# VECTORS OF CHANGES AND THE FUTURE OF THE GLOBAL COMMUNITY

A few years ago, the former President of Israel, Shimon Peres, during his last trip to Russia to give a lecture series, predicted that the 21st century would be a totally different century for the humanity, acting as the watershed of its evolution. Until then, he said, man would have used his brain to discover the outside world. He had seen the horses run and had invented the car and the train. Birds flew and had copied them with airplanes. But in this century man would discover his brain and with it his authentic nature and his enormous potentialities. Following this analysis, today we would be at the door of a new era that we could call the "civilization of intelligence". And while Shimon Peres expounded his thesis to hundreds of students who followed him between intrigued and passionated, a great scientist, this time British, Stephen Hawkins, made another important prediction about our future. Questioned about what he thought was the destiny of man, he said something very concise but at the same time very revealing: Man, he said, is called to fulfill a manifest destiny; to be the bees of the universe, the pollinating entity of knowledge of the cosmos.

The conjunction of these two visions leads us to reflect on the two main themes that will mark our future; our entry into a new stage of civilization and our departure to the cosmos. And on them, important political and strategic issues will have a major impact.

Today we are on our way to a new intelligent civilization, where the human being acquires a new value and his relationship with the planet takes on new proportions. Today we also need to consider how we approach our future projection in the universe, because we can be a species that carries harmony or the germ of conflict on a cosmic scale. And we live these two capital themes fragmented in multiple civilizations with deep differences and very different rhythms of evolution. In this context and lacking a superior political order of a global nature, strategic unknowns hang like swords of Demócles on the future.

We are therefore approaching the watershed of history, where science drives us to the future and politics drag its feet without yet finding the new formula to accommodate the coexistence of men to new times. That is why it is crucial to analyze some of the traits that begin to mark our evolution towards the future and try to model it in the best possible way for our peaceful and successful development.

The development of science and technology gives a new value to the citizen, anchoring their competitive capacity in intelligence, which creates an increasingly individualistic dynamic with greater creative force. Each person will emerge more and more as a unique piece of intelligence that will radically change its value from the past. Yesterday, in the absence of machines, the masses were necessary to be able to develop the productive processes that the elites developed. But today, with the advance and diffusion of technology, the value of each man is too precious to have it limited to mechanical functions or tasks that can be executed by products of artificial intelligence. What matters is "the thinking homo" able to imagine and invent. The superior value of man thus passes to focus on the intelligence and as it develops, gives life to a process of complexity and inventive wealth beyond imaginable. Man has gone from a stage of facing survival, to another of being a work force with elites creating products, to end up being a galaxy of creative beings. Each citizen gains value by their differentiated capacities that allow quasi-infinite innovations that in turn promote an exponential diversity.

The future of the world goes through the creative function; the more human beings that can be in this dimension, the greater the advance and the greater horizons will open up. We are heading towards a society that will have an infinity of creative individuals, generators of ideas, projects, initiatives or products, in front of previous societies that had masses of consumers but that executed functions with limited technical capacities. As has been said on other occasions, as recently as 1900, the first years in which the industrial revolution created new conditions in the most advanced parts of the planet, what was in the hangars were factories of a thousand workers with a management team of only ten people. Nine hundred and

ninety people performed a repetitive, mechanical work, which with scientific development was replaced by machines. In year 2000, in the same hangar, what we found were a hundred companies of ten people, all performing functions of difficult mechanical substitution. And in the middle of the 21st century, what will be in the most advanced places, will be a thousand people at the head of a uni or bipersonal company, creating in each case a new economic reality. The future is to count on each being as an unrepeatable being, of maximums, that during its limited time of life comes to exteriorize what it contains as unique. And the sum of all of them will allow humanity to spread through the most unusual fields of diversity and growing creation. This is the trend towards which we are heading.

In a world without artificial intelligence, men acted as mechanical operators. The human nature marked by diversity was perceived as a problem and an attempt was made to limit and frame it. By entering an era in which man can invent a product for everything that is a mechanical function, the center of gravity moves to the other extreme, towards the capacity to invent, the primacy is creativity. What is worth is man as being intelligent because what is involved is to invent. And here there are no limits because just as there is no man or woman that has the same iris among the eight billion people that inhabit the world today, the ability of creative combination in each human is also unique, being able to give birth to millions of different new initiatives. Thus, since everyone has their own angle in the perception of things, the possibility of inventing what the other does not come to imagine is the key to the new intelligent world and what makes the value of each individual not substitutable.

But if science and technology have opened the horizon to the development of man as a thinking being and at the individual level, progress is formidable, the science of the collective, what we would call political architecture, how we organize coexistence and the interaction of one the with the others to multiply the synergies and avoid shocks and conflicts, it is far from having matured in an equivalent way. This affects us deeply because by not getting to organize societies well we lose immense possibilities, we waste generations and resources and open

the doors to conflict. It is imperative to give a new priority to political architecture in countries and on a global scale, in the world. The strategic risks arising from the numerous failures between cultures and civilizations are too pressing not to address them as a top priority, thus avoiding destabilizing the prospects for progress.

At a former Likhachov Conference in St. Petersburg in May 2016, the eminent professor James K Galbraith, son of the famous economist John Kenneth Galbraith, elaborated on the key to development. With a brilliant speech he put the accent on the rules under which a human group is articulated. It is not education, nor funding, nor other hugely important functions. The fundamental pillar is how we articulate society, how we organize the game. Today the question becomes more crucial than ever, because we are at the doors of the great individual revolution, the drift towards the "homo intelligente". And we need a well organized collective game so that there are no bottlenecks that strangle the initiatives, to make it easier for each person to extract the most from themselves. In international relations this is also fundamental for the least developed countries, so they can take advantage of their delay to go through, thanks to the benefits of the technologies, to the advanced stage without all the hassle of the intermediate stages. We need to ensure that collective infrastructures advance at the same pace as individual advancement and so on.

In the last five hundred years science has made prodigious advances. In an effort of centuries it has managed to free itself from the gags and limits that the diverse moral or religious conceptions had it submitted to. The price that some have paid to push this car has been very high, like Galileo, burned alive to prove that the earth revolves around the sun, or Miguel Servet, roasted in boiling oil to expose his thesis on the circulation of blood. But this effort has allowed to broaden and then deepen the fields of research that have ended up leading humanity to enter the era of intelligence.

And although physical architecture has almost touched the sky and the great architects today build buildings that challenge all kinds of limits with shapes, heights and dimensions unimaginable a few years ago, in the social architecture, in

how we organize the shared public space and as we manage the game of all individuals among themselves, we have much to advance. And yet this is the capital field. Successful innovation in the social architecture is what will allow us to reach new firm ground in this era of deep convulsions that affect the emergence of the new individual, and a new distribution of everyone on the planet that gives true quality of life to each person.

Today, societies become complex in their nature and we must know how to channel their functioning with innovations. The architects of the public must be valued by society as essential pieces for their progress, attracting the most brilliant individuals who create the mechanisms to keep the game open without anyone being able to become a dominator. We must all choose, but we must prioritize the best in our own good. Man must now create the moral order that guarantees their coexistence and development and needs an effective political architecture to enforce that order. Those who think that this is an easy matter and that all serve for it are wrong. On the contrary, it is the most complex function because it requires finding formulas to channel the energy of millions of people well. That is why we need to select the best and we need to prioritize this function in priority. For knowing how to create well in political architecture is as difficult as scrutinizing the cosmos or finding the key to incurable diseases. For many centuries the function of ordering coexistence has been ensured by religions, preventing man from being in the forefront in the definition of his destiny. Today science and technology take us to adulthood, they confront us to lead our future. A responsibility that gives at least vertigo, but irrevocable.

Collectively, our challenge is to innovate in the organization of societies and in the relationship between them on a planetary scale. All the parameters change and the formulas of the past expire. Since man no longer has a simple value, as a mere labor force, but a much higher and much more complex value, as a source of intelligent energy, we must reorganize our political systems to create the platforms where each one can give their best, so that each individual can use , in its short time of life, its full potential.

The first challenge is to accompany the current generations in their constant recycling and the most decisive is the transformation of educational systems to adequately prepare future generations.

The current generations have to face a torrent of changes. They live in the present settled on a territory in a perpetual earthquake. All jobs are transformed and fears and insecurities invade them. They are certainly times of accelerated transformation. The question of employment today occupies a preeminent place in the well being of people because man has gone from a society centered on being (social status) to others based on having (bourgeois revolution) to the current ones based on function (from what is exercised) and see the work endangered involves not only economic uncertainty but high risk in social consideration. And although today there is no shortage of people who maintain that work is approaching its final point with the arrival of artificial intelligence, there is no lack of assurances that, on the contrary, we are only in a phase of mutation of the nature of the work, not the of the end of them. The latter remember that the history of employment in Humanity goes from the simple to the complex, from a single job - the battle for subsistence be hunting or snatching from the other what is hunted (via war or theft) - to one job at a time more diverse and broad based on technological progress. To each job that intelligence destroys when introducing a machine or an artificial intelligence instrument that executes it, simultaneously creates a new complementary field that requires new actors. Everything new does not cease to open new fields of activity and generate employment accordingly. However, we must be aware that everything new comes from the hand of intelligence and therefore we must read the sign of the times well. The times, like a river of increasing rapids, impel us to a constant renovation in the performance of new works, having to overcome the discouragement or the frustration, because the effort of adaptation is very demanding. But one must insist that the new nature of the times is unstoppable and that there is no alternative but to equip themselves with instruments that combine support for the fall and incentives to rise again.

But where we all face the main challenge is in our ability to prepare future generations in accordance with the new parameters, so that they can raise their full potential and avoid frustrations. And this goes through completely reformulate educational systems with a 360º turn with respect to current approaches. This is the land where societies play everything. It is what will determine its rise or decline, the satisfaction or frustration of the populations. Whoever executes it before will be laying the foundations of a society with citizens in line with the evolution of the world. The new educational systems must be configured in accordance with the aspiration of the new generations, which consists of acting as soon as possible with exchange value in society. We must go from an education held hostage by the bidders, the teachers, to one designed according to the plaintiffs, the students. Today education has to change its pattern. The times of encyclopaedism have come to an end and the times of searching, understanding and creating have begun. It must be well measured that it is required so as not to overload time and effort unnecessary to those who learn and direct their energies well. The development to the maximum of the potential of the mind is the inalienable north to which the new educational systems should be oriented since each individual represents a capacity that is also unique in the mind and young people must find in the educational process the means to discover it. A society will be so much richer the more it creates and will create more the more citizens can imagine and do it operationally.

In Education we should experience something similar to what happened with military uniforms in the seventeenth century. At the beginning of the century the soldiers wore heavy armor when basing the combat on the defense; The slogan was to be protected to the fullest. However, King Gustaf Adolph of Sweden thought that the best defense was in agility and that for this the soldiers had to go with cloth uniforms and not iron. Thus his soldiers achieved the greatest successes in the first decade of the sixteen hundred and after his victory in the north of Germany, all the armies changed, leaving the iron for the cloth. The change was far-reaching since nobody ever dared to invest in armor. In education today a similar process opens

up. The times of encyclopaedism are over and those of agility in knowing and creating have begun.

And together with the enormous work to be done at the national level, there is also an urgent call for a new political architecture in the collective fabric. An important challenge is to innovate in the distribution of humanity on the planet. Another is to discover everything that Earth can offer us. It is about seeing how we take advantage of this unique and wonderful space that is the Earth where there is so much to discover and take advantage of. Now that we have unleashed the revolution of mobility and communication, the times have come for a new relationship with our world. With scientific progress it is time to develop new initiatives that open thousands of new positive scenarios. Let's see some cases to show how much things can change if we proceed to reorganize the game more wisely.

Today, the earth is a hugely depopulated area with small points, the megacities, which encompass large agglomerations. When you travel from Accra to Istanbul, you travel through a space of millions of square kilometers with hardly any population. It is a desert area due to the absence of drinking water. But water in the form of the sea is not far away. The air is pure. The sun that brings life and energy is always present, but we find that organizing life there is complex. And I would say it's true ... but in the context of the past. Because in the past the capital element that is water was impossible to obtain. But today this impediment becomes less, because on the one hand the advances in the desalination make feasible to have the potable water coming from the ocean, and on the other the advances in infrastructures make it possible to drive the desalinated sea water to any point of the interior. And let's think what mass of water rivers are compared to the sea: a trifle. The great reserve of water of the planet is the oceans and to the extent that this water is transformed into potable the whole letter of world agriculture and of the human settlements can change in exponential terms. And to this we add what happens with energy where alternative energies multiply the possibilities of changing the charter of human settlements. And let's also think that any difficulty

is minimal compared to what a future human colony will have to face in extraterrestrial spaces where it will not have anything, nor oxygen, nor water nor easily convertible territories into orchards. And yet the external challenge is in the minds of the leaders as assumable because it falls into the sphere of a new legal space, while the internal challenge is played within spaces parceled by existing structures, the States, and arouses less interest. So we come back to the topic of social architecture. Advancing and innovating in this field, is fundamental because we must be able to offer quality space to each of the human beings of the planet, because there is space for everyone. The gaps are immense. Russia is totally depopulated in millions and millions of kilometers from Moscow to Vladivostok. Large countries such as Canada, the United States, Brazil, Egypt and Australia hardly have populations in 90% of their territory. The question is whether we will be wise enough to intelligently colonize the vast empty spaces of our planet. The theme will evolve in a revolutionary way in this century. In the meantime, let us hold back the idea that the problem is not the number of the population, the problem is of political architecture, of how we make the world available to everyone.

And on the same terms we are, when talking about transforming existing realities, as regards the Oceans. Until just five centuries ago these spaces were insurmountable barriers for Humanity that did not dare to navigate them beyond a few miles from the coast. Little by little the development of navigation was connecting the world until it became a space explored as a whole. Since anthropologists date the origin of modern man in about two hundred thousand years, this means that during 99.9% of the time elapsed by humanity on this planet, man has unknown the dimensions of it. Today we are the lucky ones, we must go further in the knowledge and use of the huge bodies of water that are the oceans. Until now they have served man as a means of navigation and food supply through fishing. Undoubtedly the Oceans contain much more. From plants and unique beings that can revolutionize health, to new sources of energy. The Oceans are still

huge spaces with enormous potentialities to discover. We just have to organize for it.

Innovated at a collective level in this century. A century that can count on humanity as a whole to think about solutions, because very soon the barriers of languages, not languages, will disappear. The man has managed to overcome with skill the barriers that would have been a differentiated numerology, managing to settle on the base of the ten figures his numerical communication on a world scale which has allowed a scientific development without territorial borders. The same has not been achieved so far with the word being the world a very fragmented and plural linguistic mosaic. In the last centuries a few languages have reached a vast projection but in no way are we on a plane similar to what happened with numbers. However, science is already on the verge of providing micro chips in our ears that will allow us to listen in simultaneous translation to any other language in our own code, which will allow everyone to communicate with the whole world without giving up their original leagues. The wait will have been worthwhile because we will have saved the linguistic diversity with the millions of nuances and perceptions that contain the variants of the words created for the same thing or reality. As we have already implemented the revolution in communication hardware, -today through mobile phones we can transfer the sound in real time from Asia to America and from Europe to Africa to put some cases-, the transmission of these in the codes of communicants allow everyone on the planet to speak in full understanding and without any barriers. First we shredded the distance barrier. Very soon the compression barrier will disappear. This will make the Earth a space of total new features. Humanity will then create in a more powerful way because more beings that can communicate and more cultures cross, but the flow of new ideas and projects will grow.

But all this boiling of new possibilities and this breakthrough of millions of individuals as new poles of creativity requires a set of rules that channel well the situation, social architecture. And this must accompany an evolution of the

international environment that avoids conflicts and blockages. Let's see then the challenges and perspectives of this last aspect.

Faced with the still existing inability to organize and structure ourselves on a planetary scale around a common moral code, guarantor for all individuals, the world continues to be organized on the basis of a mosaic of legal frameworks that take the form of States, and that regulate in different ways the activity of people. They come from different civilizations, with different departure points and different rhythms of development. And this impacts in a double way the evolution of the world. Firstly, because depending on their capacity to organize better or worse the functioning of their societies, their citizens will begin sooner or later, in better or worse conditions, with more or less tensions, their entry into the new intelligent society. And secondly, because of the feeling of vulnerability, the arsenal of weapons and the capacity to enter into destructive conflicts is still present. And peace or war prevails depending on how their relations evolve. Let's see then, how changes in strategic equilibria will shape the future.

China is perhaps today the greatest rising power and above all the clearest case in the history of the importance of direction and regulations in the development of a society. From 1950 to 1980, the one thousand five hundred million people of this important civilization barely earned an additional $ 100 in their per capita income. Of the 300 dollars that the World Bank attributed to them in 1950, they only reached 380 in 1980. However, when Deng Xiaoping changes course, that is why he wins the title of great helmsman, they earn more than 8,000 dollars in the following 35 years, that is to say, they multiplied by twenty the per capita income, going from 380 dollars in 1980 to 8,600 in the year 2,015. If we take into account that we speak of a set equivalent to one fifth of all humanity, success is spectacular. But above all, the essential thing to keep in mind is that future success will be even greater. The great dynamics of development of these years, has been used mainly to pass the new generations of an extremely limited rural environment in the educational area to a generalization of the urban world, opening the doors to university education. The Chinese universe composed of

families with oney one child will see in the medium term how all the possibilities of investment and growth in the world are within their reach. Of a non-invasive nature and therefore not very threatening, the Chinese world, however, will awaken enormous concerns in the future due to its great capacity. And a red line will be capital for China to renounce to dybnamics of force: the resignation of all to the arms race in space. If an agreement between all the states with the greatest potential in this field is not reached soon, China will not give up giving top priority to the space adventure because even if it does not want to lead it, it will not want to accept that another leads it. On planet Earth, China has not sought global hegemony. For almost twenty centuries it has collected thirty percent of the world's wealth but this has not led it to want to dominate the West or Africa or America or the Middle East. His universe was enough. But in the end the price that China had to pay for mistakenly thinking that the country was protected from the evolution of the others, perhaps thinking that the great wall still existing, has been a painful fall in the world concert, having as low point 1968, when during the cultural revolution it came to represent only six percent of the world economy. Its vulnerability on Earth does not want to be reproduced in the Universe. At the moment, who can decide on this issue, the United States of America, do not seem willing to compromise. The evolution of this issue is crucial for the military future of the big ones, for stability in development in outer space and for the risk of a conflict in our world. But in the meantime this capital point is decided, China marches with firm foot towards the great economic takeoff. And its future strength will be the great preparation of the new generations who know about the hardships of the past but favored by the current great economic takeoff, grow under a regime of personal "coaching", as unique children, aimed at encouraging them to be the best in their area of activity. Attitude and aptitude will be combined here with impressive results.

The most relevant issue when looking to the future is that we are still immersed in an armed world and this implies that the swords are raised to resort to domination through the military. However, the high capacity for mass destruction

that several states already have means that for the moment we live under a mutual neutralization or at least an important inhibition of all to unleash a greater war conflict. However, the arms race continues and tends to move to outer space. This is today an almost virgin terrain and unfit for many before the very important costs involved. Actually there are only two great players. The United States with great current capacity and China with enormous capacity in the medium term. And this difference in capacity of one and the other explains the underlying tensions, as a game of power, that are experienced on the international scene. It is a subject of time and economy.

Today, the United States grows around 2% and China around 6%, but they start from different levels of development; the first with 55,000 dollars of per capita income and the second with close to 9,000. But 20 years ago the per capita income of the United States was 35,000 while China´s was only 800. That is to say that while that of the United States has not doubled that of China has been multiplied by 12. This gives an idea of the different rates at which these economies move. The rapid advance of China makes that due to the great difference between the number of inhabitants, -325 million United States versus 1.400 million China-, the GDP of both countries approaches, calculating that by 2030 they will have reached parity. Meanwhile the volumes of indebtedness are very different; 18,000 million United States for only 5,000 China. In this context, defense spending in the United States is 500 billion and China's 200 billion. And here is a key issue. Today, China can already allocate almost half of what the United States of America allocates to the military issue and given that its economy grows to 6% while the American economy to 2%, both budgets will be equalized within 10 years. And to avoid this, America requires an increase in military spending in budgets far above the proportional growth that would be due to the general increase in the country’s general budget. And this is a red line where the congressmen do not want to compromise because they can not stop investing in an important way to lead the military career in space.

But as a democratic society citizen support is needed to approve budgets annually. And to prioritize defense spending to the detriment of other areas perceived by the citizen as of immediate benefit, such as health, education or infrastructure requires of a credible risk of threat or serious danger or, at least, the citizen perceives it. The risk, the threat must be visualized as a great power, which requires having very expensive and sophisticated weapons. Obviously the threat of terrorism, although disturbing for individual security, does not meet these characteristics today. Fighting it requires a very limited expense basically centered on information, we would say in classic terms, on espionage, but evidently this is not an expense of vast proportions. The future opponent is obviously China for two reasons: The first because it has set up an economy that works and that in the future will work even more, and second because it is not willing to accept a leadership of another country in the arms race in space. It is favorable to no arms race but if there is to be, it will not accept being subordinated. And for this, China is willing to increasingly invest large sums and be in a position to resist any other leadership. However there is no interest to present China as a danger or as an enemy. And this for mutilating reasons that go from that constitutes a foreign economic market of first importance until the fact that the average American citizen does not see the Chinese as fierce warriors. Hence, with skilful criteria the focus has been placed in many other conflicts that can convince the American society of the fragility of security and the need to invest heavily in this area.

So today the military race continues to advance towards space, which, due to its size and long-term results, is outside the ordinary concerns but nevertheless has a great impact on the evolution of the world.

We live like this a time that announces great possibilities in the future but is full of insecurities in the present. The new order has not yet been born and the old order already shows all the symptoms of exhaustion. The current balance is extremely fragile preserved by the magnitude of the destruction capacity in case of conflict resulting from the size and power of existing armament Peace is not based today on a recognized and accepted world order but on the will of powerful

individual states to maintain it. This balance is not the product of a collective decision. Until security does not emanate from a collective order we can not breathe with confidence.

In the meantime, let's try to strengthen the commitment of millions of human beings in a scenario that enhances the dignity of all; the desire not to see their individual potential restrained requires strengthening the rol of Human Rights as the universal backbone of the New World.