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Latin American Scenarios 2030

Between 2010 and 2030 most countries of Latin America are commemorating 200 years of independence in multiple bicentennial celebrations across the region. As these countries look back over their first two centuries, it seems appropriate to take this opportunity to explore some possible futures for Latin America. The last 200 years provide a basis for thinking about the next 20 years.

Scenario analysis has become popular in many places since the middle of last century. In the twenty-first century, many entities—from companies, cities, and countries to regions—are using scenario analysis to help them make policy decisions. However, no major Latin American scenarios have been developed within the region during the last few years.

Latin America is a major world region encompassing Mexico, the Caribbean, Central America, and South America. Most countries in the region became independent following the French invasions of Portugal and Spain by Napoleon in the early 1800s. The region was then usually called Ibero-America, a term still used mainly in Portugal and Spain, but Napoleon III supported the term “Latin America” during the French invasion of Mexico in the 1860s. The term “Latin America” was also sometimes applied to include other French former colonies from Canada to the Caribbean and was used by some intellectuals who linked the region to the linguistic roots of French, Portuguese, and Spanish in Latin. Thus, linguistically, Latin America is an even larger geographical area that could also include some parts of the U.S., which is now the second largest Spanish-speaking country in the world (after Mexico but ahead of Spain). “Latinos” or “Hispanics” today represent close to 13% of the U.S. population, and they are the single largest U.S. minority.



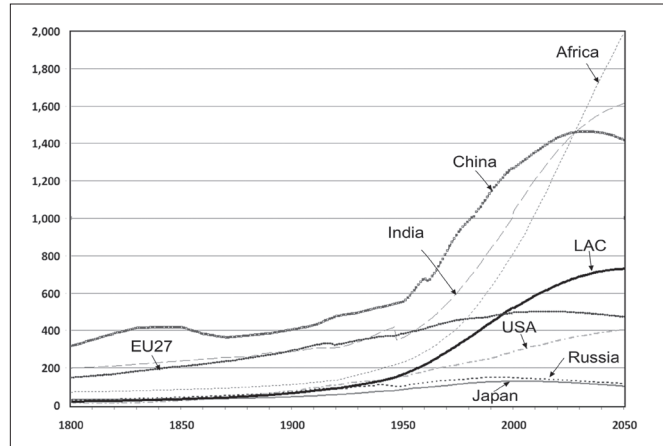
The population of conventional Latin America—from Mexico and the Caribbean to Argentina and Chile—has grown considerably during the last two centuries after having been significantly reduced in the decades immediately after the arrivals of Europeans, who brought new diseases to the region, unknowingly decimating large groups of indigenous groups. The Latin American population stood at around 576 million in 2010 and is expected to stabilize in the second half of this century at over 730 million. In a global context, the populations of the European Union (currently with 27 members), Japan, and Russia are already declining. The population of China will also begin shrinking in the 2030s, and India will then overtake China as the most populous country in the world (see Figure 35). The population of Africa will keep on rising until the end of this century, when it is expected to stabilize as well.

In terms of economic development, Latin America was a relatively wealthy region at the start of the nineteenth century. In fact, some parts of Latin America were richer than the nascent United States. The Dominican Republic, Mexico, and Peru had universities almost two centuries before Harvard was founded. Haiti was a very wealthy colony in 1800, richer than many parts of the U.S. then. Latin America was at par with most of Europe, and it was richer than Africa, China, India, and Japan. In fact, even at the beginning of the twentieth century Argentina was one of the 10 wealthiest countries in the world, and many poor Chinese and Japanese immigrated to richer Latin American countries like Brazil, Mexico, and Peru. By the beginning of the twenty-first century, however, Latin America fell behind, and many countries in East Asia had overtaken it. If current trends continue, China will overtake Latin America in terms of GDP per capita in the 2020s (see Figure 36).

Figures 35 and 36 show single-point projections for the population to 2050 according to the UN and the GDP per person to 2030 extrapolating the 2011–15 forecasts by the IMF. Population forecasts are easier than GDP forecasts since they are smoother and more predictable, as the curves in Figures 1 and

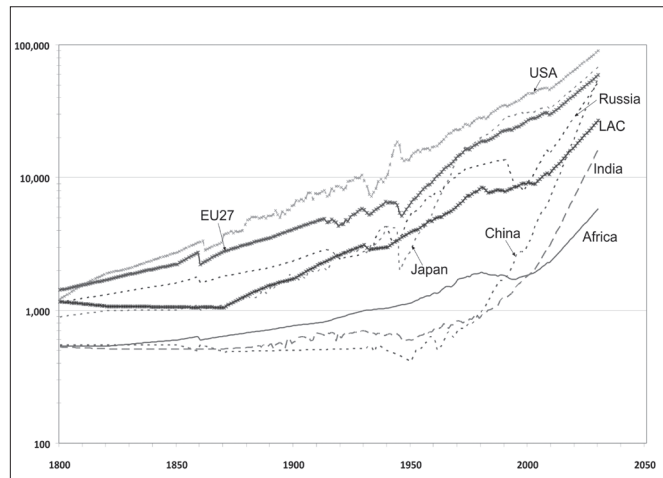
2 exemplify. This is also why the UN has population forecasts to the year 2050 (in fact, there are even demographic projections up to the year 2300), but the IMF only has five-year forecasts, which have been extrapolated here to the year 2030.

Figure 35. Comparative evolution of population (linear scale): Historic and projections, 1800–2050



Note: The population projections correspond to the medium variant of the UN. LAC refers to Latin America and the Caribbean.

Figure 36. Comparative evolution of GDP per person (logarithmic scale): Historic and projections, 1800–2030



Note: The GDP per capita projections are an extrapolation to 2030 using the same growth forecast for 2011–15 as the IMF.



Table 7 compares Latin America and other major countries and regions in the world according to their land area, population density, population forecasts to 2050, and GDP forecasts to 2030 (both total and GDP per person). China is developing fast, and if its rates of growth continue it will overtake Russia and Latin America, while India will also get closer to Latin America by 2030.

Thinking beyond the GDP, and certainly including more than economics, we can use a STEEP (society-technology-economics-ecology-politics) analysis in

order to consider other variables. The GDP is an important variable but certainly not enough, and an analysis using only the GDP is too simplistic. Therefore, we can also consider the Human Development Index developed by the United Nations Development Programme and other variables. Table 8 shows some of the variables included during the Delphi Survey for this Latin America 2030 study. It is useful to analyze the “best” and “worst” values for each variable, both in Latin America and in the world, as well as the corresponding average values.

Table 7. Latin America in the global context

Country or Region	Area (million km ²)	Population density (people/km ²)		Population (million)		GDP (PPP, billion US\$ 2010)		GDP per person (PPP, thousand US\$ 2010)	
		2010	2050	2010	2050	2010	2030	2010	2030
Africa	30.222	37	66	988	1,998	2,348	11,686	2.376	5.849
China	9.641	139	147	1,337	1,417	10,051	80,097	7.518	56.526
India	3.287	359	491	1,181	1,614	3,887	26,418	3.291	16.368
Japan	0.378	336	270	127	102	4,296	6,878	33.828	67.434
Russia	17.075	8	7	141	116	2,229	6,087	15.807	52.478
USA	9.827	32	41	312	404	14,705	36,373	47.132	90.034
EU27	4.325	116	109	501	473	15,213	28,016	30.367	59.230
LAC	21.070	27	35	576	729	6,444	19,650	11.188	26.955
World (land)	148.940	46	67	6,909	9,150	74,004	240,246	10.711	26.256

Notes: The numbers do not add up to world total since not all the countries/regions have been included. The population projections correspond to the medium variant by the UN, and the GDP per capita projections are an extrapolation to 2030 using the same growth forecast for 2011–15 as the IMF.

Table 8. Comparative best and worst cases for international indexes, 2010 (economics-society-ecology-politics-technology)

Variable/Indicator/Index	World Worst	Latin American Worst	World Average	Latin American Average	Latin American Best	World Best
Society: HDI (from 0 worst to 1.000 best)	0.140 (Zimbabwe)	0.404 (Haiti)	0.624	0.704	0.783 (Chile)	0.938 (Norway)
Technology: E-Readiness Index (from 0 worst to 10 best)	2.97 (Azerbaijan)	3.97 (Ecuador)	4.30	5.40	6.49 (Chile)	8.87 (Denmark)
Economics: GDP per person (PPP, thousand US\$ 2010)	340 (D.R. Congo)	1.121 (Haiti)	10.711	11.188	19.600 (Puerto Rico)	88.232 (Qatar)
Environment: CO ₂ emissions (tons/person)	55.5 (Qatar)	6.0 (Venezuela)	4.6	3.7	0.2 (Haiti)	0.0 (Mali)
Politics: Corruption Index (from 0 worst to 10 best)	1.1 (Somalia)	2.0 (Venezuela)	3.3	3.6	7.2 (Chile)	9.3 (Denmark)

Notes: The best and worst values correspond to the latest information of the countries with available data in 2010. The Latin American and world averages are based on population-weighted values.

Considering multiple variables gives a broader spectrum to study the future of Latin America, both in terms of itself and also in comparison with other regions and countries around the world. Latin American nations have fallen behind several other countries in the last 200 years. What could happen in the next 20 years? Will the situation in Latin America become better or worse? In fact, different scenarios actually consider both possibilities. Diverse variables have to be analyzed in order to avoid the worst and to reach the best alternatives.

Methodology

In 2009 The Millennium Project initiated a multi-year study about the future of Latin America. This coincides with the expected multiple bicentennial independence celebrations throughout the region. The first phase of this study consisted of a Real-Time Delphi survey during 2009–10; the second RTD, run in 2010–11, was designed to integrate the results of the previous one in the form of 2030 Latin American scenarios.

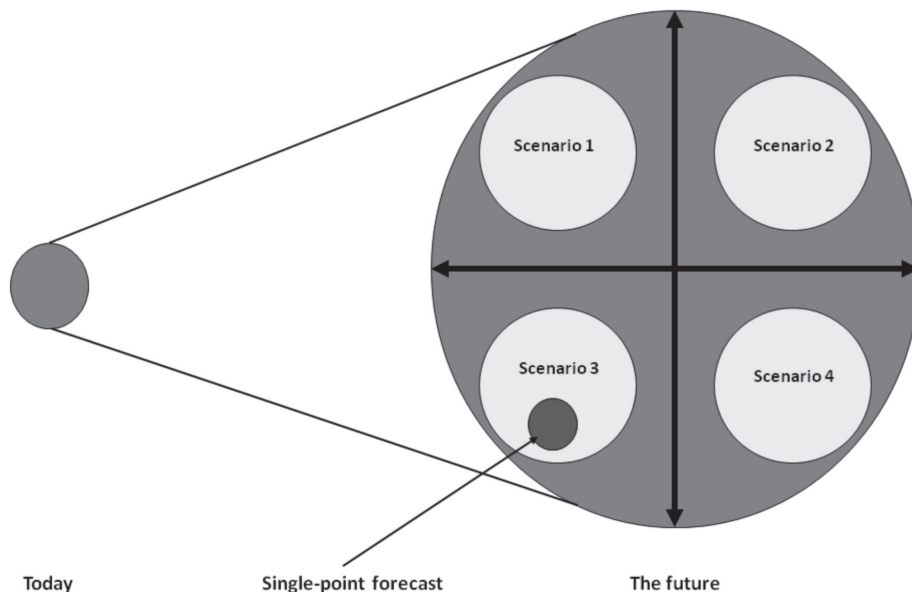
In the earlier study, The Millennium Project Nodes in Latin America designed an RTD to collect judgments from knowledgeable individuals about the likelihood and significance of diverse international and regional developments that might affect Latin America over the next 20 years and about the potential course of variables important to the region. The other Nodes of The Millennium Project around the world also helped to identify additional experts to give an “outsider” view of Latin America. The RTD was distributed in English, Portuguese, and Spanish and had a total of 92 questions, divided into:

- International Developments (questions 1 to 38)
- Geopolitical Influences (questions 39 to 52)
- Latin American Developments (questions 53 to 82)
- Scenario Axes (questions 83 to 87)
- Main Variables (questions 88 to 92)

More than 550 people from about 60 countries participated during a seven-week period. About 30% identified their gender as female. By country, the top participation was from Brazil at 19%, followed by Argentina at 15%, Mexico at 13%, Peru at 13%, and the United States at 12%. The Real-Time Delphi helped identify some developments with high likelihood and high significance (called “good bets”) and some others with relatively low likelihood but high significance (called “surprises”). Additionally, the experts corroborated the “rise” of China and the positioning of Brazil as the most influential Latin American country. The results of the Delphi survey (www.millennium-project.org/millennium/RTD_LA2030/LatinAmerica2030DelphiSurveyLong.pdf) and a compilation of the answers by the Delphi participants (www.millennium-project.org/millennium/RTD_LA2030/LatinAmerica2030DelphiSurveyAppendix.pdf) can be seen online.

After the conclusion and review of the RTD results, the Latin American Nodes of The Millennium Project decided to create four scenarios for Latin America 2030 using a techno-economic axis and a sociopolitical axis. Using these standard but simple axes allows the design of a scenario matrix that can be easily visualized. First of all, scenarios allow consideration of many more different possibilities than a single-point forecast. This is a major advantage of the use of multiple scenarios—that is, they increase the range of possible futures to be analyzed, as shown in Figure 37.

Figure 37. Single-point forecast versus scenarios



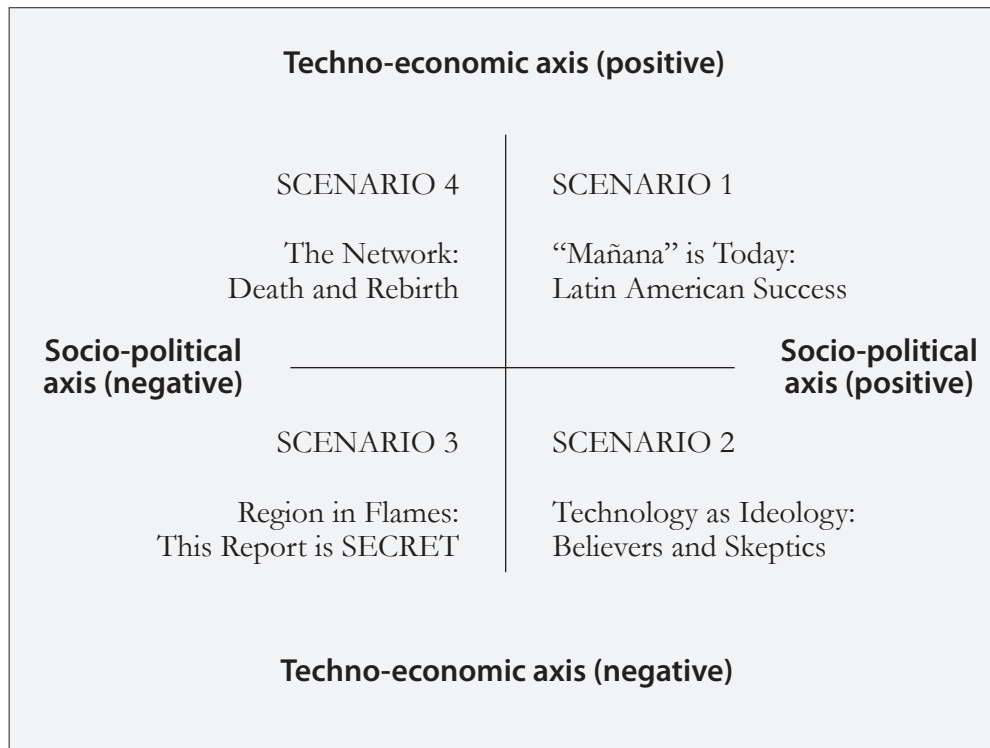
Furthermore, the stories behind the scenarios help identify additional factors and broaden the vision of what might be possible, even if not very probable. Finally, some scenarios might even reflect single “wild card” events (or the “surprises” identified in the previous RTD) that might have high impact or significant consequences.

Figure 38 shows the four scenarios created using the techno-economic axis in the vertical position and the sociopolitical axis in the horizontal position:

- Scenario 1 – “Mañana” is Today: Latin American Success
- Scenario 2 – Technology as Ideology: Believers and Skeptics
- Scenario 3 – Region in Flames: This report is SECRET
- Scenario 4 – The Network: Death and Rebirth

Each scenario builds upon the information gathered during the Real-Time-Delphi and the direct feedback received from other Millennium Project Nodes.

Figure 38. Scenario matrix



Different Latin American Nodes of The Millennium Project coordinated each scenario, including several “fill-in-the-blank” questions that participants were asked to complete in the scenario drafts. Based on their feedback, each scenario was rewritten to best incorporate all additional input.



Scenario 1

“Mañana” is Today: Latin American Success

From Important Speeches of the Month, June 2030

This is a keynote speech presented by Javier Bolívar, Chairman of the Latin American and Caribbean Union to the Assembly of African Nations in response to their question: “Upgrading Development: How did Latin America do it?”

It is a real pleasure for me to be with you today to speak about our experience and policies, and perhaps a bit of good luck, in achieving our present state of development. I hope that nothing of what I will say might sound as bragging, and I offer this hoping that it will be useful to you and your nations.

This year, 2030, began very well for the world in general and for the Latin American and Caribbean countries in particular. The State of the Future Indexes for the countries in the region show continued progress. This proves what can be achieved when there is international political will to trade some sovereignty for the common good. Brazil, Mexico, and other countries have made important progress in education and also in fighting poverty, crime, and drugs. Living standards are improving very fast, and social disparities have been greatly reduced. Many new technologies, some of them developed in Latin America, have been fundamental to the educational renaissance and economic boom that the region has been experiencing. Finally, most Latin American countries can proudly say that they are joining the ranks of the developed world, which has been greatly transformed with the incorporation of other major nations like China and India.

Let’s go back to the UN meeting in 2015 that reviewed the Millennium Development Goals established at the UN Summit in 2000. During the UN review, the Group of Latin America and Caribbean Countries announced a new plan for the region: to reach “developed status” in another 15 years, by 2030, since the MDGs for the region have been largely met. This was not just a diplomatic announcement; it was fully backed by the civil societies of every country, by local and regional NGOs throughout Latin America, and by the private sector, universities, and governments. Coincidentally, the eyes of the world were on Latin America with the very successful 2014 FIFA World Cup in Brazil and the scheduled 2016 Olympic Games in Rio de Janeiro. Former Brazilian president “Lula” da Silva had famously said that “God is Brazilian”; well, maybe it was actually becoming true for Latin America. Thus, Brazil functioned as the international showcase of a new Latin America striving for more and better development. Traditional measures of economic success, such as GDP, had been superseded in the

wake of massive global restructuring, leaving many Latin American countries to reinvent prosperity around new metrics of value, connectivity, resilience, influence, and happiness, stimulated by the State of the Future Index processes.

Most Latin American governments really made a concerted effort to advance toward political and economic union under enlightened leadership. Chile set the pace, becoming the first large Latin American country to have reached “developed status” by the early 2020s. Chile was the second Latin American country to join the OECD in 2010, after Mexico in 1994, but Chile achieved increasing prosperity during longer periods thanks to more open and stable public policies. Larger countries like Brazil and smaller nations like Costa Rica have also followed paths similar to Chile’s. Even after the terrible earthquakes of 2010 and 2020, Chile managed to quickly recover and keep on developing very fast. It became a regional example of progressive political and economic achievements under alternating governments. In fact, the country managed to keep improving very fast under governments from the left and from the right. Chileans joked that they did not care much about left or right, because they just wanted to move forward and upwards. And talking about upwards, Chile, together with Argentina and Brazil, participated in a joint unmanned mission to Mars, which also had collaborators from Asia and Europe. Peru decided to specialize in biotechnology, giving more added value to its Andean and Amazon biodiversity. By 2030, a good part of all the vegetables and fruits sold worldwide came from varieties developed in Peruvian biotechnology labs under public-private alliances, respectful of local intellectual property rights. Mexico also had great advances in biotechnology, including important developments with several corn varieties and the unique nopal cactus.

The 2020s were a time of very rapid development in Latin America, much faster than expected at the turn of the century, and by 2030 the majority of Latin America’s 730 million people have a good living standard. Most Latin American countries managed to reduce poverty by improving the quality of education for all, which allowed these countries to reduce the gap between public and private education. Functional

illiteracy was eliminated and nearly all people had access to tele-education systems. Many people had access to their own Internet-based businesses, looking for markets instead of looking for jobs. The new education systems stopped the brain drain and promoted human success by investing in human development, including fairness in distribution opportunities, goods, and services, by reducing gross inequalities of income, wealth, and power. Most Latin American nations also managed to improve the health and well-being of their citizens while creating sustainable economies that set an example for the rest of the world.

Latin America's successful development has transformed it into the most prosperous and happiest region, even ahead of the European Union and the United States, thanks to the very fast internal and external development of the region. Latin Americans enjoy the healthiest environment in the world: large open spaces, unpolluted air and water, clean beaches, sustainable rainforests, and even archaeological sites combined with modern adventures. In fact, the world's most visited place has become the new Disney Entertainment Park at Cuiabá, Mato Grosso, in Brazil, close to the geographical center of South America. A fundamental achievement of Latin Americans has been to "latinize" the rest of the world by promoting the Latin American lifestyle. The "happy style" of Latin America was exported to other parts of the world thanks to the "happy" actors, artists, dancers, musicians, singers and writers originating from Argentina to Venezuela, from Brazil to Mexico, from Colombia to the Dominican Republic, from Chile to Peru, from Bolivia to Cuba. Even the Latin American gastronomy, including many exotic drinks and typical foods, has become a recognized symbol of a happy lifestyle.

Caudillos, military coups, dictators, guerrillas, and terrorists are now part of history, and strong democracies are the norm in the new Latin American and Caribbean Union, which has adopted a regional currency to favor its flourishing regional and international trade. The largest market for Latin American exports is now China, followed closely by the United States and then Africa, Europe, and India. The growth of Latin American internal trade has been impressive, and it now complements a much diversified external trade balance with all of the other major trading blocks.

The creation of the Latin American currency was fundamental to consolidate the financial stability and strength of the regional monetary system, since all major international economic blocks also used

common currencies linked through global electronic exchanges. Our "Structural Development Fund" has allowed the least developed countries of the continent to stabilize and "balance out" with respect to the most prosperous ones.

Now, in 2030, the Latino and Hispanic population in the United States is by far that country's largest minority, with over 70 million people today and still growing. This has been reinforced by the large historical Latin American "diaspora" in the United States, and to a lesser extent in Canada. The United States has thus become the second-largest Spanish-speaking country in the world, after Mexico, but ahead of Argentina, Colombia, or Spain. In fact, during the U.S. elections of 2028, Juan Pérez was elected as the first Hispanic president, following his two successful periods as governor of California. The election of the first Hispanic U.S. president allowed the United States to see Latin America as a close neighbor rather than the U.S. backyard, thus reducing tensions and improving bilateral relations. President Pérez also advocated that the United States join the more vigorous Latin American and Caribbean Union that was created to consolidate all the previous social, economic, and political regional groups throughout Latin America and the Caribbean.

Not only has the international trade of Latin America increased substantially, but so has the quality of its products. "Made in Latin America" became a sign of excellent quality and is also a label indicating top environmental and social responsibility. There is a new "continental nationalism," and a product from a Latin American country is usually preferred over products from Asia, Europe, or the United States. The concept of "Latin America Motherland" is also a reality, and there is free mobility across the Latin American borders. People can circulate freely without passports or any documents, except for some special areas that use retina scanning for identification.

In this discussion I should not ignore the great changes occurring elsewhere in the world, which helped create a climate of peace. The reunification of North Korea and South Korea in 2020 and the International Peace Treaty of Jerusalem in 2022 were very important events that paved the road toward a more peaceful world. Latin America has been a nuclear-weapons-free zone since the Tlatelolco Treaty in 1967, and most Latin American countries eliminated their armies in the 2020s, following the example of Costa Rica, which had done so in 1948. This anti-war movement started in 2022, when Brazil, celebrating the bicentennial of its independence, declared that the only Latin America war was

against drugs, poverty, hunger, and poor education. The whole region established a continental plan to transform its armies into national guards devoted to defending people against natural disasters.

The eradication of illegal drugs was achieved as a result of the reduction of European and U.S. drug consumption. The victory over the drug cartels created a wave of hope and optimism over the whole continent, from Canada to Argentina and Chile. In a more peaceful world, with a non-belligerent United States and separated by oceans from other world regions, Latin American resources that previously went for defense are now devoted to education, arts, science, and technology. Obviously, there are always risks, but the growing prosperity and more transparent governance in Latin America and the rest of the world make it very unlikely that internal or external wars will occur, just as a European war is unthinkable today among the members of the European Union following its creation in the twentieth century.

Breakthroughs in science and technology around the world also played a role. No matter where these advances originated, they spread quickly throughout the planet. The World Trade Organization, World Intellectual Property Research Organization, and Internet 7.0 helped ensure that knowledge moved fast from country to country. Technology keeps getting better, cheaper, and faster. It is now estimated that almost all Latin Americans are continuously connected to Internet 7.0 with their mobile jewelry and clothing nano-telecomputers. Synergies among nanotechnology, biotechnology, information technology, and cognitive science (commonly known as NBIC technologies) have dramatically improved the human condition by increasing the availability of energy, food, and water and by connecting people and information anywhere, anytime. The positive effect has been to increase collective intelligence and to create value and efficiency while lowering costs. However, some people complain about too much technology and unintended consequences, such as over-reliance on technological solutions. Most of our institutions try to guard against the notion that “technology will fix anything.”

A key facilitator of this important process of rapid development was the creation of the Latin America University in Panama. Located in the former “Ciudad del Saber” (City of Knowledge) on the grounds of the old U.S. Army facilities, and fully accessible in cyberspace, LAU obtained financial resources from all the Latin American countries according to their respective wealth. The new regional

tele-collaboratories at the LAU campuses received many Latin American researchers and scientists who returned from other important labs around the world, in a reverse diaspora that brought the “brains” and experience back to the region. LAU has now become one of the most important R&D centers in the world, and along with other regional universities it is accelerating the process of technology transfer and innovation across Latin America. For the first time, many Latin American universities began appearing in the top ranks of the best world institutions.

The acceleration of technological development, successful economic policies, and national education goals to increase human intelligence have opened the door to continuous and rapid economic growth. The NBIC technologies are proving to be the key to a very bright future, in which machines work in increasingly efficient ways so that the cost of goods continues to plummet and tremendous wealth is created faster and faster for everybody. All basic necessities, as well as intellectual and physical luxuries, can be accessible to even the poorest people, in what some experts call the “post-scarcity” society where everything is abundant and cheap. Space exploration, artificial intelligence, and robotics are close to a take-off point that some experts refer to as a “technological singularity,” probably during the late 2030s or early 2040s.

Some experts talk about the possibility of a time of smarter-than-human machines, although others think that the “technological singularity will always be 20 years off in the future because the definition will keep changing.” Still, a few others believe that another version of the singularity could arise from the integration of human and other kinds of life-forms, which would be fauna and flora consciousness. The basic line of progress will be a breakthrough in genes that control our communication interface. In this version of a benign singularity, the Amazon will transform to a hub of live intelligence infrastructure. So preserving it now would mean that in the distant future these areas will become strategic assets for an emerging global power like Latin America.

Meanwhile, amazingly enough, Moore’s Law still seems to hold true, and computers continuously become faster, smaller, and more powerful—now integrated into much of the built environment and clothing. Quantum computing, 3D circuits, and architectural innovations have given new life to Moore’s Law. The largest computers now have more transistors than humans have neurons in their brains. Artificial intelligence now augments human intelligence, as a common experience. We are now on

the threshold of incredible scientific developments, such as humans being transformed into more advanced life forms: transhumans and posthumans. In fact, the first cyborgs and clones are already becoming accepted and normal in some societies, and their numbers are increasing faster than those of the so-called naturals. Biological evolution, which is slow and erratic, is being overtaken by technological evolution, which is faster and directed.

Many humans will never be the same, and some people worry that the very nature of “humanity” and what it means to be uniquely human is blurring and losing distinction. Creating new life forms or modifying them for human purposes continues to cause shockwaves across the theological landscape, eroding one of the most durable institutions of Latin America: the Catholic Church. Now the very faith of Latin America is being challenged. This worries some people, but I think it is an incredible opportunity. Yet, just as some Andean highland communities and Amazon tribes still refuse any technology today, some other Latin Americans are still afraid of more scientific advances. A common decision has not been reached, and perhaps it will never happen, but individual choice is guaranteed by most governments, and choice includes the relationship to human-changing technology. Yet we are alert to the need to preserve regional identities, traditions, and cultures, as established in the 2028 LACU constitution.

While some people debate what it means to be human in general and Latin American in particular, the 2030 Mexico City World Expo has been incredibly

successful, and when it closes on October 31st it is expected to have been the largest international gathering in human history. So far close to 50 million human tourists and over 100 million robots have already visited the fair grounds, conveying their experiences through virtual reality to their families and friends. Cyber-visits have averaged over a million per day, and both humans and robots have seen the great advances brought by science and technology in order to create a better, cleaner, and more peaceful world. One of the most visited pavilions was the one displaying science and technology in Latin America, including major breakthroughs in the control of aging and enhanced rejuvenation processes, as well as significant advances in quarktronics, leptronics, femtotechnology, and the planned human mission to Mars by the Latin American Space Federation.

In the meantime, inequality—in its broadest sense, as social, technological, economic, environmental, and political—has been the single toughest issue to overcome. But if the trends of the last 20 years are any indication, then the future will be very bright for the region during the next two decades. Against many odds, international cooperation and good public policies have allowed a virtuous cycle of development and improving conditions for most people. Therefore Latin America will happily celebrate not just two more decades, but hopefully two more centuries of progress and prosperity. A new civilization is being born, and Latin America is not missing the train this time. The future has finally arrived: “mañana” is today!



Scenario 2

Technology as Ideology: Believers and Skeptics

This is a true record of the June 20, 2030, debate at the Latin American University forum on the role of new technologies in building a new Latin America. The speakers had five minutes each to make their primary points for and against a positive role for technology, followed by rebuttals. Speaking for the negative, Dr. Juan Bosque, and for the positive, Dr. Francisco Arbusto. Based on a coin toss, the negative will begin.

Dr. Bosque (negative):

Although Latin America has some NBIC-based technologies today, these new capabilities haven't accelerated our social and economic development. Applying external technologies without understanding both their potential and their downside leads to an inconsistency in their application. It is certainly evident that living standards in our region have improved even more than we might have expected 20 years ago, but it is equally apparent that they have resulted in further

concentration of wealth, have raised expectations which can't be fully met, and have broadened the social and economic gap between classes.

Focus on short-term profits, and other ills that led to the world financial crisis in 2008, lingered in Latin America, preventing what could have been a more equitable technological development. What we needed were public policies for solving structural problems of the politico-economic system for improving education and for accelerating socioeconomic development.

In the 1980s, Argentinean futurist Horacio Godoy anticipated one of the key problems of technological development in what he described as the USTED syndrome (the underdeveloped use of developed technologies): the mismatch between expectations of technology and the actual contributions. What happened? Many groups across the region claim that the production based on new technologies was driven by the motivation of short-term profit and ignored the human, social, and environmental costs (such as planned obsolescence) that they would bring. Consider, for example, the expanding use of harmful agrochemicals, pharmaceuticals designed to cure diseases but not to promote health, and advanced weaponry. Some technologies threaten human personality; democracy is still perceived as a euphemism that covers the role of “corporatocracy” as the force from which the politico-economic power really derives.

New technology merely excites unwarranted consumerism and may create new needs without fulfilling some basic needs. What is the rationale of having people use smart phones 5.0 without proper clean water and sewage systems? Products have a shorter and shorter useful life, as due to new technologies they become increasingly sophisticated and the need for renewal is endless. Advertising increases the wish for new products, but only a small percentage of the population could afford them.

Products based on new technologies only give the already powerful even more power, while they still use outdated strategies of war and follow the agendas and styles of western democracies. Other problems are focused especially on land use. Think about GMO-based foods: the seeds are supplied by monopoly agribusinesses, so they set the prices; yes, the harvests may be larger, but where are the benefits for the rural small farmers? What is the biotechnology that besides larger crops also provides employment for rural people? Economies based on cooperation and shared ownership of productive goods and resources have made some progress, but the ideal of converting the gains of productivity into reduced work and free time for the working society has yet to be realized. We had hoped that increased productivity could be converted to improved human qualities, attributes, and potentials; instead, we find that improved productivity equals higher unemployment.

Dr. Arbusto (positive):

You make some good points, Dr. Bosque, but you're wrong about much of your assumptions. The benefits of technology far outweigh the risks, and the future status of the nations and people of our

continent depends on them. While we still have social crises—including poverty and marginalization—things are much better today than they were 20 years ago.

Take the global financial crisis of 2008 and the subsequent world recession: Latin America was not affected as deeply as many expected. The number of people making a living online has exploded over the past 20 years; people are finding work and how to learn and earn in new ways. This modernization in job creation occurred in a context of growing tension between creativity and imitation. Many local “traditional” jobs were sacrificed in the interest of competing on the global market, but the capabilities that new technologies offered provided a means of employment that did not exist before. It is true, nevertheless, as you suggest, that some new technologies were used merely as a “sign of modernity” without creating new ventures or generating sustained overall economic growth or development. Nevertheless, advanced technologies were vital key improvements: environmental problems such as pollution in major urban centers and industrial areas have been partially controlled; pollution and falling water tables have been curbed by improvements in the treatment and disposal of garbage and more attention to rivers and drainage systems in water projects. Tele-education and tele-medicine have made major contributions to improving the quality of life for many people. We have flexible emergency lodging and other response capabilities to natural disasters, we have earthquake-resistant buildings, and we have cheap and more efficient energy.



Dr. Bosque (negative):

If new technologies had not been a source for improving our lives, what have been the causes? Early in this century, outside corporations took control of the natural resources in the region. Global corporations have managed to transfer much of the costs of environmental consequences to nation states, as was the case of infrastructure development in industrial society, seriously compromising future generations. Now, global corporations with great financial power are attempting to do the same with biological resources—to extract and patent elements of the rich regional biodiversity (plants, animals, microorganisms, and all kinds of living matter and components of biological material). Biodiversity is at risk of being appropriated by corporate globalism. This violates the very sovereignty of countries.

Moreover, no consensus has been reached for helping countries in the region to act as a bloc against the abuses of multinational corporations, which therefore could operate indiscriminately because they were creating jobs for the region. Countries by themselves are unable to outline a regulatory framework governing the use of these biological materials in all Latin America.

Dr. Arbusto (positive):

Let me remind you that there were a series of crises of governance by 2020; charismatic but egocentric leaders of the past who were supported by patronage and demagoguery have fallen due to public pressure. Before the crises erupted, there were serious attempts to control the vast resources for government procurement and the mass media (such as Internet 7.0), but like-minded people across the subcontinent (using one of the technologies you deride) met in cyberspace and formed transnational power blocs. Communications were in cyberspace but the confrontations were in physical space. Political science theorists saw the events as self-organization in the midst of a chaotic system. The outcome was clear from the beginning. This technology brings the world to us and us to the world. It permitted people to participate in the rewriting of constitutions, it helped identify and train new leaders for replacing the old guard, and it consolidated representative democracy. This capacity is still young and the capabilities are still partial and limited. Real democracy is still impeded by reminiscences of the old economic system in which rules were set from the top down; hence, this environment is still new and difficult for voters.

When the dust settled, by 2025, we had improved our sociopolitical systems of governance while the old values still largely prevailed: family solidarity, religious values, and international charities. We found improvements in almost all areas: income, unemployment, literacy, rich-poor gap, but perhaps the most important use of the new online technologies is in education. People of all ages had all the humanly available information at their fingertips.

Dr. Bosque (negative):

Ah, there's the problem: people who need access are deprived of it by cost, time, and lack of knowledge about how to use it. We may have information but what we need is wisdom. Without an educated public, it is difficult to make democracy work. What we need is a dynamic balance of peace and justice. In addition, we still must work hard to provide the quality education you and your technologies promise us.

Let me point out that new important issues have appeared and old ones have worsened, such as land use

and management policies, housing shortages, regressive taxation, concentration of corporate ownership, farm subsidies, and growing bribery, corruption, and organized crime. The scarcity of medium- and long-term programs with support from local leaders worsened these problems and the social unrest.

Dr. Arbusto (positive):

You know, despite our regional problems, the global situation has improved dramatically. Perhaps this has to do with the new soft technology of improved decisionmaking. We have seen agreement between Taiwan and China, and Korea's reunification in 2020, and the peace treaty of Jerusalem in 2017. The United States effectively repealed the Monroe Doctrine in 2028, abandoning its self-assigned "protectorate" role and the use of military intervention in the region in support of what appeared to be its national interests. With fewer conflicts between states, Latin America has substantially changed its concept of defense and security. Our single regional army, under the Latin American Caribbean Union, was formed with the primary role of assisting the victims of natural disasters, which in the last two decades exceeded by far those of historical wars. This bold security policy changed the military rationale from border conflicts to responses to natural hazards: earthquakes, tsunamis, landslides, and floods. The problem, of course, was how this armed force would be commanded. We looked at many possible solutions:

- A supranational army under the direction of a mature regional military
- A Latin-American Council of Defense integrated by all countries in the region and with a rotating presidency
- An institution independent and apolitical, with equitable representation from every country
- An institution like the North Atlantic Treaty Organization, to which Latin America nations can contribute, rotate to choose institutional leader, and select permanent and non-permanent committees as in the United Nations
- Rotation of command among the contributing countries, or a non-military top command
- A coalition that includes representatives of all countries, with the participation of experts and professionals in various fields, such as doctors, engineers, sanitarians, planners, nurses, scientists, politicians, psychologists, volunteers, and so on, dissolving the old feature "military" and turning this into a common core structure for humanitarian purposes.

I won't say that these approaches were technologically

inspired, but without advanced technologies they would have been more costly and less practical.

Dr Bosque (negative):

Dr Arbusto, you can't claim that new technology was the main cause of reduced corruption. There is a long list of long-term policies and strategies that made a difference, such as increased transparency; international cooperation on arresting drug dealers and money launderers; public consultation to restore people's confidence in political parties and institutions; improved laws and implementation of public disclosure of government officials' financial affairs; support of civil society and culture; establishment of anti-corruption networks and blacklists of corrupt officials (convicts of corruption were banned for life from holding public office); judicial review with reform of criminal laws and procedural practices (such as dilatory recursive accelerating trials); and citizen networks to oversee procurement, purchasing, evaluation, and execution of contracts with public accessibility.

Dr Arbusto (positive):

Hold on a minute, Juan! Don't you think that new techniques of forensic accounting helped find money launderers? Don't you think that tele-classrooms helped bring excellent education to people who were denied it before? Don't you think that new media of public communication helped create the civil culture you refer to? Latin American artists and entertainers used new forms of cyber media to increase the public's courage to demand better governance. An important aspect was the reintroduction of the so-called *juicio de residencia* (impeachments) of the colonial times, ending the reign of highest government officials. Any citizen could complain about crimes committed during an official's tenure, potentially concluding with the imprisonment of the corrupt officials and their corrupters. Anti-corruption programs also included tax reforms based on equity, efficiency, fiscal responsibility, and mechanisms to stop tax evasion, as well as taxation and accountability mechanisms for foreign corporations operating in Latin America.

I'm sure you know that we were able to trace each individual peso and real with an electronic signature; this was of enormous benefit in the fight against money laundering and corruption activities. Health services, education, housing, and security improved as well.

Dr. Bosque (negative):

But how about energy and national economies? National energy policies designed to protect the

environment were ineffective; they seemed to be designed and brokered by the corporations involved in energy production and distribution. The national economies of Latin America are still fragmented: the more competitive and larger business sectors—which were part of the global economy—received most of the attention of the new governments, which applied economic and financial policies to better protect them. A second sector, oriented toward the domestic market, continued its difficult development, continuously threatened by the opening of the economy, dumping tactics, and smuggling. The third sector, the informal economy, continuously expanded and became an even stronger contributor to national well-being. It consisted of people who were unemployed in the first or second sectors. They developed strategies for survival outside of basic health services, education, and even personal dignity; many created online services and found markets around the world that are now totally connected through the Internet.

Dr. Arbusto (positive):

OK, people were able to develop those online businesses thanks to our computer literacy programs and excellent simulators that helped them develop management, business, and interpersonal skills, as well as learning new languages and get basic training in virtually any domain. These programs included the active collaboration of universities and colleges for the implementation of e-commerce, market organization through networks, distribution logistics, inventory management, creation and use of innovations such as electronic funds transfer, and the establishment of labor organizations for government backing the entry into the social security system.

Successful programs such as PLAN CEIBAL of Uruguay in the 2010s reduced the digital gap. Their free availability in the virtual world increased equal and unlimited access to information and improved e-government opportunities.

Dr Bosque (negative):

It seems to me that stability was the highest priority for decisionmakers. Traditional economic development decisions continued to strengthen the old production structures. Highly sophisticated consumerism came into the scene, but technological innovation was focused in the corporate sector, without real benefit for the larger majority of the population. The most advanced technologies were used only by the elite youth, while most people didn't understand them. Despite the creation of ministries of science and technology, the need for social development occurred not because of

technology, but despite it. We needed public policies with “technological inclusion,” assuring the ethically responsible use and democratic assessment of the benefits and potential hazards of emerging technologies like nano- and biotechnology.

The continual dumping of chemicals on the land and in the water and of carbon into the atmosphere is a byproduct of production. We all know the environmental and public health consequences. The online networks open the possibility for serious security flaws and terrorism for industrial operations and electronic transfer of funds. That some local companies joined the global campaign of corporate social responsibility is commendable but hardly persuasive. Environmental and social standards had to be imposed and enforced by legal mechanisms. Using environmentally friendly technologies is mandatory, not optional.

Dr. Arbusto (positive):

As a safety measure, auditor-directors elected by the community are serving on the boards of large companies, and purchases exceeding 1% of reported capital are made public through the companies’ Web sites. Publicly owned entities (including universities) submit their balance sheets to private auditors. Mergers and acquisitions of domestic enterprises by large corporations are subject to legislative approval. By a law established for public credit, banks are required to allocate 50% of their loans to local investment and new business developments. A tax was introduced on loans to corporations for advertisement and promotion of innovation that is not in the public interest. The point was to encourage inventions and new products that brought public benefits with them while discouraging monopolistic incentives. A unique addition was the Open Innovation Forum, a think tank where participants openly discussed ideas that might lead—after more R&D—to patents.

The cyber revolution and participatory democracy expanded the e-government systems and made them more transparent. Most government bids are made via Web, and important decisions are referred to the people via e-referendum. Now, truly the people have a say on the solutions to everyday problems as well as major decisionmaking on long-term challenges. With online voting on new decisions and issues of general interest, recognition of new groups with common interests formed via Internet and social networks. Old problems still exist, but life is better for most people. Maybe things will be even better tomorrow, like the struggle for the elimination of food insecurity.

Dr Bosque (negative):

Although inequality has decreased, large migrations from the poor and disadvantaged regions to cities and developed countries are still occurring. Although living conditions and living standards are slowly but surely rising, there is still a significant mismatch between the technologies invented or acquired in Latin America and the needs to solve the region’s massive social problems. Technology apparently has a mind of its own, evolving in ways that make attractive products and increased profits for large corporations but in its mindless way is not able to influence to any great extent the problems that plague our society; with some exceptions, of course...

Dr. Arbusto (positive):

Think of Latin America as a whole and not as a many different countries. Latin American integration exists in trade, as a beginning. We have institutions of continental cooperation to work for the people and biodiversity. Food security has improved, with pure meat produced without growing animals using cellular processes, and genetically modified foods have increased harvests.

And we are proud of our Latin American University, which enables the exchange of knowledge and ideas through student mobility.

We still have to find new ways to make the benefits of progress reach those social sectors most in need—including small local businesses. This would help ethical, social, and economic development and would reduce corruption, criminality, and social discrepancy.

Dr. Bosque (negative):

We can agree on that, at least if there are safeguards for the environment and ecosystems, natural resources, and native peoples’ rights.



Scenario 3

Region in Flames: This report is **SECRET**

Date: July 31, 2030

This report is our manifesto for action and will be discussed at the committee meeting tonight. It is being sent to you in this way to avoid cyber-interception and blocking.

Yesterday, the last of the great independent newspapers in Latin America was burned to the ground. We all know it was not an unfortunate accident, as the government claims. There are now no newspapers or reliable news sources on the continent that can freely write their opinions about the true state of affairs, except the cyber underground and, as in this report, our private internal committees.

Here's what caused the latest attack on the freedom of the press. Their editorial, run on the front page, said:

The trends of the last two decades—drugs, corruption, poverty—have come together to create a situation that is worse than we could have imagined.

Families do not know where to take refuge. The drug chain has specialized by following the trends of legitimate business. Bolivia and Peru concentrated in production. Colombia and Mexico are carrying out the management—the intangible part of the business and the most profitable.

Bolivia, Colombia, and Peru have expanded coca cultivation. The cartels have taken over Brazil, Ecuador, Mexico, and Venezuela. These countries are living in a state of siege. The laboratories for processing coca are proliferating to other Latin American countries.

The fight amongst the drug heirs continues; it is an endless war. The United States of America is the main customer and a major financier. The drugs market is expanding with the production and consumption of synthetic opiates: the old ones such as amphetamines, ecstasy, and prescription drugs, and new ones that appear almost monthly. In Latin America, juvenile drug addiction is growing exponentially, mainly driven by marijuana and cocaine consumption.

The cartels murder migrants and kidnap people. The business includes trafficking of people and weapons, piracy, extortion, forgery, smuggling, predatory lending, and environmental degradation. A point of political instability has been reached, and governments are becoming increasingly corrupt. Money is not an issue and

honesty ultimately has a price.

The implementation of policies to improve employment, education, and social assistance systems has to be urgently fostered by UN agencies. Everyone seems to know that a coherent and sustained commitment is required from the U.S. government in coordination with Latin American governments, to combat international organized crime, but none of the so called “effective plans” have yet succeeded. Sustained demand, clever criminals, and endless bribery money have killed the most hopeful schemes. The rhetoric sounds great: “Latin American state policies have to be established against structural corruption and international drug trafficking with regional cooperation and stronger systems, creating an international fighting force,” but so far, there are almost no lasting or effective accomplishments.

The legalization of drugs is still a matter of discussion. The World Health Organization says that it is not the answer, as it would create more health problems than solutions. Others think that legalization is the only way to dismantle the cartels and their systems of profits and power and to generate more tax money from drugs trade.

Education has been another promising possibility: teach the children as soon as they are old enough to understand that drugs are enslaving. Such plans are costly and, even in schools, money corrupts.

Meanwhile there is no agreement, no coordinated planning, no means to resist the flux of money, and the region lives in a brutal world where the worst is yet to come.

Our committee's research confirms this information. Freedom of expression on the continent is limited in several ways—some obvious, others not. In some countries, legislative and judicial powers are at the service of dictators. Political parties, unions, and all organizations are more or less controlled. All elections seem to be arranged and all candidates seem to have been chosen by the narco dealers. Most people are afraid to speak out. The people have traded democracy for survival.

The newspaper that burned down was not alone in its views. Last year's OECD report “The Outlook

for Latin America—2030” noted that drug and corruption problems across the region have made it increasingly difficult to escape from the cycle of poverty. Poverty and misery have increased as the forms of crime have multiplied and the whole region has become “the kingdom of inequality.” Income distribution in Latin America is the most unequal in the world, and GDP keeps falling. Most people are vulnerable, due to their lack of education, employment, and health services.

Projects for transforming public education—as a mechanism to equalize opportunities—have not succeeded yet. However, many access Internet tele-learning applications outside government authority. Clearly, realistic systems for allocating money to needy families with children are missing. Government-controlled education has poor coverage and poor quality. So the “no-no” (no study and no work) population continues to grow, more slowly than in the past but growing nevertheless. People have few opportunities for starting an independent life. The dynamics of inequality in education, income, and health reinforce each other in what seems to be an endless cycle and is further strengthened by lack of security and justice.

The magnitude of the problem of crime seems to be beyond the control of any agency acting alone because many—if not most—governments are corrupt and have tight links with international crime organizations. New “guerrillas” and terrorist groups are emerging. The old victims become criminals for surviving. There are no values. Getting involved in crime seems to be the only job option, the only viable way for surviving. Crime has become poor people’s “modus Vivendi.”

The *International Cyber-News* magazine, building on the OECD report, accused the international community of looking the other way and only becoming involved when the problem affects their own direct interests, such as cross-border violence entering the U.S.

Most Latin American governments have openly rejected the OECD report and the ICN story as being constructed by people who do not understand the region and profit from its decline.

With this background, it is understandable that the Economist Intelligence Unit reports that Latin America is poor and becoming poorer. GDP, exports, exchange rates, and remittances are all falling. Inflation is rising. In the region, economic uncertainty prevails and labor markets remain depressed. Governments are inclined toward fiscal austerity and reduced spending. Latin America is

in recession and some would say depression, with problems of external debt, internal debt, and budget imbalance. The official unemployment rate is nearly 50%. Of course, many of the “unemployed” are really employed in crime and the drug industry.

The pace of growth in the region has declined due to lack of policies involving social, private, and public participation. The lack of confidence of foreign investors because of corruption and the vicious cycle of the lack of domestic investment in productive capacities is deteriorating the region’s global competitiveness.

The Latin American countries continue to export raw materials and import finished products, hence making a net loss for the countries. There is a clear inability of the governments to centrally coordinate the resources and of the communities to self-organize and defend their own interests. And yet people argue that the market forces do their job with less government intervention.

The United Nations Environment Programme reviewed the situation recently and found that carbon dioxide emissions have tripled. Latin America and the Caribbean coasts are polluted by waste, garbage, chemicals, plastics, and especially fecal matter. They have lost much of their marine habitat, and human health is greatly affected. Hepatitis, cholera, diarrhea, malaria, dengue fever, and skin diseases are proliferating.

Coastal erosion, melting glaciers, forest fires, and flooding of beaches have driven away tourists. Deforestation, biodiversity loss, and lack of environmental governance are evident. The stability and productivity of ecosystems have been affected. Because of climate change, most countries in the region are vulnerable.

Droughts are frequent and some scientists have warned that the region may be on the threshold of a great famine. Human systems have become highly sensitive to changes such as water supply and demand, land use practices, and demographic changes.

The environment suffers from the “tragedy of the commons” in which no one is responsible. Polluters are not punished. There are no guarantees for foreign investment. Ecological tourism has vanished because biodiversity is disappearing.

Many human rights organizations, including Human Rights Watch, have condemned the state of affairs of most Latin American countries. They rightly say that we live in a region where poverty and youth are criminalized. Violence against women and

children has increased exponentially. Torture and terror are common. Indigenous communities are increasingly homeless, marginalized, discriminated against, harassed, and abused by powerful corporations who want their land, mines, and forests. African-descendant communities and lesbian, gay, bisexual, and transgender people are living in constant danger.

Health care, clean water, education, and decent housing are not available to most people. The death penalty has been reinstated, and people live in an atmosphere of public insecurity. People from small socially excluded communities are despised, and young people are killed to collect the premiums paid for each “dead guerrilla.” Activists and human rights defenders are constantly threatened, tortured, imprisoned, and/or killed. This is the decade of chaos, impunity, and dehumanization of humanity. Local gangs vie for power. Nobody knows where the newly disappeared have gone.

In Latin America and the Caribbean, submission, control, and authority of men over women persist. Gender-based violence includes sexual, economic, community, institutional, media, stereotyping, and biased ownership policies. Racism and discrimination persist. Maternal and infant mortality have increased. The law is not enforced, and religions condemn women for abortion. Women lack public health care, education, and opportunities to work. Mistreatment of women is increasing. Some policies that have been designed to correct these inequities have been attempted, but unfortunately they have not had much

effect. Police abuse continues. The Committee for Women’s Defense has been created to force Latin American governments to dignify women’s role and equity, but now the horizon is frightening.

The perception of what has happened to us is emerging in cyberspace and is being encouraged by committees like ours.

So, my friends, this is the background. The question is, Where do we go from here? Are we really inept? Are we really powerless? While the social revolutions against dictators and corrupt officials in Africa and the Middle East in 2011 were an important warning, political and drug leaders in Latin America didn’t pay attention. The dictators are not attending to population needs and have succumbed to the pressure and money of criminal groups. Dictators feel themselves as Messianic, keeping their feudalistic patterns. They wish to avoid being judged by the International Criminal Court for theft and violating human rights. Corrupt officials profit at the expense of the population; their wealth grows while poverty and squalor persist. The drug leaders think they are invincible because they think they can buy anything.

Countries of the continent do not lack laws, constitutions, or systems of justice and redress. The framework is here. What has proved to be lacking is the will to enforce these structures, the ethics to do what’s right.

The floor is open. Do I hear any suggestions for lawful action?



Scenario 4

The Network: Death and Rebirth

An ancient myth describes an attempt by the Babylonians to build a great tower that would reach to the heavens. The Babylonians believed that the invention of the brick—a real breakthrough at that time—would enable them to build such a structure. They were punished for their hubris; the curse of multiple languages destroyed their ability to communicate. In Latin America, we attempted to build such a “tower” and, as in the ancient myth, communications were our downfall—not words, but understanding of the meaning of words. Did we hope for too much? Our “tower” was a political, economic, and technological union of countries—a network called Cyber 1.0. Some people called it *Babble 1.0*.

This union attempted to integrate people from all Latin America and the Caribbean with different languages and from different fields of knowledge, with different values and ideologies. They were organized by thematic groups such as health, education, governance, environment, transport, entertainment, technology, conscience, citizenship, well-being, and happiness (rather than only economic success). It was a unique variation of the European Union. The members—individuals, groups, and countries—were called *Babelites*. The mission of the network was to advance political integration, avoid military conflicts, assure peace on the continent, prevent poverty, detect and reduce corruption, enhance economic development,

improve decisionmaking, and foster social equity, as well as promote bottom-up development and empowerment. The Network provided a forum to enable fast and efficient interchange of ideas and information and improve participatory democracy. Idealists who were participants also hoped to change development paradigms while reducing rich-poor gaps, promote a worldwide friendship and fraternity without destroying cultural and natural diversity, return to traditional “indigenous” values of close communion with the environment, and increase the power of collective responsibility.

At the beginning, the network appeared to be the foundation of a continent-wide forum for participatory democracy, encouraging sustainable cities and consumer consciousness, citizenship, and a productive medium for social and environmental activists. Based on highly advanced communication devices and networks, the Cyber 1.0 platform was light-years ahead of the social networks of the last decades. It included multilingual with 3D holographic screens, global autonomous and seamless language translation, fast intelligent communicating engines, personal stories, socioeconomic data, happiness measures, and government goals, as well as votes on social and political issues in real time. It could recognize discussion themes and create ad hoc links to form automated topic forums, based on WSAI (for Wiki Semantic Artificial Intelligence) platforms. This forecasting capability stimulated the hope that the network would facilitate gradual Latin American integration and rescue the wisdom of its leaders and elder statesmen and women to build on traditions and to reinvigorate the “Latin Soul.” However, as Colombian Nobel Laureate Gabriel Garcia Marquez implied in his *One Hundred Years of Solitude*, this movement was neither strong enough nor efficient enough to overcome the archaic institutional structures of the entrenched sociopolitical systems that were more or less in conflict with emerging social interests and values fostered by the embryonic union and its voice, Cyber 1.0. Ancestral cultures of the continent were swept away by the alienating consumer society. Therefore, like the Babylonians before them, the Latin American Babelites had goals beyond their capacity. And the story of collapse, like the fable of Babel itself, warned us about the ethical and economic dangers on the horizon for the sub-continent.

Outwardly, technology (like the Cyber 1.0 network) glittered and the economies of the sub-continent grew as a result of inventions, low

labor costs, demand for its exports, and foreign investment. But poverty and inequality increased as well in the region. Why?, asked the people. Why?, asked the academics. Why?, asked the politicians. Why do we have apparent prosperity on the one hand and misery on the other, with high gaps in between? The collapse of Cyber 1.0 was a symptom of the ills that plagued the continent. Even though large corporations kept pushing development with an apparent technology boom and expansion of markets, high value-added products were increasingly imported and natural resources increasingly exported. The high rate of unemployment was a result of lack of social inclusion and accelerated automation of production processes; about 70% of the overall working population was at the margin of the economy.

The media were still controlled by one big group called EPIC: Established Politics for Information and Communication. Using all channels of media, TV, digital, printing, and so on, the media monopoly was in charge of what many critics liked to call BBS2, for Big Brother and Sister 2—in fact, it was “transliminal mind control” or at the very least manipulation of the population based on bread and circuses. Like a new generation of Wikileaks, Cyber 1.0 was the enemy of EPIC, and some people believe the network’s disintegration came in part from EPIC’s “dirty tricks,” which included implanted misinformation and even using Radio-Frequency Identification chips on people. The tragedy is that nobody seemed to care that the network that had a chance of reforming the politics and economy of the region had passed from the scene. What emerged instead was a new form of collective manipulation by powerful elite. Massive state and economic control slowly destroyed cultural differences, creating homogeneous thinking and a continued disintegration of the common social threads holding society together. EPIC encouraged consumer aspirations and “mass mind” ideals, starting from an early age. Australian political analyst Sharon Beder wrote about this possibility a long time ago in her classic work regarding the corporate capture of childhood. The faith that things can be achieved through cooperation was lost.

While the political hopes for continental unity and communications were fading, the world of Latin America was changing. The warnings from the Rio+20 Summit in 2012, where experts agreed that weather phenomena would have greater intensity, were confirmed. As a matter of fact, developing regions like Latin America have proved to be the

most vulnerable to climate change and variability. Social unrest grew, partially as a consequence of climate change, which reduced water from the Andes (thus lowering rivers' debit), changed insects' migrations, and altered human disease patterns. These were aggravated by intensified rainforest deterioration, crop failures, uncontrolled use of GMOs, and destruction of regions important to indigenous tribes (that started with the Brazilian Belo Monte dam in 2011). Migrations have doubled since 2011, mainly due to water and food shortages.

Daniel Pérez, an Argentinean environmentalist from the Cyber 1.0 era who attended the Rio+20 Summit, declared that Latin America is a continental environmental failure, noting that his country now uses transgenic seeds for 100% of the crops instead of adopting a green business model in its agriculture. Even worse, Brazil continues to be the largest consumer of pesticides in the world, compromising its enormous natural biodiversity and natural water resources so vital to the rest of humanity. Other activities with serious environmental consequences across the continent included political corruption leading to privatization of water reserves, lack of effective waste management policies and sustainable consumption and production approaches, radical changes in the courses of rivers, poorly controlled use of nuclear energy even after the 2011 Fukushima warnings, and mining exploitation without ecosystem restoration. The obsession for producing biofuels and the expansion of coca plantations affecting biodiversity took priority over sustainable food cultivation.

When the network failed, political unity among nations fragmented as well, and civil apathy in Latin America grew. The rule of law gradually lost its grasp, allowing organized crime to take over states with increasingly corrupt governments. Countries like Colombia, Venezuela, Bolivia, Paraguay, and Mexico slipped completely under the control of organized crime groups. Rio de Janeiro had a semi-legitimate "narcodemocracy," where people's representatives met weekly with cartel gangs to monitor the action-plan established by the Narco Vision 2035 project of the Latin American Narcopower Cartel, launched in Favela Rocinha around Rio de Janeiro in 2015.

However, there is a glimmer of hope. Quietly, Cyber 2.0 has taken shape; it features all of the interconnectedness of the Cyber 1.0 network but it now includes truth checking (displays the likelihood of a statement being true and authentic)

and increased government participation, which appears to be fostering a spirit of multilateralism once again. The network also includes detectors of corruption and advanced anti-virus detection and prevention, while governments have enacted new laws that make tampering with the network a crime. Some people called this new rebirth *Agora*, after the Greek forum—a place of free speech, trade, and open political debate. In addition to curbing the power of organized crime, the achievements of this new network of like-minded reformers already include improved ability to foster true dialogue and empower communities to devise and implement solutions, as well as tools to help decisionmakers in all sectors together with government—instead of by government—to improve the quality of their decisions, thus increasing the strength of civil society and promoting social integration. Projects for improving indigenous peoples' rights to resources and new community-oriented development are devised cooperatively online. Online social movements and e-government systems help reduce corruption and improve decisions. Internet access is free, and knowledge is shared through the implementation of UREDAP, the Urgent Educational Attention Program, a network to expand global knowledge to the excluded segments of population and all areas of society through local cyber centers.



In this chaotic time of corruption, exclusion, cultural fragmentation, ecological damage, and strong cartels for information, energy, and raw materials, another Latin America is becoming possible: Cyber 2.0 led the political arguments for open-sourcing of green technologies for the development of integrated smart and clean energy distribution systems everywhere. Energy systems now permit houses to receive and provide energy to and from a parallel new energy distribution network. Such energy enterprises were described and encouraged on Cyber 2.0 and garnered the support of large investments from big pension funds and venture capitalists from all over the world.

In particular, new advanced intelligent energy grid systems involving small farmers and communities earn income from energy production

while also protecting the environment. The region's biodiversity became essential not only for the planet's health but also for assuring the availability and abundance of organic foods, cosmetics, and biopharmaceutical products. Other benefits of the new energy strategy were more than self-sufficiency, the exportation of energy surplus to other low-income countries with less capacity, and new opportunities for small businesses in the neighborhood, allowing a massive contribution to the local economy. These leapfrog innovations have produced positive impacts: better quality of life, reduction by 75% of the production of fossil fuels, and improved energy security. Communities now can decide what types of energy they wish to use, with benefits and downsides proper to each community's main industries, using the supplement of massive energy production by large power stations necessary for large populations and small-scale energy production suitable for small and remote communities. The savings resulting from the optimization of these new systems have been allocated to education, housing, and health and social care programs. The investments in local economies have reduced the migration from rural to urban areas, and more and more people are willing to go back to the quietness and healthiness of rural life.

Foreign investment has been high, and despite increased crime, tourism is up and Latin America now competes with Europe as a travel destination. Yet inflation is always a great concern and could again affect development. Throughout the last decade, the idea of a common Latin American Peso and a complete geo-political and economic union with coordinated standards and trade agreements was continually discussed. But the process may take even longer than the creation of the European Union because of the internal interests of the member states and external pressures. Instead, Cyber 2.0 has led to an era of multilateralism—agreements among countries that see it to their benefit to agree on standards, laws, and behavior norms.

After the last massive financial crisis at the beginning of the century, leading economies of Latin America have increased their power within the G-40—now led by China and India—even if the world still lacks good economic policy coordination. While the European Union is still pushing the social union approach, Latin America only cares about the economic one. Therefore, the LA Union is now committed to developing new finance and economic regional institutions to

foster sustainable development, by institutionalizing common economic policies.

The death of Cyber 1.0 and early plans for continental integration set the stage for the rebirth of both. Today our continent has the best of the world's science and technology: whatever is available in the world is available here, but maybe not to everyone. Technology brings the allure of materialism. We love it, we think we need it. We have the highest computer speeds and the smallest chips; Cyber 2.0 is the least costly and highest speed network anywhere in the world. But has technology helped us, really? We still have poverty and crime and corruption, battered women and starving children, homelessness. We have the worst the world has to offer, too. We can modify DNA and produce marvelous new life forms that detect and cure disease and shape our prospective progeny, but also the growing spectrum of bio-weapons and grave uncertainty about the morality of using technology to change human destiny and evolution. We have nanotechnology and the worst slums in the world; we grow sugar for fuel when we need food. We make decisions that affect the world without knowing the consequences, using obsolete and impoverished decisionmaking.

The scale that balances technology against social need is tilted strongly toward technology. We haven't yet learned how to use it to make Latin America work for the best of all, but we may be learning. We need to redesign government policy and legal standards directed to making technology breakthroughs and applying knowledge for the benefit of all and of nature. New actors that were before excluded in important decisions are now on board in this movement: women who are key players in the economy and education, youngsters who are now pioneering with social enterprises, and elderly people whose population has doubled since 2011 and who are now engaged and feeling the call of the earth too. Our network of bilateral agreements slowly spreads these goals among Latin nations.

By this time, in the beginning of the 2030s, a new decade is foreseen for Latin America's future. Change is already overdue and is more than necessary for the survival of the whole continent, envisioned as a promising Up from Eden yet-to-be accomplished process, but now more aware of who and where we are, and where we want to go. For that reason, dystopias are being replaced by utopias, and a whole new set of AQAL (for All Quadrant All Levels) Well-Being Indicators is emerging.

Cyber 2.0 is a step toward improved democracy and social evolution building on the cultural roots of our continent. The whole continent is now on the move, in search of new leadership models, cultural identity, regional integration, ethical values through education and culture, and solid leadership fundamentals to promote solidarity among

nations—rethinking the real purpose of knowledge and heading for new solutions. A rebirth is on the way. But it may depend on, as in many other regions, the extent to which we may go regarding a new framework of a trusting and empathic civilization.



Conclusions

The previous scenarios can be used as input to national and regional policy planning processes. Decisionmakers can use these scenarios to ask how their policies might fare in the range of situations depicted by these scenarios and find courses of actions that produce desired results in all the situations depicted by the scenarios. It is helpful that a set of alternative scenarios illustrate a reasonable span of plausible futures and that the content in each is detailed enough to reveal potential impediments and opportunities for action.

There is less consensus about the development model in Latin America than in more developed countries. Basic forms of social organization, such as markets, states, and institutions, or the separation between society and state are not universally accepted in Latin America. The conflicts within these countries (ethnic, cultural, economic, social, political, and technological) have not been resolved. Tensions between modernization, development, and the “traditional” social and economic organization are most evident in a context of rapid changes in technology and globalization.

As these four scenarios suggest, Latin America must find its place in a changing world while it simultaneously meets the basic and expanding requirements of its population in education, health, housing, jobs, safety, and other services for individual and social development.

If deeper integration of the region is to be achieved, common strategies and policies must be sought. An improved economic framework would include matching national production systems and markets across national boundaries. With proliferation of the Internet, integration of educational systems in the region is possible, as is the meshing of science and technology systems. Local and regional innovation policies are needed. The informal economy should be integrated with the formal economy, while establishing a new

balance between external and domestic markets.

The biggest challenges are to recognize and incorporate the requirements of future generations in the formation of public policies and to create a balance of opportunity costs for human, natural, and technological resources in each country. Solutions must be found to problems that reach across the scenarios: corruption, crime, and drugs. Until progress on these is achieved, the wisest of development strategies is not likely to succeed.

As imaginative as these scenarios may be, they certainly omit surprises that may lead to disruptions in society, infrastructure, businesses, and economies. The key to effective response to such exigencies is resiliency.

After 200 years of Latin American independence, a reorganization is evolving as a result of internal pressures and globalization. New relatively short-lived initiatives have come and gone because of an essential lack of real Latin American identity, on the one hand, and globalization of multinational lobbies fighting for their own interests on the other hand.

The scenarios include many examples of positive initiatives related to high-tech social networking: Cyber 2.0, 3D holographic screens, seamless language translation, fast and intelligent communicating engines, expanding socioeconomic data, happiness measures, WSAI platforms, smart-grid energy systems, the exchange of knowledge and ideas through student mobility, cyber revolution and participatory democracy, e-government systems, new soft technology to improve decisions, transnational power blocs to promote a more sustainable world, construction of a Latin America University, consideration of a Latin American currency, a 2030 Mexico City World Expo consolidating the futuristic image of Latin America, “Made in Latin America” brands revolutionizing international trade, and so on.

All four scenarios are powerful resources in understanding the threats and opportunities of the future. The rebirth of Latin America may be on the way, but this rebirth may depend on how much and how fast we move toward new frameworks of institutional power and new paradigms in governance. We also need to transform educational

systems to develop a new generation of leaders who cultivate and share ethical principles in their decisionmaking, understanding that the ultimate meaning of life is to expand human potential and well-being in such a way that the next two decades may be promising in terms of a better Latin America for a better world.

