

A REVOLUTION IN MILITARY AFFAIRS: SOME COMPARATIVE APPROACHES TO THE CONTEMPORARY DEBATE

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INTRODUCTION

The problem addressed in this paper is not fundamentally new or exclusive for it contains a historic line. In spite of this historic line, no general consensus exists. Therefore the first part of the paper is directed towards clarifying the concept before pursuing its historic roots and contemporary meaning. The historic analysis of a revolution in military affairs (RMA) might reflect much of *an ex post facto* and descriptive approach. This however, is perhaps inevitably the departure or entry point from which even the contemporary debate on the issue is to be pursued. Within the present debate two broad lines of thought become apparent. One, that the process is evolutionary and two, the view that developments contain dynamics that reflect a more revolutionary than evolutionary nature.

However, current thinking on a possible military revolution has an undeniable focus on its future impact upon warfighting, military organization and civil society. Predicting the future is by nature a risky undertaking. The second part of this paper is directed at this matter and in particular the countries seemingly involved in or on the verge of becoming involved in this debate and their endeavours to reconcile the inherent difficulties of a contemporary military revolution.

THE CONCEPT OF A MILITARY REVOLUTION

Clarifying the concept of a military revolution is a first step towards a proper understanding of a phenomenon that tends to become shrouded by differences of opinion. Clarity is also necessitated by a tendency to use the concept without being particular about either its meaning or context. It is essential to first disengage the two constructs of the concept - referring to the military dimension and a revolution

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respectively – which in themselves could inject bias into the meaning or understanding of the phenomenon.

Military refers to the armed forces of a country.² It has to do with soldiers, that being used or done by soldiers or befitting a soldier or belonging to an army.³ From these two explanations a narrow and possible exclusive focus on the military environment, its people and their purpose becomes obvious. The Collins Dictionary describes revolution as an important change in a particular area of human activity. It also elaborates upon it as revolutionary ideas and developments that involve great changes in the way that something is done or made.⁴

If revolution refers to the dynamics of change contained within the concept, it is possible for the military to be understood [1] as the primary sphere or area of human activity within which the dynamics operate or [2] within which its impact is to be sought and understood. Bearing in mind the above distinction of a military dimension and one of dynamic change, a military revolution can thus be described as: [1] Major discontinuities in military affairs that is brought about by changes in the relevant technologies, concepts of operations, methods of organization and/or resources available. [2] These changes contain the potential to render existing means for conducting war as obsolete or subordinate.⁵

The danger of the above description is that it contains the idea of restricting all thinking to dynamics in the military sphere. Whilst the final outcome might well be or eventually manifest primarily in the military domain, the scope of the recent debate on a military revolution, tends to reflect the undeniable input from the non-military environment and its institutions. The Russian view⁶ of a military technical revolution is an example of an earlier view that tends to exclude the non-military dimensions that play an undeniable role.⁷ The more recent involvement of the concept towards one of a revolution in military affairs⁸ or a revolution in strategic

² The University of Birmingham, *Essential English Dictionary* (William Collins Sons & Co Ltd, 1989), p. 493.

³ CT Onions (ed.), *The Shorter Oxford Dictionary* (Oxford University Press, London, 1956), p. 1250.

⁴ The University of Birmingham, p. 682.

⁵ The Center for Strategic and Budgetary Assessments, "The revolution in military affairs", (CSBA, 1999), p. 1; < <http://www.erols.com/cbsa/rma%20main.htm> > (3/1/99).

⁶ EA Cohen, "A revolution in warfare", *Foreign Affairs* 75(2), March/April 1996, p. 39.

⁷ The earlier Russian observation was guided by their views on the possibility of conventional weapons being advanced by technology to achieve the same results as small tactical nuclear weapons and they might have become forewarned by their inabilities in this very technical environment (Cohen, p. 39).

⁸ S Menon, *Maritime strategy and continental wars* (1998, Frank Cass, London), p. 182 criticises, from a naval perspective, the use of the term "affairs" as a word or concept that does not contain a recognized or accepted content. He does however accept its use as a change of meaning in the way war is managed or conducted.

affairs might be understood as an effort to deal with a more interdependent world.⁹ As such the concept ought to be developed within this interdependency and perhaps be pursued along a more evolutionary pathway as presented by Dibb.¹⁰ The current concept of an RMA is thus to be understood as a particular military outcome structured or underpinned by both military as well as non-military dynamics of change.

MILITARY REVOLUTIONS: THE INFLUENCE OF THE HISTORIC DEBATE

The concept of a military revolution could be traced back to the more recent (1955) thesis by Roberts based on the notion that a revolution occurred during the early modern period and in particular in early seventeenth century Sweden.¹¹ The Parker variation on this thesis is that the particular changes in question rather occurred during 1560-1660 and earlier during fifteenth century Europe.¹² These debates are very much cluttered by arguments on the precise time frames during which those developments took place. Of importance however, is that these theorists managed to delineate particular developments and their impact upon the military and non-military dimensions. As such they interpreted these events as having a revolutionary impact upon how wars would be conducted henceforth.

Present literature debating a contemporary military revolution, still tends to utilize historic developments and changes as an avenue towards ordering current developments in this field or an entry point for discussing the possibility of a contemporary revolution in military affairs. The historic approach is either reflected by its use of arguing for a persistent continuum of change, or as an acknowledgement of the historical origins of the phenomenon. However, this common departure does not lead to a synthesis in understanding the dynamics and outcome of a military revolution.

Baumann relies upon the historic approach and proposes that previous approaches to future war influence current thinking.¹³ According to Baumann twentieth century thinking on military revolutions is essentially about evolutionary change unfolding in a continuous manner.¹⁴ It does not contain a revolutionary shift

⁹ Cohen, p. 41.

¹⁰ P Dibb, "The revolution in military affairs and Asian security", *Survival*, 39(4), Winter 1997-1998, p. 41.

¹¹ J Black, *A military revolution? Military change and European society 1550-1800* (McMillan, London, 1991), p. 2.

¹² Black, p. 4.

¹³ RF Baumann, "Historical perspectives on future war". *Military Review*, Vol LXXVII (2), March-April 1997, p. 40.

¹⁴ Baumann, p. 46.

in how warfare is to be conducted. In Baumann's view, as yet, no real paradigm shift took place and present changes are merely a natural flow of ideas that support the prevailing views on warfare. Although of the opinion that these trends are rooted in the nineteenth century evolution of warfare, Baumann nonetheless presents certain future trends. Some of these trends are increases in lethality and dispersion, volume and precision of fire, integration of technologies and the achievement of greater mass and effect.¹⁵

The essence of Baumann's arguments are that current changes characterizing the debate, are not sufficient to cross the threshold between continuity of change and revolutionary change. It does not represent a fundamental break with previous understanding and an undermining of existing knowledge on the topic. This in turn feeds into the contemporary debate of whether a military revolution is in process or not. According to the Center for Strategic and Budgetary Assessment of the US, the idea that a revolution does not exist, represents a definite line of thought in the contemporary debate.¹⁶ It rests upon the notion that change will continue to be evolutionary and appear along the margins of existing military capabilities.¹⁷

THE CONTEMPORARY MILITARY REVOLUTION: A COUNTRY APPROACH

In spite of the above arguments of a continuous line of development, opposing views of change in the military sphere did not disappear. Towards the end of the Cold War the debate continued on the revolutionary content of military change. To achieve synergism between the concept and its true meaning and to contribute to theory building, thinking developed along more than one line. Different countries opened up their own debates that eventually crystallized into particular but not exclusive views on matters pertaining to a military revolution or as it is presently called, a revolution in military affairs (RMA).

RUSSIAN VIEWS ON A CONTEMPORARY MILITARY REVOLUTION

The Russian perspective could be judged the predecessor of the current military revolution debate. Kipp (1997) argues that during the period 1977-1984 the

¹⁵ Baumann, p. 46.

¹⁶ Center for Budgetary and Strategic Assessment, p. 3.

¹⁷ This view is supported by Uhlig (1999) in his paper "A real evolution in naval affairs and what it achieved" (US Naval War College) on the innovative use of submarines which in turn led to innovations by navies to counter the submarine threat. This illustrates that understanding how to use a particular system is closely related to being in possession of that system.

Russians began to speak of a revolution in the military sphere.¹⁸ According to Fitzgerald (1994) the Russian military perceives a military technical revolution as the foundation of future war.¹⁹ These views resulted from the introduction of a new generation of nuclear weapons and advanced high-precision conventional weapons. Some Soviet military decision-makers understood this introduction and the response it demanded, as a qualitative leap in the development of military affairs. This view²⁰ led to a further fundamental rethinking of the defence problems of the Soviet Union.²¹

Gareev²² views future war to be the outcome of winning quickly and decisively and to optimize force structure and strategy towards achieving this outcome.²³ Achieving it, however, reflects some new thinking. The introduction of information warfare is viewed as a means to avoid the perpetuation of protracted and costly operations the Russians could barely afford. In addition, technology is considered as a means to effect simultaneous operations in pursuing quick and successful wars. This also led to thoughts on blending the concepts of fire, strike and maneuver to destroy enemy forces in parallel operations as opposed to expensive successive operations. These views still incorporate heavy fighting, albeit in ways not previously possible or foreseen.²⁴

Radio-electronic warfare is contemplated as a new Russian combat category. This is contained in a shift from fire dominance (old thinking) towards command of the ether as a future way of fighting. If the opposition is to be disorganized along non-violent lines, it creates room for command of the air and deep air-strikes on a disorganized opposition.²⁵ These "strikes" upon the opposition also represent a shift away from force-on-force projections towards how targets are "struck" and the system behind that strike. This allowed "psychological strikes" as opposed to the more destructive physical ones, to be considered. In some quarters this dovetails

¹⁸ JW Kipp, "Confronting the RMA in Russia", *Military Review*, Vol LXXVII(2), May-June 1997, p. 49.

¹⁹ MC Fitzgerald, "The Russian image of future war", *Comparative Strategy*, 13(2), April-June 1994, p. 167.

²⁰ Kipp, p. 50.

²¹ According to Cohen, highly accurate conventional weapons with an impact similar to small nuclear strikes eroded the mass armoured principles and doctrines of the then Soviet military planners.

²² Gareev is a prominent Russian general whose military career spanned the period from the Second World War to the current era and who is very much involved in the Russian views on a possible RMA.

²³ Menon, p. 185, argues (from a naval point of view) that technology has reduced [maritime] space in terms of time and thus speeded up the battle. To run a battle at a heightened speed, the incorporation of new technologies is necessary. This in turn requires a new approach to maritime force structure, naval hierarchies and operational planning.

²⁴ Kipp, pp. 52-3.

²⁵ Kipp, p. 53.

into information warfare with both the targets and outcome located within the opposition's population response and economic sphere. This allows for a downplay of violence and destruction and it not being the respective means and outcome of such strikes anymore.²⁶

The Russians however view information war in both a broad as well as a narrow sense. They realize its utility to conduct **military operations**, as well as a **national asset** against opposition and its consequent protection against access by outsiders. Part of this includes harnessing the electronic sphere and challenging status quo thinking of having only land forces, air power and a navy. The evolving view is one of information and psychological effects that push for their own independent dimension and arguments that space, as a fighting dimension, has to be an independent arm of service.²⁷ The latter is representative of a direct challenge to traditional thinking on operating with firepower in the air, land and maritime dimensions.

A further Russian line of thinking is about countering the future war environment and what means to employ. New fighting systems tend to automatically generate a search for counter systems. In the realm of an RMA it could be argued that the response to find counters to sophisticated systems thinking and systems is to continue.²⁸ Russian thinking contains a realization that in accepting an RMA, it is [1] accepting a change to both the nature of the threat as well as its deterrence; [2] that a future enemy most likely will have access to the RMA-generation of systems and [3] that the nuclear option is losing much of its momentum in the face of information superiority.

Whilst a paper by Fitzgerald (1994) on Russian thinking has technological developments as its primary focus, Kipp in turn has a softer technological focus.²⁹ Kipp pays more attention to Russian military sciences and the views of Russian military decision-makers on developing the idea or theory of an RMA. Of interest is Fitzgerald's portrayal of the Russian view on future war against the backdrop of emergent geo-strategy and military developments. It is this sixth generation of warfare, characterized by superior data processing to support smart weapons, that is deemed to alter the character of warfare.³⁰

²⁶ Kipp, p. 55.

²⁷ Kipp, p. 53.

²⁸ Kipp, p. 54.

²⁹ Kipp, p. 49.

³⁰ Fitzgerald, p. 168.

With a decline in the nuclear option, precision conventional weapons will rise in importance. A concurrent shift away from ground forces and the destruction of the armed forces of the opposition resulting from the rise in the importance of the air force, navy, air defence and electronic warfare, are foreseen. The papers by both Kipp and Fitzgerald portray a pre-occupation with the vertical plane, with Fitzgerald floating the opinion that ground forces could fade towards a supporting role.³¹ However, the crucial success factor remains a correct understanding and use of these potential shifts and opportunities. This threshold might be illustrated by Menon's arguments on how a revolution in naval affairs took place. Menon points out that technological developments potentially bridged the gap between navies operating at sea and operations conducted on land.³² The crucial switch is contained in how naval thinking comprehended the opportunities that arose. New systems could speedily destroy the means that previously restricted the navy's role to the oceans, at sea as well as ashore. This was a shift in the naval perception away from the idea that they could only marginally influence or support the land battle. Navies could speedily advance through the sea phase of a war and quickly become involved in the execution of joint strategy.

The above Russian views on future war are based on some future trends. These trends, as presented by Fitzgerald and Kipp, primarily display a tendency towards new thinking on the destructive properties of particular types of weapons. Developing non-lethal weapons or systems receives particular attention. This is to be understood as a shift away from mechanical destruction towards radiated destruction. The second line of thinking is about non-traditional weapons technologies such as space-based directed energy weapons and non-lethal systems.³³ What seems absent are the moral implications disguised in the use of laser weapons to disable organs of vision, incoherent light sources to disrupt aiming and movement, super high frequency weapons to disable gear as well as humans, infrasonic weapons to disable military personnel in shelters and combat systems.³⁴

If the Russians manage to climb the technology ladder towards systems enabling them to fight according to their view of sixth generation warfare, the implications will be more extensive than a mere ability to fight in a future war environment. Their views incorporate views [1] rehabilitating the economy with [2] the Russian defence industry as a vehicle for the economic access of the competitive world market. The ability to fight local and large scale wars at the conventional level, maintain strategic stability by not falling behind in cutting edge technologies

³¹ Fitzgerald, p. 167.

³² Menon, pp. 186-7.

³³ Fitzgerald, p. 71.

³⁴ Fitzgerald, pp. 171-3.

and a shift from traditional measures to keep the balance, are held as crucial variables for Russian world power status. In addition a civil-military consensus on the resurrection of superpower status and that parity or superiority in military technical affairs is the lynchpin for clawing its way back, might be the Russian way to cope with the current pressures of revolutionary military changes.³⁵ The Russian views however lack a coherent civil-military profile that is [1] an obstacle to addressing the issues at hand and [2] their realization of this obstacle implies an extended time frame for adjustment given the current difficulties characterizing the Russian environment.

AMERICAN VIEWS ON A CURRENT MILITARY REVOLUTION

The American approach reflects the acceptance that an RMA has arrived or is in progress. This perspective reflects very particular or salient categories, rigid military fields and simultaneously an inclination not to limit the debate to military technology. As such the RMA perspective in the US reflects both a military as well as a civilian or political incentive to utilize American capacities to pursue RMA possibilities.³⁶ This is visible in the views of US scholars and military strategists that the phenomenon should rather be about military affairs and not military technology. To some extent it is in contrast with the Russian views on a possible RMA as having much to do with the military-technical sphere. Metz acknowledges as much in his paper. Metz argues that mere technological change does not constitute an RMA.³⁷ This approach is supported by Fitzsimonds and Van Tol who view present technological development, doctrinal innovation and organizational adaptation as synergistic preconditions for an RMA.³⁸

The US perspectives are driven by particular developments that rest upon the notion that the RMA is not to be confined to military ends, ways and means. These developments include coping with unaltered responsibilities in the face of declining force structures and budgets and intolerance by the US for the human toll of armed conflict.³⁹ The American military reflects some signs of being reconstructed along the thesis of an RMA leading to smaller but more powerful forces that could fight and achieve objectives with minimum loss of life and destruction. On the one hand technology was leveraged towards obtaining some of the above, but it was soon

³⁵ Fitzgerald, p. 178.

³⁶ S Metz, "Racing toward the future: The revolution in military affairs", *Current History*, Vol 96 (609), April, 1997, p. 187.

³⁷ Metz, p. 184.

³⁸ R Fitzsimonds and J van Tol, "Revolutions in military affairs", *Joint Forces Quarterly*, Spring 1994, pp 25-6.

³⁹ Fitzsimonds, p. 25-6.

realized that merging concepts and technologies with doctrine makes the real benefits of RMA-thinking accessible.

On the one hand technology is focussed on information gathering, its assessment and dissemination, non-lethal weapons, robotics and unmanned military systems, new materials and new energy resources to clean up warfare. On the other hand, a view evolved on how future wars ought to be fought and this found reality in operational concepts of dominant maneuver, precision engagement, full dimension protection and focussed logistics.⁴⁰ These concepts were put in place to be pursued as building blocks of a future war doctrine with technologies being either pursued or existing ones incorporated into operational concepts.

Contemporary thinking on developments is one way of viewing future war. The USA is perhaps the only actor that opened a window on this future during the 1991 Gulf War. Arguments do exist that the 1991 Gulf War was the last military conflict where a build up of forces and deployment of such massive proportions took place. However, the Gulf War simultaneously reflected an early and perhaps underdeveloped view of particular futuristic concepts and their employment. The perceived impact of these concepts (even in an underdeveloped format) such as superior information and its dissemination and distribution, parallel operations and space-based capabilities imbedded in technology determined the outcome of the war. It startled particular actors on the international scene as well. The USA has in some way interfaced the debate on future war, concepts and doctrine with particular technologies towards a desired outcome.

A transformation of the US military via the RMA towards future war capabilities is in itself dangerous for it contains the risk of strategic surprise. This is bound up in the uncertainties about the future threatened environment and the simultaneous uncertainties on the effective execution and utilization of new concepts and technologies by new military organizations.⁴¹ According to Krepinevich the combination of technology, emerging military systems, new operational concepts and force restructuring underlie the discontinuous leaps in military effectiveness that characterize or sustain military revolutions. This however is not a predictable and orderly process, but rather one of exploitation and elimination.⁴²

⁴⁰ Fitzsimonds, p. 186.

⁴¹ A Krepinevich, "Transforming the American military", Speech at the George Bush School of Government and Public Service of Texas A&M University, September 1997, p.5.
< <http://www.csbahome.com/publications/bush%20speech.htm> > (3/1/99).

⁴² Menon., p. 200 cites this as the proper understanding of new capabilities and their intended outcomes (both before as well as during a war). The latter refers to how previously mere tactical actions become endowed with the capabilities to have operational and even strategic consequences.

The above process feeds into the threats and vulnerabilities presented by future military competitors. From a US point of view this will clearly influence their exploitation of the RMA.⁴³ Matching threats, vulnerabilities and the RMA however, is not an exact science and prone to marginal success. As the Russians accept that their future opposition will have access to revolutionary technologies, the US thinking has gone further in analyzing what future competitors might present. It is anticipated that a future competitor with an RMA capacity might include: [1] a conscious decision to acquire part or all of the portions of an RMA complex; [2] acquiring the abilities to develop the systems that constitute RMA technologies; and [3] the adaptation of organizational and operational technologies towards RMA utility.⁴⁴

If the above represents the rise of a future opponent, the US focus is on the further development of corresponding warfare areas. These areas are not unique and perhaps coincide with the views held by any actor active in the future war environment. In particular the US thinking has much to do with the following concepts presented by Metz and The Office of Net Assessment of the Secretary of Defense:

- Precision strike or engagement
- Information warfare
- Full dimension protection
- Dominant maneuver
- Space warfare

The predicted revolutionary impact of the concepts mentioned above is foreseen to result from a combination of two or more of them. This amounts to outcomes such as: [1] keeping the enemy at a distance while blinding and immobilizing him by destroying strategic and operational targets; [2] denying the opposition critical knowledge on its own as well as opposition forces; [3] deploying the right forces at the right time to cause psychological collapse and capitulation; and [4] projecting forces overseas at dramatically increased response speeds while denying the opposition this capacity.⁴⁵ What becomes clear is that theorists and military historians merely debating the issue have been eclipsed by mainstream thinking on refining the RMA and its utility for the US military.⁴⁶

⁴³ Office of the (US) Secretary of Defense, *The revolution in military affairs*, Strategic Assessment Center, Office of Net Assessment, 1999, p.4. < <http://sac.saic.com/rma/rmapaper.htm> > (1/19/99).

⁴⁴ Office of the (US) Secretary of Defense, p. 5.

⁴⁵ Office of the (US) Secretary of Defense, p. 15.

⁴⁶ Metz, p. 185.

The United States has moved from a mere debate to using the RMA concept to structure its future military. They view future war and the role of an RMA as being two sides of the same coin. The content of the RMA to some extent points towards the ways and means of twenty-first century warfare. This view of an RMA is alive and well within US military thinking and according to Metz actively pursued in the current development of future doctrine and training of US personnel at the tactical and operational levels of war.⁴⁷

The Russian debate reflects an effort to gain some hindsight into the rise of the RMA by also deliberating counters to RMA-related threats. The US moved into this murky side of the RMA as well by trying to thrash out possible threats that might arise. This line of thinking crystallized in the following tentative views: [1] Guerrilla warfare could blunt current utilities of RMA forces and limit the utility of the applicable technologies. [2] Lessons learnt may entice opponents to refrain from confronting US capabilities in future. [3] An information arms race could evolve as the prominence of information warfare rises and actors start competing to stay at the cutting edge of technologies and deny opposition such access.⁴⁸

Simultaneously American approaches reflect so-called fringe speculation on future war. This resulted in views containing ideas of future warfare [1] reflecting no/little human contact; [2] advancement of technologies making machine-on-machine warfare the future scenario; and [3] intellectual capacities and technologies becoming the objective of future arms control. Directing warfare at the minds of the opposition is a further warfare area recognized by the Americans. This line of thinking becomes subject to severe moral restraints - perhaps more so in the US than in Russia where the issue might not yet be part of the emerging civil society agenda.

THE CHINESE PERSPECTIVE ON A MILITARY REVOLUTION

The Chinese views on future war and the role of a contemporary RMA, have to be viewed against the backdrop of their striving towards achieving superpower status. Simultaneously the Chinese endeavours require mastering some of the intricacies of the RMA and future war. Chinese military views are driven by the idea of harnessing the correct technologies as being of critical importance.⁴⁹ However, this

⁴⁷ The debate is also actively pursued as can be observed in the publication *Strategic vision. A selected bibliography with emphasis on future war*, compiled by the US Army War College with the majority of the indexed material containing American publications on the topic.

⁴⁸ Metz, p. 187.

⁴⁹ B Gill and Henley, L, *China and the revolution in military affairs*. Part 1, 20 May 1996, p.1, ><http://www.milnet.com/threats/chnrmap1.htm>< (1/19/99).

preoccupation with technology seems to fade when the realities of moving China into a future war environment are scrutinized.

Gill and Henley (1996) touch upon the very foundations of China's movement towards future war and identify economic and socio-political factors as the main variables underlying this migration.⁵⁰ Gill and Henley also point to the fact that although China managed to acquire minimal capabilities in pursuing the missile and nuclear revolution of the middle and latter half of the twentieth century, it has not readily progressed into the realm of the contemporary RMA.⁵¹

Chinese decision-makers have few if any qualms about the Chinese military's migration into the future war arena. Simultaneously they view this to be underpinned by the dynamics of present thinking on an RMA. This, however, supposes shifts in particular Chinese priorities. In practice this points to deep change in their socio-economic, political and military environments that in itself could be of revolutionary proportions. For China to become immersed in the contemporary RMA, ought to impact much wider than the military domain. To reap the military benefits for RMA purposes, implies transformation of Chinese society and its structural fundamentals. Changes at this level represent the entry point for mobilizing factors that promote the capabilities to play in the contemporary RMA league. In essence, this is the scope of change envisioned by Gill and Henley for China's migration towards the future war environment.

Being a role player in the contemporary RMA, requires financial resources and their direct and indirect allocation towards building an RMA capacity. This implies allocation of sufficient funding to research and development and a shift from military exclusivity towards integration into the national economy and civil sector. The true meaning of this shift however could not be fully comprehended by merely pointing it out, but these two matters could form the bedrock of a Chinese RMA.⁵²

Contained in the views presented by the Tofflers, economic strength and participation in the contemporary RMA are mutual partners.⁵³ However, the views of economic power as deliberated by Jablonski (1997), is perhaps the new line of understanding economic power, its fusion with technology and information elements and that these elements are the stepping stones for China towards RMA status.⁵⁴

⁵⁰ Gill and Henley, p. 2.

⁵¹ Gill and Henley hold the view that over time a number of RMAs took place and that the international system is at present once again experiencing a particular RMA.

⁵² Gill and Henley, Part 3, p. 1.

⁵³ Alvin and Heidi Toffler, *War and anti-war* (Warner Books Edition, New York, 1993).

⁵⁴ D Jablonski, "National power", *Parameters*, Spring 1997, pp. 34-54.

Economics have enabled China's future opponents to cover much territory towards entering the RMA environment. In particular the USA and Japan are two main actors⁵⁵ that have moved or could move more rapidly than China down this economic path and both are future global and regional contenders that China will have to deal with.⁵⁶

There are economic problems presenting some obstacles for moving from a mere debate towards the reality of the RMA and which China can only ignore at its peril. The ingrained autarchic Chinese approach in a global economy is a variable obstructing movement towards the RMA and not one that promotes security through self-reliance. For a country like China a self-reliant and nationalist approach will not unlock the economic incentives upon which entry into the RMA domain seemingly depends.⁵⁷ With commercialization of its defence industries underway, it is still a long haul towards the enterprises deemed to have some RMA utility.

For decades, or in some cases, centuries, particular forces influenced the Chinese socio-cultural factor. It continues to reflect these influences and it is to be assumed that a quick eradication or change is not achievable. Whether it being Confucianism, Maoism or the Russian influences, its remnants will remain influential for some time to come. A shift to a more modernist outlook or approach, however, also has repercussions. One major outcome is the unpredictable results of a shift away from a defence focus by certain sectors of society. Such a shift however has an impact upon the adaptation to cope with the RMA. A lack of understanding defence related spin-off contained in a shift towards privatization and civilian technologies is only one issue. This results in resistance to new ideas, stratification of society, the only good being viewed as the collective good and an ideological dogmatism inhibiting the adjustment of the required socio-cultural elements in society towards RMA lines⁵⁸

The Chinese have realized that certain shifts are imperative to at least start moving the Chinese colossus towards RMA-related concepts, doctrines, technologies and consequently the future war environment. It is therefore important to outline the changes in Chinese society, their economy, defence-related institutions and

⁵⁵ M Park and T Kim, "Anchoring a new pattern of interdependence and strategic rivalry: China-Japan relations toward the 21st Century", *Korean Journal for Defense Analysis* 10(1), Summer, 1998, p.7; < <http://www.kdda.re.kr/kimandpark.htm> > (3/29/99).

⁵⁶ The paper by Park and Kim reflects the Chinese sentiments on future contenders. An American presence and role is accepted whilst a remilitarization of a future Japan is an undeniable factor in their view of their future security environment. Both these actors have the inherent capacity to present a threat that contains elements of the RMA being discussed in the above paper.

⁵⁷ Gill and Henley, Part 2, pp. 2-3.

⁵⁸ Gill and Henley, Part 4, pp. 3-5.

industries. Of importance is the interface of these shifts with Chinese thinking or views on the RMA.

This compatibility or interrelationship might be explained in the following manner: Chinese decision-makers realize that progress towards big power status contains an undeniable military dimension. The changes to effect this profile, however, span the totality of Chinese society as set out in the paper by Gill & Henley. In the Chinese case it might well mean that changes restricted to only some sectors of Chinese society, are insufficient. It is not about military change per se, but the changes are to be effected within the military as well as the non-military domains.

The scope of change envisioned, resulted in the PLA and defence research and development communities opening themselves to outside influences.⁵⁹ These shifts are pushing China onto the threshold of the information age and its particular impact upon Chinese society, including their military forces. It is the impact upon the more intangible sphere of behaviour, organizational changes and how to think about these changes in terms of the RMA that is now becoming relevant. It seems that technological innovations might not be the problem, but rather the proper understanding and utility of the technologies as outlined by Joshi in a recent paper of the Indian Institute for Defense Studies and Analysis. Joshi refers to Naisbitt's views on developing technology by outlining it as follows: [1] taking the path of least resistance - applying it in ways that do not threaten people; [2] improving previous technologies; and [3] implementing new directions of uses with new processes, activities and products.⁶⁰ China will have to shift from mastering technologies and thrashing out doctrine to one of developing approaches to the future, supporting doctrines and only then embarking upon breakthrough technologies to give content to doctrine. This is the difficulty confronting China for it is not geared towards either of the two approaches.⁶¹ This points to the view of Menon (1998) that tactical and operational innovation must match technical innovation for metamorphic change to take place.⁶²

China has to move through the five steps of a revolutionary process being: [1] the existence of necessary conditions; [2] recognition of these conditions; [3] acceptance, adoption and adaptation; [4] debate and specification of new opportunities and problems to be addressed to institutionalize the revolution; [5] exploitation of the revolution. These steps, in the case of China, boil down to a breakthrough in

⁵⁹ Gill and Henley, Part 5, p. 1.

⁶⁰ A Joshi, "A holistic view of the revolution in military affairs", *Strategic Analysis*, XXII (11), February, 1999, p. 1. <http://www.idsa-india.org/an-feb97.html> (4/13/99).

⁶¹ Gill and Henley, Part 5, p. 2.

⁶² Menon, p. 183.

warfighting capabilities associated with an RMA. It thus calls for a new paradigm to execute military operations – either one associated with future or existing technological and conceptual breakthroughs, or one based on a low level of technology.⁶³

China could move down the road by duplicating current understanding of the RMA (US-dominated). This implies that China could pursue the technology imperative and copy existing RMA thinking. China thus has to gradually climb the technology ladder or introduce newly purchased technologies from the global market. Alternatively a Chinese RMA could also lead down an unfamiliar path that might once again raise the familiar nuclear-conventional-guerrilla triad of the mid-twentieth century. This might materialize as a high-tech people's war by fusing conventional and unconventional war. Given the undeniable western influence upon the RMA, Chinese thinking, whether in the short or medium term, seems drawn towards the established notion of the innovative application of military technology and new military capabilities not possible from the standard methods in use by other nations.⁶⁴

CONCLUSIONS

The historic view of a military revolution creates the impression of time frames being a central factor in pinning down the phenomenon. The developments within these particular time frames were then judged according to their perceived revolutionary impact upon the ways how wars were fought. It contained a major emphasis on how new means opened up alternative ways for conducting wars at the tactical and operational and to an extent at the national strategic levels. Irrespective of the time frame debate, how particular countries rapidly adjusted to new military breakthroughs and linked their civilian sectors to the military momentum, became an important factor. The earlier debates clearly ran along military as well as non-military lines. This in turn could guide contemporary thinking on the RMA debate and its apparent bias towards viewing technology inherent to particular military means as dominant.

The more contemporary debate found its origins in understanding how technology functions to change warfare. The idea of an RMA is opposed by those who are of the opinion that the issue is more inclined towards an evolution in military affairs. Decision-makers at present seem less inclined to solve the evolution-revolution debate, but are rather interested in an underlying theory that could give con-

⁶³ Gill and Henley, Part 6, p. 1.

⁶⁴ Gill and Henley, Part 6, pp. 1, 6.

tent and meaning to current developments. The debate however is more a matter of choice by opting to view the dynamics of the process and its outcome as evolutionary or revolutionary, with both options containing similar arguments and a lesser inclination towards determining whether the dynamics and outcomes are of a different kind.

The contemporary approach originates from the Russian concept of a revolution in military technology that is acknowledged as the cradle of contemporary RMA thinking. However, it appears that their views were (and perhaps still are) strongly influenced and restricted by military technology and Russian military sciences. From their perspective the Russians perceived the impact of new developments as well as their response to it, as revolutionary and demanding of a fundamentally new approach towards how they were to fight in future. Although they might still hold strong views on the matter, events in the former USSR and present Russia must have taken its toll. Whilst the academic and military debate on the matter could quite well continue, moving towards doctrine and organizational adaptation seems to be caught up in a technological straitjacket.

The US approach might be criticized as using Russian views as a stepping stone. On the other hand the Americans contributed much to our current understanding of a contemporary RMA. For one they managed to reconcile RMA capabilities at the appropriate levels with relevant decision-making. The development of a theoretical debate into particular doctrines, military systems and a corresponding training program for military forces, is of American origin. They have currently managed to give a measure of content and have operationalised how some US forces will operate in a future war environment. This represents an undeniable foundation for other militaries to build upon.

The Chinese might be facing the greatest challenge of all. The scope of change they have to effect, seems staggering, although they have both the American as well as the Russian developments to draw upon. These changes are not only related to their military, but to Chinese society, economy and politics as a whole. The true military outcome is only to be realized in the distant future. This implies a very time-consuming progression along pathways that ought to take China [1] either down the road of an RMA influenced by Western thinking; or [2] a unique Chinese RMA that might not fully coincide with the status quo and dominant Western views.