



Document Title: World Crisis, 1975: Military Aspects

Author(s): George Lindsey

Date(s): 7-8 June 1975

Document Type/Physical Description: Type-written, 14pgs (includes 2 tables)

Fonds/Collection Name: George Lindsey Fonds

Series: Global Affairs

File/Box Number: 2/1

Original Archival Reference: N/A

**Item Description:** This document is a typed paper that Lindsey prepared for the Forty-Second Annual Study Conference of the Canadian Institute of International Affairs, which was held at the University of Saskatchewan.

**Keywords:** nuclear deterrence; strategic balance; NATO; Warsaw Pact Organization; Strategic Arms Limitation Talks (SALT I & II); multiple independently-targeted re-entry vehicle (MIRV); non-nuclear military threats; global naval balance; Asia; Middle East; nuclear proliferation

\*When citing material that has been digitized from other archives, the LMH Archive encourages users to cite the original reference information provided in the above field.

The purpose of the Laurier Military History Archive is to acquire, preserve and make available documents relating to the Canadian and international experience of military conflict in the twentieth and twenty-first centuries.

## WORLD CRISIS, 1975:

#### MILITARY ASPECTS

#### by

# George R. Lindsey

Chief, Operational Research and Analysis Establishment Department of National Defence

# Ottawa

# prepared for the

# Forty-Second Annual Study Conference

# of the

# Canadian Institute of International Affairs

#### held at the

University of Saskatchewan

on

## 7-8 June 1975

(The opinions expressed in this paper are those of the author, and do not necessarily represent those of the Department of National Defence)

#### WORLD CRISIS 1975: MILITARY ASPECTS

#### 1. NUCLEAR DETERRENCE AND THE STRATEGIC BALANCE

Of the many threats that hang over modern society, the one containing the greatest potential destruction is that of all-out nuclear war between NATO and the Warsaw Pact Organization. With a catastrophe of this dimension possible, it could be argued that the world is not safe for democracy, totalitarianism, any other ideology, or for the citizens of the developed world whatever be their political philosophy.

Fortunately, the probability of unrestrained nuclear attack on cities is very low, thanks to the existence of <u>stable mutual deterrence</u>. Today there is <u>deterrence</u>, because the ultimate threat of the destruction of cities certainly can be carried out. Even if one side achieved complete surprise, and used all of its strategic weapons against those of its adversary, enough weapons would survive to permit unbearable retaliation to be made against the population and industry of the initiator. This deterrence is <u>mutual</u>, because it applies in both directions. Neither side can disarm its opponent by a counterforce first strike. Finally, under present conditions the mutual deterrence can be described as <u>stable</u>, by which three conditions are implied:

- (a) Neither side has any rational motive to strike first,
- (b) Neither side has any rational motive to set its retaliation process for an automatic "hair trigger response",

and (c) Neither of the two conditions just stated will be disturbed by a marginal change in the capabilities of either power, whether offensive or defensive, and whether real or only perceived by the other.

In the first two decades after the end of the second World War the stable balance which applies in 1975 did not exist. The first nuclear weapons were carried by bomber aircraft, and if they could be caught on the ground, whole squadrons could be destroyed by one nuclear weapon. The first long-range ballistic missiles were extremely vulnerable, and their launching required hours of preparation. Consequently there was a rational motive to strike first, and also to set the retaliatory forces for instant response. He who struck first could hope to disarm his opponent. If an attack was feared, there was good reason to prepare immediate retaliation, or even to get in the first blow with a pre-emptive attack. Strategic deterrence was unilateral until the Soviet Union acquired nuclear weapons. It was mutual but unstable until a number of measures were taken, such as:

- (a) The provision of early warning against the approach of bombers and missiles,
- (b) The placing of ICBMs in hardened underground silos,
- and (c) The creation of a large force of nuclear-powered submarines able to launch ballistic missiles (SLBMs) while submerged

These measures reduced the vulnerability to a counterforce strike. Also, paradoxically, the increased numbers of weapons, especially the virtually invulnerable SLBMs, added to the stability,

- 2 -

since the chance of destroying <u>nearly all</u> of the opponent's weapons became negligible, whereas he could still inflict unbearable retaliation by hitting cities with <u>only a very few</u> of the weapons remaining.

Two technological developments culminating in the early 1970's threatened to disturb the stability of the nuclear balance. One was the appearance of Ballistic Missile Defence (BMD), the other was the Multiple Independently-Targeted Reentry Vehicle (MIRV). If an effective BMD could be erected around the key cities of one of the adversaries, he might feel that he could withstand the attempt at retaliation by those enemy weapons that had survived his counterforce first strike. MIRVs would permit each missile to attack several (instead of only one) of the opponent's weapons, thus greatly increasing the effectiveness of a counterforce first strike against ICBMs, bombers on their bases, and submarines in port. The result could be to destroy the stable balance, or, more likely, to stimulate counter developments which would have the effect of maintaining stability, but at greatly increased cost.

These concerns were at the base of the Strategic Arms Limitation Talks (SALT) between the USA and USSR, which began in 1969 and produced two major agreements often designated as "SALT I" in 1972, with indications in 1974 that a further accord (SALT II) is likely to be signed in 1975. SALT I included a treaty to limit Ballistic Missile Defence to two sites in each country, and an interim agreement to limit offensive armaments. Subsequent negotiations reduced the BMD limitation to one site each. The

- 3 -

limitation on offensive armaments expires in 1977, but will probably have been superseded by SALT II before this date.

Table I outlines the numbers of weapons involved in the SALT agreements. It is seen that SALT I allows a quantitative advantage to the USSR, but that SALT II specifies strict numerical equality. It is probable that both powers will maintain their actual strengths close to the agreed limits.

	SALT I LIMITS		
WEAPON SYSTEM	USSR	USA	
Bombers	Nothing Specified		
ICBMs Older	210	54	
Modern	1408	1000	
Modern SSBNs	62	44	
SLBMs: Replacement level	740	656	
Maximum numbers	950	710	
MIRVs	Nothing Specified		
Ballistic Missile Defence	2 sites	2 sites	
	SALT II LIMITS		
Bombers+ICBMs+SLBMs	2400	2400	
MIRVed launchers	1320	1320	
Ballistic Missile Defence	l site	l site	

## TABLE I

Limits negotiated in the Strategic Arms Limitation Talks

- 4 -

Some anxiety has been expressed about the large number of launchers with MIRVs expected to be permitted under SALT II. But these do not threaten submarines at sea, and if it were believed that they constituted a really serious threat to the ICBMs it is probable that steps would be taken to increase ICBM survivability, such as making them mobile, or concealing them in new very hard sites.

In summary, although the destruction caused by nuclear attack on cities would be truly disastrous, the stability of mutual deterrence makes it extremely unlikely to occur. And the plans and policies of the two Superpowers, as demonstrated by the SALT, are dedicated to the preservation of stable deterrence into the indefinite future.

# 2. MILITARY THREATS IN EUROPE BELOW THE LEVEL OF FULL-SCALE NUCLEAR WAR

As mutual strategic deterence becomes stronger and more stable, the probability of an all-out nuclear war recedes. But the power of strategic deterence to deter lesser forms of aggression becomes correspondingly weaker. The deterrent is only effective if it is credible, and a threat to commit mutual suicide is only credible in terms of very large stakes. The credibility of the strategic nuclear deterrent is even less compelling when applied by one power on behalf of another, or of an alliance.

As a result, it has become necessary to provide a more credible and effective deterrence against levels of aggression that must be opposed, yet do not pose a menace of such a

- 5.

magnitude as to make a threat of retaliation by unrestricted use of strategic weapons carry conviction. This takes the form of "graduated deterrence", or "flexible response", and attempts to provide a highly believable threat of retaliation appropriate to the circumstances. A "ladder of deterrence" is established, extending from the operations of conventionally armed forces up through various levels of use of tactical nuclear weapons on the battlefield to carefully restricted use of strategic nuclear weapons.

A major danger of this approach is that the level of conflict may escalate upwards from the lower rungs of the ladder, especially if the conventionally-armed forces are not strong enough to win, or at least draw, if attacked. Of course the option of escalation is available to the aggressor, too, should he fail to win at a low level of violence.

Unfortunately for the safety of democracy, NATO's conventionally-armed forces are outnumbered by those of the Warsaw Pact, especially in armoured forces, which are the key to an offensive breakthrough in Europe. Table II, taken from The Military Balance, 1974-75 (International Institute for Strategic Studies, 1974) summarizes some of the figures.

	NORTHI CENTRAL WPO		SOUTHERN WPO	EUROPE NATO
Combat & Direct Support Troops	910,000	620,000	355,000	550.000
Main Battle Tanks in Operational Service	20,000	7,000		3,000
Tactical Aircraft in Operational Service	4,350	2,040	905	808
		-/010	505	000

# TABLE II NATO/WPO Balance in Europe, mid-1974

- 6 -

Numbers do not tell the whole story, of course, It is probable that the quality of NATO equipment is better. Although the WPO has more tactical aircraft, a large proportion are interceptors, which are more use in defence than attack. The WPO has the advantage in standardization of equipment and in the speed with which they can mobilize and reinforce.

The rungs of the ladder of deterrence above conventional war but below the use of strategic nuclear weapons mark the various extents of use of tactical nuclear weapons. The gap above which the first nuclear weapon is used is often referred to as "the fire break", representing the last real hope of checking the spreading conflagration. In terms of numbers and variety of tactical nuclear weapons, NATO is believed to have an advantage of about 7,000 to 3,500. What is not known is whether introduction of these weapons will favour the defence or the offence. One of the objectives of US Senator Nunn is to reduce the number of American tactical nuclear weapons in Europe and make a compensating increase in conventional armament.

Multilatural negotiations are under way to discuss reduction of the forces on both sides in Central Europe. These are often labelled "MBFR" for "Mutual and Balanced Force Reductions". The emphasis is on ground forces, but it is possible that air forces and tactical nuclear weapons could be included.

With the current balance somewhat to NATO's disadvantage, the loosening of alliance solidarity and the tendency of most members to reduce their real expenditure on defence could signal serious weakness to come.

- 7 -

# 3. THE NAVAL BALANCE

The NATO allies include several strong naval powers, and in terms of general capabilities their combined fleets are considerably stronger than those of the Warsaw Pact. However, the USSR has the largest submarine fleet in the world and is well equipped to attack the merchant shipping routes on which NATO depends. NATO could not survive denial of the sea, but it would not be fatal to the WPO.

The Soviet Navy has been steadily increasing in strength, and steadily extending its areas of regular operations. It has begun to build aircraft carriers and has led the way in the design of cruise missiles for ships and submarines. The fleets of the NATO allies, on the other hand, are diminishing.

# 4. ASIA

There has been far more evidence of detente between the USA and USSR and between the USA and China than along the Sino-Soviet side of the triangle. This must constitute a serious problem for the WPO when they calculate their balance with NATO.

China is building a force of strategic nuclear weapons, including ballistic missiles as well as bombers, although the ranges of most of them are insufficient to extend beyond Central and Eastern Asia. The composition of the Chinese armed forces appears to be designed for de ensive operations, although they have shown no sign of relaxing their determination to assimilate Taiwan into the Peoples' Republic.

<del>~</del> 8 <del>~</del>

The victory of North Vietnam has brought them enough captured military materiel to qualify as the strongest army in Southeast Asia. This, however, will be a rapidly wasting asset, since much of the high technology equipment will be very difficult to maintain without the support of the manufacturers in the USA.

With Cambodia, Laos, Thailand and Burma all touching Vietnam, there is no shortage of dominoes for those who expect them to fall in sequence. However, the danger of Southeast Asian conflicts spreading to the rest of the world has been greatly reduced by the American withdrawal. Economic concerns for loss of strategic commodities would be much greater if threats developed to Malaysia and Indonesia.

# 5. THE MIDDLE EAST

The most dangerous area today is the Middle East, which possesses in ample measure the ingredients for war: long-standing enmities, border disputes, strong armed forces, and very large economic stakes. And the danger is not just local to the area, since the need for petroleum gives nearly every important country in the world a vital interest in continuing supply. Add the widespread elements of population in many countries who have allegiance to the Arabs or the Jews, the interests of national and multinational corporations with investments in the area, traders who would like to sell armaments or use the Suez Canal, and political forces happy to make trouble wherever it may damage their enemies, and the mixture could hardly be more flammable, or, once ignited, the flames more difficult to contain.

- 9 -

# 6. MILITARY LESSONS FROM THE YOM KIPPUR WAR

The military battles in the Middle East, and especially those of the "Yom Kippur" war of October 1973, contain many lessons for students of warfare with the most modern conventional weapons.

One feature was the tremendous rate of consumption of weapons and ammunition. In a few days the Israelis had used up nearly everything in their arsenal, and the Arabs were probably running out too.

The statistics that drew the most attention were the heavy losses in tanks and aircraft. It was very starkly demonstrated that unsupported tanks attacking defenders equipped with modern antitank guided missiles, and unsupported aircraft attacking over areas equipped with modern surface-to-air missiles (SAMs), are extremely vulnerable. However, the conclusion should not be drawn that tanks and aircraft have no future on the modern battlefield. Valid conclusions would be that tanks need the support of artillery, infantry, and aircraft, and that aircraft need the support of electronic warfare and other operations to neutralize the SAM sites.

Another fact demonstrated in the October war was the high effectiveness of surface-to-surface guided missiles fired from small patrol boats against surface ships.

# 7. NUCLEAR PROLIFERATION

There are many warnings of the high probability that nuclear weapons are going to be manufactured by many countries in addition to the five who have them today (or six, if we include India, whose one nuclear explosion is claimed to be for peaceful purposes only). Certainly the amount of plutonium produced as an inevitable by-product of nuclear power reactors will soon be adequate for the construction of an enormous number of weapons, although the extraction of weapons-grade fissile material from the spent fuel rods is not a simple matter. The indifferent success of the Non-Proliferation Treaty, and its lack of power to control nations not wishing to comply, do not inspire confidence.

There are three types of nuclear proliferation, with different types of attendant dangers.

Vertical proliferation applies to a nation which already possesses nuclear weapons, but increases the number. Once the number is high, as is already true for the USA and USSR, the mechanism of stable deterrence begins to operate, and whether a further increase represents a danger or not may depend on the type of weapons being added. An additional number of SLBMs could be stabilizing, an additional number of very accurate MIRVs destabilizing. If China only needs a few more IRBMs to achieve a state of stable mutual deterrence with the USSR, the acquisition of these could reduce the danger of war.

Horizontal proliferation is the term used for the first acquisition of nuclear weapons by a nation. It is, in general, probably more dangerous than vertical proliferation, but obviously the danger depends on which nation is going nuclear, and under what circumstances. It could reduce the dependence on alliances. If hereditary enemies are already on the brink of war, and one or both

- 11 -

acquires nuclear weapons, the war could be made less, or more likely to occur. If it does break out, it would probably be made considerably more destructive. The efforts to stop it made by allied or uncommitted powers could be stimulated, or could lead to their involvement as participants.

A third type of possible nuclear proliferation is at levels below that of organized national governments. This could occur through the capture of weapons from military depots by a revolutionary movement in the course of an uprising or civil war, or by theft or fabrication by a political or criminal group. The latter type of proliferation is unlikely to cause war between nations, but it could result in the death of tens of thousands of people and major disruption of civilized law and order. In fact, the proliferation of nuclear weapons at the sub-national level is the sort of development that will make the world very unsafe for democracy.

# 8. OTHER DANGERS

International instabilities within countries are on the increase on all five continents, and the danger that these will erupt into overt violence appears to be growing. In many cases both governments and revolutions are managed by the military. However, most of the conflagrations have been of short duration, and most have been contained within the borders of one state.

It seems probable that the coming decades will see plenty of national revolutions of varying degrees of violence. In many cases there will be little danger of extension to international

- 12 -

conflict. But when there are ideological, racial, or economic interests shared by large groups in several countries, and when some of these countries are themselves unstable, the violence could be contagious.

Two of the disasters being discussed under the rubric of "World Crisis 1975", namely world war and the collapse of democracy, are unlikely to descend on us in the next few years as a result of a carefully premeditated and intentional plan. They are more likely to come about by an unfortunate combination of circumstances causing one of the local outbreaks of violence to involve larger powers to an extent that they are drawn into the conflict. The result could escalate to a world war, or it could produce political changes spelling the end of democracy.

- 13 -