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STRATEGIC DETERRENCE AND THE EAST-WEST BALANCE

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D E T E R R E N C E

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## DETERRENCE

### 1. Introduction

Basic idea of deterrence is to cause an opponent who may be contemplating a hostile action to estimate that it will result in his suffering more harm than the expected gains are worth.

Conditions for deterrence: Potential aggressor must estimate that  
(Losses if aggression conducted)(or continued) > (Benefits to be gained)

- Deterrence works on the forecasts and expectations of a thinking opponent
- and hence has a strong psychological content
- depends for its success on what the opponent thinks may happen, rather than on what we think will happen, or what really will happen

Could not deter a flood or a plague of locusts, can only defend against it

Can deter thinking opponents, by instilling fear of the consequences of attack

Deterrent Effect = (Effectiveness of Armaments if Employed)

x (Probability that they will be employed)

First factor is military and technical, should be capable of objective assessment (if information is available)

Second factor is psychological and political, is probably capable of only subjective assessment.

Before going into a discussion of strategic nuclear deterrence we could spend a few minutes discussing deterrence in general, and its historical development.

- taking of hostages

Genghis Khan and Tamerlane -- any resistance brought absolute destruction. This deterred subsequent victims of attack from offering resistance

Usually the means of deterrence was also the means of defence, i.e., army or navy

- for the more civilized nations, the punishment for attacking and failing to succeed was to be defeated in the field (or sunk at sea)
- also, possibility of subsequent counter invasion - sack of cities, loss of territory, complete absorption, annihilation

Attack and defence were carried out by the same type of force, weapons were not much differentiated

- there was no way of striking directly at the homeland without first overcoming its land and sea defences

## 2. Changes In Weapon Systems Have Altered This Situation

- offensive airpower made it possible to attack industrial and population centres deep inside enemy territory, without first defeating his army or even his airpower
- nuclear fission weapons multiplied this capacity by a factor of several thousand
- thermonuclear fusion weapons multiplied it by yet another factor of several hundred
- ICBMs and SLBMs removed all limits to range and any need to overcome defences
- destructive power approached the limits of saturation
- *There were no defences that could be done with to retaliate*

## 3. The Choice Between Deterrence And Defence

- the type of force best adapted to retaliate and punish is not necessarily well suited to provide direct opposition, denial of territory, or defeat of an army in the field
- the object of deterrence is to prevent a war breaking out
  - to replace the use of force by the threat of force
  - to a large extent it has failed if the weapons have to be employed to destroy rather than to threaten
  - but there still may be the possibility of "intra-war deterrence", i.e. halting of a war that has started but not yet reached the ultimate level of violence

- Defence is to win a war after it breaks out, or at least to fight the enemy until he decides to stop

#### 4. Unilateral Nuclear Deterrence

- applied in 1950's when U.S. nuclear power was dominant
- use of 2 nuclear weapons in Hiroshima and Nagasaki acted as a very effective deterrent in continuing the war
- 1952 NATO estimated need for 96 divisions plus 9000 aircraft to be able to defeat, USSR conventional forces - even with FRG, reached only 26 divisions plus 1400 aircraft
- Dulles' doctrine of "massive retaliation" was announced in 1954
- unilateral nuclear deterrence applies today between a nuclear power and a non-nuclear power without a nuclear ally
- but the psychological and political costs are almost certainly too high for the nuclear power to seriously contemplate use of the weapon, or for the non-nuclear power to give much credibility to the threat

#### 5. Bilateral Strategic Nuclear Deterrence

There were important changes in the strategic situation between the USA and the USSR resulting from technological developments of strategic nuclear weapons

- long range armed patrols with "failsafe" procedures
  - bombers still vulnerable on the ground
  - Airborne alert practiced
- carrier aircraft could deliver strategic attack with nuclear weapons
- IRBMs of Thor and Jupiter types required basing in Europe, were very vulnerable to pre-emptive attack, and could only be launched after a fairly long preparatory count-down
- ICBMs of early Atlas type could be based in USA, but were very soft, and shared other defects of vulnerable slow-to-launch rockets

- later Atlas, Titan and Minuteman ICBMs were in protected sites, in most cases buried silos, and time to launch was reduced by changes such as going to solid rocket fuels
- missile submarines were developed, carrying ballistic missiles of progressively longer range
- qualitative improvements in the accuracy of the missiles and in the potency of the nuclear warheads
- development of multiple warheads, first without individual guidance and then independently targetted

USSR - made some but not all of the same developments

- did not establish forward bases for bombers close to USA, and were foiled in their attempt to do this with IRBMs and in Cuba
- did build hundreds of MRBMs and IRBMs able to hit Western Europe from the Soviet Union
- do have SLBMs and hardened ICBMs, in numbers exceeding USA, and latest SLBM version has no longer range than Poseidon
- have fitted multiple warheads
- have organized much more thorough civil defence measures than USA
- Soviets have caught up. Present situation has been described as "parity", or "essential equivalence", with concern that the USSR is about to achieve superiority

## 6. Stability Of Bilateral Strategic Deterrence

At the period when Wohlstetter wrote of "The Delicate Balance of Terror", (1959) deterrence between the USA and the USSR depended on bomber aircraft on soft bases, and vulnerable slow-to-fire missiles

- a strong advantage for the one to strike first against opponent's offensive weapons
- hence, in a crisis, a strong motivation to strike before the weapons were destroyed
- very unstable. Danger of war by mistake

Subsequent changes removed most of the motivation to strike first, or even quickly

- can say that the balance had become more stable

But we shall enlarge the definition of crisis stability to include three concepts:

1. No rational motive to strike first  
e.g., a pre-emptive strike, or one to prevent opponent becoming stronger
2. No incentive to "fire in warning" or set a "hair trigger response"
3. Not dependent on precise knowledge of enemy forces, i.e.,  
deterrence not removed by small changes in numbers (real or imagined)

Steps to reduce probability of accidental war include "hot line" and technical precautions against unauthorized or accidental detonation. Remarkably and extraordinarily successful

Large forces enhance stability. Good intelligence, both strategic and tactical. Good surveillance. A warning system. Invulnerable weapon systems. Immense significance of reconnaissance satellites, also monitoring of missile testing of telemetry and radar.

There is another type of stability, related to the incentive to build new weapon systems (rather than to start an attack), and acting over a period of years rather than hours or days. It is possible for a new weapon to enhance crisis stability, but to produce arms control stability. An example is the cruise missile.

## 7. Nuclear Alliances

An alliance represents a pooling (which may be far less than complete) of the resources, risks, and strategies of the allies

- if one or more of the allies possesses strategic nuclear weapons, and announces that an attack on any ally is an attack on all, then all benefit from the strategic nuclear deterrence of an enemy of any one (the "nuclear umbrella")
- however, the question of credibility is even more vital than for bilateral deterrence



- is a country that does possess N. Wps. really ready to risk its own existence to revenge an attack on its allies?
- institution of two-key system allows veto on use by either

If several allies each have independent nuclear forces they can at least plan joint targeting.

Within NATO, the problem of "linkage" or "coupling" between the function of NATO nuclear weapons based in Europe to deter or resist attack in Europe, and the function of nuclear weapons based in America to deter attack on Europe.

#### 8. The Nuclear Stalemate

- The more stable the balance becomes, the less credible is the threat to use strategic nuclear weapons, and, a fortiori, when the issues at stake are far below that of national survival.
- So it is becoming increasingly <sup>accident</sup> probable that strategic nuclear deterrence <sup>may</sup> will not suffice to deter a small or medium conflict
- While the threat of nuclear punishment may be rational, its execution against a power able to retaliate in kind is irrational

#### 9. Graduated Deterrence

- Little credibility of all-out response ("destroying the world") as a logical reply to a small provocation.
  - not only incredible but also inappropriate
- Concept of graduated deterrence, or flexible response
  - "Make the punishment fit the crime", or the costs fit the stakes
- Clearly evident preparations to take punitive steps short of all-out nuclear retaliation show determination, and probably increase the credibility that all-out nuclear retaliation would be employed in the last resort
- Ability for escalation through rising levels of violence
  - Could it be controlled? Where could it stop?
  - Would either side accept not to win?

- Mutual Assured Destruction (which represents the top rung of the ladder of escalation) may be effective in deterring the taking of the first step
- but doubts exist about possibility of stopping escalation once it starts
- Escalation is at once a danger that needs to be met and a threat that could not and should not be surrendered (R. Aron)

#### 10. Tactical And Theatre Nuclear Weapons

Technically, it is possible to make nuclear weapons of small yield - (1 Kiloton or less) - and of correspondingly small dimensions and weight

- could be considered as no more than a normal extension of battlefield weapons
- however, they are sufficiently more powerful than conventional explosives, and sufficiently important, militarily, politically, and psychologically, that they deserve special categorization and analysis in their own right
- if used extensively, TNW would certainly dominate an open battlefield and <sup>probably</sup> modify it out of all recognition
- not obvious whether they would prove a net advantage to the offence or the defence

Now exist in the form of artillery shells, missile warheads, (SSM, SAM, ASM, AAM), aerial bombs, ADMs. Many systems are now "dual capable" (e.g., bomber aircraft, guns)

- their presence creates a threat to an attacker hoping to confine the battle to conventional weapons, as he will be reluctant to concentrate his troops and thus offer lucrative targets for tactical nuclear weapons
- to apply the strategy of deterrence to the European Theatre, the chief role of nuclear weapons is to put several credible steps on the ladder of graduated response, above the level of conventional response, but short of the level of (limited) use of strategic nuclear weapons
- need to retain firm political control

- there is no clear distinction between a strategic and a tactical weapon (nuclear or conventional). It is the use which makes the distinction. NATO speaks of "tactical use of nuclear weapons" not "use of tactical nuclear weapons". Other terminology preferred in recent years has been "theatre nuclear weapons", and then "intermediate and short range nuclear forces".
- use of Soviet IRBM on German city may not be considered strategic by the USSR but will be by FGR
  - question of location of short range tactical nuclear weapons
  - near the front so they are available from the beginning - but there is the risk of early capture
  - hence a motive for premature use
  - or well back?
  - possibility that Soviet forces intend to use tactical nuclear weapons anyway, and early, in which case NATO's threat to use them has little deterrent value
- NATO program for Intermediate Nuclear Force Modernization
  - to strengthen the longer range component, allowing selective use against targets in Western USSR
    - i.e. deny the Soviet Union a "sanctuary"

#### 11. The Ladder Of Deterrence

All-out counter-city destruction  
All-out counterforce attack  
SNW Limited and selective use of strategic nuclear weapons  
vs military targets  
Demonstration use of strategic nuclear weapons vs one or  
a few selected points

#### ACTION OF INDEPENDENT NUCLEAR FORCES

All-out use of tactical nuclear weapons on battlefield and  
for interdiction  
TNW Selective use of tactical nuclear weapons on battlefield  
Use of very small tactical nuclear weapons only on battlefield  
Use of tactical nuclear weapons at sea

THE "FIREBREAK"

Offensive use of CW

Full-scale conventional war

Limited conventional military operations not employing armour  
or heavy army

Armed reconnaissance, skirmishing

THRESHOLD OF VIOLENCE

Harassment at sea

Economic Sanctions, Diplomatic Pressure

12. The East-West Balance

The dilemma of the British and French nuclear forces

- UK, Fr, NATO, USA consider them to be national strategic deterrents
- USSR considers them to be part of the NATO inventory that  
threatens USSR homeland
- Tacit compensation in SALT I (No. of SLBM: No. of heavy ICBM)

The history of the long-range nuclear forces

- I ICBMs (Throw Weight, no. of warheads)
- II SLBMs (range, no. of warheads)
- III Intercontinental Bombers (Payload, no. of aircraft)
- IV Comparison of strategic warheads (no. of warheads, Throw Weight)
- V INF land-based missiles (range, no. of warheads)
- VI INF SLBMs (range, no. of warheads)
- VII Long range theatre nuclear-capable aircraft (combat radius, no. of warheads)
- VIII Land-based nuclear-armed missiles after NATO deployment (no. of  
launchers, Megatonnage)
- IX Air-delivered nuclear weapons (no. of warheads, no. of aircraft)
- X Land-based INF aircraft (no. of aircraft)
- XI Shorter range nuclear forces (no. of systems)

Balance of Conventional Forces in Europe

XII Aircraft in Europe (no. of aircraft)

XIII Land forces in Europe (numbers)

Maritime balance cannot be meaningfully struck in a table of numbers

- strategic requirements are so different: sea control and sea denial

Crude Summary might be:

- Intercontinental Strategic Nuclear Weapons - each has more than enough
- European Theatre - Nuclear - W.P. significantly ahead in  
intermediate range land-based missiles
  - Conventional - W.P. ahead in land-based forces
- Maritime - Questionable whether NATO has forces adequate to preserve the North Atlantic SLOC

For Triad of Deterrence, West

- could accept mutual reductions in strategic nuclear forces
- needs to improve the balance in European INF and conventional forces
- needs to strengthen its capability to defend <sup>European territory and</sup> the North Atlantic SLOC