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ASIAN BALLISTIC MISSILES AND WEAPONS OF MASS DESTRUCTION: THE IMPACT OF MISSILE DEFENCES

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DIIS Working Paper no 2005/1

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Contents

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Abstract

The paper analyses critically the threat perceptions of the West, and especially the United States, regarding ballistic missiles and weapons of mass destruction in the hands of Asian states. Reviewing Southwest, South and Northeast Asia it finds these regions to be more stable as commonly assumed and little evidence to support the assumption that the states in these regions are undeterrable. A deployment by the United States of ballistic missile defences is thus found to be both superfluous and possibly destabilising. However, a mobile boost-phase defence is found to be less potentially destabilising than other missile defence "architectures".

1. Asia and the Great Missile Scare

For some reason, ballistic missiles tend to be lumped together with weapons of mass destruction (WMDs, in itself a rather heterogeneous category comprising nuclear, biological and chemical weapons) as particularly dangerous and threatening.

Even though one may well question the logic in so doing (considering the, in many respects, superior potential of aircraft and/or cruise missiles)[1] it remains a fact that missiles are perceived as destabilising and as a special problem demanding a solution, either in the form of arms control initiatives or preemptive strikes, or of missile defences. Indeed, the 11 September attacks against the United States even seem to have reinforced this impression, at least in the American public—not because even the best missile defences would have had any impact whatsoever on the attack, but rather because it seemed to prove that "somebody was out to get the USA" without any inhibitions with regard to the means employed.[2]

The "missile scare" and the plans for US missile defences have been closely linked to the discourse on so-called "rogue states", also known as "states of concern" or, most recently, as the "axis of evil".[3] It just so happens that all three "evil" states, i.e. Iran, Iraq and North Korea, are located in Asia, and it strains the imagination to envision any (alleged or genuine) missile threats against the United States emerging from other continents—e.g. in the form of a repetition of the Cuban missile crisis of 1962. Hence, Asia is central to the missile defence controversy, especially if we count the Middle East and the Persian Gulf regions as parts of Asia, i.e. as Southwest Asia—a term habitually used by the American armed forces.

In the present article, the basis of these concerns about Asian ballistic missiles and WMDs is analysed critically, as is the potential impact of a US deployment of a missile defence system on "deterrence stability" in Asia. A central premise of this analysis is the author's belief in what has been called "existential deterrence", i.e. the (neorealist) assumption that the presence of nuclear weapons can be stabilising in the sense of making any war utterly unattractive.[4]

2. Asian Security Complexes

Asia is a big place, and the first we must do in order to analyse the impact of missile defences on Asia is therefore to subdivide the continent into regions or, in the terminology of Barry Buzan *et al.*, "regional security complexes" (RSCs).[5]

For the purposes of the present paper, I have chosen to subdivide the Asian "super-region" into the RSCs of Northeast, Southeast, South, Southwest and Central Asia—all of which exhibit a certain overlap with each other, and some of which even have an overlap with regions not counted as parts of Asia (see Table 1).

Table 1: Asian Regional Security Complexes

Central (CA)	**Southwest (SWA)**		**South (SA)**	**Southeast (SEA)**		**Northeast (NEA)**
(Afghanistan)	**Iran**	*(Iraq)*	**India**	**Vietnam**	Laos	***ROK***
Kyrgyzistan	**Saudi A.**	Kuwait	**Pakistan**	Thailand	Cambodia	**DPRK**
Kazakhstan	Qatar	Bahrain	Nepal	Myanmar	Malaysia	*Japan*
Azerbaijan	UAE	**Yemen**	Sri Lanka	Phillipines	Indonesia	Mongolia
Turkmenistan	Oman	Jordan	Bangladesh	Singapore	Brunei	**China** (+SEA)
	Syria	Lebanon	Bhutan			**Russia** (+EUR)
	Israel	(Palestine)				
		Turkey (+EUR)		(***Taiwan***)		

Legend: UAE: United Arab Emirates; ROK: Republic of Korea; DPRK: Demokratic People's Republic of Korea; EUR: Europe; **boldface**: in possession of or developing missiles; *italics*: potential coverage by US missile defence; ( ): special case, not sovereign state; (+ …): also belonging to …

Most of these countries and RSCs are not directly relevant for our present purposes, i.e. the analysis of the implications of missile defences, either because none of the countries comprising the RSC in question have missiles or missile defences, or because they would not be covered by US missile defences. Those that are relevant are inter-connected in a rather complex network of enmities, rivalries, amities and loose alliances, which we may depict as interlocking triangles (see Fig. 1).[6]

Fig. 1: Strategic Triangles in Asia (illustration)

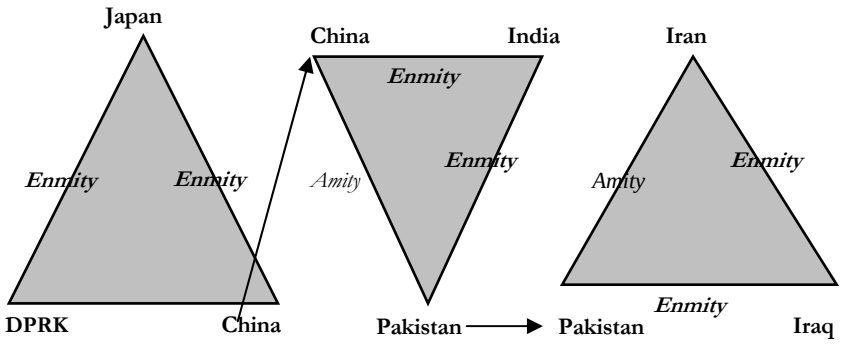
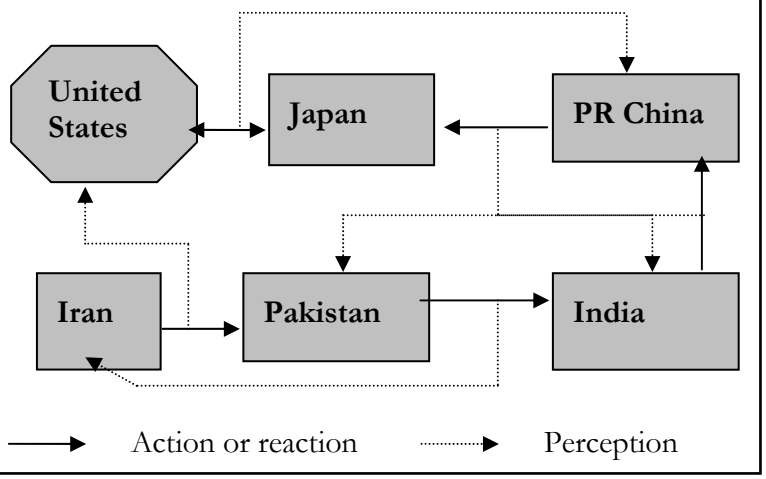


Fig. 2: Strategic action-reaction chains in Asia



By implication, whatever happens within one dyad of countries may well have repercussions for the entire triangle as well as for those with which this interlocks. Hence, for instance, Chinese perceptions of US-Japanese relations may indirectly impact on Indo-Pakistani relations, as China responds to Japan but thereby (however inadvertently) impacts on Indian security—thereby provoking an Indian reaction impacting indirectly on Pakistan, the reaction of which may impact on Iran, etc., as illustrated in Fig. 2.[7] If we take potential feed-back loops into account this may make the situation rather unpredictable.

In the following sections, the possible impact of the deployment of missile defences on these regional security dynamics will be illustrated with a number of scenarios.

3. Asian Ballistic Missiles and WMDs

Before we proceed with an analysis of the importance of Asian ballistic missiles, the (alleged or genuine) risks associated with, and threats represented by them, and the potential impact of missile defences, an overview of the arsenals seems in order. Important parameters include the following:

- the state of development of the missiles in question, ranging from "under development" to "fully deployed", which (for rather obvious reasons) corresponds roughly to the reliability of the available information;
- the number of missiles deployed or planned, the latter often being a matter of estimates rather than certainty;
- where the missiles are deployed, which has implications for both their potential target set and their vulnerability to counter-force strikes as well as for the effectiveness of various types of defences against them;

- the range of the missiles, which has implications for whom they may threaten, the usual categorisation being short (>1,000km), medium (1,000-3,000km), intermediate (3,000-5,500km) and intercontinental (5,500km>);
- the payload of the missiles, which matters for an assessment of their missions as much larger amounts of conventional munitions are required for afflicting major damage than are required for WMDs;
- the estimated accuracy of the missiles (usually measured in terms of CEP: circular error probable) which determines whether they may be suitable for counter-force (i.e. warfighting) or merely for counter-value (i.e. deterrent) missions;
- the fuelling system (solid or liquid) which has implications for the vulnerability of the missiles, liquid-fuelled ones taking longer to ready for launch than solid-fuelled ones;
- the ownership of the missiles, i.e. whether they belong to the country where they are deployed or to another state (usually the United States);
- the origin of the missiles, i.e. whether they are (fully or partly) indigenously produced or imported, which has implications for the vulnerability of the state deploying them to arms embargoes as well as for the potential for upgrades;
- whether they are being exported to others.

Table 2 lists missiles by countries and provides data for some of the above parameters. There is some variation of the estimates by various sources, but none seem to have significant implications for the following analysis.[8]

Table 2: Short and Medium-range Ballistic Missiles in Asia

Type / Country	IRBM/MRBM				SRBM			
	Name	**Range (Km)**	**Payload (Kg)**	**No.**	**Name**	**Range (Km)**	**Payload)Kg)**	**No.**
DPRK	Nodong-1	1000	1000	100+	Hwasong 5	280-330	985-1000	500
	Nodong-2	1500	770-1000	-	Hwasong-6	5-700	5-700	
	Taipodong-1	1500-2200	1000	-				
	Taipodong-2	3500-6000	1000	-				
ROK					NHK-1/-2	150-250	300	12
					Hyun Mu	180-320	300	-
China	Dongfeng-11A	1000-1200	4-500	-	Dongfeng-11	300	500-800	40
	Dongfeng-21/21A	2000	600	8-50	Dongfeng-15	600	500-950	150-200
	Dongfeng-3/3A	2650-3000	2150	80-100	M-7 BSRBM	160	90	?
	Dongfeng-4	5500	2200	10-30				
Taiwan	*Tien Ma*	950	500	-	Ching Feng	100-130	275-400	?
Vietnam					Scud-B	300	985	?
India	Agni-2	2000	1000	?	Prithvi-1	150	1000	12-75
	Agni-3	3000-5000	?	-	*Prithvi-2*	250	500-750	-
					Prithvi-3	350	500-1000	-
Pakistan	Ghauri-1	1000-1500	500-750	12+	Hatf-1/-1A	60-80	500	80
	Ghauri-2	2000-3000	700	-	Hatf-2 (Abdali)	280-300	500	?
	Shaheen-2	2000-2500	1000	-	Hatf-3	290-600	500	?
					Shaheen-1	7-800	1000	?
					M-11	280-300	800	30
Afghan.					(Scud-B)	300	985	?
Kazakh-stan					Tochka-U	120	480	?
					Scud-B	300	985	?
Iran	*M-9 Variant*	800	320	-	CSS-8 (BSRBM)	150	190	
	Shahab-3	1300	750	-	*M-11 Variant*	400	500	-
	Shahab-4	2000	1600	-	Nazeat (BSRBM)	120	190	?
	Shahab-5	4000	750	-	Shahab-1	330	985	?
					Shahab-2	550-600	500	?
Iraq	Al-Aabed	2011	750	†	*Abadil* (BSRBM)	150	?	-
	Al Abbas	900	300	†	Al Hajra	650	500	†
	Badr-2000	1000	450	†	Al Hussein	650	500	†
Syria	M-9 Variant	800	319	?	M-11 Variant	280	800	?
					Scud B	321	985	?
					Scud C	500	500	?
					Scarab	70	480	?
Saudi Arabia	CSS-2	2800	2150	?				
Israel	Jericho-2	1500	1000	?	Lance (BSRBM)	130	450	?
					Jericho-1	500	500	?

Legend: No: numbers; IRBM: Intermediate-range ballistic missile; MRBM: Medium-range ballistic missile; SRBM: Short-range ballistic missile; BSRBM: Battlefield short-range ballistic missiles; *italics*: under development; (in brackets): significant variation between sources; ?: no data available; †: halted

Distinctions between missiles become blurred when we enter the realm of nuclear-armed ones, as these are, in a certain sense, both global and regional, and strategic rather than tactical or operational, both because all missiles usually referred to as strategic may also be used at shorter ranges and because submarine-based missiles have an effective range far exceeding that of the missiles themselves. Hence, any comparison of missiles in Asia has to take into account those of the non-Asian or "not only Asian" nuclear powers, i.e. the United States, the UK and France, on the one hand, and Russia on the other. See Table 3 and Chart 1.[9]

Chart 1: Nuclear Warheads

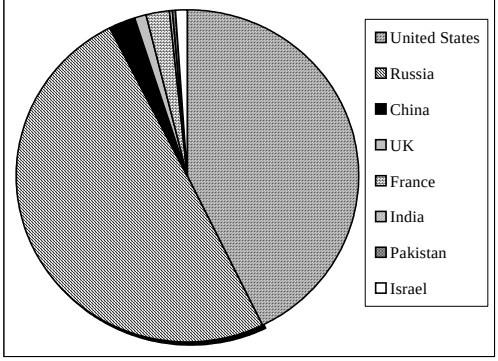


Table 3: Nuclear Warheads

Deployed on Country	Aircraft	Landbased missiles	Seabased missiles	Other	Total
United States	1,660	1,600	2,688	1120	7,068
Russia	864	2,916	1,072	3,380	8,232
China	150	120	12	120	402
UK	0	0	185	0	185
France	60	0	288	0	348
India	?	?	0	?	30-40
Pakistan	?	?	0	?	30-50
Israel	?	?	?	?	Ca. 200
Total					**16,525**

While the capabilities listed in tables 2 and 3 provide some clues to what states are able to do, they tell us little about what they are likely to do, which depends mainly on their national security doctrines and military strategies.[10]

4. Missiles and WMDs in Southwest Asia

For simple reasons of geography the military capabilities of countries in Southwest Asia, i.e. the Middle East and the Persian Gulf, have attracted a good deal of attention. Paradoxically, however, the European countries who would be most likely to come within reach of missiles deployed in SWA in the foreseeable future have been much less concerned about them than the United States, which would be protected by sheer distance much longer.[11]

SWA has indeed seen a general proliferation of missiles,[12] but most of the missiles deployed have a very limited potential unless combined with WMD. In the assessment of Martin Navias,

> Most ballistic missiles now in the hands of Middle East states are neither accurate enough to provide a hard target kill capability nor are they large enough to carry sufficient high explosives to do massive damage either to populations or property (...) Non-conventional strikes certainly could be far more effective against military targets and far more devastating against civilian ones.[13]

Even though SWA is far from bipolar, but features a complex network of criss-crossing conflicts and alignments, we shall nevertheless focus on two central conflicts, namely the loosely bipolar one between Israel and the Arab countries and the triangular one between Iran, Iraq and the GCC countries.

The oldest of these is the Arab-Israeli conflict, pitting Israel (more or less directly) against the Arab states, albeit mainly against Egypt and Syria, whereas neither Lebonon or Jordan nor the Palestinian "non-state" play much of a military role. This conflict has already seen some employment of ballistic missiles, as when the Egyptians and the Syrians launched both *Frog* and *Scud* strikes against Israel during the Yom Kippur War of 1973, yet with very little impact.[14]

As far as capabilities are concerned, Israel possesses both short and longer-range *Jericho* missiles, which are indigenously produced, albeit probably with some US assistance. The rationale for this Israeli quest for a ballistic missile capability is less clear than that of the Arab states, because of its unchallenged air superiority which would allow it to rely on aircraft.[15] What may explain it is that the Jewish state has (probably since 1967) also been in possession of nuclear weapons, now numbering around 200 warheads, albeit without ever officially declaring itself a nuclear power.[16] In addition to these offensive capabilities, Israel is also building an indigenous missile defence capacity in the form of the *Arrow* system,[17] just as it has received US support for its defence against Arab missiles (*vide infra*).

Besides Egypt, Syria has placed a considerable emphasis on the acquisition of missiles as well as WMD in the form of chemical (and perhaps even biological) weapons,[18] probably as an asymmetrical counter to Israeli air superiority and nuclear weapons capability. Whereas Syria has not been able to deter minor Israeli attacks (much less to re-conquer the lost Golan Heights), its combined ballistic missile and chemical weapons capability may have deterred more substantial Israeli attacks. If so, deterrence holds in the Middle East proper, in the sense of forcing all parties to limit their military ambitions, as decisive victories have been rendered unachievable—also because of Israel's de facto alignment with both Turkey and the United States[19] and the countervailing option of "pan-Arab" support for Syria.[20] Whereas the Arab

side remains inferior, the balance of power may still be even enough (albeit in an asymmetrical sense) to militate strongly against any major war.

In the Persian Gulf the situation may be somewhat more unstable, as there are several overlapping and interlocking conflicts (also interlocking with those of the Middle East proper) as well as major external, i.e. American, involvement.[21] Ballistic missiles have proliferated throughout the region (*vide infra*) and they have been used quite extensively, mainly in the course of the Iran-Iraq war from 1980 to 1988.[22] It saw, among many other atrocities, a "war of the cities", fought partly by means of missiles. However, according to Navias this was "one of the smallest strategic bombing campaigns in history" with a "mere" 20,000 tons of high explosives dropped on Teheran, compared to, for instance, the 1.2 million tonnes dropped on Germany in 1944.[23] Moreover, the war saw a use of chemical weapons, perhaps inadvertently encouraged by the US restoration of diplomatic relations with Iraq in September 1994, which was almost immediately followed by major Iraqi missile attacks against Iranian cities and the use of chemical weapons.[24]

Both prior to, during and after this war Iraq was engaged in a quest for a ballistic missile capability,[25] as well for a full panoply of WMDs, i.e. both chemical,[26] biological[27] and nuclear weapons.[28] After the 1991 war it was revealed that Iraq had stockpiled large amounts of chemical and smaller amounts of biological weapons, and that it had come rather close to developing nuclear weapons. The 1990/91 "Gulf War II" also saw a rather extensive use of missiles, albeit not primarily ballistic ones. The most substantial use of missiles was, beyond comparison, the US launches of land-attack cruise missiles against Iraq, perhaps most decisively against its air control centres, thereby effectively crippling the entire air force and air defence.[29]

In retaliation (and lacking other means of delivery, its airforce having been effectively downed) Iraq launched a limited number of *Scud* attacks against both Israel and Saudi Arabia, yet thereby causing only minimal damage.[30] Indeed, the main rationale for these strikes may have been to provoke an Israeli retaliation which would probably have forced Egypt and Syria (aligned with the US-led coalition against Iraq) to switch sides. It is also significant that Iraq, despite its possession of both chemical and biological munitions chose to use neither,[31] most probably because it was deterred by the fear of US nuclear retaliation. The defence against these Iraqi missile attacks consisted both of an offensive, but rather ineffective, "*Scud* hunt"[32] and of actual missile defence, represented by US *Patriot* batteries which were hastily deployed to Israel, Turkey and Saudi Arabia, yet with a performance record which remains disputed to the present day.[33]

Ballistic missiles or WMD were not forgotten after the war either, but an attempt was made in April 1991 (with UN Security Council Resolution 687) to rid the region of long-range missiles as well as WMD. First of all, Iraq was denied the right to missiles with ranges in excess of 150 kilometres as well as to all three categories of WMDs. Secondly, the resolution also contained a commitment to transform the entire Middle East into a zone free of WMDs, which was almost immediately forgotten and subsequently completely disregarded.[34] Even though UNSCOM was established to oversee the Iraqi implementation of UNSCR 687 (and to some extent itself contribute to this implementation),[35] a tug-of-war ensued, with Iraq placing obstacles in the way of UNSCOM inspection teams and only yielding to pressure to enforce what amounted to the most intrusive inspection regime ever imposed on a sovereign state. Nevertheless, UNSCOM managed to oversee the destruction of 48 operational long-range missiles, 14 conventional missile warheads, 6 operational mobile launchers, 28 operational fixed launch pads, 32 fixed launch pads (under construction), 30 missile chemical warheads and other missile support equipment and materials.[36]

After a major crisis in 1998, the United States and the UK in December of that year launched "Operation Desert Fox", featuring massive missile and air strikes against Iraq over a short period, yet without accomplishing anything at all.[37] The UNSCOM inspectors having been withdrawn by the UN in anticipation of these air strikes (not, as often alleged, expelled by the Iraqi government), a slightly different arrangement was mandated by the UN (in UNSCR 1284 of 17 December 1999) in the form of UNMOVIC.[38] Following overt US threats to attack Iraq with or without UN authorisation, the Security Council in November 2002 passed a new resolution (UNSCR 1441), making the inspection regime even more intrusive. After the arrival of the UNMOVIC inspectors they decided to ban the *Al-Samoud* missiles for being "inherently capable of ranges of more than 150 kilometres" and to place question marks around the *Al-Fatah* missiles.[39] Even though Iraq may well have been correct in alleging that the *Al Samoud*'s effective operational range (i.e. mounted with warheads) would fall below the 150 kms. threshold, Baghdad nevertheless consented to the demand for destruction and initiated a fast-track destruction of the missiles. In its first post-war report, dated 30 May 2003, UNMOVIC was thus able to conclude that

> (8) In the period during which it performed inspection and monitoring in Iraq, UNMOVIC did not find evidence of the continuation or resumption of programmes of weapons of mass destruction or significant quantities of proscribed items from before the adoption of resolution 687 (1991).

> (10) Following a determination by the Commission that the Al Samoud 2 missile system exceeded the range limits set by the Security Council and hence was proscribed, the Commission implemented a programme for destruction. Some 70 missiles and associated equipment were destroyed under Commission supervision before its operations were suspended.

By that time, however, Iraq had been attacked by a coalition led by the United States and a handful of other states. The occupation following the defeat of Iraq and the deployment of more than one thousand US inspectors was unable to reveal any proscribed weapons or production facilities. Even more significant was the (often unnoticed) fact that the war itself had refuted the claim that Iraq constituted a threat to peace (as alleged by the invaders), simply by being waged and won without Iraqi use of any proscribed weapons—either because it had none or because it was deterrable. It strains the imagination to envisage any circumstances under which Iraq would have used such weapons when it did not use them to prevent the fall of Baghdad.

In retrospect, Iraq may even have been complying much more satisfactorily with UNSCOM and especially UNMOVIC demands than commonly assumed. The allegations of Iraqi non-compliance and lack of co-operation with UNMOVIC voiced by the USA and others were all based on the premise that Iraq *did* possess WMDs, hence that its failure to admit this was tantamount to deception. However, we now know (certainly beyond any reasonable doubt) that the statements by Iraq about its non-possession of WMDs were right and those by the Americans (about their presence) wrong. As the Iraqi authorities could not reasonably be criticised for not revealing what we now know did not exist, it seems that they were not the ones to deceive the world community.

Iran is likely to already possess chemical weapons,[40] and it has long been suspected that the Islamic Republic is aiming for a nuclear weapons capability as well.[41] In addition to this, Iran has a substantial arsenal of fairly long-range ballistic missiles, which might prove suitable means of delivery.[42] Even though they are probably mainly intended for deterrence (of a resurgent Iraq or of the United States, perhaps even Israel) they might also be used for attack or "compellance", e.g. of the UAE in a hypothetical struggle over the three disputed islands, Abu Mussah and the Greater and Lesser Tunbs.[43] Saudi Arabia is in possession of ballistic missiles as well,[44] probably mainly intended for deterrence of Iraq and/or Iran. Even more importantly, however, it remains covered by an implicit US security guarantee, the value of which became obvious during Operation Desert Shield in 1990-91.

There is no evidence to support the allegation that the states of SWA are undeterrable. Hence, for all its enmities and its history of wars, SWA may thus be far more stable than it often assumed. A deployment of US missile defences will probably not make much of a difference, except for the impact it might have (in the case of mobile theatre missile defences) on the United States itself by "immunising" it from being deterred from intervention by a (hypothetical) Iranian missile-*cum*-WMD deployment. Whether this is to be applauded or regretted is a matter of contention which needs not bother us in this connection.

5. Missiles and WMDs in South Asia

The rationales for India's and Pakistan's quest for ballistic missile and nuclear weapons capabilities are several. More than anything else, however, they are interrelated in the sense that Pakistan's main reason for wanting a particular system is India's possession of such a system, and vice versa. There is, however, also an inherent assymmetry in this relationship as India feels a need to match not merely Pakistan, but also China—as illustrated in the above triangles.

India has a long-standing rivalry with China, including a dormant territorial dispute which in 1962 spurred a small-scale war.[45] Moreover, India has an even more severe conflict with Pakistan, the origins of which go back to the years immediately before independence. Not only do the two countries have a long-standing dispute over Kashmir,[46] but this could even be seen as a conflict over the very *raison d'être* of the two countries. India has never been convinced about the rationale for creating a separate state for "Indian Muslims" considering the secular nature of what might have been a united India. Pakistan, in turn, questions the secular nature of India, seeing it as basically a Hindu state from which non-Hindu parts should have the right to secede.[47] This conflict with Pakistan has produced several wars, in 1947-48, 1965 and 1971 respectively, as well as frequent small-scale skirmishes and troop movements intended for deterrence and/or compellence[48]—albeit typically alternating with periods of relaxed tension. This basic instability is exacerbated by the lack of any regional organisations to defuse tensions, as SAARC (South Asian Association for Regional Cooperation) is simply too weak to play any significant role in matters of national security.[49]

In the spring of 1998, both countries conducted nuclear tests, thereby joining the nuclear "club", yet without being welcomed by the other members. In actual fact, however, both states must have already joined informally well before "coming out of the closet."[50] India probably did so in 1974 when it first conducted a nuclear test, albeit of what was then called a

nuclear "device" rather than an actual bomb—thereby placing the test in the ambiguous and controversial category of "peaceful nuclear explosions" (PNEs).[51] When exactly India proceeded to full weaponisation remains unclear, and it may indeed have refrained from this until shortly before the test. If so, it had thus opted for what Jasjit Singh has aptly called "recessed deterrence,"[52] probably mainly intended as a deterrent of China.[53] Since 1998, however, India has shed all inhibitions and, as a matter of official policy, embarked on building a nuclear weapons arsenal accompanied by a nuclear doctrine.[54]

This is undoubtedly the main reason for India's acquisition of ballistic missiles.[55] Whereas the short-range missiles are probably mainly intended for use against Pakistan, those with longer ranges are most likely primarily targeted against China, mainly as a deterrent against Chinese nuclear and/or missile attacks against India. These longer-range missiles offer the additional advantage of covering all of Pakistan, which may be important for some, but not all, missions. In terms of pure deterrence, what matters most is the ability to target the major cities, most of which are located rather close to the border with India (i.e. within range of shorter-range missiles). Had India merely deployed short-range missiles, Pakistan might have deployed its nuclear missiles (which would then have needed longer ranges) in the western parts of the country, out of India's reach, thereby ensuring it a second-strike capability.

Pakistan's reasons for seeking a missile and nuclear capability have been almost exclusively the wish to counter-balance and deter India. Just as India, Islamabad until 1998 preferred "opacity" to an overt nuclear posture, yet premised on the expectation that India regarded its nuclear capacity as a near certainty.[56] Its reasons for wanting ballistic missiles may simply be a realisation that it would be impossible to match the Indian air force and air defence, whereas missiles would have a better chance of getting through.[57]

The fact that both sides thus rely on missiles for reciprocal deterrence, and that some of these missiles are within range of those of the other side, may look destabilising. However, one may question to which extent such considerations, derived from the US-Soviet confrontation, are really applicable to the South Asian setting. If the Cold War balance of terror between the two superpowers was really as "delicate" as argued by Wohlstetter and others,[58] this was a combined function of the size of the arsenals and the presumed accuracies of the missiles which just might enable one side to launch a disarming first strike against the other, thereby achieving "escalation dominance". There is absolutely no reason to expect South Asian missiles to even come close, within the foreseeable future, to this kind of counter-force capability. Hence, the balance of terror developing between India and Pakistan may actually be much less delicate and much more stable than commonly assumed,[59] and the use of missiles as

opposed to aircraft as means of delivery may actually strengthen this stability by making both sides comfortable with their ability to retaliate.[60]

In January 2004 India, quite unexpectedly, announced its willingness to join the US missile defence programme. The impact of this is difficult to determine, as it may well come to naught, since the United States may (with some justification) suspect India of mainly being tempted by the prospects of acquiring otherwise "off-limits" technology without really contributing to the programme.[61] Should India, however, succeed in building effective missile defences (a very big if), this would undoubtedly give Pakistan (and perhaps even the PRC) incentives to ensure their deterrent capability, e.g. by adding to the total number of missiles, by changing their deployment, or by switching to other means of delivery. Such a development, however, seems much less likely than a maintenance of the reciprocal basic deterrence presently in force between India, Pakistan and China.

The likely impact on South Asia of a future deployment of US missile defences is mainly indirect. If they jeopardise China's ability to deter the United States (which is unlikely, but conceivable) the PRC is likely to go out of its way to restore its deterrent capability, e.g. by adding to its total number of missiles or by MIRV'ing some of them. This may, in its turn, provide it ("inadvertently") with "escalation dominance" vis-à-vis India, to which the latter may respond by expanding its arsenal beyond what it would otherwise have done—in turn forcing Pakistan to do likewise.

6. Missiles and WMDs in Northeast Asia

Northeast Asia is, in a certain sense, potentially much more important than both SWA and SA, simply because the region is home to some of the really great powers of the world, especially Russia, China and Japan—combined with a rather massive US presence.[62] Indeed, had it not been for the fact that these four powers are so large, the two Koreas would also have counted as great powers measured by their military potential.[63] All of them are, however, "special"—Russia both in the sense that it is not only Asian, but also European, and in the sense of being a declared nuclear power, a status which it shares with China; Japan in the sense of arguably being a "post-military" state whose constitution imposes severe constraints on its military power and activities; and the two Koreas in the sense of being two mutually hostile states rather than one united Korea.[64]

Even though it might look like a mere shadow of its former superpower posture, Russia remains a formidable military power, having in its arsenal both short, medium, and long-range missiles, including both ICBMs and SLBMs, most of them mounted with nuclear warheads (see Table 3). Whereas during the final decade or so of the Cold War what was then the USSR emphasised the East over the West with regard to many of its nuclear deployments (especially of SLBMs),[65] since 1990 its forces (now those of the Russian Federation) in and adjacent to the Pacific Ocean have been neglected considerably, both in absolute and relative terms.[66] However, even though Russia has presently well neigh disengaged from NEA, it certainly has the potential to re-engage, should it decide to do so—but it is less obvious on whose side this would be. Whereas the former ideological conflict with China has apparently been resolved, a dormant territorial dispute remains. On the other hand, Russia has "friendship agreements" with both China and the DPRK which it just might decide to honour in case of a conflict, e.g. with Japan (with whom there is also an unresolved territorial dispute) or the ROK—or in a wider setting, pitting either of them against the United States.

China is, likewise, a nuclear weapons state, apparently relying increasingly on the kind of deterrence that gradually developed between the two superpowers in the course of the Cold War—manifested in a quest for survivable second-strike forces, e.g. deployed on submarines in the form of SLBMs.[67] However, its nuclear arsenal remains quite small (around 400 warheads) and a good deal thereof remains deployed as rather primitive (e.g. liquid fuel) short and medium-range missiles. The primary mission of the Chinese missiles and nuclear weapons is undoubtedly deterrence, e.g. of a US intervention in any conflict in China's "near abroad" (including Taiwan)[68] or of a resurgent Japanese military.[69] However, the missiles could also be used as means of "signalling" to Taipei that mainland China has the ability to inflict significant harm on Taiwan, should the latter declare independence,[70] even though it does not have (nor is likely to achieve in the near future) the ability to invade this "renegade province" (*vide infra*).[71]

Japan has neither long-range missiles nor WMDs, indeed its constitution prohibits its having a military, a stipulation which has been interpreted as allowing merely "self-defence forces".[72] Nevertheless, in terms of military expenditures Japan ranges as a global number two, surpassed only by the United States, even though it spends, as a matter of long-standing political tradition, a mere one percent of its GDP on defence.[73] Moreover, despite its non-nuclear policy,[74] Japan has stockpiled large amounts of plutonium, which might be weaponised swiftly, given Japan's general scientific and industrial prowess.[75] As these facts are well-known, Japan arguably possesses a formidable "recessed deterrence" capability, which is further enhanced by the security guarantee provided by the USA.[76] It is, however, not entirely clear

against whom this guarantee is offered, and Japan is very cautious about referring to China as a threat, whereas it is less constrained about references to a threat from North Korea, especially after the DPRK's missile tests overflying Japan.[77]

In conformity with its security guarantee, the United States has offered Japan protection under its missile defence "umbrella", an offer which Japan has accepted, albeit not without some domestic opposition.[78] Moreover, Japan decided to become involved in some of the technological projects associated with the US missile programme.[79] Furthermore, in 1991 it decided to purchase the Patriot air defence system (PAC-1), which was followed in 1995 by the decision to upgrade this to the PAC-2 system which supposedly has some TMD (theatre missile defence) capacity and which points forward to the PAC-3 system, representing a fully-fledged TMD system. Moreover, Japan has purchased *Aegis* destroyers which have been mentioned as suitable platforms for a sea-mobile TMD system, as well as various C^3I (command, control, communications and intelligence) systems which would also be relevant for the TMD mission.[80] In 2003, and mainly in response to the aforementioned North Korean missile tests, Japan seems to have decided to go "all the way", announcing its determination to proceed with the PAC-3 system and purchasing the SM-3 missiles for the Aegis system. With some, perhaps deliberate, equivocation Tokyo even couched the announcement of these decisions in terms of constructing a shield to protect the nation, i.e. as a national missile defence capability, to be deployed from 2007 through 2011 at an estimated total cost of $4.67 billion.[81]

As illustrated by this development, the most likely catalysts of conflict in NEA is the conflict on the Korean peninsula. The DPRK has for the last decade or so been hinting at its possible possession of nuclear weapons, which makes its actual development of longer-range ballistic missiles appear threatening to both the ROK and Japan—in the longer term perhaps even to the United States, which just may come within partial reach of the *Taipodong*-II missile, in the sense that this might reach Hawaii and parts of Alaska.[82]

Contrary to many recent allegations, however, the situation on the peninsula may be much more stable than often assumed.[83] First of all, the military balance is such that neither the DPRK nor the ROK has any realistic hopes of defeating the other in war.[84] Secondly, there is no evidence to support the allegations that the DPRK (all the regime's other unattractive features notwithstanding) is aggressive and/or undeterrable.[85] On the contrary, ever since the end of the Korean War in 1953 (with and armistice rather than a peace treaty) it has refrained from attacking, and limited its military activities to a "harassment" of the ROK falling well

short of attack. Moreover, whenever its chances of prevailing would have been the best (e.g., during South Korean military coups) the DPRK has de-escalated rather than rushing forward.

Even Pyongyang's "playing the nuclear card" seems perfectly rational, regardless of whether it has been trying to hide a clandestine development programme or to "hide that it has nothing to hide". This "game" payed off handsomely in 1994 with the Agreed Framework, signed with the United States.[86] At the time of writing it appeared to be working again, as the United States seemed willing to compromise by offering a peace treaty of sorts. Perhaps even more importantly, the DPRK's "recessed deterrence" seems to have worked eminently, as the Bush Administration was quick to assure Pyongyang that it was *not* next on the list after Iraq, despite its belonging to the "axis of evil."

Deterrence may thus be quite stable in Northeast Asia, albeit in a curious "asymmetrical" fashion and in the complete absence of any all-encompassing arms control agreements or institutional setting.[87] One could, however, envision scenarios under which this stable deterrence might be upset by the deployment of missile defences by the United States, Japan and perhaps Taiwan.

They may hold the potential of effectively shielding Taiwan against Chinese missile strikes at some time in the future, and China may fear that this might embolden the "renegade republic" to declare itself independent, and consequently seek to pre-empt this by attacking Taiwan before it becomes too late.[88] More ominous may, however, by the implications for stability of Japan's possible protection by its own and/or US missile defences. Given the long history of Sino-Japanese rivalry and enmity, China is likely to see this as yet another step in the restoration of the "old Japan", i.e. a country with quite formidable armed forces and few inhibitions regarding their use. If so, China is very likely to respond, e.g. by seeking to outmatch Japanese defences with a larger number of perhaps improved (e.g. MIRV'ed) missiles—to which Japan might conceivably react by going nuclear. Odd alignments are also conceivable, e.g. between China, Russia and either of the two Koreas, all of which have little love for Japan but a shared concern about a resurgent Japanese militarism and imperialism.

7. The Impact of Missile Defences

We have thus seen that the situation is probably more stable than often allegated by US spokesmen in both SWA, SA and NEA. Not only are countries in these regions less likely to attack each other than one might suspect. They are even less likely to launch suicidal attacks

against the world's only remaining superpower, mustering 43% of the world's military power[89] (as measured in military expenditures in accordance with the logic that "you get what you pay for") as well as the world's most formidable nuclear weapons arsenal.

This logic notwithstanding, the United States appears determined to develop and deploy a missile defence system, mainly intended to protect CONUS (Continental United States) and/or US forces around the world from missile strikes launched by countries in Asia, especially the DPRK and Iran—Iraq having been moved from the category of enemies to that of an occupied country by the 2003 war. This US determination to proceed with (N)MD raises the question what such a system may do to the balances of power in Asia. This depends, of course, to a large extent on the ambitions and "architecture" and the actual capabilities of such a system. Unfortunately (for the analysis), however, the Bush administration has been much less determined with regard to these development and deployment "details" than with its political decision to develop an NMD system "of sorts". [90]

What the Bush administration as well as its predecessor have been quite explicit about, however, is what the system is *not* intended to do, i.e. to protect CONUS against Russian or Chinese nuclear strikes, as this would obviously undermine their deterrent capabilities. Unfortunately, that the USA denies such ambitions does not automatically allay Russian or Chinese fears for the future. Even small-scale deployments which would be obviously incapable of intercepting the 132 missile-based Chinese nukes or the more than 4,000 Russian ones (see Table 3) may be a cause of concern as they might be the harbingers of a larger and more capable NMD system of the future.

If Russia and/or China worry about their future deterrent capability, they are likely to do something about it, but it is not obvious exactly what their response may be.[91] An obvious solution might be to simply expand their arsenals, i.e. to quantitatively outmatch US interceptors with additional missiles or other means of delivery. For various reasons, however, this seems rather unlikely. Russia seems to be a "saturated" nuclear power which already has the missiles it thinks it needs (viz. its START and "SORT" negotiation positions),[92] and it has other economic priorities than to embark on an expansion of an arsenal it has just reduced. China, on the other hand, probably remains "unsaturated" with nuclear weapons (at least long-range ones) and is likely to expand (and modernise) its arsenal, yet for reasons having little to do with US missile defence plans. It simply wants a full panoply of nuclear weapons, but is not quite there yet.[93]

More likely appear qualitative countermeasures, e.g. in the form of MIRVing or "re-MIRVing" existing missiles or ones that would otherwise have been deployed in single-warhead versions—which would do little for strategic stability, as realised by the Bush Sr. administration.[94] Alternatively, and less damaging for stability, they could resort to the wide panoply of asymmetrical countermeasures, such as using decoys and the like—and all evidence seems to indicate that this would do the trick. Whether such measures would suffice or not depends on the configuration of the missile defence system, of course. Decoys work best outside the atmosphere (i.e. in the mid-course phase of a missile's trajectory), whereas they are difficult (perhaps even impossible) to apply in the boost or terminal phases, i.e. within the Earth's atmosphere.

This seems to point towards a possible "grand compromise". The US might refrain from deploying both terminal defences (which are anyhow not promising given the amount of CONUS territory that would have to be covered) as well as mid-course defences which could easily be fooled by decoys or MIRVs, and rely instead on boost-phase defences, i.e. on intercepting missiles immediately after their launch. The US might further abandon whatever may remain of the "Star Wars" era's plans for space-based or orbiting boost-phase interception devices,[95] which are anyhow technologically well beyond reach for the foreseeable future, and instead rely on land or sea-based interceptors, assisted by orbiting surveillance and communications satellites. Because of geography this would effectively place most of both Russia's and China's ICBMs well beyond reach of US boost-phase interceptors, thus salvaging their deterrent capability and thereby making counter-measures dispensable. It might further encourage China to proceed along the path apparently already taken (and beneficial to strategic stability) namely to emphasise their sea-based over the land-based deterrent, as SLBMs would in any case be well beyond reach of fixed boost-phase interceptors.

The problem with fixed-location boost-phase systems is, however, that they have to be in the right location to be of any use at all, and that their deployment thus inevitably signals fear of attack and thus inherent hostility. Rather than protecting the United States (or any other country falling under its protective umbrella) against attacks from whomever might launch them, it would entail identifying the likely perpetrators of such attacks in advance, i.e. before the "crime". This would be an unmistakable sign of hostility—albeit not more so than labelling countries "evil" and planning for pre-emptive offensive strikes against them. Moreover, had the US, for instance, deployed such systems in Turkey or elsewhere in order to shoot down (apparently non-existing) Iraqi missiles, these interceptors would now be obviously redundant, as will be defences against North Korea, should it eventually unite with

the ROK. A final problem is that such land-based defences would have to be deployed in foreign countries, simply because of distance. This may well be costly and it will in any case presuppose the consent of the host countries, who may not appreciate thus singling out their neighbours as enemies.

All these considerations seem to point in the direction of preferring "portable boost-phase defences", i.e. of deploying them on ships such as the *Aegis* destroyers or cruisers. This would not only provide some protection against strikes launched at CONUS, but could also serve a theatre missile defence system, i.e. protect US forces deployed overseas against missile strikes.[96]

8. Conclusion

To single out a sea-based boost-phase missile defence system as the least damaging to mutual deterrence and as the one most likely to work, is not tantamount to an argument for deployment.

First of all, as argued above, there seems to be absolutely no need for such a system as the only "approximate peers" of the United States (Russia and China) would still be encompassed by mutual deterrence, and because anybody else would undoubtedly be "more than deterred" by the overwhelming US superiority in all military respects, thus making defences superfluous.

Secondly, it is debatable whether theatre defences make the world a safer place. If the belief that they will actually protect US forces overseas makes it more rather than less likely that the US will launch wars such as that against Iraq (next time perhaps against North Korea, Libya or Iran) then they may be a recipe for more rather than fewer wars—even if theatre defences turn out to function less than perfectly, or not at all. The will to intervene depends on expectations rather than realities. Finally, if other states think that theatre defences will work (or even that the US think they will) they will be concerned about US interventions, and they may decide to focus on other means of delivery than missiles, e.g. international terrorism and/or the proverbial "suitcase bombs".

9. Endnotes

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