

Nuclear Weapons, International Prestige and Economic Development: What Cost for the Emerging Countries?

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*“I think that we in our family don’t need bombs and guns,
to destroy to bring peace – just get together, love one another,
bring that peace, that joy, that strength of presence of each other”*
Mother Teresa, 1979

Introduction

In September 2009, the members of the UN Security Council unanimously pledged “to create the conditions for a world without nuclear weapons”. Given such a unanimous decision, one has to wonder why the President of Russia² and the Vice President of Brazil,³ declared their countries’ intentions to either (i) use nuclear weapons in case of an attack (Russia), or (ii) build nuclear weapons for security reasons (Brazil). Those declarations are particularly troubling because both nations are part of the group of emerging nations (BRICs), called to play a decisive role in defining the international economic development agenda for the 21st century.

It is well known that holding nuclear weapons involves a major escalation in public expenditures not only in weapon development, but also on delivery systems, command instruments, control structures and communications and intelligence structures which are absolutely unproduc-

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² President Medvedev’s press declaration on February 5, 2010.

³ Vicepresident Alencar’s press declaration in 2009.

tive in emerging nations. Additionally, public expenditures in nuclear weapons are rarely open and explicit; hence they propitiate opaque financial and political reports which reduce the overall transparency of any government's communication with its citizens. This is a major reason why most countries with such programs create a political climate unfavorable to democratic practices.

Thus, if building and storing nuclear weapons is incompatible with rational political and development goals, why do governments such as China, India, Pakistan, Iran and Brazil seem interested in keeping and developing nuclear weapons when the impact of the costs of a nuclear arsenal – its maintenance, storage, and expansion – impairs those countries' ability to redress such basic domestic items as widespread illness, poverty, unemployment, and inequality in income distribution?

It is the intention of this paper to demonstrate that the road to nuclear disarmament depends not so much upon scientific discoveries, the invention of new technologies, or vague rhetorical communiqués, but rather on the conviction amongst all governments that nuclear arming is not only foolish and costly, but also that *it would bring no political advantage, or international prestige to the nations owning such a nuclear arsenal.*

The paper will stress that, despite rhetorical clichés, international incentives are biased towards the building of nuclear arsenals if a country wishes to become a key player in deciding the world's political and economic agenda for the 21st Century.

In particular it will become necessary that those governments who today dominate the trade and economic agenda act convincingly in demonstrating that unless nuclear disarmament is defined and acted upon as an essential element of an emerging country's international agenda, its opinions in determining the economic and trade agenda will not be considered as important in shaping the 21st Century world's agenda.

Origins of the "Prestige" Argument

An example of the effect of a non *values-oriented policy* is given by North Korea's actions. In a country whose people are famished and without a level of education to be competitive in today's global environment, the Government has felt compelled to divert their scarce resources

towards an outrageously expensive weapons program, intended as a way to arm-twist the world into giving them “respect” and “recognition”. This decision is a perfect example of the “prestige” argument which misguides governments in emerging economies to make decisions and define national priorities at the expense of the well-being of its population. To any of us such a use of the country’s resources seems a crazy decision. But judging from the results obtained by the country in its negotiations with the so-called world powers, to its officials they may appear as wise decisions. In fact, they were decisions forced upon them by the current international environment in which if a nation possesses nuclear weapons, it “punches above-its-weight”.

Unless we understand the impact that this “prestige” argument creates in the current international arena, it will be impossible for any of us to comprehend why some nations act as they do and, above all, what needs to be done to change such behavior. We can say that instead of applying a clear values-oriented policy regarding nuclear disarmament, the major world powers apply a confusing and ineffective nuclear deterrent policy, one that reinforces the “prestige” argument upon which many emerging countries base their international political policies today.

A *clear values-oriented policy* is given by the following statement made by the world’s strongest defenders of peace:⁴

Today, the world is interconnected as never before. Decisions made today will have permanent consequences. Humanity’s global footprint must be guided by appropriate thinking, policy, and actions. No longer can we afford to think locally and act globally.

We must effectively address crushing poverty and adequately organize ourselves to protect the global commons, such as the oceans, the climate, and the rainforest – living systems on which civilization depends. Because the promotion of global cooperation is distorted by the possession of nuclear weapons by some, and our security increasingly risked by their spread, we must ensure the elimination of nuclear weapons before they eliminate us.

⁴ 8th Nobel Peace Laureate Summit, December 13-15, 2007.

If we are to fulfill our responsibility to leave a sustainable future to the next generation, we must make sure our political leaders have answers to these critical questions:

1. *What are your plans to address crushing poverty?*
2. *What are your plans to protect the environment?*
3. *What are your plans to eliminate nuclear weapons?*

Most major nations behave without a policy sustained in such clear principles; as a consequence, the *de facto* nuclear-weapon states of the emerging world are developing nuclear capability for a variety of reasons, other than the familiar motivations of the Cold War.⁵ While Israel is presumed to have nuclear weapons for traditional threat-based deterrence and North Korea appears to possess them for use as a bargaining tool, why would Brazil, Iran, India, and Pakistan be interested in having nuclear arms?

Let's start with Brazil.

In the course of 2009, Brazil's Vice President stated that he believed that Brazil needed nuclear weapons to protect its offshore oil assets. Recently, President Luiz Inácio Lula da Silva announced that Brazil will build nuclear submarines in preparation for extensive patrolling of Brazil's offshore oil wealth, while at the same time announcing a military regeneration program which started with a large military weapon purchase from France. This behavior appears at odds with Brazil's international policy and its geographical placement in a quiet neighborhood. Indeed, Brazil's foreign policy is such that it is friends with rogue nations such as Cuba, Iran, North Korea, and Venezuela, while being at the same time a member of the BRICs group, the WTO, and the UN. Furthermore, it enjoys a special relationship (defined as strategic) with the EU and the United States of America. It is thus very odd that its officials would claim that Brazil needs a nuclear weapons deterrent to defend its offshore oil deposits.

Given what we have just said, its current behavior must originate from the Brazilian government's belief that despite the success and recognition

⁵ There are at least four additional nuclear-weapon states – India, Pakistan, Israel, and North Korea – and Iran could soon join their ranks.

of its current foreign policy, to move from being considered a *mid-size power*, to attain its aspirations to become a permanent member of the UN Security Council, and to reach recognition as a *great power* in defining the world's peace and economic agenda, it needs to become a nuclear power. Quoting Mr. Alencar, "*Pakistan is a poor nation with a seat in various international entities, precisely for having an atomic bomb*".

However, as the saying goes, "*it takes two to tango*". A classic demonstration of the lack of values and confusing policies followed by a world power, which strengthens the "prestige" argument, is given by France's behavior towards Brazil. A member of the UN Security Council, France was among the countries which in 2009, unanimously pledged to create a world without nuclear weapons. And, as reported by the Henry L. Stimson Center,⁶ "*since the early 1990s France has bolstered its efforts to fight against the spread of nuclear weapons aggressively since the early 1990s and it is playing a key role in the European Union's efforts to deal with Iran's threat to become a nuclear nation*". French officials have proposed means to ensure that a country such as Iran, leaving the NPT, does not go unpunished for the violations it may have committed as a member.

Yet, breaking such commitments, France decided to help Brazil build nuclear submarines "to protect its offshore oil's wealth". The real reason, however, was the commercial interests of France's weapons industry. It was these interests which forced its government to support Brazil's nuclear intentions in order to obtain a major weapons contract. In the process, France reinforced Brazil's, and other emerging nations' belief, that prestige and power can only be obtained through the development of a nuclear-weapon arsenal.

A similar story can be told about India.

In the early stages of its independent life, and in accordance with the Congress Party principle to eliminate a nuclear world of have and have nots, India strongly pursued a policy of total nuclear disarmament. However, while in government, the BJP used nationalistic arguments to lead India into the Nuclear Club. One would have expected that, given its

⁶ *Unblocking the Road to Zero: France and the United Kingdom*, pp. 3 and 4, Edited by Dr. Barry Blechman, Washington, D.C., February 2009.

international principles, upon its return to power the Congress Party would clearly reaffirm India's commitment to pursue the policy of eliminating the two-tier nuclear structure of have and have nots countries in the world. To nobody's surprise, the current nuclear policy of India validates and supports the current world's two tier system!

Again, the response of another of the "great powers" was lacking in principles and utterly confusing. As in France's case with Brazil, the United States response vis-à-vis India validated the country's nuclear status by signing a bilateral agreement which assured that no economic – or any other sanctions – would be imposed against India as a result of its having become a nuclear power under devious processes. Like France, in 2009 the US had pledged at the UN Security Council to do everything possible to rid the world of nuclear weapons. In fact, by accepting such agreement, the US validated once more the emerging nations' belief that having a nuclear arsenal provides a country with the capacity to "punch-above-its weight" in international matters.

One could bring many more examples of this confusing *lack-of-values nuclear policy* and of its impact on emerging nation's belief that to be considered major players it is necessary to possess nuclear weapons.⁷

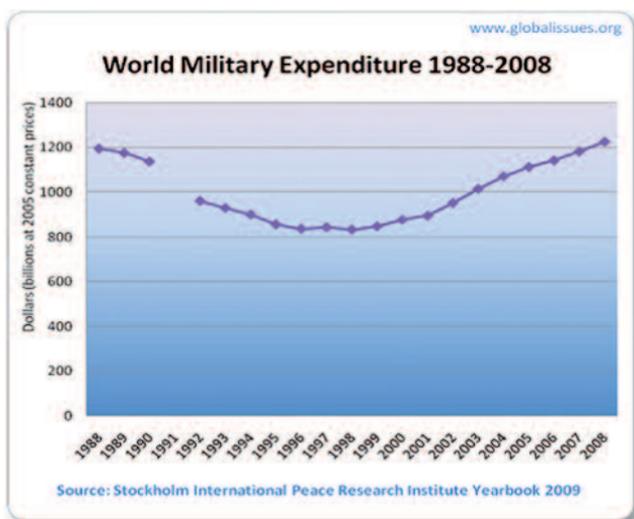
Costs of the lack of a "values-oriented policy"

In his 2005 Nobel Prize speech Mohamed El-Baradei stated

Fifteen years ago, when the Cold War ended, many of us hoped for a new world order to emerge. A world order rooted in human solidarity – a world order that would be equitable, inclusive and effective. But today we are nowhere near that goal. Consider our development aid record. Last year, the nations of the world spent over \$1 trillion on armaments. But we contributed less than 10 per cent of that amount – a mere \$80 billion – as official development assis-

⁷ A sad conclusion, as it would suffice to make them feel "punching-above-their-weight", to provide these nations with a stronger voice and decision making role in those international organizations which really count for economic development, the IMF, the World Bank, the WTO, etc.

tance to the developing parts of the world, where 850 million people suffer from hunger.⁸



However, emerging countries building nuclear arsenals should be aware that the cost of building a bomb is not the main expense they will incur in. In the past fifty years, US governments have spent around *four trillion dollars* on the combination of the nuclear weapons arsenal it holds, its delivery system, and its C3I systems. Only 10% of that amount (\$375 billion) went towards the cost of the weapons themselves, the rest was the cost of the delivery systems (\$2 trillion), C3I system (\$1 trillion), etc.

Moreover, according to a reliable source,⁹ the cost to India of its nuclear program lies between 0.5 to 1 per cent of that country's GDP;

⁸ M. El-Baradei, Nobel Prize Speech, Oslo, Norway, 2005.

⁹ For an interesting analysis of these costs read *Nuclear "Security" and Economic Slavery: the BJP Swadeshi*, Draft discussed in 2002 for discussion at the Meeting of Movement in India for Nuclear Disarmament.

an enormous amount for a nation where close to 60% of its population lives under the \$1 dollar per day extreme poverty threshold of the World Bank. Since we can assume that such a program did not substitute conventional weapons and soldiers, then the terrible conclusion is that unless the benefits derived in international trade from the “prestige” factor are equal to between 0.5 or 1% of GDP, such a program will simply reduce the government’s capacity to bring economic development to its population.

Additionally, if one adds the indirect costs associated with the diversion of resources to R&D nuclear related programs, the costs incurred by nations wishing to join the nuclear club increases as investments in the development of commercially-oriented technologies fall in the Government’s priorities. In today’s globalized markets, those countries lacking a commercially-oriented technological production process will become unable to provide their population with full employment. Investing in a nuclear arms program does not appear, therefore, as the best investment promotion strategy to reach those social objectives.

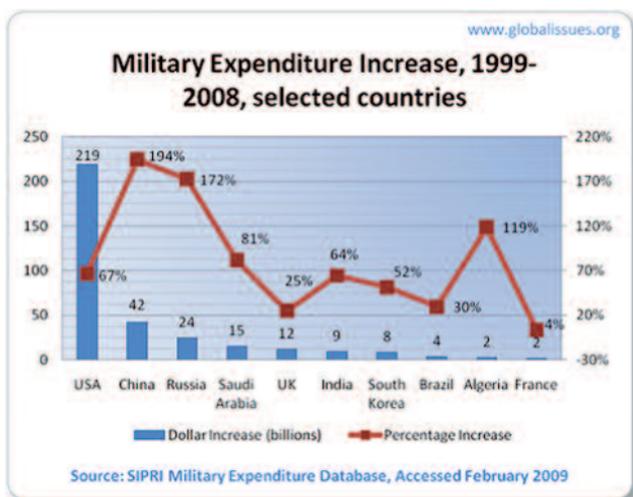
We can conclude thus, that the resources invested in nuclear programs by governments wishing to acquire “international prestige” will end up deteriorating the country’s well-being.

Can we build a “values-oriented” nuclear policy?

The new millennium began with 32,000 nuclear bombs possessed by eight nations containing 5,000 megatons of destructive energy.¹⁰ This is a global arsenal more than sufficient to destroy the world. Yet, despite that fact, in the first years of this century military expenditures continued to increase, with many emerging nations becoming participants in this folly.

Non-nuclear middle powers and the five nations holding permanent seats at the US Security Council are, therefore, facing a critical and delicate moment presenting openings and dangers in their search for total denuclearization. To put in place a *clear values-oriented nuclear policy*, non-nuclear middle powers must seize the opportunity, leverage their

¹⁰ Quoted in *Repairing the Regime*, Joseph Cirincione ed., 2000.



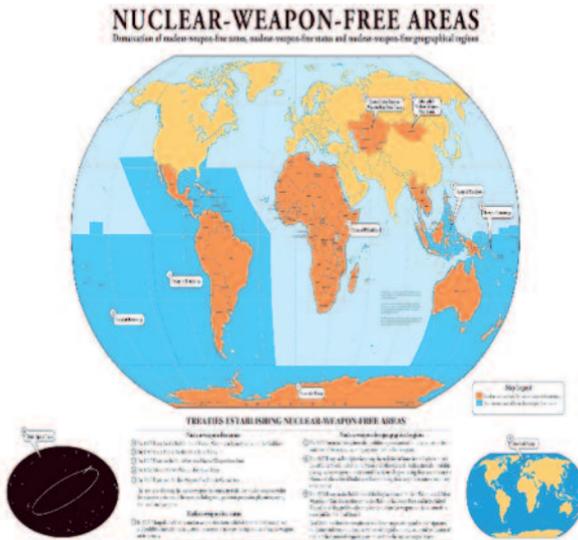
collective power, and press hard the 5 permanent members to adhere to two basic principles: *transparency and good faith*. At the most basic level, transparency demands of them keeping promises and working sincerely and cooperatively to achieve agreed denuclearization objectives. Good faith requires meeting the NPT commitments made in 1995 and 2000 or, when appropriate, developing alternative means of fulfilling Article VI. A way of achieving these objectives is through the building of a global network of Nuclear Weapons Free Zones;¹¹ a task where, if good faith exists, both non-nuclear middle-powers and the 5 powers holding permanent seats at the UN Security Council could collaborate.

Since 1963 Mexico's government argued that establishment of Nuclear Weapons Free Zones (NWFZ) not only would contribute to reducing horizontal proliferation in specific regions, but also to global

¹¹ A nuclear-weapon-free zone (NWFZ) is a specified region in which countries commit themselves not to manufacture, acquire, test, or possess nuclear weapons. No nuclear weapons may be stationed on land anywhere in the regions covered by these zones, although nuclear weapons transit at sea is still permitted by most of the zones.

nuclear disarmament through gradually broadening the areas of the world “from which nuclear weapons are prohibited to a point where the territories of powers which possess these terrible weapons of mass destruction will be something like contaminated islets subject to quarantine”.¹² Mexico’s efforts created the first nuclear free zone in Latin America. Both Brazil and Cuba signed in 1988 the Tlatelolco Treaty that bars Latin American and Caribbean countries from developing nuclear weapons programs.

Following Latin America’s example, most of the nations in the Southern Hemisphere have established NWFZ. Regional nuclear-free or nuclear weapon-free zones in this hemisphere include the Latin American NWFZ (Tlatelolco Treaty, 1967), the South Pacific NWFZ (Rarotonga Treaty, 1985), the Southeast Asian NWFZ (Bangkok Treaty, 1996) and the African NWFZ (Pelindaba Treaty, 1996). Interestingly, the new Central Asian NWFZ (Semipalatinsk, 2006) expanded the NWFZ concept to a significant regional grouping wholly in the Northern Hemisphere.



¹² Alfonso García Robles, *Speech before the United Nations*, UN A/C.1/PEV2018 November 13, 1974.

However, because of lack of regional consensus, or due to the opposition of major powers, new zones proposed for such regions as Central Europe, Northern Europe, the Baltic region, the Middle East, South Asia and Northeast Asia, have so far not been established.

Here is the tool available to define a “*clear values-oriented policy*”!

Conclusions

That the search of “international prestige” is valued higher than economic development in many emerging nations is a symptom of the need for a *values-oriented policy* regarding nuclear weapons. Without it, proponents of nuclear development in emerging nations will continue to believe that they are improving their nation’s chances of becoming a developed nation. The pertinent question that those proponents should ask themselves before entering into the nuclear arms race must be: what is the loss of economic development from our intention to gain “international prestige”?

At the same time, without a *values-oriented policy*, the original five nuclear powers will continue to allow a few emerging nations to become nuclear powers, either because of commercial considerations, or because of the assumption that such leniency will maintain their nation’s current nuclear power *status quo*. They forget that things will not remain static; no *status quo* is possible in the present information age, where leaps of knowledge are forcing a new conceptualization of what it means to be human and exist on this planet.

Abolition of nuclear weapons under a *values-oriented policy* is necessary not only because they pose totally unacceptable risks, but also because the current situation does not give rise to a stable and effective global political and legal order; one where the world effectively tackles the real problems facing an interdependent world: climate change, terrorism, financial instability, poverty, and disease.

During the Study Day the author added the following commentary to his paper

Thank you. First of all, as Professor Gotti Tedeschi said, for an economist to be sitting here with all the scientists it is complicated to talk about all these things. I wrote a paper, the paper is there, I do not want to repeat what is in the paper, I would like to concentrate my comments on three things that I feel build on what I am saying in that paper.

The first one is a view that I have been developing for the past ten years, since I was the Minister of Foreign Affairs of Mexico, looking at what changes are happening in the world in terms of the global equilibrium and how that equilibrium is really becoming the important issue that we are facing, and what we have is very clear. Whereas everybody thought at the beginning that this would be the century of the United States, where the United States would be the unipolar, strong country, what we are finding more and more quickly is that we are facing a truly multipolar world where, what I call, you know, organisational structures that will be building over time will be happening. What are those structures? Well, the first one that is becoming very complicated is what I thought at the time would be a North American type of structure, and would be the combination of Canada, United States and Mexico, thought under the NAFTA treaty and then really developing into a stronger combination that would make that region of the world become one of the multipolar regions. That is not happening for many reasons and I would say that that is one of the things that is pushing many countries to think that if I cannot become part of that multipolar world through a region, then I will have to become my own country, and one of the ways that I can become my own country and speak and be listened to in the world is by having a nuclear arsenal. That is something I am very concerned about because, whereas I thought originally as an economist that you could put together economic regions, now I am facing more and more a situation where, if that is not going to happen, then some countries that were interested in becoming important "through the regions" will now look at becoming important by themselves by creating this nuclear arsenal, which seems to be something that gives prestige in the world. But not only prestige in terms of having prestige but also having influence in the decision-making process in many areas, not only peace but also trade, also financial aspects

in the world. So that multipolar world, in my opinion, would have been formed by the North American region and then you have the South American region where Brazil should be the leading country, really managing and putting together this coalition.

If you look at what Brazil has been doing in the past ten years, you see that very clearly. Brazil is first pushing for the Mercosur, then it is pushing for the structure of the regional countries in terms of what it calls the community of South American countries and then Brazil was looking at that community, talking to countries such as the Arab countries, in a combination, the African countries, so Brazil really has a clear idea of how it has to become important and part of that idea comes from the fact that I need a region called South America where I will be the leader of the region. Then you go on and look at the European Union, which is facing the same problems, it was supposed to be a region where you would go from the economic side to the political consideration and structure and there you have some problems because you have nations, two of them, that have permanent seats in the Security Council, that gives them, I would say, a punch above their weight, I put that in my paper because that is really what you have, two countries like France and the United Kingdom which are really punching above their weight, they really say things and have veto power when, in fact, when you look at the overall European Union, they are just part of it and not really, you know, one of the biggest or most important parts. I mean, sure, they are important countries but obviously you have Germany that is a more important country in many regards, and which is still being considered lower because they do not have a permanent seat in the United Nations Security Council.

And then, of course, you have China, which is becoming the leading power for the 21st century, and China is pushing very strongly the concept of this Asian region multipolar concept and they are really going into a combination with the rest of the Asian countries, to see whether they, as a top country, can really manage Indonesia and all these other countries. And of course, because China is doing that, India is concerned because India does not want to be left out of the picture and so India is trying to see how they can put together that combination. Why do I know that this is true? Well, because what we did during the time I was Minister of For-

eign Affairs, and since we are talking about Chatham House Rules here, was simply to define that we could not allow Brazil to have a permanent seat in the UN Security Council unless Mexico also had it and the reason is very simple: if we do not do that, and Brazil were to be the Latin American country sitting on a permanent seat, then all the discussions between Mexico and the United States would be bilateral and that would be a very asymmetric relationship between the two countries whereas, if we were either part of a permanent seat along with Brazil, or we also had our permanent seat, the United States would have to discuss bilateral issues in the light of the multilateral issues that are important for them and have to go through the Security Council. That is the reason also why we push Mexico to go into the Security Council more and more frequently, we have been twice in the past five years with a non permanent seat. That is important for all of us because it gives you influence. So the prestige argument is there. I need to be powerful enough to really sit in all these boards where big discussions are put together, on what will be the trade regime in the world, what will be the financial regime in the world, what will be the peace regime in the world and so these things are important and if you are a country which has grown in size, and there are many ways to grow, you know that you want to be part of that group that decides. So what do you want: you want to be part of the G8, you want to be part of the G20. And so we pushed for the G20, now we have a G20, and at the same time you wonder, is this really useful or not, and the answer is yes, because that is where decisions are being made really, and not in the other big places where people are discussing things. They are very nice, I was many times in the General Assembly of the United Nations, you go there, you make your speech and it is beautiful but, at the same time, it is absolutely useless, I mean, nothing happens, and therefore where things happen is where these small meetings are taking place so you want to be a part of that, you want to be really one of the countries that will be defined in the international agendas, at least in these aspects, in financial, trade and security business for the next hundred years or a thousand years or whatever you want to think.

So there you are. That is why I am more and more convinced that this prestige argument is very important for countries the size of Mexico, Argentina, Brazil, Indonesia or Malaysia, all these countries that are

medium-sized powers which are emerging and becoming important in the world. That is why I made the argument in my paper that prestige is something you want to have. And what do I mean then by prestige? Well, we thought that it was through trade, we thought that it was through financial aspects and so we worked through this possibility, I am talking about Mexico, of joining the United States in this major alliance that would be the North American Free Trade Association and that would give us a punch-above-our-weight type of situation. As it turns out, that was not true. I talked to my government on this point but I do not know whether they really believed that we needed to push more and more the Mexican presence in all these fora so that we could really make a difference. And as we went into that we began to find out that there is a question of double standards, I mean, it was mentioned a little while ago and so what I made in the paper is the point that all these big powers do have double standards. I mean, you know, come on, the United States is making all this noise about going into disarmament and pushing the whole thing and when India exploded the bomb and showed that they do have nuclear power the first thing they do is, how do we accommodate, and I am talking about the Bush Administration, I am not talking about the Obama Administration, I am talking about the ones that used to tell the world that they were so powerful and strong that they would kill anybody who got in their way. Well, sorry, but you know, when you talk to India you switch your conversation and you allow them to have the kind of agreement that goes against everything that you are talking and making in your pushing for peace and disarmament. So it is important then to understand that there are messages being sent by France, by the United States, by China, by many of these countries that, you want to be important, you want to be in the big club, you better have nuclear weapons because otherwise we will not pay attention to you, despite the fact that you may be a very strong country in terms of trade or in terms of finance. And so it is becoming a switch because what happens to a country like Mexico, and many other countries like ours, is you start thinking in terms of your own security. I mean, we have always made the joke in Mexico that why do you want a big army, why do you want a big nuclear-weapon arsenal if you only have two countries, well, three countries really, that you can invade? One is the United States, in

other words that you are not going to be able to win, and then you have two under you, Guatemala and Belize, which honestly, it does not make any difference whether you have an army or not, it is not going to happen, all the Guatemalans want is to go through the Mexican territory to get to the United States, not to conquer Mexico anyway, so when you look at this point and when you are talking about the big issues for a country like ours, which are trade, finance, security and migration, then it becomes very important to be part of the club. And to be part of the club you start thinking whether you should have nuclear weapons to be listened to. Now, Mexico probably will not do it, because we are too close to the United States and they will get too nervous if we have nuclear weapons but you know, a country like Brazil, despite what the Ambassador says, and I did not want to say this without him being present, but despite what he says, I do not believe it. I am absolutely convinced that Brazil is looking for how to develop them, or how did they get so close to developing nuclear weapons? Everybody knows that – what did you tell me Carlo? – in less than nine months I can have the baby, OK? So this is something where I put the double standards as a very difficult issue and it has to be then decided whether we really believe in it or not and that is a point that I make in my paper, you treat countries that do have the weapons differently than you treat countries that do not.

And just witness what is happening right now with Iran. This is absolutely ridiculous. Everybody believes that they do have a programme to build a bomb. I mean, come on, we all know that, but at the same time I do not see the United States invading Iran and what I am pretty sure of right now is that Brazil and Argentina, which are seated on the Security Council at this point in time, have already said that they will not apply any kind of this type of problems or limitations to what Iran is doing. You are going into that fact that there is a truth between what people say and what people do and they do not match in many of these countries.

And then the third one is a very sad thing, because when you are beginning to believe that you need to develop then you start spending on defence and you start spending a lot of money not only on defence, but also on nuclear programmes. There is this estimate that I got from this analysis that was done by some critics of the Indian programme, where

they really are saying that India is spending between half a point to 1.5 points of GDP just on the nuclear programme, because it is not only that you build the bomb, then you have to take care of the bomb, you have to take care of all the developments that are happening, you have to take care of all these things that you have to keep going and so you are going to be keeping a 1 to 2% of GDP expenditure just on that thing which is a nuclear programme. Does that mean that you are going to be reducing the conventional army that you have or the conventional weapons? The answer is no, you also have to add that, and so, in the end, you are wasting, that is my word, 1 to 2% of GDP on something that you are telling people you will never use. So there is a contradiction here, I am making weapons of mass destruction that I am promising everybody I will never use. So what do you want them for? If you are not going to use them, what do you want them for? I understand why the Americans may want them, I understand why the Russians may want them, but why would the Brazilians, why would the Mexicans, why would the Indians want them, except for something which is either prestige or really going into war? You have to choose one of these two things. My perception is that none of these countries really want to go to war. I mean, yes, there was a little problem with Pakistan and India and that may have some issue on that but when you take that out, really what happens is, because they are nuclear powers they are being listened to now in many fora. And that is important and they will simply want to keep it. And so one of the key things to me was, when I look at this, what is the cost? And the cost is very high because the Millennium Goals are now forgotten, basically. I mean, yes, people talk about them and I am going to be next week in a meeting in Russia talking about financing for development and all these things, which is very nice, and I will also make a passionate speech about the whole thing but, through this, no one really cares anymore about spending money. We were all in Monterrey at the time of this famous meeting to put all these goals, the whole idea was that we would be putting 0.7% of GDP in terms of development aid, none of that has taken place and countries like the United States, for the reasons that Professor Gotti Tedeschi was saying right now, are unable to really divert resources into those kinds of goals. So the goals of the Millennium are going down the bolt and the whole concept is the cost to the world is too high

because what it is doing is we are spending all this enormous amount of money in things that, at least we hope, will never be used and if they are used then we will all just disappear and that is it, but if they are never used then you should be using the money in the things that are important, and things that are important are elimination of poverty, education, health, all the kinds of things that will make sense.

Finally, what I am concerned about is, because I switched into nuclear power development, then all the technology that I am developing in a country like Mexico, to put that as an example, will be dead because I do not have enough resources to move not only into that and something else so, in the end, the worst choice for an emerging economy or for a developing country, in this kind of investments, is because I am spending money on nuclear energy I am not spending money on any other kind of research and development programmes that will make sense for my country in the long run. And what can I really get from this type of investments? Well, very little because the Americans are spending a lot, the Russians are spending a lot and by the time I catch up with them it will be very complicated for me, because I will have to invest 10% of my GDP or 15% of my GDP to really have the kind of programme that the Americans or the Russians or whatever country, even China, will have. And so I am switching from what should really be my research and development programme, for growth and development, unemployment and the kind of things that will make me competitive, into investments in things that make no sense for my country in terms of technological development. Those are my three points there in my paper and, really, my concern is that, unless we do that, then we will be having trouble. So what I suggest, and Dr Rubbia has already told me that I am too idealistic, is that maybe the way to do it is by working all these nuclear-free zones in a more serious way, rather than trying to go into these major NPTs or what have you. Why? Because there the regional aspects and the regional coercion from countries that you are living with may be stronger than talking about these big meetings of 196 countries. So maybe, by going into nuclear zone by nuclear zone and then making that binding, we will be able to solve the problem of how can we disarm the world. The other option which to me is the one that should be logical, and then I will tell you a joke about what we say in Mexico about logical

solutions, the logical solution would be for the nine countries that have nuclear weapons to sit together and find a way to disarm themselves and that would disarm the world but, you know, that is not going to happen so this is like the Mexicans, we say that there are two ways to solve the problem of the economic crisis in the country: one requires a miracle and the other one will be just a normal thing. The normal thing would be for the Virgin of Guadalupe just to show up in Mexico and solve the whole problem for us and that would be nice, and the miracle would be that all Mexicans worked towards the solution of the problem together, and so this is exactly what I see right now in terms of what is happening in the world. Thank you very much.