

A View From India Towards Geneva

Space, Science & Security: The Role of
Regional Expert Discussion

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Is the Conference on Disarmament Relevant in the World of Today

The Conference on Disarmament (CD) is a heritage inherited from the Cold War Period.
Its successes are the successes of the Cold War Era

Its failures are a consequence of its inability to cope with the new world order emerging from the ashes of the cold war period

Why does one make such a sweeping statement?

Let us try to provide some kind of a rationale

What are commonly mentioned as the success stories of the CD

The Partial Test Ban Treaty (PTBT) of 1963

The Nuclear Non-Proliferation Treaty (NPT) of 1967

The Biological Weapons Convention of 1973

The ENMOD convention 1977

The Chemical Weapons Convention 1992

Treaty Making in the Cold War Era – the PTBT an Example

The Partial Test Ban Treaty came about not because the major powers including the two superpowers wanted the world to be safer – they saw it incidental to the larger purpose which was to prevent or delay testing by other countries.

Control over testing and agreement on the kind of tests you could do also became necessary – radioactive fallout over large areas because of atmospheric testing created a major danger for common people

Underwater testing especially in the Pacific destroyed or partially destroyed islands and also spread radioactive pollutants over wide areas of the sea

The two superpowers also conducted a number of tests in space – some of which damaged many satellites.

These environmental consequences as well as the need to have some mutual limits on such activities that would not confer some preferential advantage – led to the PTBT – not some noble cause.

The idea was that since they had learnt enough – the preferential advantage would continue

Not a Disarmament measure – but a non-proliferation measure

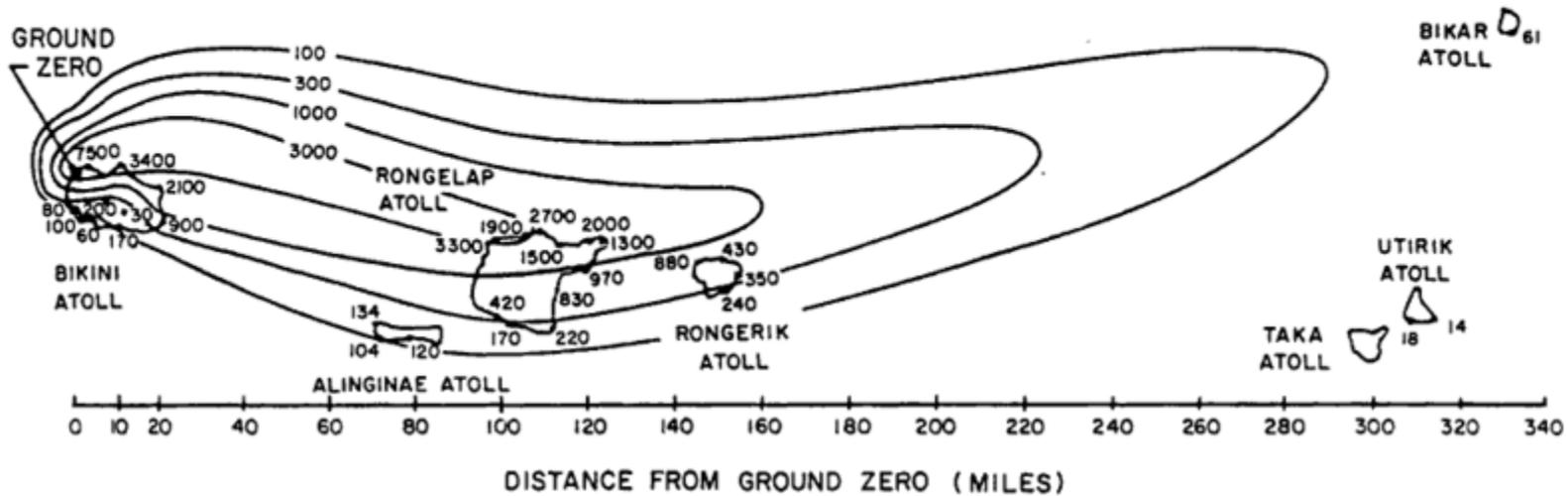
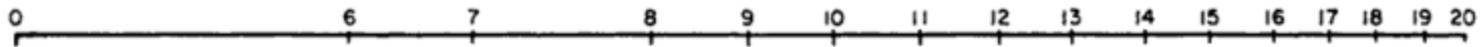
Operation Bravo – Bikini Atoll Test

Source Wikipedia

Daigo Fukuryu Maro



EFFECTIVE ARRIVAL TIME (HOURS)



Treaty Making in the Cold War Era – the NPT

The NPT – was the second major treaty that came about from the CD

This was literally not a multilateral Treaty negotiated by a multilateral forum but rather a Treaty negotiated by a few of the nuclear weapon powers and then placed before a multilateral body – actually a predecessor to the CD

The Treaty provided flexibility to cater to a wide spectrum of countries for being able to ratify this treaty. Unlike the later treaties nation states could choose to be a part of it or refrain from acceding to it – a merit that is useful in international matters – since this limits individual countries whose interests are directly threatened from becoming Treaty breakers

By this time of course China had already tested – India had also fought a war with China – Nehru was dead – and so India could not under any circumstance sign this bulwark of non-proliferation which India saw as being discriminatory.

The Treaty has been so successful that any amendments to it – to take care of the post cold war developments – is almost impossible. It has also created an entire ecosystem of adherents and followers that is still very powerful and rooted in the dominance mindset of the Cold War period

The CTBT and After

I will not dwell too much on the Biological Weapons or the ENMOD Conventions. These are very nice conventions with no verification requirements – which everybody will have no problems with signing

However the Chemical Weapons Convention – which had been stymied for quite some time – by the differing interests of the superpowers – received a new lease of life when Gorbachev assumed office in the Soviet Union. Once again superpower agreement preceded the formal process of debate discussion at the CD.

The key thing about all these success stories were that they were preceded by superpower agreements and then other countries were invited to sign and ratify a noble goal in the interest of all countries. The entry into force provisions were flexible. Of course by this time the superpowers had come to the conclusion that they did not have much value for most of the weapons prohibited or controlled in any case

After the Chemical Weapons Convention the next big effort was of course the negotiation of the CTBT. A lot has been written about it . However there was no way for India to have signed or ratified it – not recognising this – I find it difficult to believe – doomed the Treaty to failure – of course one of the major proponents of the Treaty – the US failing to ratify it – sent it into complete cold storage

The CTBT and After

Starting with the CTBT all negotiations in the CD have become problematic

No progress on the FMCT

No progress on PAROS

No progress on many important issues though the world is changing fast.

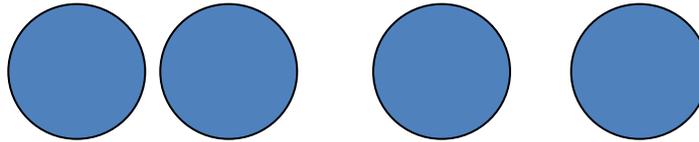
The Cold War is not the world of today. Today's world more complex – many shades of interest – the process of negotiation of give and take – has to accommodate many more points of view

Consensus rules and procedures adopted to protect interests of the nuclear and space powers – now prevent any progress at all on any issue

Of course the CD has never ever promoted disarmament – its sole purpose in all its actions has been only to prevent proliferation – more logical to call it the Committee for Non-Proliferation than a Committee for Disarmament – any change directly affects interests of the major powers – so even to prevent proliferation we may need new institutions and new approaches.

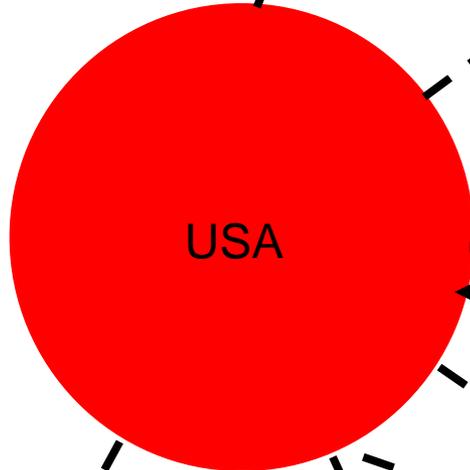
The Emergence of the World Space Order – 1957 to 1983

Interdependent
equal relationship

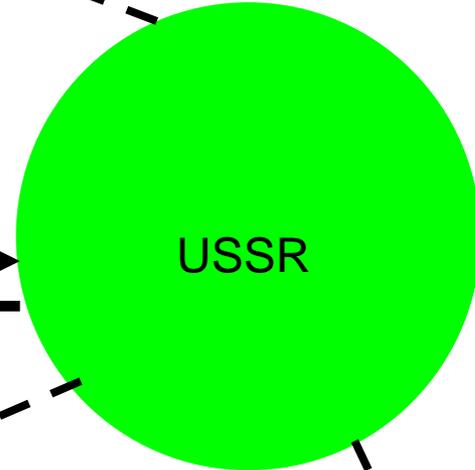
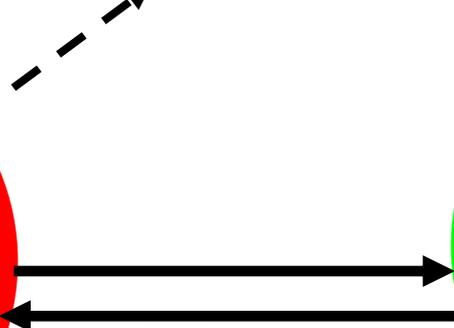


Israel, Canada, Brazil, India

Dominant relationship

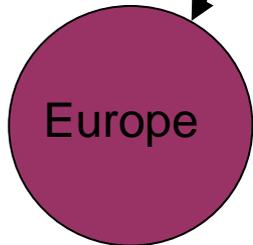
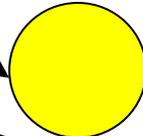


USA

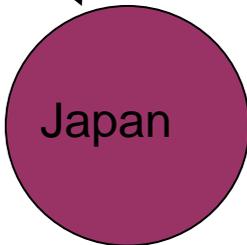


USSR

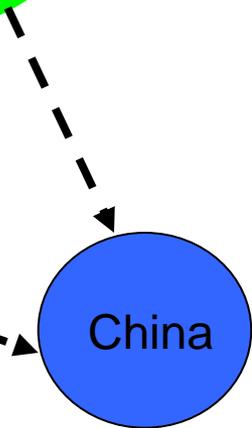
Others



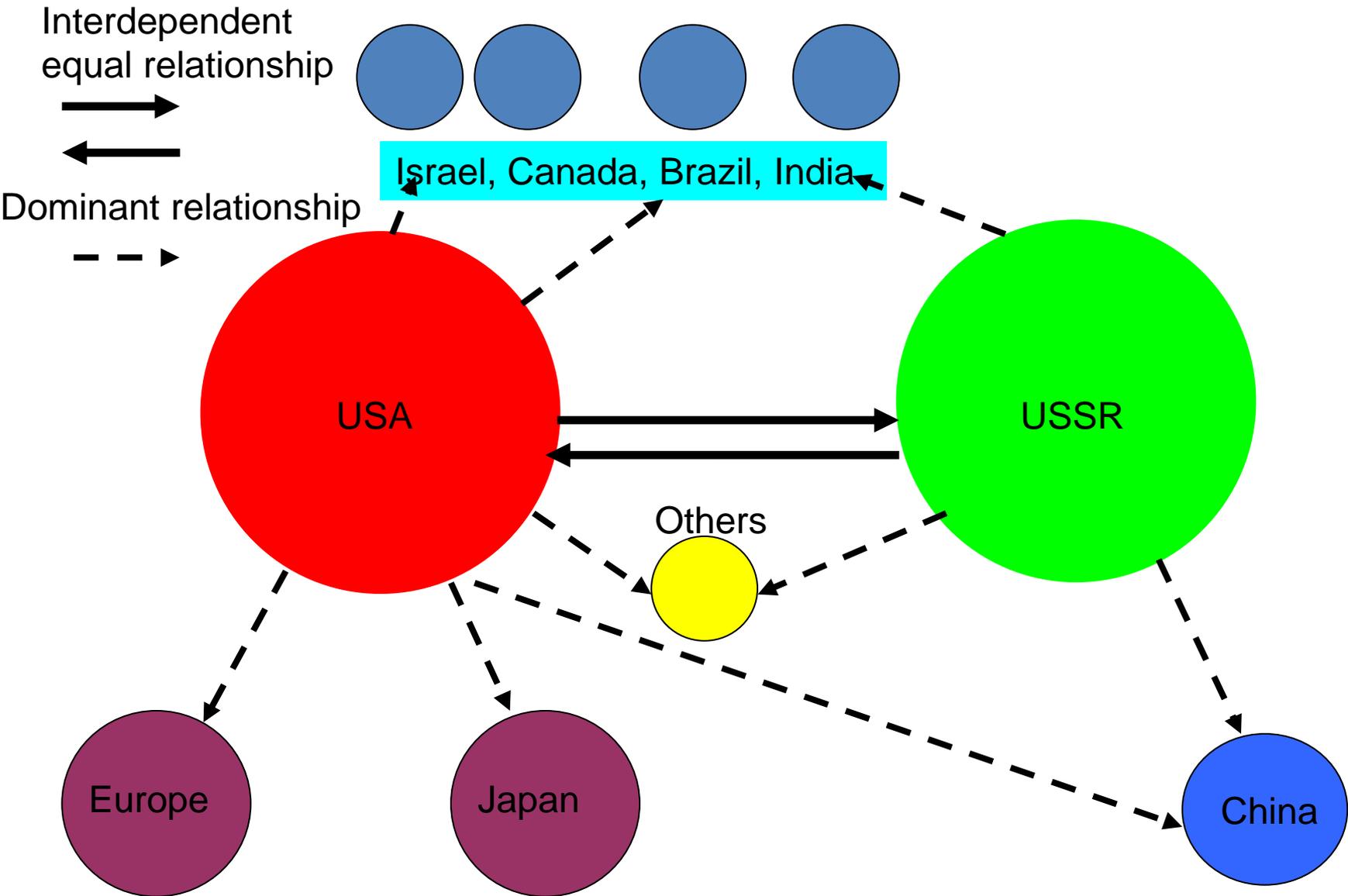
Europe



Japan



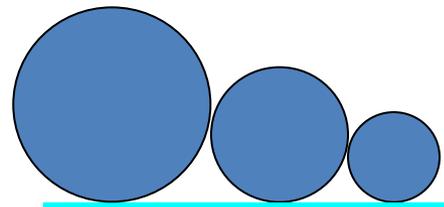
China



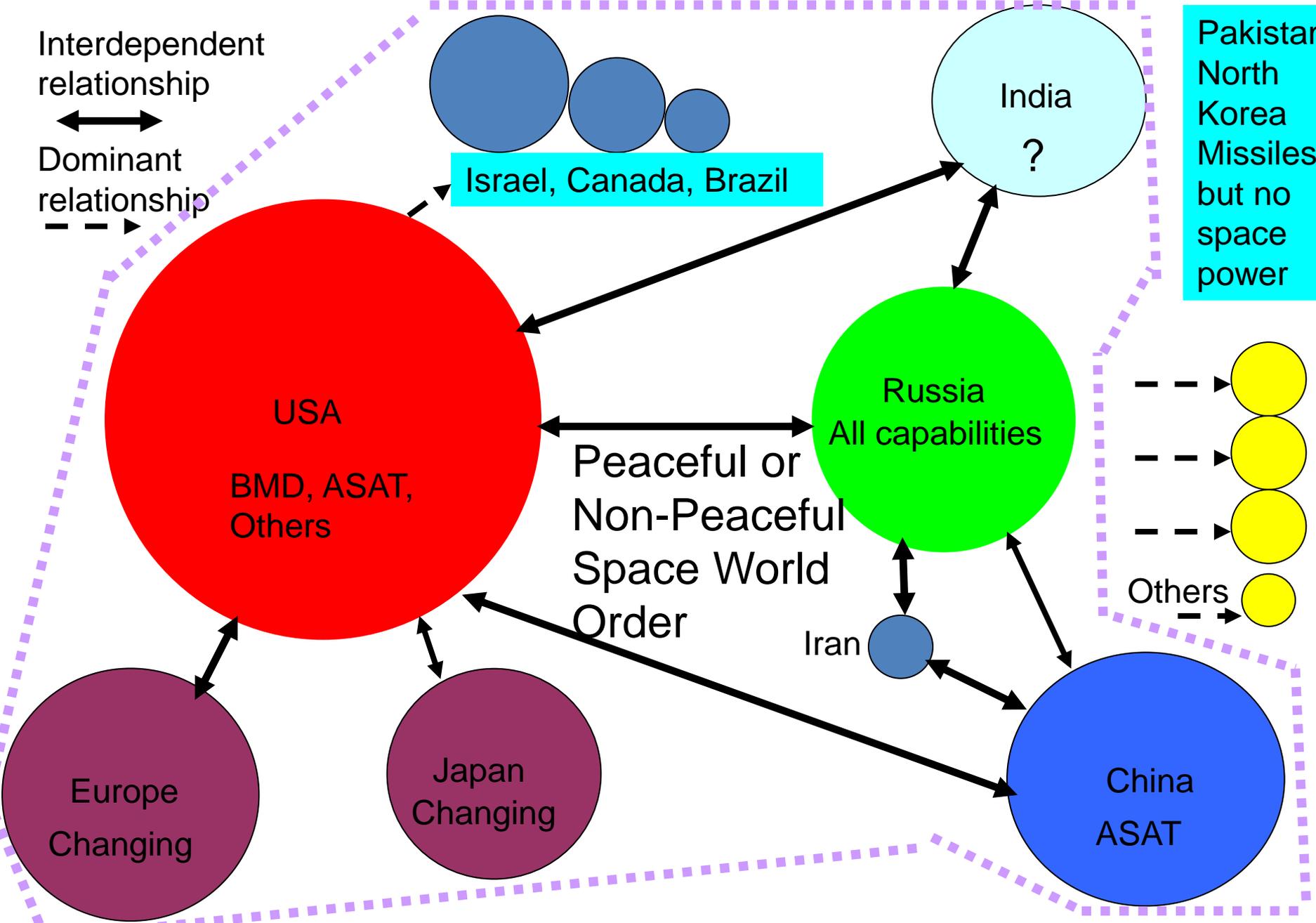
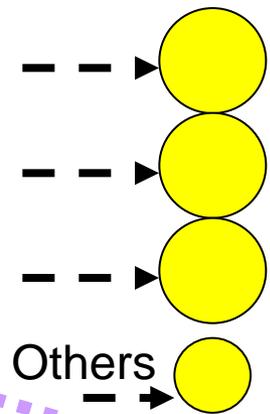
The Emergence of the World Space Order – Post 2001

Interdependent relationship
↔

Dominant relationship
- - ->



Pakistan
North Korea
Missiles
but no
space
power



Indian Space Assets –They Do Need Protection

Indian assets in Space are not insignificant. Bound to become more important

11 INSAT satellites ~ 211 transponders – a variety of services – significant investments on the ground – Value addition through a variety of products and services.

VHRR on INSAT and other satellites crucial for the National Weather Service.
Public good

9 IRS satellites in orbit – provide information of value to many applications – Public good nature of service. 20 ground stations around the world get data.

Other Satellite services – search and rescue, civil aviation, Navigation system under development.

Complementary to using space – launch services a crucial component of the ability to use and access space. PSLV, GSLV other planned launchers.

Complementary assets – Centres, Ranges, Test Facilities, Industrial infrastructure, Organisation and delivery capabilities.

Don't they need protection in the emerging world order?

How Valuable are the Indian Space Assets

The value of the INSAT system (Market value) = $150 * \$1 \text{ million} * 7 \text{ years (avg. life)}$
= \$1 Billion

The value of the IRS system (public good)

replacement cost surrogate for value = $6 * \$100 \text{ million}$
= \$ 600 million

Other space assets = \$ 200 million

Total space assets = \$ 1.8 billion

= Rs. 7200 crores

Ground investments ~ 5 times = Rs. 36000 crores

Value of services ~ 10 times = Rs. 72000 crores

Value to the country = over Rs.100,000 crores

How can we protect these assets?

Neighbourhood Concerns

China 2007 ASAT test – US response – apart from debris threat to IRS satellites – also a threat to Indian space assets

China 2010 Anti-missile test – may not be India centric – but certainly affects Indian responses – long standing issues and concerns cannot be wished away

China ASBM capabilities – though US centric – also directly impacts future prospects of both cooperation and conflict

Many more can be enumerated – all are pretty well known

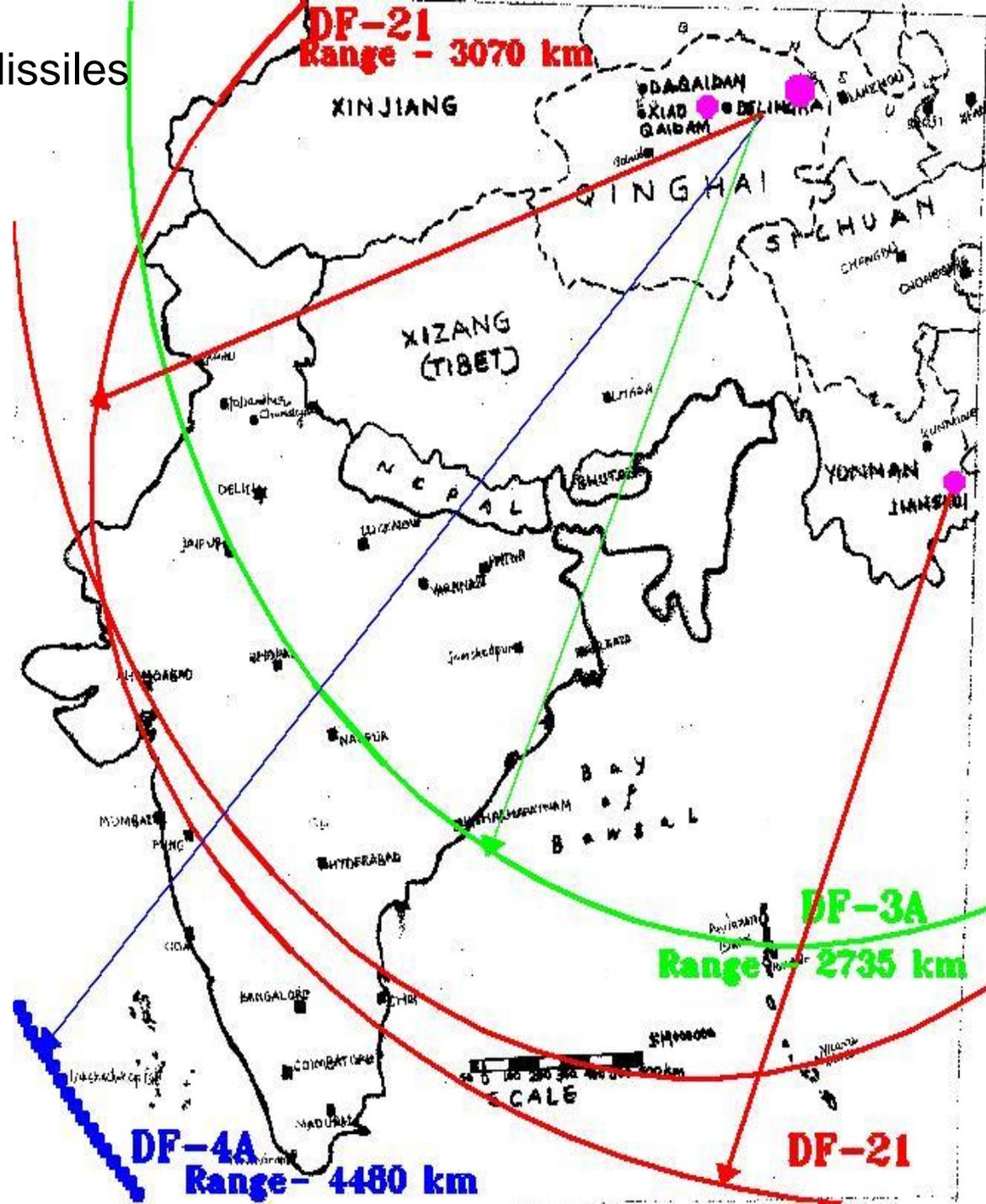
China – Pakistan nexus clearly directed at India – seen in transfer of technology

Also seen in the CTBT negotiations – in tandem with the UK

Pakistan is of course a threat – added dimension of Jehadi terrorism – with a nuclear dimension

Iran too is becoming a space power in the making – no major problems as India sees it currently – however could change depending on the politics of the Asian continent – especially China

Range of Chinese Missiles



The Work Horse of the Space Threat Canister Based DF-21 missiles



Ejection – followed by ignition. Different kinds of TEL – two types





Shaheen 1 – based on technology of the M9 – very similar

Ghaznavi based on the M-11

Strong ties – other areas

Joint Anti-India approaches internationally – CTBT

Pakistan – China Anti-India Nexus

Iran Emerging Space & Missile Power



Possible Indian Actions

Indian space programme still civilian driven – in principle can do all the things needed

DRDO has focused on the missile part

Separate so far – but between them can cover all aspects of space-based or space assisted threats

So far no dedicated military satellites

Space power – emerging concept in the US – need for dominance

China too sees it in a similar way though still playing catch-up – rivalry direct impact on India

Significant increase in Chinese space capabilities

Affects not only the space component of military systems – but also the very nature of strategic threats and responses

The CD has not been very inspiring for India NPT made worse after the CTBT

India will try to ensure no such situation ever occurs in the future

Preservation of options key need for India

This covers technology options, political as well as diplomatic options

The Emerging World Space Order

As we have seen we are witnessing a transition in the use of space.

Peaceful Uses of Outer Space through the normative route suggests that military uses of space to support conventional and strategic forces on the Land, Sea and Air are peaceful uses. Many countries who use space for both civilian and supportive military purposes would agree with this concept.

Countries with no independent space capabilities would go one step further and say that peaceful use is synonymous with “no military use”.

Other nations who have considerable assets in space may need to take actions to protect these assets. They may want to stretch or alter the concept of peaceful use to consider defensive measures against attack as legitimate peaceful uses.

Still others could stretch this and say further that preemptive actions to control space to protect their assets and their countries is a legitimate activity with or without support from international space law.

There could still be others who might want to move from control to dominance without a care for international norms or opinions

The World Space Order has all these shades. Negotiations on any International Treaty will be affected by these shades. The baggage from the Cold War Era and the focus on proliferation control will also be a factor. There seems to be a period of turbulence in the international space order before we see some stability.

How Will India Respond?

India will continue to take part in the CD – knowing full well that its ability to alter or change anything depends on multiple factors including elements that are anti-India. One does not have to try very hard to make sure that any problem inimical to any country is permanently stalled in the CD.

This was originally the prerogative of the superpowers and in some cases the other nuclear weapon states. However it is still a body that enables countries to talk together – does serve some purpose.

However – all the rules – consensus rule – the rules of procedure – that served the superpowers so well in the past – do not help to further their cause anymore.

With increase in membership – and an increase in the number of countries whose stake in space is increasing – the complexity of negotiating an agreement and obtaining consensus on it is a difficult if not impossible mountain to climb.

If any agreement has to be reached – it may be reached through direct negotiations between the concerned countries or by a smaller group of countries. This may become a trend.

Whether it is in the CD or in any other forum India while wanting the existing peaceful normative space regime to remain as it is – would ensure that her national interests in general and her interests in space are fully protected.

Will be willing for both a Disarmament Agenda or a Non- Proliferation Agenda – as long as her legitimate national interests are protected