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## **21st Century Military Modernisation: Its Challenges**

*By Bernard F.W. Loo*

### **SYNOPSIS**

*When a military organisation modernises its combat capabilities, it is natural to expect the new capabilities to be better than the old ones. This improvement is typically measured in terms of lethality. However, lethality does not guarantee that the military organisation will be more strategically effective.*

### **COMMENTARY**

WHEN A military organisation undertakes a modernisation programme, it is intuitive to expect that the weapons systems (along with the underlying technologies) that are being acquired are going to be “better” than the weapons systems being retired. The problem is, what does “better” actually mean?

Given the increasingly exorbitant costs of new weapons systems, and that scarce public resources are being expended on a military organisation — at the expense of other national spending priorities such as education, health and infrastructure development — this is a fundamentally important question that needs to be asked, and convincingly answered (if at all possible).

### **The Metrics of “Better” Weapons Systems**

Given that the ultimate function of any military organisation is the protection of the state from external, and sometimes existential, threats, the desire for “better” weapons systems is intuitive and necessary. But how these weapons systems contribute towards the military organisation being able to realise its function vary from peace-time to war-time.

A peace-time military organisation seeks to dissuade — more precisely, deter — its

adversary (or adversaries, as the case may be) from initiating hostile military operations against the state; whereas a war-time military organisation seeks to defeat — more precisely, attain strategic success against — its enemy. However, both deterrence and strategic success are problematic concepts.

To either deter an adversary from initiating hostile military actions or defeat an enemy at war, what the military organisation needs is the same across both scenarios: to be “better” than its adversary or enemy. Very often, this condition of being better than the adversary or enemy is measured by **lethality**.

The difference between a peace-time military organisation from its war-time counterpart is that, in the first instance, this lethality is potential, whereas in the second instance it is actual.

### **What is Lethality?**

Lethality is determined by a series of secondary characteristics. **Survivability** is important, because if your weapons systems are more survivable than those of your adversary or enemy, it means your military organisation can be more lethal than its counterpart. In an age of computer networks and joint military operations, **data linkages** and **bandwidths** are also important considerations.

This is because they allow the military organisation to do away with traditional inter-service rivalries, and function as a single, coherent entity, and to engage enemy forces (a euphemism for lethality) with any available weapons systems deployed on air-, land-, or sea-based platforms.

**Precision sensing and targeting** are also important, because these capabilities allow you to “see” its enemy first, and bring lethal fires to bear against it, with greater **accuracy** — an important consideration given the increasing costs of modern weapons systems — before the enemy can “see” your own forces.

### **Deterring the Adversary versus Defeating the Enemy**

In 1946, Bernard Brodie published *The Absolute Weapon*, which was an attempt to understand the ramifications of nuclear weapons on strategy and war. In it, Brodie stated: “Thus far the chief purpose of our military establishment has been to win wars. From now on its chief purpose must be to avert them. It can have almost no other useful purpose.”

Brodie has since been misunderstood: he was not suggesting a distinction between deterrence and defence in reality; rather, he was writing specifically about what nuclear weapons would do to the mission of the United States military establishment.

For non-nuclear military organisations, the ability to wage and win a war against a putative enemy is central to its peace-time function of deterring adversaries from initiating hostile military operations. Deterrence holds when an adversary calculates that the costs incurred as a result of initiating military operations will be greater than the possible gains it accrues.

In the nuclear realm, the issue of cost is arguably stark and unmistakable: the image of nuclear mushroom cloud creates a powerful argument that a nuclear war produces only losers, no winners. In the non-nuclear realm, however, cost is determined by the inability of the aggressor to attain its desired end-states; it is the ability to **deny** the aggressor its desired end-states that constitutes deterrence.

### **Lethality is NOT Strategic Effectiveness**

Except that, if strategic effectiveness is understood as the ability to attain the desired end-states, the ability to win wars, strategic effectiveness **does not necessarily** come from the ability to wage wars. Lethality drives the ability to wage wars; remember General George Patton's dictum that the soldier's job is not to die for his country but to kill the enemy.

The history of wars is replete with instances where more powerful — and more lethal — military organisations were not strategically effective. Over one million North Korean and Chinese soldiers died, while under 300,000 South Korean and United Nations Command soldiers were killed or missing in action.

In the United States' war in Vietnam, 1.1 million North Vietnamese and Viet Cong combatants were killed in action, as compared to 300,000 American and South Vietnamese combatants. In the Soviet war in Afghanistan, 13,000 Soviet soldiers were killed as a result of combat operations, whereas an estimated 57,000 mujahideen fighters were killed.

In all three cases, the more lethal side could not claim strategic success; it is clear that lethality did not confer strategic effectiveness. If anything, these cases demonstrate a singular, if unpopular (especially in these technologically sophisticated times) truth: wars are won by stubbornness and obduracy, the sheer unwillingness to accept defeat despite battle losses, the ability to outlast the enemy, despite the enemy's technological superiority (measured by lethality).

When a military organisation undertakes a modernisation programme, therefore, it is indeed expected that the new weapons systems will be "better" than the weapons systems being replaced; it is in fact expected that the military organisation, once modernised, is more lethal than its previous incarnation. Just don't expect that the military organisation will be more strategically effective.

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