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by Jeremy Black

Academic strategies vary, and any bi-polar approach to them has its flaws, but there is a distinction between the bold advance of the revolutionary-style analyst claiming novelty and asserting clarity, and the more cautious incremental-style analyst, urging complexity and being reluctant to provide a clear-cut conclusion. That is not the beginning readers will expect in a paper of this type, not simply because the space available does not allow for much complexity, but also because the culture of analysis for, of and about the military is one of decisiveness.¹ In such a context, it is scarcely surprising that past, present and future are frequently joined as a display for revolutions in military affairs which, once asserted, can then be constituted as causative forces that explain this branch of the historical process.

This paper will adopt a more sceptical account, not only toward such revolutions but also to the standard theoretical structures and devices, and literary tone, of much analytical military history. In doing so, it will be argued that these revolutions are as much product of these structures, devices and tone, as they are context-free discussions. In part, military revolutions thus share the characteristics also seen in standard concepts and building blocks of military analysis, such as, first, decisiveness and, second, the Western Way of War.

Yet, there is also an important difference. Decisiveness may be a goal of military policy, but it is an adjective of military history. The Western Way of War is asserted as a largely timeless construct, Victor Davis Hanson indeed taking it back as far as the ancient Athenians,² and, as an explanatory device for capability and success, it lacks a strong sense of development through time.

This may be very misleading, as far as the development and usage of allegedly distinctive Western characteristics are concerned, but the contrast with revolutions in military affairs is clear. They focus on change, as both problem for analysis and as explanation of effectiveness and development. The notion of change, moreover, is one that is conflict-orientated, in that it draws heavily on the Hegelian idea of thesis, antithesis, and synthesis. This notion of change also generally underrates the capacity of conservative societies to initiate and to execute change, a common flaw in historical analysis. As a related but separate point, the standard approach to change, with the focus on transformation, if not revolution, ignores the generally incremental character of military change. The last can be underlined in the specific case of weaponry by noting the importance not only of initial

1 J. Black, 'Determinisms and Other Issues', *Journal of Military History*, 68 (2004), pp. 1217-32.

2 V.D. Hanson, *Carnage and Culture: Landmark Battles in the Rise of Western Power* (New York, Doubleday, 2001), and *Why the West has Won* (New York: Doubleday, 2002).

development but of the slower processes of diffusion, particularly the adoption of new methods of usage and alterations in training, and doctrine.

If change is often less abrupt and clear-cut than the language of revolution might suggest, the latter is also misleading because it presupposes a clear-cut trajectory in development and, in particular, asserts the primacy of capability over tasking. This emphasis on capability is a central problem for much military analysis and is related to the preference for a non-exogenous understanding of military issues, an understanding that is related to a disinclination to focus on tasking. Such a preference can be seen historically, as well as with reference to the present world, and with respect to the future. In short, there is an implicit wish, indeed desire, to believe that the key factors in the military world and, in particular, in the explanation of military success are inherent to that world and are not external variables over which the military have scant control and which are not readily explicable in military terms. This is related to a profound unwillingness to contextualise the subject and to engage with general literatures.

Examples of that from recent military history are, first, the extent to which failure in colonial counter-insurgency struggles was largely political and ideological in cause, namely the breakdown of the integrative practices and ethos of imperialism, rather than the result of military defeat; and, secondly, the degree to which the Revolution in Military Affairs is a response to socio-cultural shifts, particularly the abandonment in most states of conscription, and the opposition to casualties, both within a context of Western societies that are more hedonistic, atomistic, and individualistic.³

If the emphasis, in contrast, is on tasking, then attention is switched to an analysis of military developments as indeterminate, in the sense that it is unclear what these tasks will be. Indeed, tasks are largely set by circumstances that are difficult to predict and

that are not controlled by the military. The Argentinian invasion of the Falkland Isles in 1982, the consequences of the rapid collapse of the Soviet Union, the Iraqi invasion of Kuwait, and the 2001 terrorist attacks, all come to mind. Furthermore, the difficulty of assessing consequences ensures that it is hard to establish the success of task-based operations and strategies, not least in terms of their long-term impact.

Task-based approaches seem obvious in the here-and-now, but, as part of a more general process of simplification by posterity, recede from attention in the apparently less complex past. This approach is seriously mistaken, however, and does violence to the complexity of strategic environments and tasks in the past. This needs to be taken on board in considering the topic of strategic culture, which is a key aspect of the current use of cultural interpretations.⁴

Early-modern military revolution

It is true that the greater range of possible long-distance force-deployment today, which stems from developments in communication technology, specifically steamships and aircraft (neither of which in fact were originally military in conception), ensures that the situation in the past was different, but there was still the need then to consider prioritisation in terms both of enemies and of the most appropriate way to deal with them. Thus, for example, Austria in 1717–18 had to decide whether to respond to Spanish moves in Italy or to follow the opportunities for Balkan gains at the expense of the Turks. In the same century, there was a more frequent tension in British policy between a focus on oceanic and colonial goals, a 'blue water' policy, and those of Continental interventionism in Europe.⁵ Furthermore, there was frequently the issue of how best to address internal as opposed to external goals. This is an issue that tends to be unduly minimised by those who work on

3 J. Black, *Why Wars Happen* (London: Reaktion, 1998), pp. 216–38.

4 T. Farrell, *The Norms of War. Cultural Beliefs and Modern Conflict* (Boulder: Lynne Rienner, 2005).

5 J. Black, *America or Europe? British Foreign Policy, 1739–63* (London: UCL Press, 1998).

American military history, because, over the last century, the American regular military has not had to focus on domestic enemies and tasks.

These points can be amplified by considering the issue in a broader historical context. The RMA is at once description, analysis, prospectus and mission; and much of the confusion surrounding the use of the term reflects a failure to distinguish between these aspects of the situation. As such, the treatment of the RMA is an aspect of the more general discussion of revolutions in military affairs. Such discussion has a long genesis, not least with reference to the contemporary European treatment of the impact of firearms. Nevertheless, it has become more common over the last half-century, in response to the success of the concept of an early-modern European military revolution advanced by Michael Roberts in 1955 when he applied it to the period 1560–1660.⁶ The success of this concept, at least in helping to define debate,⁷ ensured that it was then applied to other periods, and indeed this matched a scholarly interest in transformation and modernisation.⁸

This, however, had a somewhat problematic character, not least because a questioning of the notion of the Roberts' revolution, in terms of both content and chronology, coincided with this application.⁹ The concept of an early-modern military revolution lacks precision and devotes insufficient attention to process. It rests on a 'push' theory of warfare which interprets war in terms of the material

culture of war, specifically the weaponry. This devotes far too little attention to 'pull' factors, in terms of the purposes of military capability, use, and related force structures and doctrines. Despite efforts to link these to the supposed rise of the modern state there is scant sign of a fully-fledged revolution in these purposes, certainly on land.¹⁰

Furthermore, the self-conscious character of the RMA was not widely matched in the early-modern period, while there was also then a strong, continued, and, in many respects, new belief in the value of Classical exemplars, and therefore a looking back to the ancient world. Indeed, aspects of the work on military tactics drew directly on Roman examples. Whether or not there is an effective modern RMA, as opposed to a discourse to that end, that offers no proof of a similar situation in the early-modern period. The case for a military revolution then remains not proven at best and dubious at worst.

More generally, the definitions of military revolution provided in applications of the theory so far offered vary greatly, not least in terms of duration, content and impact, as well as variations in their use between the tactical, operational and strategic scales of war, and between military and non-military dimensions. This should induce caution in the use and application of both term and concept, but military revolution became like the rise of the middle classes: a catchall that was always occurring and always incomplete.

RMA as a product of need

This introduction could serve as a short background for a discussion of the current RMA, but a longer introduction is necessary for two reasons. First, it is appropriate to explain how the belief in the RMA in part arises from a need that can be explained, and, secondly, in order to discern a parallel between the RMA of the 1990s and 2000s, and that discussed in the aftermath of World War One. The latter is of relevance, not only because it provides a parallel, but also because it indicates how

6 M. Roberts, *The Military Revolution, 1560–1660* (Belfast: Queens University, 1956).

7 C. Rogers (ed.), *The Military Revolution Debate: Readings on the Military Transformation of Early Modern Europe* (Boulder: Westview, 1995); G. Parker, 'The "Military Revolution", 1555–2005: From Belfast to Barcelona and The Hague', *Journal of Military History*, 69 (2005), pp. 205–10.

8 T. Gongora and H. von Riekhof (eds), *Towards a Revolution in Military Affairs? Defense and Security at the Dawn of the Twenty-First Century* (Westport: Archon, 2000); D. Showalter, 'Thinking About Military Revolution', *Historically Speaking*, 4, no. 4 (2003), pp. 9–10.

9 J. Black, *A Military Revolution? Military Change and European Society, 1550–1800* (London: Macmillan, 1991); D. Parrott, *Richelieu's Army: War, Government and Society in France, 1624–1642* (Oxford: Oxford University Press, 2001).

10 J. Black, *European Warfare, 1494–1660* (London: Routledge, 2002).

belief in a RMA was a product of need, as is also the case today.

In the earlier case, the problem was tactical, operational and strategic in military terms – the varied difficulties of winning World War One – but also, in a broader sense, social, political and cultural, in terms of a reaction against the unprecedented losses of that conflict, with all this entailed for military tasking. The war had ended in Allied victory and, in large part, there was a matter of extrapolation from the supposed lessons of this victory. This was driven further by a determination to ensure that, in any future conflict, there was no repetition of the warmaking of World War One, and, in particular, of its longevity and casualties.

These goals led to a determination to argue that the new weaponry of World War One, if properly understood and applied could be employed to further, ensure, indeed constitute, a warmaking that was effective and decisive. However, as today, this entailed the misapplication of tactical and operational capabilities and lessons, for operational and strategic ends respectively, a misapplication that readily stems from the tendency to take an overly-optimistic view of weapon capabilities. Thus, in the 1920s, as in the 1990s, there was much interest in the apparent potential of air power and mechanised warfare. As today, this involved the contentious issue of evaluating what had occurred in its most difficult aspect, causal analysis; and the problem of reconciling theory and practice, in the shape of deciding how best to integrate the supposed lessons of real and contemporary campaigning with doctrine.

Again, as today, there was also the question of which war or type of war was likely to occur. The range of present possibilities may seem extensive – the USA having to prepare to fight China, as well as to persist in the ‘War on Terror’, or to address issues in Latin America – but the situation was little different for the major imperial powers in the 1920s. It was unclear at the start of that decade whether it would be possible to stop Soviet expansion short of full-scale war, in

part because, prior to the battle of Warsaw, Soviet strength seemed particularly potent; and, thereafter, it was unclear whether there would be subversion as a result of pro-Soviet activity. States, in the end, did not succumb to labour activism in this fashion, but such problems had been anticipated, as in the USA where War Plan White was designed to tackle this threat.

Secondly, it was unclear how far it would be necessary to fight in order to defend imperial possessions, and the problems this tasking entailed was greatly extended by the expansion of these possessions into the Middle East as Britain and France made gains from the Ottoman Empire. New technology could seem an answer to these issues. Aircraft seemed a key capability advantage, providing both firepower and mobility, and, albeit less dramatically, the same case could be made for mechanised vehicles. Indeed, aircraft were used extensively, not least by the British in Iraq.¹¹

The variety of tasks that the military might have had to face in the 1920s is a reminder that ‘transformation’, in the shape of new capability, the dominant theme in accounts of revolutions in military affairs, is of limited value as an analytical concept unless it is understood in interaction with tasking. What, for example, was the use of air power expected to achieve: overawing opposition or control on the ground? It is pertinent to remember that this is a two-way process: capability can help shape tasking and, indeed, affect the assumptions referred to as strategic culture, as with the recent return of Western forces to Afghanistan. Nevertheless, on the whole, it is tasking that sets the terms within which capability becomes operative, not only because of procurement issues, but also due to priorities for training and to the very decision to embark on conflict.

The crucial, and related, issues of procure-

11 A. Millett and W. Murray (eds), *Military Effectiveness. The Interwar Period* (Cambridge: Cambridge University Press, 1988); H.R. Winton and D.R. Mets (eds), *The Challenge of Change: Military Institutions and New Realities, 1918–1941* (Lincoln: University of Nebraska Press, 2000); D. Omissi, *Air Power and Colonial Control: the Royal Air Force 1919–1939* (Manchester: Manchester University Press, 1990).

ment and prioritisation indicate that, far from capability flowing automatically, or semi-automatically, from new developments, it is necessary to understand that, at any one time, there is a range of military options available for fresh and continuing investment. Indeed, the possibility for enhanced capabilities that stem from technological developments has made this situation more difficult, because the range of possibilities has grown at the same time that their real cost has risen. As a cause of further difficulty, at the same time, the possibility of interchangeability among weapons and indeed personnel has diminished as a product of the need for specialisation in both weapons specification and training in order to obtain cutting-edge advantage.

These problems both ensure the need for greater claims for proficiency on behalf of particular options, in order for them to justify support, and lead to a related need to rank options, whether weapons systems, organisational models, doctrines, or tactical and operational methods. This competition is one of the contexts of the RMA: it becomes a prospectus that encourages support, or, looked at more harshly, a key aspect in a bidding war, and one where the so-called military-industrial complex is to be understood not as a monolith but as a sphere of competing interests each advancing their case through bold claims. This is very much the case with the politics of procurement, but this element receives insufficient attention.

Linked to this is the issue of prioritisation. This involves the need to consider the range of tasks and how best to respond to this variety. Thus, for example, in 1936–37, it might seem necessary in Britain to invest in tanks in order to confront the possibility of a Continental war with Germany, but, as far as the threat environment was concerned for Britain, there was also the prospect of naval action against Italy in the Mediterranean and against Japan in the Far East. Furthermore, there were large-scale present obligations in the shape of the Arab rising in Palestine and the Waziristan campaigns on the North-West Frontier of India. Even if the colonial dimension was neglected (and for Britain,

France and Italy this was not feasible), there were serious choices. Should France focus on defence against Germany, or should it also assume Italian antipathy, which challenged the maritime routes from France to North Africa and Lebanon/Syria? More generally, how far should any interwar revolution in military affairs focus on offensive or defensive capabilities, and how far were weapons systems suited to one appropriate for the other?¹²

Evaluating World War Two from this perspective casts further doubt on the idea that RMAs are straightforward, either in terms of analysis of what is occurring or with reference to their consequences. Few prepared for what was to happen. For example, the Germans were not really preparing for *blitzkrieg* and instead learned from their successful war of manoeuvre in Poland in 1939 what could be achieved. Furthermore, the tasks the German military were set did not arise in a predictable fashion. Thus, an air force designed essentially for tactical purposes was called upon to play a strategic role against Britain in 1940–41.¹³

Similarly, pre-war navies sought carriers and submarines only as a subordinate part of fleets that emphasised battleships, the Japanese navy providing a particularly good instance. In short, force capabilities were developed for particular goals and then it was discovered that they could be used in other contexts.

These issues provide a necessary background for considering the situation after 1945. In one respect, this involved a considerable measure in continuity, and, therefore, no need for a revolution in military affairs. The tools for conventional war – aircraft carriers, submarines, tanks – were similar, but so, even more, were some of the tasks. For the Soviets an advance into Western Europe would be, in some respects, a similar stage to that to Berlin and Vienna in 1945, while, for NATO, there was the need, for example,

12 D.E. Johnson, *Fast Tanks and Heavy Bombers: Innovation in the US Army, 1917–1945* (Ithaca: Cornell University Press, 1998).

13 J. Buckley, *Air Power in the Age of Total War* (London: UCL Press, 1999).

to consider the defence of North Atlantic shipping routes against Soviet submarines, continuing the large-scale efforts made by the British, Canadians, and Americans in World War Two. Yet, there were also major differences between the strategic situations in both conflicts. These ranged from the capabilities provided by atomic weaponry and intercontinental delivery systems, to the need for NATO to consider how best to succeed in the face of the major conventional superiority of its Soviet opponent.

In some respects, these responses to the post-war Soviet threat provided the basis for what was subsequently to be termed the RMA, as long as the very disparate nature of the latter is considered. The dominance of space is a key issue in modern capability and strategy, and this was latent as soon as rocketry moved beyond the simplistic guidance systems seen in World War Two. The rocket-race from the late 1950s relied, in the absence of anti-rocket technology, on deterrence or first-strike as a defence. The development of anti-rocket rockets, and the effective surveillance and detection that such interception requires, links the Cold War to the present situation, and indeed the future, and is a reminder of the pitfalls of assigning the RMA solely to the post-Cold War years.

This is also true of the doctrine of mobile battle and the related weaponry that developed from the late 1970s, in response both to the Soviet doctrine of deep battle and to the need to be able to fight a conventional war in Europe. The RMA can therefore be seen as an alternative to Armageddon: an attempt (praiseworthy in itself) to create a winnable option for non-nuclear or sub-nuclear war. The roots of the RMA are therefore late Cold War. In particular, from AirLand Battle and the Soviet idea of a military-technological revolution, thinkers on both sides were thinking about ways to change radically the way main battles were fought, and so to gain an edge, which they interpreted as meaning that a revolution was happening (or could be ensured) and that, by adjusting to this revolution, it was possible to improve their

position.¹⁴

That this doctrine and weaponry were to be used most prominently in the Iraq Wars of 1991 and 2003 creates a post-Cold War impression for the timing and tasking of this warfare, but the reality, instead, is of the application of the Cold War military. This is also true, for example, of guided aerial munitions, which, in fact, were used from the Vietnam War, and of cruise missiles, which were deployed in Europe from 1983.

Thus the RMA, as conventionally understood, describes in fact the improvement, or modernisation in terms of technological possibilities within a tasking driven by competitive pressures, of World War Two/early Cold War systems. In particular, on the part of the USA, this entailed a response to the enhancement offered by electronics in order to confront the scenarios posed by successive challenges from the Communist powers, and within the context of a willingness, even in the 1980s eagerness, to spend the money to face the challenge. This indeed was crucial to the Reaganite claim to be resolute against Communism and to be winning the Cold War.

The resulting capability was shaped by commentators into a RMA in the very different context of post-Cold War pressures and priorities, in particular the need to provide for power projection; as well as the call for transformation so as to move from a Cold War military to a more varied successor. Both put the emphasis on a multi-purpose and joint, or integrated, military, while leaving specific tasks less clear, the essence of an emphasis on capability and power-projection. As a consequence, capabilities seemed key, as both means and goal, and thus the RMA could be proclaimed as both process and result.

14 W.A. Owens, 'Creating a U.S. Military Revolution', in T. Farrell and T. Terriff (eds), *The Sources of Military Change. Culture, Politics, Technology* (Boulder: Lynne Rienner, 2002), pp. 205-8.

RMA, technology and the information age

Integral to the RMA are a number of concepts each rich in acronyms and jargon. The common focus is on smart doctrine: operational planning and practice, in order to take advantage of a new generation of weapons and the possibilities posed by advances in information technology. The emphasis on precise information as a means, as well as a tool, of conflict, relates to its use in order to locate forces accurately, as well as to destroy enemy units with semi-automated weapons. Accurate targeting is required if precision weaponry is to be effective. This, in turn, entails 'information dominance', in order to deny such a capability to opponents. The RMA also calls for 'network-centric warfare': a focus on the new capability of information systems, rather than on traditional practices and structures of command and control. The concept thus linked developments in weapon systems with a doctrine that meshed with theories of modernization that rest on the adoption of technological systems. In the language of the RMA, weaponry is designed to ensure what are termed dominant manoeuvre, precision engagements, full-dimensional protection, focused logistics, and information warfare.

Broader requirements were also served by this creation of a belief that total victory can be ensured through a specific type of High Intensity Conflict.¹⁵ These tasks and assumptions can be discussed, without any suggestion of prioritisation, in terms of liberal internationalism, the particular requirements of American foreign policy, and the growing disjuncture between highly ambitious Western goals and a widespread reluctance to risk

casualties. Liberal internationalism became part of the new world order that followed the collapse of the Soviet Union,¹⁶ with the argument, fed in particular by the atrocities in Rwanda in 1994 and Bosnia in 1995, that there was a duty to intervene in order to prevent humanitarian disasters. Such intervention presupposed success, and relied on the notion of a clear capability gap between the two sides. Indeed, from the humanitarian perspective, the forces of good had to be successful in order to avoid the suffering that would result from a difficult conquest. This concept helped explain the difficulties faced by Anglo-American representatives when discussing Iraqi casualties during and after the war of 2003.

From the perspective of American foreign policy, the RMA also explained how policy goals could be fulfilled, as this policy rested in part on a military underpinning, and in particular on how best to forestall threats. The need to be able to respond to more than one threat simultaneously, was regarded as particularly necessary, and the force multiplication apparently offered by the RMA was especially important in this context. In short, the RMA made American foreign policy possible: it contributed not only to strategic concerns but also to foreign policy interests around the world. Looked at more critically, the RMA aided in a militarisation of this policy in which, furthermore, the views of allies were of limited significance. The same approach could be adopted to the policies of Israel, or indeed to the radical Islamic opponents of the USA and Israel, with the RMA in this case seen as residing in varied combinations of weapons of mass destruction and terrorist tactics.

It is also necessary to consider the extent to which the RMA was the necessary product of the RAM (Revolution in Attitudes to the Military), in the shape of the greater reluctance to take casualties. This was true both in specifics and in generalities. In specific terms, for example, American concern about the impact on morale of having aircrew shot

15 B. Berkowitz, *The New Face of War: How War Will Be Fought in the 21st Century* (New York: Free Press, 2003); W.K. Clark, *Winning Modern Wars: Iraq, Terrorism, and the American Empire* (New York, Public Affairs, 2003); N. Friedman, *Terrorism, Afghanistan, and America's New Way of War* (Annapolis: Naval Institute Press, 2003); D.A. Macgregor, *Transformation under Fire: Revolutionizing How America Fights* (Westport: Praeger, 2003); R.H. Scales, *Yellow Smoke: the Future of Land Warfare for America's Military* (New York: Rowman and Littlefield, 2003).

16 L. Freedman, 'The age of liberal wars', *Review of International Studies*, 31 (2005), pp.93-107.

down and taken prisoner in the Vietnam War helped encourage an interest in stand-off weaponry. More generally, the movement from mass militaries in the West to smaller professional forces made soldiers fewer but more valuable; while civil society as a whole became more reluctant to regard casualties as acceptable. The two developments were linked, albeit different. They each encouraged a desire for an RMA to provide apparently casualty-low, if not free, war, a desire that was to be challenged by the realities of waging counter-insurgency war against opponents in part employing the methods of terrorism.

As, however, with other such revolutions, it is far from clear how far these criteria are generally applicable. Indeed, the notion of an RMA takes on many of the characteristics of a paradigm model that may in fact not be of more general applicability. The very cost of Transformation in an American context does not mean that other powers will not seek the same end, but, in doing so, they should not necessarily be understood as simply lesser-string players in an RMA. Instead, the more the latter is understood as, at least in part, task-defined, rather than capability-determined, the more it will be appropriate to note differences between particular powers. The results will affect doctrine and procurement, and may well mean that the RMA is understood not as a transforming stage in military history but, instead, as a particular moment in that of the USA, and of those whose concepts are moulded or at least influenced by American models.

As such, it is the specific circumstances and strategic and military cultures of the USA that require consideration. Indeed, this may mean that, in time, the RMA is treated as an aspect of American exceptionalism.¹⁷ This, like the exceptionalism or *sonderweg* of any other state, is best understood in terms of the complex interaction of description and discourse; and thus the RMA provides the opportunity to advance both. In doing so, the notion corresponds to another tradition of American exceptionalism, its self-

identification with best practice. This is very important to American writers: their exceptionalism is both separate and distinctive, helping to define them and also being defined accordingly; but is also linked to an interaction with the rest of the world in which it is important not only for the Americans to be first and foremost, but also for them to be seen in this light. This, however, is a goal made more complex by the capabilities and practice of power projection.

The RMA is thus, at the level of discourse, an assertion of difference and primacy, which matches much historical discussion of military development. This assertion of difference and primacy would be challenged if, at the descriptive level, thanks to a widespread process of Transformation, such practices became widespread,¹⁸ but concern and response would then combine to produce another iteration in which the Americans could be first. Throughout the machine age, this has been a key aspect of American self-belief, helping to ensure concern about Soviet advances in the Space Race. The ideology of mechanization is key both to the modern American imagination about force (as seen, for example, in science fiction as much as in discussion of the military), and to the specific belief in the RMA.

In a machine age, there is a powerful tendency to define worth in terms of machines, and they, rather than ideas or beliefs, are used to assert superiority over other beliefs, as well as over the environment. Furthermore, change and the measurement of specifications are the inherent characteristics of what can be termed machinism: machines are designed to serve a purpose in specific terms, can be improved, have a limited life (in the sense of being at the cutting edge of applicability), and are intended for replacement in what is a continual process of improvement, indeed perfectibility.

This is not inherently incompatible with the notion of improvement as a responsiveness to circumstances, but that lacks the cultural

17 A. Lewis, *The American Culture of War* (New York: Routledge, 2007).

18 Eg. Re wide dissemination of cruise missiles, L. Guy, 'Competing Visions for the U.S. Military', *Orbis*, 48 (2004), p. 709.

potency of the notion of continual cutting-edge perfectibility. Thus, the RMA meets the American need to believe in the possibility of high-intensity conflict and of total victory, with opponents shocked and awed into accepting defeat, rather than the ambiguous and qualified nature of conflict and victory in the real world. This certainty is attractive not only psychologically but also in response to the changing threat-environment. Thus the RMA appears to offer a defence against the threats posed by the spread of earlier technologies, such as long-range missiles and atomic warheads, of new ones, such as bacteriological warfare, and of whatever may follow.

In short, the RMA is focused on the management of risk, a common goal in policy, but one that is misrepresented when it is presented as entailing the suppression of risk. Indeed, preparing to stand for President, George W. Bush in September 1999 told an audience at the Citadel, a particularly conservative military academy, that 'the best way to keep the peace is to redefine war on our terms'. Once elected, he declared at the Citadel in 2001, 'The first priority is to speed the transformation of our military'.

At the same time, it is necessary to be cautious in suggesting too much coherence and consistency in the idea of an RMA, a point more generally true of other such constructs. A less harsh view can be advanced if the RMA is presented as a doctrine designed to meet political goals, and thus to shape or encourage technological developments and operational and tactical suppositions accordingly, rather than to allow technological constraints to shape doctrine, and thus risk the danger of inhibiting policy.

If the RMA is seen as a discourse designed to win the argument, within and outside the military, for investment in a particular doctrine and force structure, in short as the ideology of Transformation, then, at the operational and tactical levels, it can be seen as of value provided that a unitary model of tasking, that automatically maximises this value, is not taken. At both levels, there have been important advances in

overcoming the problems of command and control posed by the large number of units operating simultaneously, and in fulfilling the opportunities for command and control gained by successfully overcoming this challenge, and thus aggregating sensors, shooters and deciders to achieve a precise mass effect from dispersed units.

It is not new that better communications enable more integrated fire support and the use of surveillance to permit more accurate targeting, and radio provides a key example, but these possibilities have been taken forward by the new technology that attracts the attention of RMA enthusiasts. The latter emphasise the need for speed in order to get within opposing decision cycles, which are also to be deliberately disorientated and disrupted. Again, this is not new, but it has been given a central role at the tactical and operational levels. The mistake is to assume that this has clear strategic results, not least in terms of war-winning. Military output is not the same as military outcome, a fundamental lesson that qualifies the emphasis on capabilities.

Western, especially American, economic growth and borrowing capacity, and American resource-allocation have given substance to triumphalist ideas, because they make it easier to afford investment in new military systems; or, at least, the development of earlier ones. However, uncertainty over tasking and outcomes complicates the situation, although to an extent that is unclear. The combination of this uncertainty and the variety of national strategic cultures certainly ensures that Transformation has to be understood as a number of processes designed to meet a number of goals. If the RMA ends up meaning this, then it becomes, at least to a considerable extent, a truism and a platitude, which indeed is the fate of many tendencies styled by its advocates (or others) as revolutionary.

The value of the RMA as an analytical tool is therefore limited. RMAs are an apparent short-cut that in practice have only limited explicatory capacity. This is particularly so because they reify the complexities of change

and abstract them from the multiple contexts that convey meaning.

This, however, does not make clear how best to consider the nature and cause of change. Action-reaction cycles remain the best internal explanation of military change, but do not provide much when considering the reasons for the use of non-military processes; in so far as the distinction between military and non-military has value. These non-military processes can be seen not only with technology in, for example, the impact of steam power on land and sea (railroads and steamships), or the telegraph, or with organisational developments, or with reference to the general issue of the impact of social trends. A modern instance of the latter is provided by changing social attitudes toward the role of women with the resulting consequences in terms of female military service.

It is far from clear how best to incorporate this perspective. Military capability and activity are clearly part of the non-military world, in which, instructively, there has been debate over the value of analytical concepts such as the Industrial Revolution, the Agricultural Revolution, particularly the first. The key phrase here is revolution, namely the sense of a seismic turning point in and by industry. This has a counterpart in the use of the term Military Revolution to describe early-modern change, a term that drew much of its potency from the Industrial Revolution. However, it is less clear that the value or potency extends to the concept of revolutions.

Furthermore, there is the issue of distancing. Just as the twentieth century looks different once we are in the twenty-first century, so there is the general issue of chronological perspective to consider. From the perspective of 1955, early-modern changes appeared closer and more pertinent than they do now and a narrative of modernisation could be constructed within which a military revolution could find a place. The chronological perspective for analysis, however, constantly shifts.

This, moreover, is linked to the issue of teleology. The narrative, and therefore

analysis, in the late twentieth century was based around the concept of total war and the move to that capability. As such, earlier history could be organised and significance detected. A related narrative was that of dominance by the industrial world.

Now, the former and, in some respects, the latter seems far less secure.¹⁹ As a result, there is a need to think through a different narrative. If revolutions are understood as causal discontinuities in this narrative, then that may require another set of revolutions; although, as already suggested, the use of the concept of revolution in this context is questionable.

Conclusion

Shorn of revolutionary language, current issues can be profitably re-examined from the perspective not of a revolution in military affairs but of a period of major changes in military tasking. This reflects the combination of the end of the Cold War and the longer-term rise in the number of international players that followed decolonisation combined with the instability of some of the areas from which imperial control withdrew, particularly Africa and the Middle East.²⁰ This rise in the number of states reflects the reversal of the role of political factors in encouraging the spread of Western power. More specifically, political, rather than military, factors undermined this imperial power, which encourages a focus on the role of ideology and belief, in both periphery and metropole, in making rule by others seem aberrant rather than normative. This underlines the contrast in the twentieth century between growing technological prowess on the part of the major powers, and the more limited role they sought, and success they enjoyed, as imperial powers.

The extent to which new technology, or the RMA as conventionally understood, is pertinent to this story is limited. However, an emphasis on the Third World as an inde-

19 J. Black, *The Age of Total War 1860-1945* (Westport, Praeger, 2006).

20 J. Black *War and the New Disorder in the 21st Century* (London: Continuum, 2004).

pendent source of military developments as well as a site for Western intervention, as opposed to a focus great-power confrontation, leads to a greater emphasis on the variety of military trajectories. In some respects, for Western powers, this is no different to the earlier imperial notion of the military as a fire-brigade to deal with crises both at the margins of Empire and at imperial centres.

Thus, in terms of doctrine, there has been a revival of earlier concepts, such as 'hearts and minds', with related concerns about training, for example in operating in built-up areas in the Third World. Technology is an adjunct to doctrine, rather than a substitute for it, and to this extent again the RMA, as usually presented, is of limited relevance. Again, however, it is pertinent to note differences between countries based on their strategic cultures and specific taskings. Thus, the British military in Iraq and Afghanistan takes, or seeks to take, a different position towards 'hearts and minds' than its Israeli or American counterparts.

A contrast is also readily apparent between sea/air power and land capability. Superiority in forms of military technology and military industrial complexes are more important in the former, where their effect is fundamental; but precisely the same forms of superiority in technology and industry have a far smaller impact so far as land power goes. A general theoretical conclusion that emerges is that factors that help provide a capability advantage or cause success (the two are not synonymous) in one context, are not necessarily relevant in others. This makes processes, and therefore judgements, of causality more difficult. The RMA as an ideology, indeed, is in many respects, an air power ideology.²¹

Unpicking the RMA is not some parlour game, but, instead, is crucial to an assessment of Western capability. As recent years have shown, this is important if appropriate policies are to be followed. Far from assuming that the world is an isotropic surface, made knowable, pliable and controllable by new

technology, it is necessary to understand not simply the limitations of the latter, but also the limitations of a technology-driven account of capability and change. The alternative is the illusion that fresh technologies can, and thus will, bring new powers and therefore that problems can be readily banished. That is not the appropriate military analysis and tasking for the twenty-first century.

21 J. Black, *Rethinking Military History* (London: Routledge, 2004).

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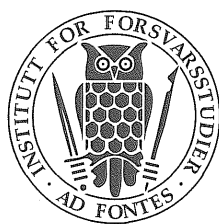
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