# GLOBALISATION, ECONOMIC GROWTH AND NATIONAL SECURITY

By

**Arvind Virmani** 

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#### INTRODUCTION

The focus of this paper is on the geo-political system. The World is in the process of moving from an old to a new global system and it is useful to look at some of the projections made earlier, basically between 2004-06. We then go on to look at the new developments since then -- there have been quite amazing and unpredictable developments – and see how well the earlier projections have held up. It is a good test. I know that Shri Rasgotra was always a little skeptical about these projections. So, it is a good check. He will be able to highlight where I failed. I will be happy to put that right up front.

There is now a clearer discussion on the transition. Earlier papers had focused only on the long-term. Here, the extra part is the transition where the institutions and the implications for India kind of start coming out; It would however be presumptuous to say we have got all the answers. The transition is marked by great uncertainty. Some clarity is possible if we understand where we are coming from and where we are headed. Those two parts will be somewhat similar to those in earlier papers, but revised and updated. This allows us to focus on the ten years or fifteen years which are the period of transition from the old to the new order.

Clearly *globalisation* is a major driving force and it is there lurking in the background. There is not enough space to bring it out more explicitly.<sup>2</sup> The paper will explore, the implications of the changing global order. How do we set our objectives and goals for this transition period, which has been assumed to be of the order of ten or fifteen years. The key is to focus on improving the institutions and rules of global security which includes economic, military and other dimensions.

### **EVOLUTION TO A NEW GLOBAL ORDER**

So, what is evolution? Is it an evolution of an old order or is it a new global order? Let me start by quoting from the US National Intelligence Committee Forecast which appeared in December, 2004. This report used the economic forecasts given in a Goldman Sachs Paper written in October, 2003. The NIC (2004) report indicated that China's GDP in US dollars could be second largest by 2020 and India's GDP in US dollars could be third largest by 2035. Virmani (2004b) which was also published

<sup>&</sup>lt;sup>1</sup> Virmani (2004), Virmani (2005a b c d e f), Virmani (2006a b)

<sup>&</sup>lt;sup>2</sup> We can take that up in the question session if the things are not very clear about what I say.

in December 2004, showed that the rise of China and India would be much faster than projected by anyone else till then. I had got an indication of the broad views in the US Intelligence Committee, from a US analyst who was familiar with such US based work, while attending a seminar in Europe around May 2004. I think perhaps Gen. Banerjee was also there in that Seminar. The second point that the paper emphasized was that China's GDP at PPP (and this was an outrageous statement at that time), would equal the US by 2015 (Virmani(2004b)).

#### Uni Polar to Tri Polar+

The power potential, an index (VIPP or VIP²), which was first defined/used in the same paper. The power potential of China, as measured by this index, was projected to reach 70 per cent of the US by 2035; India's GDP was projected to equal that of the USA at some time after 2035 and the power potential would be about 25 per cent of the USA at that time (in this paper, it was not absolutely clear when that would happen,). Virmani (2005a), which came soon after, expounded more clearly on the rise of India saying that it would be the third largest economy by 2015. It forecast that India's GDP would equal that of USA by 2040 and power potential would be 80 per cent of USA by 2050. Similarly, China's power potential would equal USA by 2030-35 and therefore a bipolar world would emerge by 2025. This was the big new message of this Paper that contrasted sharply with what most international analysts and scholars were saying. It asserted that we would move first to a bipolar world and then subsequently to a tri-polar world with India coming up by around 2015.

When this paper was presented at seminars, questions were raised about the role of EU (Virmani (2005d)). Recall that Prof Henry Kissinger (1994) had written about the EU as a potential great power of the future along with USA, Russia, China and Japan, with India only a distant possibility in sixth place. Subsequently Virmani (2005e) therefore defined something called a "Virtual State," something like the USSR where decisions regarding external matters, whether it is economic matters or military matters were taken in an unified way. The reasoning was that the EU could not be a power unless it became a virtual State. We will have something more to say on this subsequently.

There were also questions raised about the value of such long term projections. In response I had stated that one thing that we can be almost sure of is that any specific futuristic predictions will turn out to be wrong. Projections, no

matter how imperfect are however essential for any kind of Planning. Questions were also .raised about the downside risk to the projections particularly for India and Chinese economies. Does the projection mean that there are no weaknesses, and that these outcomes would happen automatically? The answer is clearly no. The main weaknesses we had identified for China were the mercantilist export-FDI oriented policies and I believe that this is what is going to cause it much more problem today in the financial crisis than it is going to India, because they will have to fundamentally change their developmental model if they want to continue to grow as fast as before or relatively faster. On India's side we have identified governance, something that everybody is now talking about post-Mumbai. We had specified that the issue of governance was really the issue of the supply of public and quasi-public goods. These are defined as goods which are public in the sense that they cannot be provided in a private market. You cannot sell and buy them. They are collective goods. A good example of that is the rule of law where the police system, the legal system is common. Defense is a classic example. I emphasized the rule of law as it is essential for the existence of competitive markets. This is the fundamental flaw which we see again and again including the Naxalite controlled districts and most recently in the Mumbai terrorist e attacks (Virmani(2002a b).

# New Developments in 2007 and 2008

There have been a number of new development in the last few years i.e. since our initial projections, so we first present these, so you can judge for yourselves the impact of these and the comparison with earlier projections. Four very, very significant developments since then: One, is the oil and energy price boom, which we have just been through, the roller coaster. Oil prices rose by 130 per cent till July and have since fallen by almost that amount or less than that, but getting there. The important implication of that, which I admit freely is that Russia has come back. In my earlier projections, Russia did not have a prominent role as it has now. Clearly, Russia's come back has depended on the oil and energy price boom. The fluctuations and trends have been amazing and there are certain implications of that. I will mention them very briefly because they are purely economic stuff which we can elaborate in the question session if somebody is interested.

The second was a massive change in the PPP estimates by the World Bank/ADB. India and China's GDP, according to this new estimate was 36 per cent

lower, reduced with one stroke of the pen. That is a huge change. How does it affect my forecasts? The basis of my projections and forecast is the GDP at PPP, which was with one stroke adjusted down by 36 per cent. You would think everything should go haywire.

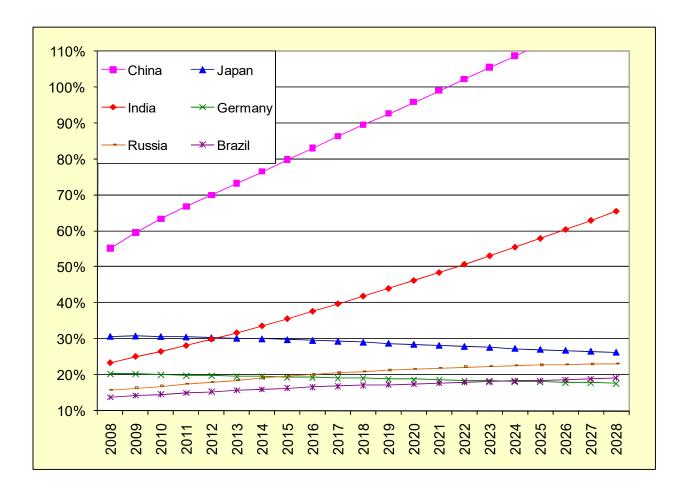
The third, of course, you are all familiar with, the end of the nuclear apartheid and the fourth is the US global financial crisis, its impact on the global economy and big powers. All these factors, with the exception of the ending of nuclear apartheid, a somewhat non-economic factor, have been taken account of in the new projections.

## Change in Projections: 2004-5 and 2008

These are summarized in two graphs (figure 1a and 1b) which depict the evolution of relative economic size of the major powers (vis-a-vis USA) over the 20 year period from 2008 to 2028. This is the relative economic size which is the size of each country relative to the US, which is the benchmark. Recall that by definition, power is always relative (Meerschimer). So, all the numbers, the graphs in this paper will represent the data for the concerned country divided by the data for the US which is the benchmark. One would say that USA is still the sole superpower. Later in the paper there is a formal definition of superpower which will show the quantitative basis for this statement.

Figure 1a shows that the Chinese economy (pink line) is now far ahead of the rest of the potential powers; so it is clearly the second largest, and it is projected to equal the US economy in size sometime after 2020 (crossing 100 per cent, that is, US). Initially the Indian economy (orange line) is smaller than Japan (blue line), but equals and exceeds it somewhere around 2012. Thereafter it breaks away with its size increasing rapidly with the 'magic of compound interest''/ or more accurately the compounding effect of growth asserting itself. This is despite the deceleration of growth that is built into these projections. As long the growth rate remains higher than the benchmark US economy's growth rate, the relative size keeps rising.

Figure 1a: Relative Economic Size (/USA)- GDP at purchasing power parity



What is the difference between the latest projections made in 2008 and depicted above, from the projections made in 2004-05. Firstly, the impact of lower GDP-PPP, which as mentioned earlier is minus 36 per cent, results in delayed catch up. However, this is partly offset by faster growth. The growth which has occurred is actually faster than had been assumed in earlier projections. What does that imply? China, will equal the US economy seven years later than projected in the previous papers- around 2022 instead of 2015. There is a similar delay in China equaling the power potential of USA, which is something different the graph for which we will just see subsequently. Second, India becomes the third largest country in terms of relative size in 2012, about six years later than in the earlier projections. India's power potential at the middle of the century (2050) would be about 70 per cent rather than 80 per cent. To summarize the current projection is completely within the range of possibilities envisaged earlier, despite these huge shocks, Statistically speaking it is completely within the normal range of errors that characterize virtually all economic variables.

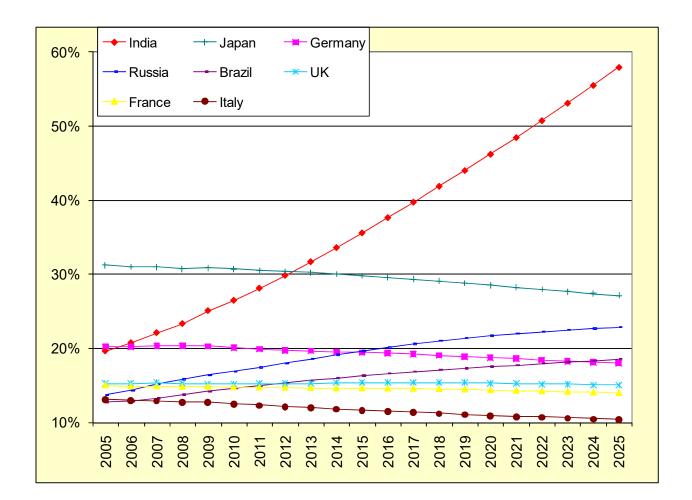


Figure 1b: Relative Economic Size (/USA)- GDP at purchasing power parity

Here I should again add the answer to the question I was asked many times, "Is this what you are predicting for the future?" The answer is that this is a mean scenario. The actual trajectory may be higher or lower. This in turn means that equivalence occurs some years earlier or later, respectively.

Let us look at the other potential powers such as Germany, Russia and Brazil. As mentioned, the earlier papers had given much less importance to these countries. One major mistake made in the earlier papers, which has been corrected in the current paper, was to downplay the importance of energy demand-supply imbalances and energy price changes. The earlier paper focused on the effect of energy shortages on countries like China, India and USA that are net oil importers. It was correctly reasoned that all such importers would be affect to varying degrees and consequently their relative position would change only marginally. This has turned out to be by and large correct. The mistake was to ignore the effect on oil/commodity exporters like

Russia and Brazil. With the experience of the recent oil/energy/commodity price shock, this oversight has now been corrected.

The revision in the commodity and oil price outlook has changed picture. Recall that Brazil is also a huge commodity producer and exporter. Consequently, towards the end, they become significant global player (figure 1a). Figure 1b squeezes the elements and leaves out China so that we can see these countries clearly. This shows that in about 20 years, the Russian and Brazillian economies are likely to be larger in size than Germany. Brazil, overtakes France and UK by 2012. So, in terms of the current middle powers, if we can call them so, Brazil will be coming up, but only to an extent substantially due to its natural resource endowment. Russia is somewhere in the middle here. Russia overtakes Germany by 2015. This is new. Fifth in size and power potential.

The reason, for the rise of Russia is quite clear in hindsight, is oil and gas endowments and the price of oil rising due to faster growth of China and increased demand from oil exporters who under price oil in the domestic market. Another factor is the non-market power of the oil cartel.

This cartelization has broader implications in terms of power. It is not a normal market. That are a few key difference between oil and certain energy product and the host of normal manufactured and extracted mineral products. All these products are traded in normal broadly competitive markets. The problem in oil/energy is supplied by a cartel of energy producing and exporting countries (which is much worse than a cartel of firms). There are certain other special characteristics of energy, in that it is a universal intermediate. It is not that it is used in one, tow or few industry in relatively small proportions, but is either directly or indirectly an input in virtually every industry and activity. This gives the cartel additional power. This means that power elements beyond pure economics come into the picture here, which Russia is successfully trying to use.

#### Other Views: US NIC

How does our latest projection compare with other analysis and views? In November, 2008, US NIC (National Intelligence Council) released a new report. This November 2008 report say that, "The eight largest economies in 2025 will be in descending order – the US, China, India, Japan, etc." This is consistent with both our earlier projections as well as our revised projections, except that they do not give

explicit projections like we have always given. They also say that, "by 2025, China will have the world's second largest economy and will be a leading military power." Again, this is consistent with our scenario of a bipolar world. After this, however, NIC(2008) goes on and said something quite different: "A global multi-polar system is emerging with the rise of China, India and others which will lead to the development of a globalised economy in which China and India play major roles." So, the US NIC believes that China and India will be important but within what looks to them like a multi-polar world. Our perspective on this is somewhat different as discussed below.

### GLOBAL SYSTEM: LONG TERM

The evolution of the global system will depend not just on the evolution of the different economies, but on the evolution of power. In this section we start by looking at the evolution of power potential over the long term, where we define the long term as half a century or till 2050. This will help us see where we are coming from and where we are going, and thus put the current period 2025/2028 in perspective. The index of power potential, which has been termed VIP<sup>2</sup>, has been defined in a number of earlier papers, such as Virmani(2005e) and Virmani(2005e).<sup>3</sup> Figure 2 shows that currently and for the next five years or so there are a number of countries bunched together giving the impression of a multi-polar power structure. Within a decade China pulls away from the crowd, and another two decades later India pulls ahead of the rest. Thus if you believe these projections, the global power structure would be transformed within three decades.

# Global Powers and Super Power(s)

The index of power potential (VIP<sup>2</sup>) can also be used to formally define a potential 'global power.' We define a 'global power' as a country with a VIP<sup>2</sup> of more than 25 per cent'. As the VIP<sup>2</sup> measures power relative to that of the USA, this means that a country with power potential of more than 25% of that of the USA has the potential to exert its power across the World. So, where does this 25 cut-off come from? This is actually the value of the index (VIP<sup>2</sup>) for the USSR at its peak of

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<sup>&</sup>lt;sup>3</sup> VIPP or VIP<sup>2</sup> or Virmani Index of Power Potential measures the overall economic capability of an economy, including capital, skills and technology. This is then combined with an index of strategic assets and Defense capabilities to derive an overall index of power.

power - we are able to estimate this using available data on the USSR. It may appear paradoxical that the USSR with less than 25% of US power potential was able to challenge it and convert the World bipolar. Clearly, there is more to global power and superpower than economic power or power potential.<sup>4</sup> In the globalised world of the 21<sup>st</sup> century the relative importance of various elements is changing, as we shall discuss below. So this paper uses a conservative value for defining a global power, a VIP<sup>2</sup> that is higher than the one at which the USSR attained global power.

## Towards a Tri-Polar System

Applying this definition of "Global power," China is only a few years away from becoming a global power (2010), while will take another two decades (2027) to attain this status (figure 2). Japan has been a global power for a long time and will remain so till 2021. Thus Japan will cease to have the power potential to be a global power a half a decade before India attains this global power potential. We must remember, however, that the index measures power potential. To this has to be added what I call strategic assets or strategic technology, which includes defense assets and technology, to obtain an overall index of actual power (Virmani(2005e)). We define 'superpower', as a country with a VIP² of 40-50%, less than double the cut-of for a global power. Based on this cut-off value China will become a potential superpower around 2020 and India around 2040.

So, what do we have? The past, a uni-polar world with the US as sole superpower, which peaked in 1999, The future a bipolar world by 2020 and a tri-polar one by 2040 (figure 2). In between, a situation that the NIC(2008) and others have called a multi-polar World. Can anything spoil this simple picture? Some people have talked about the socio-political explosion of 'Communist/Socialist' China, others of the implosion of India. Though nothing can be ruled out, I am confident that a Tri-polar World will emerge by the middle of the 21st century as predicted in Virmani (2005a) and Virmani(2006a).

# Quadri-Polar: The role of EU

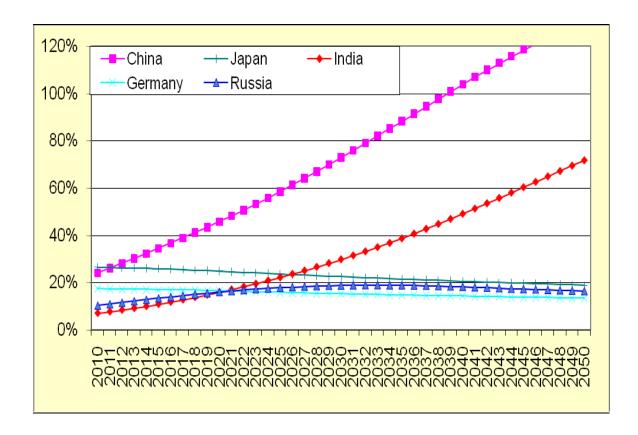
The moment we talk about Tri-polar, the issue of the role and position of the European Union (EU) comes up. In principle, a quadri-polar World is possible, but for

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<sup>&</sup>lt;sup>4</sup> See Virmani (2005e) for an analysis of the other critical element of power, strategic technology.

it to happen the EU has to become a virtual State. In other words the EU will have to develop unified decision making with respect to external relations — economic, military etc.— as for example, prevailed in the USSR. Paradoxically this ideally has receded over the past few years, since we first addressed this issue, with the EU moving in the opposite direction. A number of country referendums have rejected the EU. The recent global financial, saw each member country acting completely independently and focusing on their own National interests, some to the detriment of other member countries. Earlier papers and talks had concluded that the EU had become a virtual State with respect to economics; since the response to the financial crisis raises serious doubts about this conclusion if not falsifying it. The EU is a virtual State only with respect to trade and WTO issues. Despite the movement of the EU in a direction opposite to that of a "virtual State" we do not rule out eventual movement in this direction. The degree of uncertainty is so high at present that we cannot make a definite prediction on whether the World will be Quadri-polar at mid-century.

Figure 2: Evolution OF Power Potential (VIP<sup>2</sup>)

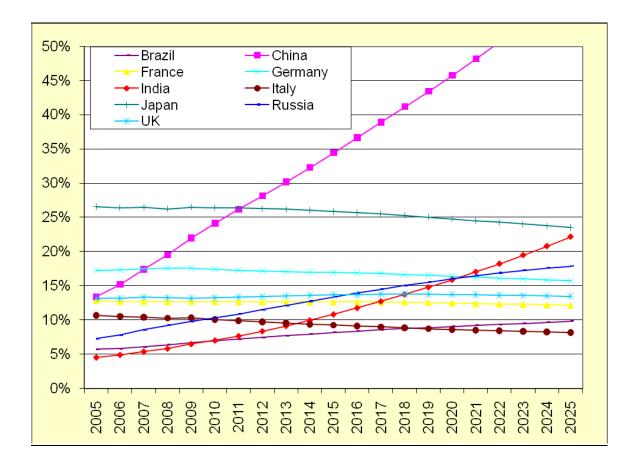


## **GLOBAL SYSTEM: TRANSITION PHASE**

With a picture of the possible evolution of power potential over the long term, we can focus our attention on the actions and approaches that India needs to adopt over the medium term or during the transition from a uni-polar to a tri-polar World. Figure 3 presents the medium term till 2025 with all potentially significant powers represented. China is now about five years from becoming the second most powerful country in terms of power potential measured by VIP<sup>2</sup> when its power potential will exceed that of Japan. Japan's power potential will however remain the third highest during the rest of the transition period. According to this data India's power potential, currently the lowest among the 10 largest economies, is projected to rise rapidly to equal that of Brazil in two years, Italy in five years, France in seven years, UK in nine years and Germany in twelve years. The rising power potential of Russia will remain above India till they both exceed Germany in 2021 when India will simultaneously overtakes Russia. According to this data, Brazil's rising power potential will intersect Italy's declining one, to exceed it by the end of the period, but will remain below that of UK and France, who are likely to retain their relative power vis-à-vis Germany, the most powerful European country.

We are now ready to analyse this transition phase, a period of 15 to 20 years and draw out the implications for India. International affairs scholars have been using a multiplicity of descriptions for the emerging global order, such as pluri-polar, multipolar, apolar. Other terms that have been used are, (a) US and the rest (Farid Zakaria), (b) uni-polar with an oligopolistic fringe, that is, a large player and then there is a whole bunch of competitors below that. Most analysts would however agree that currently the ranking in terms of the economic potential or the power potential is Japan, China, Germany, UK, France, Italy, Russia, Brazil and India.

Figure 3: Transition: Power Potential VIP<sup>2</sup>



This is a good point at which to digress briefly and say a little bit about actual power. The index of power potential (VIP<sup>2</sup>) is based on economic theory and is an economic concept, but at some point, one has to bring in strategic assets, including a country's strategic military assets, the strategic technology (defense, nuclear, space) into the picture. Virmani (2005e) formally defines an index of power, termed VIP, which is composite of VIP<sup>2</sup> and the strategic assets of the country, including strategic

military technology, assets and capability. Unfortunately, it is very difficult to get data on strategic assets and therefore we have not been able to construct this index VIP for all the large powers this.<sup>5</sup>

There are however, a few important implications that one can draw even without calculating VIP. One is that Russia, because of its legacy of strategic assets, which they developed as the USSR, is actually more powerful than this ordering would suggest. Similarly, China has very determinedly from the days of Mao's nuclear and space deals with the USSR, built up its strategic capability. In contrast since its defeat in World War II, Japan has turned inwards, shunned the acquisition of strategic capability and consequently comes lower in the power ranking than its rank on VIP<sup>2</sup>.

# Multi-polar: Concentration Index

The first issue that we have to address is the issue of multi-polarity raised by many scholars! If we ignore the US which is at 100% and is not shown in fig 2, the World seems to have some elements of multi-polarity. Virmani (2006b) had argued that though the World economy could be described as multi-polar, because of the near 'virtual State' nature of EU in terms of Trade-WTO and some other issues, the global power structure looked distinctly uni-polar with an oligopolistic fringe. In the current paper we we apply certain established economic concepts to this issue with the hope of getting more definitive conclusions. The Harfendahl Concentration Index (HCI) is commonly used to measure the concentration of market share among supplier firms in a given industry. We use this to measure the concentration of economic size and power potential.

This can be done, stretching back to the start of the Millinium, using Angus Madison's data and the VIP<sup>2</sup>, which had earlier been calculated and presented in Virmani(2005e). Here, we use the data back to 1870-90 to find out what has been happening to concentration of global power potential, using the VIP<sup>2</sup>. When we measure the concentration of power among all countries for which the data is available, it turns out the highest concentration of power occurred in 1950, immediately after World War II. Thereafter it declined rapidly till 1982 but it has

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<sup>&</sup>lt;sup>5</sup> In India VIP is a common abbreviation for Very Important Person. However, countries are not persons, so to keep an allusion to the commonly usage of this abbreviation, the Index was christened Virmani Index of Power.

been rising slowly since then. Though the absolute value of the HCI is not important, we can get an idea of the order of magnitude, by noting that it fell dramatically in 30 years from about 1.0 in 1950 to about 0.07 in 1982. Therefore the Concentration of power potential is increasing since 1980, it remains well below that in the post war years according to the Madison GDP data used in the HCI.

The data we have used earlier in the paper is however the World Bank GDP-PPP data, which is available only from 1980 onwards. We get a slightly different but not too different picture when we use this data and look only at the top ten countries. We first calculate the concentration among the ten largest economies i.e. the concentration in terms of economic size. As shown in Figure 3, among the ten largest countries economic concentration peaked in 1999 and has been declining since then. Projected forward the concentration reaches a trough in 2014 after which the concentration increases progressively to exceed the 1999 peak by 2030. Thus the growth of the Chinese and Indian economies, initially serves to disperse power among the large powers as China catches up with the USA the largest economy (fig 1a) and India catches up with Japan the third(earlier second) largest economy(fg 1b). Subsequently, economic concentration is projected to rise as China's economy rivals and exceed the USA economy and India's economy does the same vis-à-vis Japan's economy(fig 3). What appears to be an un-precedent rise in the concentration of economic activity among the large powers by mid-century, is however, a return to a pre-industrial revolution era, when China and India were the two largest economies by a big margin.<sup>6</sup>

Virmani(2005d) and other papers argued that post-war globalization is leading to a convergence of Asian per capita income to developed country levels. As China and India converge to World average income levels the population size of these two countries will assert itself. From the start of the millennium (zero) to around 1800 these two countries were both the richest and largest countries in the World. So, the projected future would just be a return to a situation which existed for centuries in the pre-industrial era, before the industrial revolution transformed Europe and USA into high income countries with economies larger than that of India and China.<sup>7</sup>

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<sup>&</sup>lt;sup>6</sup> Virmani(2006d), Virmani(2007) and Virmani(2008).

<sup>&</sup>lt;sup>7</sup> Virmani(2006d), Virmani(2007) and Virmani(2008).

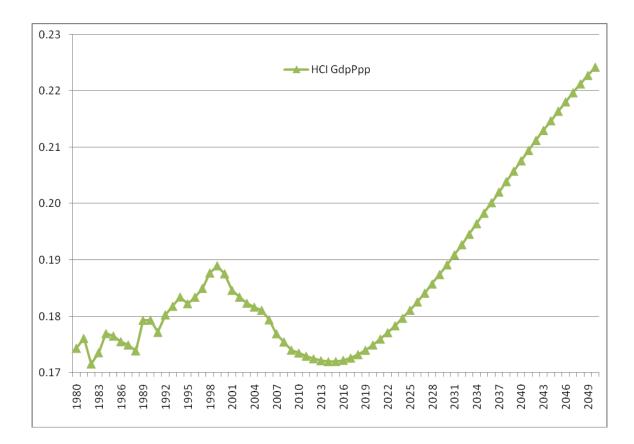
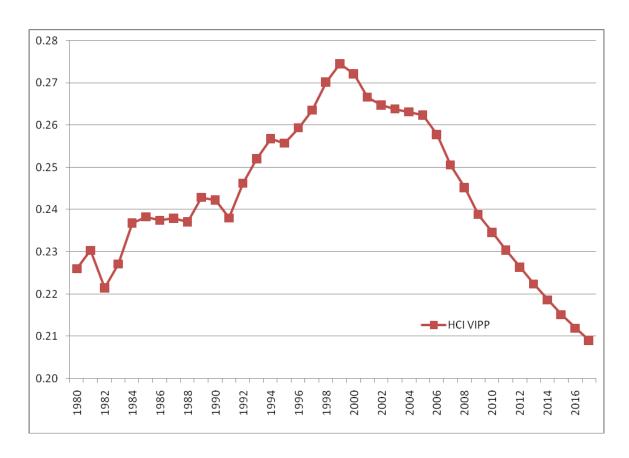


Figure 3: Economic (Gdp Ppp) Concentration among the 10 largest countries (HCI)

The measurement and analysis of concentration in terms of VIP<sup>2</sup>, is slightly more complicated. The concentration of power potential (HCI using the VIP<sup>2</sup>) among the same set of ten countries (ten largest in terms of size) is shown in figure 4. As in the case of economic concentration, the concentration of power potential is on a rising trend from 1980 to 1999. After peaking in 1999 it trends downwards much more sharply. This pattern suggests that the "Uni-polar moment" occurred in 1999. As, conventional wisdom classifies the post war years till 1980-85 as bi-polar, the fact that the HCI is still larger than in any year between 1980 and 1990 is consistent with the view that the World is still uni-polar. The HCI is however projected to go below the 1980's trough around 2014. This can be interpreted as being consistent with emerging multi-polarity. However it is also consistent with emerging bi-polarity or tri-polarity.

Figure 4: Concentration (HCI) of Power Potential (VIP<sup>2</sup>) among the 10 largest countries



## **Global Institutions & Rules**

This brings us to the most important part of this paper. The implications of the evolving global order for India's National security and International relations. In this section we explore the implications of this milieu of powers at this point and rise of India from our perspective? The assertion of power depends on relative power and balance of power, which students of international relations are quite familiar with. But the the assertion of power also depends on the constraints imposed by international and national institutions. According to Alfred North who got a Nobel Prize for his work on institutional economics, "Institution" does not mean the physical structure like the UN, but the rules, both formal and informal, under which individuals and organizations operate. By analogy Global institutions are the are the formal and informal rules under which countries operate in the World. For simplicity we will also encompass the global organization such as the UN under this overall rubric of global institutions. From this perspective a key distinction between countries that can be classified as global powers and those that cannot be so classified is that former help

shape and/or participate in the formulation of global rules. Similarly the distinction between a Superpower and a Global power is that the former makes the rules along with any other super power, with or without the participation of Global powers. The main message of this paper is that India as an emerging Global power must aim to influence the formulation and modification of these global rules under which countries operate on the World stage. The global powers help shape the rules, and we must participate in changing the rules of this global game. That is the main point and I will try to elaborate it. The second point is that Globalization is changing the factors which underline power, the economic, military and social elements of power. Globalization is leading to a change in the relative importance of these factors. This is the underlying theme of this section.

#### **Economic Institutions and Rules**

Since the classic 19th century balance of power systems of Europe, Germany which have been widely analyzed, and depicted in history, there has been a lot of evolution in terms of both economic and social elements. What are these? Let us start with economic elements. As emphasized strongly in Virmani (2004b), economic size and strength is the foundations of a National power. Globalization of the World economy has resulted an increase in inter-dependence since the end of the cold War.. This is the first time that every country, except Cuba, North Korea and Myanmar, wants to be part of this global system of trade and financial interdependence. This is a complete change from the so-called bi-polar world of the USA-USSR. The USSR and many of its block partners chose to remain completely or partially outside this system. Currently every potential global power, including China and Russia, want to be a part of the global economic system. So, the nature of the rules and institutions of global economic governance are changing. In trade we now have a WTO, and everybody wants to be a member including Russia which is still not a member, has applied for it, so everybody wants to subject themselves to and be part of this economic system. members voluntarily accept these rules of trade and competition. As North had said the rules ar not always formal. Even in the UN WTO etc, the formal rules are not necessarily always the most important. These institutions have informal rules that have evolved over time, and members voluntarily accept these rules in the expectation that they are in their own long term interests.

The only exception, which was mentioned in an earlier section is trade in oil and gas or energy. The oil/gas cartel continues to operate outside the rules of the World Trade System with apparently complete impunity. It is an amazing thing. Nobody bothers to haul them up in the WTO. This probably requires some thinking. We are probably not strong enough to do that, but we should certainly be thinking about it. Similarly, the World Bank, again, there is a voluntarily membership which deals with aid and social factors. The IMF deals with short-term BOP loans, though it is called the International Monetary and Financial Organisation, it rarely deals with other financial issues. In the recent US-EU-global financial crisis, exposed the fact that there are big holes in the global financial system. IMF really does not perform the functions which are equivalent to the WTO trade. There is no global organisation which deals with capital flows in a manner anywhere comparable to the WTO in terms of trade and competition. These are some of the things that we are actually discussing in various Fora.

For instance these issues are currently before the G-20 meeting or the P-20. From our perspective, it is more important, to participate in some way in the formulation of rules of the global financial system. One reason for being considered a power or to become a great power is therefore to be a part of the club which frames the rules. Thus for instance if a new club emerges to deal with financial issues we must endeavour to be a part of it. One possibility is a G-4 consisting of the US, EU, China and India, a club that would clearly be in our interest to bring about. We have to all think how India can start creating and becoming part of the clubs which shape the rules of the game, so to say, the economic game.

# Military Power & Rules

Move next to military power and its rules? Earlier sections have given the approximate dates, at which China and India are likely to meet the benchmark for becoming a potential great power and super power. Superpowers clearly define the rules of the game among themselves. Global powers can influence them if they play their cards well. Military power is an important instrument for enforcement of global rules, whatever they are. Of course, we have two recent glaring examples of failure of military power, Iraq and Afghanistan. However, even these examples show that the failure was less that of military power per se and more of other broader elements of power and the context and competence of its use. Military power also creates a space

that allows a global power to act outside the rules. If you are a superpower, you have the liberty of acting outside the rules. You just invent your rules. It is not always possible to detail it now, but we will discuss how that happens. But other military powers can also create the space and have done so in the past to violate the rules of global military action. Pakistan's aggressive militarization, way beyond its economic size and power potential is a good example.

Two important new elements, have come in and become an important part of the canvas of military power and its use. Most people are familiar with the fact that nuclear weapons are game changers. As Mr. Subrahmanyam has emphasized, full-fledged war between nuclear weapon States is unthinkable; maybe, that is too strong a word, but clearly it is a game changer. The emergence of alternative instruments of warfare, terrorism, guerrilla warfare, whatever you want to call it is also familiar. Virmani (2006c) gives an indication of Pakistan's strategy of combining nuclear weapons and terrorism (along with incredible diplomacy) to violate global rules and conventions for 25 years. Pakistan's use of these elements is a case study worthy of inclusion in a graduate textbook.

## Social-Political power

The third element, which is new and an important element of post-war globalisation, relates to the issues of human rights. This is an element of power in which there is the greatest philosophical divide. Democratic societies put much more emphasis on individual rights, "The right to life, liberty and the pursuit of happiness,..." as the first democratic Constitution said, In contrast communist-socialist such as China emphasise collective rights. But leaving this aside, the issue of human and social rights is beginning to shape global rules in a way that has never happened historically. This change is consistent with our National, social and human development objectives. We must therefore incorporate into our global objectives and strategy. We must develop a World vision or vision for the World which is consistent with our own ethos, our interest in and commitment to democracy. This would intelligently combine our national interests with a wider spectrum of peoples and countries.

Soft power has been widely talked about since it was firs proposed by Joseph Nye. Instead of putting this as one of three elements of power, this paper treats it as a sub-element of socio-political power in a global environment. This because

globalization is increasing the connect between National elements (economy, security and social) and international elements (economy, military and socio-political) I have to call it social, political elements of power as the important issue here is the perceived consistency in the narrative of power. When a country takes a global action, is it consistent with the vision that it has been propagating. Thus Iraq is a failure because there was no consistency between professed vision and the actions taken after the initial military victory. From the perspective of global public opinion clearly, there was what psychologists call dissonance.

If India is to become a global power, we have to start thinking of this for ourselves. The perceived consistency of narrative and the credibility and the legitimacy of the use of power. If are going to use power, for instance to fight the terrorists in either neighbouring country, we have to develop and focus much more on establishing this credibility. If I may say, and this is not meant to be a criticism of the Foreign Office, I think there is too little of this propagation. At least, I do not see it; maybe, they do it somewhere, but I have not seen enough of it.

In overall power, the will to power (i.e. the will to acquire and use power) is very important. For example, when the nuclear deal was hanging in the balance here, one wondered whether we really have the will to power. That has been partly but not wholly corrected.

# **Globalization of National Security**

Virmani (2006b) argued that, "The changing role of India in the global environment requires a change in the institutional arrangements and approaches that we have for interacting with the current and potential global powers as well as with other countries and regional organizations. Over the next decade or so we have to change our approach from one in which we react to the actions of other more active and hyper active countries to one in which we try to influence the policies of others. We need to bring about a greater conceptual clarity to our foreign policy and revamp our international intelligence capabilities. We also need to ensure that the rise in the 'actual power' of India is commensurate with the rise in 'power potential,' by developing a comprehensive approach to Strategic Technology."

Since then the Indo-US nuclear deal has been signed and NSG waiver obtained. These and other new issues have arisen to which we return after looking briefly at the issues raised in the above referenced EPW paper:

## Foundation of National security: Internal Security

"The most fundamental role of the State or the Government that claims to govern it is to provide security of life, limb and property to all its citizens. The State is defined by its monopoly over violence. In return it must provide physical security to all. Only the latter can legitimise the former. The rule of law is a basic foundation of a modern market economy. It is a prerequisite for development and equitable economic growth. A country that cannot ensure the rule of law and public security within its borders cannot become a global power. The writ of the government must be established over the Naxalite dominated interiors of the country and lawlessness (kidnapping and murder industry) eliminated from States/regions of the country where it has become prevalent, because of the abdication of responsibility by the political rulers of these States and the gross failure of governance. Given the limited capabilities of the governments in these States / Regions they must focus on universal provision of the basic public goods (& quasi-public goods) such as police, courts, roads...(Virmani(2004a)."

The foundation of national security has to be internal security. Post-Mumbai terror attack, the issue of anti-terrorism organisation has returned to centre stage. In my view, having an anti-terrorism organization(s) is necessary but not sufficient. Unless we correct our basic system of law and order so that we can protect the innocent and punish the guilty special efforts can only be sustained for a few years, after which they invariably fizzle out or revert to the mean/average quality. I have been collecting and narrating horrendous stories about law and order for 20 years. The first time such a story came up about two decades ago, I said, well, Bihar has arrived in Delhi. The most recent story is of an average middle class person arrested and kept in jail for six months and released without charges. Though these are mere examples, there are very serious issues underlying them and we cannot have a sustained and sustainable anti-terrorism strategy unless we do something about them. The solutions are well known: The Supreme Court order on police reforms needs to be accepted and acted upon – fine tuning and correction of anomalies can always follow.

# Foreign Policy Constructs and Narative

"If India is to play the 'Balance of Power' game to its advantage the Perspective Planning functions, intellectual effort/output, information/knowledge base and training systems for operational personnel must be re-oriented and strengthened.

Similarly, the conceptual basis of our foreign policy approach to our region (S. Asia, E. & S.E. Asia and W. & C. Asia) must be widened and developed with greater sophistication (Virmani(2006b))."

Foreign policy constructs have to be weaved into a foreign policy narrative that can be understood by engaged citizens and the media. For example, one narrative could be the development of S. Asia for all S Asians, an essential element of which is the declaration/creation of South Asia as a terrorism free zone (TFZ). Ideas have power when they can be understood by all. We have to have the words, sentences and paragraphs that express these ideas in simple terms that resonate with the intelligentsia and media of all relevant countries. We have a problem of terrorism. We have to globalise it in some way to our advantage. We have to think of ways in which to do that, how to involve the people, convince the people of other countries and get them to help push these things.

## Global Intelligence capability

"The Subrahmanyam committee long ago recommended the revamping of institutional structures for intelligence collection, integration, analysis and assessment and others have reiterated these recommendations since then. This becomes even more imperative in the changing context. Modern technology must be introduced to upgrade and widen the intelligence network (satellite, internet, radio waves) while strengthening traditional methods of human intelligence (e.g. foreign language training). We must develop an extensive capability for covert action to address asymmetric threats from non-state actors, fundamentalist terrorists, their handlers/controllers/motivators/financiers (Virmani(2006b)."

This issue is well known, but perhaps needs some re-orientation from domestic to cross-border or global threats.

# Strategic Assets & Technology

"Strategic technology and assets [major defence platforms (submarines, fighter aircraft), nuclear and aero space technology, robotics, communication (interception/eavesdropping), internet (pattern recognition), radar (stealth, ECM)] are critical to India's becoming a Global power. This requires better planning of procurement and development of strategic technology and an integrated view across different organisations and departments currently engaged in them. Issues like the nature and amount of Offset purchases and the trade-offs between acquisition and development

would have to be addressed. Attention has to be given to specialised education and training of scientists and technicians (perhaps in-house) in nuclear, space, oceanic and other technologies. The National Security Council should have a special wing that carries out the planning and monitoring of the development of strategic technology and skills(Virmani(2006b)."

Post-nuclear apartheid, a comprehensive and non-ideological view has to be taken to accelerate the flow of nuclear technology into India. For instance the flow of private FDI into the nuclear and other strategic sectors must be facilitated, for the same reasons that we generally prefer FDI over FII or debt flows. The former brings with it new ideas, skills and managerial capabilities that benefit the whole economy beyond the specific firms. We must also encourage and incentivise the acquisition, adaptation and development of Communication-Interception-Security Technology (CIST) and Remotely piloted aircrafts (Predator).

## Defence: Flexible Response

"The nature of the challenge facing India has been evolving over the years. The nature of constraints under which defense and foreign policy operates will also change – some will loosen others will tighten. As open violent wars between major powers becoming increasingly unlikely, those who wish us ill have developed indirect means of undermining our security. We need to increase the range of options available to us to attack the source or fountain head as well as to pay back in the coin that they choose to use or which are more cost effective from our perspective and reduce the potential adversary's benefit-cost ratio. This requires a sharp increase in capability for unconventional warfare and unconventional means of defense. A wider range of options must also be developed and/or enhanced for dealing with asymmetric threats from non-state actors, fundamentalist terrorists, their handlers/ controllers/ motivators/ financiers (Virmani (2006b)."

News reports suggest that former PM, Shri I K Gujral dismantled the limited capacity we had for covert action against non-State actors who have been waging covert warfare against us for decades. This capability must be rebuilt and enhanced.

# Economic Inter-dependence

"In this age of globalization the size of the market a country offers for other countries' exports is a measure of the (actual or potential) influence it has over them. It is easier to switch most imports from one country to another than to switch exports

from an established buyer/country to others.<sup>8</sup> Thus paradoxically, the size of a country's imports is a better measure of its economic power over others than the size of its exports. In some cases the latter can even be a source of dependence and weakness in terms of power relations." "FDI inflows into an economy also the measure the relative attractiveness of an economy. <sup>10</sup> Though the stock of FDI, equity and debt owned by foreigners in an economy denote a mutual dependence of the host and the source country, once invested and to the extent they are difficult to disinvest, the balance of advantage shifts to the host country." (Virmani (2006b).

An important issue for the future is the role of Oil and Gas and other energy resources. As already discussed, the cartelization of petroleum/mineral oil supply by National Oil companies/Nation States and the fact that on the demand side it is universal intermediate essential to the functioning of every country, makes it unique. Unlike all other goods and services, it is capable of being used as an instrument of power. Energy security (Oil, Gas, Uranium) must therefore be an element of our overall national security policy.

# **International System Objectives**

The question to be addressed is what should be our objectives in the international arena in terms of international security and national security? This has to be done keeping in mind our earlier analysis of the need to change Global institutions and rules and the cross-border developments over the past few years, including the recent terrorist attacks. The paper suggests three short term and two medium term objectives. These are by no means exhaustive and hope readers will come up with many more suggestions.

# Permanent Membership of UNSC

It is the thesis of this paper that the national and international security are interlinked. Globalization has and will continue, to result in increasing these linkages. We therefore start with the most important institution of global security the UN

<sup>&</sup>lt;sup>8</sup> Perhaps the only exception is oil imports, where there is an monopoly/oligopoly (OPEC cartel) with a small competitive fringe. It is highly misleading to treat the highly volatile spot and futures markets where most of the these small competitive suppliers operate as the market for oil.

<sup>&</sup>lt;sup>9</sup> This will become clear when the impact of the US-EU financial crises and the consequent global slowdon and trade is clear. I have asserted over the past year that Export-led economies such as China will suffer a sharper decline in growth than those with deficits on merchandise trade account such as India. Others in the former category are Japan and Germany.

<sup>&</sup>lt;sup>10</sup> Luxembourg has shown a surge of investment as many European MNCs have shifted their headquarters to it in recent years.

Security council (UNSC). Virmani (2004b) suggested that the veto should be based on a voting share that depends on relative power, with a definition of what decisions can be taken with majority and which rewuire super-majority. Till such reforms come about, we must aim, as a globally recognized Nuclear Weapon power, to have veto power as a permanent member of the UNSSC.

The UNSC is much more important than some people assert, based on its demonstrated ineffectiveness in many situations of international security. People say, it is a dying club, how does it matter whether you are a permanent member or whether you have a veto or not? What is overlooked by these observers is its informal role as a club where bargaining among permanent members takes place. There are also informal bargains made between permanent and non-permanent members. The formal rules determine whether you are a member or not and the informal rules determine how much of your power you can use to obtain bargains. Thus it is important for India to aim to become a permanent veto bearing member of the UNSC, if it wants to be able to assert its emerging global power.

## Global Anti-Terror Strategy

We need to develop a National anti-terror strategy that is part and parcel of a Global anti-terror strategy and vice-versa. Viewed from another angle, we must help develop a Global anti-terror consensus that views our anti-terror strategy as an essential part of fighting global terror.

The anti-terror strategy would include the following elements:

#### **UN Consensus**

India had introduced, several years ago, resolution on terrorism. This needs to be pursued in the UN as well as in other forums. We also need to pursue the development of a globally accepted definition of terror that is consistent with the terrorist problems that we face and the domestic constraints under which the war on terror will have to be fought. The development of a narrative with which thought leaders across the World can empathize, could be helpful in attaining our objective.

As part of this consensus we could build global public opinion to *impose a* travel ban and freeze the global financial assets of current and retired members of State intelligent agencies (such as the ISI) associated with terrorists or their activities.

### **Re-define Aggression and Self Defense**

The UNSC definition of aggression and self defense needs to be modified in the light of the increasing importance of non-State actors and the use of failing States or parts of States as a base for cross-border terrorism. We must aim to change the UN definitions of aggression to include irregular guerrilla warfare, terrorism, etc and the definition of self-defense to include attacks against them on the territory of such failing States, regions. This requires an identification of conditions under which such counter-attack would be acceptable and the development of markers for identifying cross-border terrorism.

#### **Elimination of Terrorist Networks**

Elimination of terror networks was a key objective for us, even before the Mumbai attack, as we have been the targets for close to a quarter century. One has often asked the question, whether there is any case other case in history, of a large country that was so pacifist as to not take any military action against a neighboring country, that despite being,

- (a) 13% to 19% of its size, trained, financed and supported terrorists to attack the larger country, and simultaneously convinced intellectuals and ayatollahs of the great powers that it was constantly under threat? 11
- (b) 6% to 9% of its size, that allows its territory to be used by terrorists of different varieties and persuasion against a neighbor?

It is an amazing thing. I just cannot understand how this happened. I agree with Mr. Rasgotra that there is something fundamentally wrong in India's conceptualization and approach and we cannot afford this as a great power.

## Access to Strategic Technology

Access to all possible areas of strategic technology must be an important goal. An important area of technology, where a minor apartheid regime still prevails is Missile and Space technology, which is subject to the Missile Technology Control regime. We must aim to become a member of this club. At a more operational level, we must try and acquire pilotless attack aircraft, communication intercept equipment etc. from those countries that posses such technology. <sup>12</sup>

<sup>&</sup>lt;sup>11</sup> The ratio which was 17% in 1980, rose to a high of 19% in 1992 and has since fallen to 13%.

<sup>&</sup>lt;sup>12</sup> My thanks to Arundhati Ghosh for suggesting this in response to a specific question.

# **Objectives: Medium Term**

Over the medium term, there are two objectives worth pursuing: The setting up of a new institution for Global Governance and a new Strategic Technology club of which we become founder members along with the potential great powers of the 21<sup>st</sup> century.

#### **Global Governance Institution**

Virmani (2004b) suggested a reform of the United Nations to take account of both current economic and power balance and evolving global socio-political principles such as democratic/human equality (also in Virmani (2006a)).

India has traditionally been hesitant to get involve in global democratic conclaves. This was partly justified when there was clear dissonance between the words and actions of those who proposed these issues. With this dissonance likely to be greatly muted, India as the largest democracy in terms of population and (soon) the third largest in terms of economic size, our approach needs to change. Democratic principles are both kind of globally acceptable and in our own favour. So, I do not think we should shy of them. We should conceptualize a system of global governance which is based on some kind of democratic principles. The basic idea is divide global governance into two components, which have fundamentally different management challenges and therefore require different distribution of global representation. These are global socio-economic-development issues and global security (national) issues, corresponding approximately to the current UN general assembly (and the UN social agencies-WHO etc) and the UNSC. Voting power in the first must be distributed according democratic principles (all humans are equal and must therefore have an equal vote), while voting power in the second must be based on relative power, as the key issue is enforcement of rules through exercise of power.

There are two ways to implement the democratic principle. One is through direct election of representatives to the global assembly through individual vote or to let country governments have a vote in proportion to their population. In both cases there is asymmetry between relatively free democratic countries and relatively controlled dictatorial or oligarchic systems. We therefore need to devise a system that adjusts the vote share for the degree of democracy. For this we need a system in which an independent and credible rating organization, rates the degree of democracy – not only must such an agency be independent and unbiased but must be seen to be

so across the World. As existing US rating organizations may not be credible, we need a global organization in which all democratic countries are shareholders. The rating (0 to 1 with 1 as perfect democracy) would be used to discount the individual vote or representation in the body that manages global socio-economic-developmental objectives.

The other component is global security. The Security Council is the instrument of military power and the use or threat of use of force to enforce the rules. By definition the veto means that even the weakest member of the veto bearing powers can de-legitimise any action even if the other members support it unanimously. How can countries with completely different amounts of power accept such a rule? A super-power or super powers will never feel bound by such a ridiculous principle. Thus the new system must have some kind of proportional vote based on a measure of power, if it is to be both fair and realistic and therefore credible and sustainable. Thus it may be reasonable to expect a super power with less than 50% of the global power to convince a set of countries with more than 50% of the global power that it should be authorized to take certain actions. Conversely a global power that can convince 25%/50% (whether or not it requires a super-majority respectively) of the power votes to oppose any action against it would provide acceptable safeguards to the powerful countries to subject themselves to the same global rules. As enforcement of rules through use of military power (or the threat of its use) is an important element of international security decision, a powerful country will not surrender (on a long term basis) its freedom of action, unless its vote is proportional to its power.

Therefore, the international security part of the new global governance organization must provide for voting shares in proportion to global power (measured for instance by the VIP2 or VIP). It must define situations which require majority decisions and those that require a super majority (66% or 75%). It must also provide for periodic re-estimation and re-adjustment of voting proportions according to shifts in global power.

# Strategic Technology Club

The second one is a new security technology club to supplant NPT, NSG, MTCR etc.. Those of you who are familiar with these, I am sure, I do not need to elaborate too much because the existing structure, we are like beggars trying to get in,

in each case. Why do we not float an alternative idea which is based on some kind of a global rationale and a global system, but one has to take account of the views of those who are powerful today. For instance the issue of WMDs, that is on the global table, would have to be addressed.

## CONCLUSION

When we first projected (in 2004-05), the development of Tri-polar Global Power structure by the middle of the 21<sup>st</sup> century, leading US Foreign journals refused to even consider this possibility seriously. Despite major upheavels in the last few years, including the reduction of India's per capita GDP and GDP at purchasing power parity by 36% virtually at the stroke of the pen (i.e without a clear and transparent explaination and comparative data on the components of this unprecedented change) we have shown that our projections have changed only marginally. As we had anticipated adverse (favourable) changes may delay (accelerate) the achievement of the bi-polar and tri-polar global power structure but not derail it. Thus the dates for these two events have been pushed back by about 7 years.

The latest National Intelligence Council (2008) report recognizes the eventual emergence of China and India as powers, but still asserts that they will be operating in a multi-polar World. In this paper, we have tried to show that what has been termed a multi-polar structure is merely the phase of high uncertainty during the transition between the uni-polar structure at the end of the 20<sup>th</sup> century and the bi-polar/tripolar structure that is likely to emerge during the second quarter of the 21<sup>st</sup> century. However, as Keynes said, "In the long run we are all dead."

The paper therefore focuses on the Transitional phase spanning the first quarter of this century, which can be characterized as multi-polar, but also by various other terms that have been used by other scholars. After analyzing the nature of this transition phase it tries to draw out the implication for India, and what we must do to enhance National and International security. Besides traditional measures to enhances National security, it emphasis the need to modify/change the institutions and rules of the global economic, military and socio-political game and to work to set up new institutions that will better serve our national and global security interests.

#### REFERENCES

- 1. Kissinger, Henry. *Diplomacy*. New York: Simon & Schuster, 1994. <u>ISBN</u> 0671510991
- 2. National Intelligence Council (2004), Mapping the Global Future, Report of the NIC 2020 Project, Washington DC, December 2004.
- 3. National Intelligence Council (2008), Global Trends 2025, A Transformed World, Report of the NIC 2025 Project, Washington DC, November 2008.
- 4. Virmani (2002a), Arvind, A New Development Paradigm: Employment, Entitlement and Empowerment, Economic and Political Weekly, Vol. XXXVII No. 22, June 1-7, 2002, pp. 2145-2154.
- 5. Virmani (2002b), Arvind, A New Development Paradigm: Employment, Entitlement and Empowerment', *Global Business Review*, International Management Institute, SAGE Publications, Vol. 3, No. 2, July-December, 2002, pp. 222-45.
- 6. Virmani (2004a), Arvind, Accelerating Growth and Poverty Reduction A Policy Framework for India's Development, Academic Foundation, New Delhi, January 2004.
- 7. Virmani (2004b), Arvind "Economic Performance, Power Potential and Global Governance: Towards a New International Order", Working Paper No. 150, ICRIER, December 2004( <a href="https://www.icrier.org/wp150.pdf">www.icrier.org/wp150.pdf</a>).
- 8. Virmani (2005a), Arvind, "A Tripolar Century: USA, China and India," Working Paper No. 160, ICRIER, March, 2005 ( www.icrier.org/wp160.pdf ).
- Virmani (2005b), Arvind, "China's Socialist Market Economy: Lessons Of Success", ICRIER Occasional Policy Paper, April, 2005 ( <a href="http://www.icrier.org/China05\_policy7.pdf">http://www.icrier.org/China05\_policy7.pdf</a>).
- 10. Virmani (2005c), Arvind, "VIP<sup>2</sup>: A Simple Measure of Nations (Natural) Global Power," ICRIER Occasional Paper, July, 2005 (<a href="http://www.icrier.org/vipp4.pdf">http://www.icrier.org/vipp4.pdf</a>).
- 11. Virmani (2005d), "A Tripolar World, India, China & US," Lecture delivered at India Habitat Centre on May 18, 2005 ( http://www.icrier.org/public/TripolarWrld\_IHC5.pdf).
- 12. Virmani (2005e), Arvind, "Global Power From The 18th To 21st Century: Power Potential (VIP2), Strategic Assets & Actual Power (VIP), Working Paper No. 175, ICRIER, November 2005. <a href="http://www.icrier.org/WP175VIPP8.pdf">http://www.icrier.org/WP175VIPP8.pdf</a>
- 13. Virmani (2005f), Arvind, "China's Socialist Market Economy: Lessons Of Success," Working Paper No. 178, ICRIER, December 2005.
- 14. Virmani (2006a), Arvind, Propelling India from Socialist Stagnation to Global Power: Growth Process, Vol. I (Policy Reform, Vol. II), Academic Foundation, New Delhi, 2006.
- 15. Virmani (2006b), Arvind, "World Economy, Geopolitics and Global Strategy: Indo-US Relations in the 21st Century," *Economic and Political Weekly*, Vol. XLI No. 43-44, November 4-10, 2006, pp. 4601-4612 (http://www.epw.org.in/showArticles.php?root=2006&leaf=11&filename=10717 &filetype=pdf).

- 16. Virmani (2006c), Arvind, "Trilateral Nuclear Proliferation: Pakistan's Euro-Chinese Bomb," *IDSA Monograph Series No. 1*, Institute of Defence Studies and Analysis, New Delhi, December 2006.
- 17. Virmani(2006d), Arvind, "Evolution of World economy and Global Power: From Unipolar to Tripolar World in Economic Diplomacy," Editor I. P. Khosla, Konarak Publishers, 2006.
- 18. Virmani (2007), Arvind, "Future Economic Contours of the Asia-Pacific and South Asian Region and Thier Impact on Global Security Architecture," USI National Security Lecture, 2006, in National Security, Global Strategic Architecture and Information Security, National Security Series, 2006, KW Publishers Pvt Ltd, New Delhi, 2007.
- 19. Virmani (2008), Arvind, "The Economic Foundations of National Power: From Multi polar to Tri-Polar World?" in V. R. Raghavan (Editor), Economic Growth & National Security, Centre for Security Analysis, Chennai, 2008.