticed that the more professional historians scrutinize military experience, the more RMAs appear. It is not unlike probing the universe with more powerful telescopes. When additional historians join in the debate, they are apt to attest to the plausible existence of one or more RMAs in their century no matter what their periods of expertise may be.[4]

A hard core of interconnected ideas forms the thread of this argument, specifically:

- Strategy and war have many dimensions (while 17 is my preference, the list is open).
- Every dimension matters though interaction among them varies from case to case.
- All dimensions of strategy matter so much that a severe national or coalition disadvantage in any one can have a lethal strategic effect overall.
- Dimensions of strategy and war are generically as eternal and ubiquitous as their details, and like details of their interconnections change from one context to another. The nature and structure of strategy are effectively immortal.[5]
- But the character and conduct of war (or to misquote Clausewitz, who wrote of its "grammar"), the grammar of strategy, how strategy is achieved by tactics,[6] must change—possibly radically—along with political, social, economic, and technological conditions.
- Although the nature and structure of strategy and war remain constant, changes in the character and conduct of war can arguably be described as revolutions in military affairs. The term *revolution*, however, does risk devaluing those variables that change more slowly.
- It follows that we know a great deal about strategy and war; and, *ipso facto*, we know quite a lot about what we do not and cannot comprehend.

While this argument is profoundly conservative, it allows for the certainty of change. Early in the 20th century the rapid pace of technical and thus tactical developments in Britain provoked bitter debate in the Royal Navy between "material" and "historical" schools of thought.[7] Advocates of the former asserted that great—even not so great—technical change meant that the entire subject of war, at all levels and in all dimensions, was effectively changed or revolutionized. The rival historical school argued that strategy and war are as unchanging in their essentials as technology and tactics are permanently in flux. The terms of this debate in the 1900s between materialists like Admiral Jackie Fisher and historical thinkers like Admiral Reginald Custance still persist to this day with evolving levels of detail. To the material school the world may be made over whenever a new technology comes along.

Everything Matters

Michael Howard provided the most direct stimulus to thought on the dimensions of strategy by identifying the logistical, operational, social, and technological.[8] Writing within the context of an active debate about SALT II and nuclear strategy, Howard was concerned that the United States appeared to be focusing unduly on the technological at the expense of the social and operational.

When considering strategy vis-à-vis the debate over RMA and information warfare, I prefer to use no fewer than the 17 dimensions already mentioned. These work with, on, and around each other simultaneously. Anyone who argues that strategy really has only one or two dimensions will oppose this approach. One should be reluctant to rank-order the dimensions of strategy; hence the order in which they are cited above is largely random. By analogy, the model range for auto makers typically emphasizes engine type and size as leading edge or dominant

Briefing Secretary Cohen, Bosnia.

DOD (Helene C. Stikkel)

for each vehicle in its range. Nonetheless, cars cannot operate without drive trains, electrical systems (including batteries), or tires. Furthermore, there are restrictions on what improvements to automotive dimensions can achieve unless balancing refinements are made in others. Twin turbos are nice to have, but not without better brakes and tires and—returning to the question of strategy—a better driver.

An excellent military may, even with faulty political guidance, fight the wrong war well. Conversely, a wretched force may fight the right war badly. The primary point is the stupefyingly obvious one that everything matters. The secondary point is that even wonderful improvements in military effectiveness—as might be delivered by U.S. forces multiplied by the so-called "system of systems"[9]—are likely to disappoint if political leadership is poor. After all, Germany was second to none in fighting during two world wars, but it was awesomely incompetent in waging war.

Beyond Geography

There is no correct answer to the question: How many dimensions are there to strategy? The exact numbers or labels of the dimensions do not matter, but it is important that everything of significance about strategy has been included somewhere among them. A country or coalition need not be outstanding or even excellent in all dimensions of strategy. Wars can be won—which is to say, enough strategic effect can be generated—despite unsound plans, uninspired political leaders, undistinguished generalship, bad luck, or inconvenient geography. Three points require prompt registration. First, each dimension is a player. It is part of national strategy—in every conflict, in every historical era.

Second, some substitution is feasible among, between, and even within the dimensions of strategy.[10] It is rare for a nation to be equally competent on land, at sea, in the air, and in space (or cyberspace). Or, in the case of Germany's *Östheer* (its army in the East), the quality and quantity of one side's technology may be degraded during the course of war, but some useful compensation may be found in the realm of motivation (fighting spirit, morale, and ideology). Or information on an enemy may be in short supply, but some mix of luck, better logistics, superior organization, and higher morale may enable a nation to survive unpleasant surprises. Yet specific circumstances always differ. Because of inadequate operational information, Anglo-French forces were taken by surprise in both World War I and II, recovering from their ignorance in 1914 but not in 1940.

Third, there is, or should be, a level of competitive performance in each dimension which, if one falls below it, has the inexorable consequence of adversely deciding the conflict. You lose.

The argument advanced is that a whole range of strategic dimensions influences conflict, not just those either preferred or designated. Which among them does not matter? It has been debated whether geography matters much in the age of cyberspace.[11] If cyberspace rules, and cyberpower is everywhere and nowhere (placelessly "beyond geography"), perhaps we are witnessing a radical departure from previous strategic experience. Yet perhaps there are grounds for skepticism.

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The argument that the holistic nature of strategy and war can be ignored only at one's peril is considered by one analyst who advises that "Human limitations, informational uncertainties, and nonlinearity are not pesky difficulties better technology and engineering can eliminate, but built-in or structural features of the violent interaction between opposing groups we call war."[12] To take just one of these features, the limits in the human (and command) dimension of strategy can easily restrict or offset any gains of a technological edge. (And the human dimension plays at every level of conflict from tactics to statecraft.)

If one accepts the promise of immaculate performance by technology-rich, information-led warriors, what can one assume about U.S. competitiveness in other dimensions of strategy? Is it reasonable to anticipate excellence in political leadership, enthusiasm on the part of the public, and superiority in making, executing, and monitoring the means of strategic performance?[13]

Cookbook Strategy

Whether or not one thinks appropriately about an RMA or implements one competently in all its requisite aspects (technology, weaponization, doctrine, training, organization, acquisition of critical mass of numbers) may have little actual bearing on future U.S. strategic performance. This is because the friction that degrades national performance most insistently may well lie between the government and the Armed Forces, or between the government and society. This is not a rebuke of military modernization or hostility toward the concept of RMA, nor by implication a critique of information warfare in its several guises. Instead, it is simply an argument that countries conduct conflict, wage wars, and make and execute strategy as a whole. Clausewitz made this point clearly when he referred to the trinity of passion, uncertainty, and reason, which are associated primarily with the people, the army and its commanders, and the government respectively.[14] Unfortunately, there is little analysis in *On War* about the vital subject of the difficulties that can and do arise when policy and military instruments are not both excellent and operating in harmony.

There is no need to belabor the blindingly obvious point that the dimensions of strategy are interdependent. However, it may be worth offering the caveat that to every robust-looking theory there is apt to be the odd exception. One should recall that Clausewitz, unlike Jomini, declined to offer a cookbook of rules for strategy.[15] Hence the argument here has a Clausewitzian rather than a Jominian message. No general theory of strategy or architecture of understanding can truly be proof against folly or bad luck on a heroic scale. Although it is true that each dimension of strategy is important and poor performance in any one could decide the ultimate outcome of a conflict, and that no degree of superiority in any one or two can deliver victory if performance elsewhere is too low, an exception is always possible in practice. Military genius (or folly) on a heroic scale writes or rewrites the principles of strategy.

Again, the nature, purpose, and structure of strategy are eternal and ubiquitous. Any war, in any period, between any adversaries (like or unlike), can be understood with reference to these particular dimensions. What must vary, however—sometimes quite radically—is the detail of the complex interplay among and within them. But when advocates of the historical school claim that strategy is strategy and war is war regardless of the time, place, adversaries, and technology, this is what is meant. Clausewitz, Jomini, Mahan, and Liddell Hart were right in stating that the nature of strategy and war does not, indeed cannot change. The components and structure of the subject remain constant—only the details change. Each dimension of strategy considered above played a part in the Peloponnesian War, the Punic Wars, and the Crusades.

The complexity of war and the diversity of the instruments of strategy with which we wage it have increased over the past century. Technology, tactics, doctrine, and organization have been adjusting to experience and in anticipation of the advantages to be gained or the disadvantages to be avoided. Novel though each additional environment for war certainly is, however, we find that as we have proceeded to fight in the air, to consider combat in and for space and in cyberspace—as well as on land and at sea—the same rules govern strategic performance everywhere. Whether or not forces specialized for combat in

various geographies (or perhaps anti-geography in cyberspace) can win wars by independent action, each must follow the guiding rule of classical strategy. That rule mandates securing military control in each geography as a prerequisite for strategic exploitation. The same logic applies for land, sea, air, space, and cyberspace. If sea, air, or cyberspace forces are to exercise their roles as team players, each must first succeed in its distinctive environment. To understand why one must be ready to fight at sea is to grasp why one must be ready to fight in the air, in space, or in cyberspace. The logic of strategy and war is the same.[16] If an environment is militarily important, we must be ready to fight for the right to use it.

Overall, we know almost everything that we need to know, and probably all we can know, about the future of strategy and war. Indeed, if one is willing to engage in reductionism, it can be claimed that Thucydides recorded almost everything worth considering about the causes of war and the political need for strategy by emphasizing just three impulses: fear, honor, and interest.[17] It is not obvious that modern scholarship on the motives for empire or the causes of war has produced conclusions superior to that trinitarian hypothesis.[18]

What is not known about the future of strategy and war is almost all of detail, significant and insignificant. Many pundits have a weakness for invoking the phrase "the foreseeable future." But the future has not happened and cannot be foreseen in detail. Under political guidance that is certain to be unsatisfactory, likely to contain contradictions, and almost bound to bear the stamp of some unsound assumptions, defense planners are obliged to decide what is a good enough defense establishment when one cannot know precisely whether, when, where, or for what ends war will be waged. But if it is any consolation, at least they know what strategy and war are made of—the 17 dimensions—and should be rendered immune by education, including the education provided by experience, to persuasion by unsound theories of miracle cures for strategic ills. JFQ

NOTES

[1] Edward T. Hall, *Beyond Culture* (Garden City, N.Y.: Doubleday, 1976).

[2] See the discussion in Colin S. Gray, *The American Revolution in Military Affairs: An Interim Assessment*, Occasional Paper 28 (Camberley: Strategic and Combat Studies Institute, Joint Services Command and Staff College, 1997).

[3] Kahn's instinct for synthesis is represented in *On Escalation: Metaphors and Scenarios* (New York: Praeger, 1965).

[4] For example, see Clifford J. Rogers, ed., *The Military Revolution Debate: Readings on the Military Transformation of Early Modern Europe* (Boulder, Colo.: Westview, 1995).

[5] This argument is a central theme in Colin S. Gray, *Understanding Modern Strategy* (Oxford: Oxford University Press, forthcoming).

[6] Carl von Clausewitz, *On War*, edited and translated by Michael Howard and Peter Paret (Princeton: Princeton University Press, 1976), p. 605.

[7] Battlelines for debate were drawn most clearly in Reginald Custance, "Introduction" to "Barfleur," *Naval Policy: A Plea for the Study of War* (Edinburgh: William Blackwood and Sons, 1907), pp. vii–ix.

[8] Michael Howard, "The Forgotten Dimensions of Strategy," *Foreign Affairs*, vol. 57, no. 5 (Summer 1979), pp. 975–86.

[9] James R. Blaker, *Understanding the Revolution in Military Affairs: A Guide to America's 21st Century Defense*, Defense Working Paper 3 (Washington: Progressive Policy Institute, January 1997).

[10] See Andrew G.B. Vallance, *The Air Weapon: Doctrines of Air Power Strategy and Operational Art* (London: Macmillan, 1996), chapter 2.

[11] See both Colin S. Gray, "The Continued Primacy of Geography" (and "A Rejoinder"), and Martin Libicki, "The Emerging Primacy of Information," *Orbis*, vol. 40, no. 2 (Spring 1996), pp. 247–59, 261–76.

[12] Barry D. Watts, *Clausewitzian Friction and Future War*, McNair Paper 52 (Washington: National Defense University Press, October 1996), p. 122.

[13] On strategy as process, see Williamson Murray and Mark Grimsley, "Introduction: On Strategy," in Williamson Murray, Macgregor Knox, and Alvin Bernstein, eds., *The Making of Strategy: Rulers, States, and War* (Cambridge: Cambridge University Press, 1994), chapter 1.

[14] Clausewitz, *On War*, p. 89.

[15] Contrast Clausewitz, *On War*, p. 141, with Antoine Henri de Jomini, *The Art of War* (Novato, Calif.: Presidio, 1992), pp. 16–17, 70, 114. Michael I. Handel, *Masters of War: Classical Strategic Thought,* 2d ed. (London: Frank Cass, 1996), offers a comparative treatment.

[16] This proposition pervades Edward N. Luttwak, *Strategy: The Logic of War and Peace* (Cambridge, Mass.: Harvard University Press, 1987).

[17] Robert B. Strassler, ed., *The Landmark Thucydides: A Comprehensive Guide to the Peloponnesian War* (New York: Free Press, 1996), p. 43.

[18] See Donald Kagan, *On the Origins of War and the Preservation of Peace* (New York: Doubleday, 1995), which is influenced by Thucydides; and Hidemi Suganami, *On the Causes of War* (Oxford: Clarendon Press, 1996).