



BEIRUT INSTITUTE SUMMIT

May 12 & 13, 2018 | The St. Regis Abu Dhabi, UAE

Session

Contours of an Emerging Global Future Woven by Technological Leaps

A tour d 'horizon of the large-scale forces of technological change shaping the global future and their social, political and economic implications – from the perspective of a global technology leader.

Speaker

Parag Khanna, Geo-strategist and Best-selling Author

Date

Saturday | May 12, 2018

Duration

20 minutes

[Session Video](#)

[Session Presentation](#)

Please credit Beirut Institute Summit when using this material.

--

Now, the story begins with the technological revolutions that are reshaping our world, and I want to submit to you that you face a lot of uncertainty, a lot of the conversation today is about the uncertainty and the unpredictability, but I want you to have no uncertainty whatsoever about the technological and economic revolutions that are facing our world. You will face exactly two choices; whether you will participate fully, anticipate these changes, embrace them and adopt them, or be left behind. Exactly two choices.

Now let's begin with the first of these revolutions. The first is connectivity. Connectivity is a very physical thing, for so many of us, it is wireless; we see ourselves connected by mobile phones, we don't appreciate the physical infrastructure. But in fact, around the world, all of our governments, all of our societies, spend more than twice as much every single year on infrastructure than we do than all the defense budgets in the world put together. And that goes into the transportation, energy and communication infrastructure that link all of our societies together.

Societies, in geopolitics we used to rank by the size of the military, size of the geography, size of the population. Already today and certainly in the future, we will measure societies by how connected they are, or how disconnected they are. And the most connected societies, those that have the most efficient access to their trading partners, markets and allies, will be the most successful. And this map actually shows you, there's a real map, of the world's highways and railways, oil and gas pipelines, electricity grids and internet cables that are wrapping around the world today.

So either you are connected or you are disconnected. And the final map that I'm going to show you today is actually of the Arab region itself, so you can see just what a long way to go there is.

Now that map that shows you that distributed architecture of global physical connectivity, actually helps you understand just how distributed power dynamics have become in the world today. We're accustomed to thinking of geopolitics as a hierarchy, with the United States at the center and a constellation of several lesser powers surrounding it. As we move further into the future, the structure of power will look more like this; more like a spider web, without any one dominant spider at the center, instead we will see what I call networks across hierarchies. Every region in the world matters. In fact, earlier this morning, this afternoon, His Highness mentioned that there is this connectivity between all regions in the world and that is part of what has brought us here today. In fact, we live for the first time in history, in a world where every region, every continent, can directly connect physically through airline connections, stock markets are linked, trade patterns are advancing. If you pick any two regions in the world, take Southeast Asia with Latin America, or take China with this region, The Arab World, the trade relationships, investment volumes have increased by hundreds of percent over the last 15 or 20 years, and increasingly it is done on equal terms through discovering economic complementarities- not in the form or model of colonial hierarchy under European dominance, this is a world in which regions are discovering their complementarities with each other. And in each region of course, certain powers sit at the center and dominate those regions, and stable regions will be best able to connect internationally with less concern over their stability at home. And so, we must strive for this region, which I call West Asia, bear in mind, because that is what we geographically are here, and the term Middle East of something of a colonial artifact which I no longer think has any particular relevance in the world. Here in West Asia, we have to strive for that kind of stability so that this region can focus on its international connectivity with partners around the world. So we move to a world that is less hierarchical and more symmetrical, and that is a world of great opportunity for regions to trade and exchange with each other. And within that, what we see is there is a market place of services, a market place.

America has been the leading provider of global security, of public good, which is provided to allies and nations around the world; freedom of navigation of the sea lanes, for example, security umbrella for many nations. Now what we find with the Belt and Road initiative, which many of you have heard of, is that China has become the largest provider of infrastructure in the world. Infrastructure also is a paramount global public good which hundreds of countries need in order to what? In order to get more connected, right? In order to be able to provide to their populations, connect to their neighbors, optimize their trade, grow their economies. Without physical connectivity it's not possible. These are not necessarily rival public goods; today we have this assumption that the US and China are in a great rivalry for influence in the world, but in this most significant of areas, they're truly complementary, truly complementary. United States is continuing to provide important security services and China is providing infrastructure. So let us view these as public goods, and all countries and powers that can provide them, for those societies that need them, should. And those are utilities; security, energy, finance, technology, there is global market place of these services and increasingly the cost of these technologies, the cost of these utilities, that improve the quality of life for citizens is coming down and their availability is going up.

Now I mentioned that I view this region as West Asia, and you can see a global economic multi-polarity that has emerged in the world, and why it is so important to realize that this region, given its geography so central, has to globally in terms of who it is connected to economically. Now whereas North America is very uni-polar economically, and European economies are relatively smaller, look at the size of Asia's economies which are, of course, also the world's fastest growing. And since the super cycle era, since the early 2000's until today, this region is trading far more with India, with China, with Asia as a whole than it is with its former western colonial partners and economic partners. So, appreciating where you sit economically and geographically is absolutely essential.

Now what is happening today, is that this Asian region, which was so fragmented for centuries, because of colonialism, cold war, is now starting to come together through new institutions, the Asian Development Bank, the Asian Infrastructure and Investment Bank and so forth, have all in the last few years, expanded their membership. Of course now all countries in this region have joined the AIIB for example. One sees that countries such as Russia or Turkey which for decades sought to integrate more with the West, to join the West, have now realized that they too are going to reorient towards Asia. And that applied at the commercial level, investment level, also increasingly at the strategic level, and those are forward-looking decisions that you need to be making.

Now let me bring a few points together, I want to provide you with a conceptual framework which I believe, sadly, so many leaders lack. What we find today is that public figures often have a knowledge of the geopolitics which have been so much of the conversation today. Many also familiar with some of the big macro-economic transit issues that relate to trade, investment, GDP, currency and so forth. What's been missing is beyond geopolitics which is actually a 19-century-discipline, geo-economics which emerged in the late 20th century, is geo-technology- which is very much the third corner of the triangle which becomes increasingly important in the 21st century. You cannot understand global change, the balance of power in the world, without understanding all three of these equally. You must develop a fluency in technology, in addition to economics and politics, because in fact, while the vocabulary is new, what is not new, is that throughout history, it is the balance of innovation, it is technological advance that ultimately drives the balance of power. It is the industrial revolution that creates the mercantile economic policies, that creates the trade pluses, that creates the currency reserves that allows for modernization of economies, societies and militaries.

China today is a superpower, not because of the number of nuclear warheads it has, but because in the late 1970's, it created special economic zones, it attracted foreign investment, it became the factory floor of the world, it built trade surpluses and currency reserves and invested them in its national modernization. That is why China is a superpower. It begins with economics and with technology, then military dimensions come later. So remember all three dimensions of this matter. How did China do it? Of course it was industrial policy, which was the intersection of economic regulation and technological strategy making. And I'll give you the example of energy markets. How are we to understand what has been happening in global energy markets in the last 20 years without understanding the technological revolutions. Not even 10 years ago, people did not have a sufficient appreciation of fracking technology and how that would bring about the shale energy revolution in North America. We made predictions about high oil prices long into the future, instead now, most predictions are in the opposite direction. If you don't understand the technological underpinning of what is happening with energy, just hydro-carbon energy, now bringing all the alternative and renewable technologies that are being deployed around the world, and the impact that is having, as countries like China for example and India too move rapidly towards alternative and renewable power, either at the provincial or national level, that is changing the composition of their energy imports. Already in China, there are stranded assets, there are stranded

pipelines that are not being used, that are now liabilities on their balance sheet, because they're moving so quickly.

So we have moved in a very short time, in a ten-year period, from all of this talk-about peak oil, and you all have books on your book shelves with the words peak oil in the title, now we're moving towards peak oil demand not peak oil supply. If you don't understand the technology, how will you forecast those shifts? And instead... and because of that abundance, we now have economic crises of austerity in energy, in hydro-carbon-rich countries; we can see those that are already failing, as a result of that volatility, like Venezuela, those that have a very difficult future ahead of them, like Nigeria and Angola, and those, like this region, that have anticipated this and are now rapidly trying to adopt, knowing, having seen, what is now happening in other places. So without understanding the technology, we'll not understand how to appreciate it. And of course what's very important is that we realize which of the global energy markets we have to start to isolate and ring-fence, those volatile countries whose shortness of supply, places like Libya for example, do not disrupt the system of energy transfer.

Now industrial policy as I said, geo-technology is about industrial policy. What we are witnessing today, whether it is Donald Trump's trade policy towards China, or whether it is China and India's attempts to move up the value chain, is why I call the tug-of-war. It is a tug-of-war to control the maximum value added in our economic transactions with each other. What this map shows you, it's called the complexity outlook index, it ranks countries by the complexity of their economies, meaning the difficulty if you will, or the formally speaking, the non-substitute ability of the products that they make. In other words, even if China and other countries move rapidly up the value chain, you are protected, your economy's protected from those technologies being rapidly off-shored to other countries, because they are very difficult, they require lots of human capital, lots of technological ingenuity, lots of fixed high-tech assets and so forth.

So the most complex economies in the world, like countries like Finland, South Korea, Germany, Switzerland and Singapore and others where you see a lot of high-end working machinery, chemicals, bio-technology and so forth, semi-conductors and whatnot. Other countries are very vulnerable. Now the rapid spread of technology means that it is inevitable that these technologies are going to diffuse. This is precisely why there is such an aggressive move and response by the Trump administration against China, to try to clamp down on intellectual property theft and these advanced technologies. But as you may already know it is too late, right? It is too late. You can see, based on China's five-year plans, how rapidly it wants to acquire the latest technologies in the most high-tech areas and displace domestic, displace imports.

The other way to go about this industrial policy, again in the age of geo-technology, is to buy it. What I'm showing you here on the right is the rate of Chinese foreign investment into Germany, in the last several years. You see that what was relatively stable for a while, suddenly spiked drastically, right? And this is represented by a number of acquisitions that China made into German robotics companies and others. Remember what I just said, Germany ranks as one of the world's most complex economies. It takes longer to indigenously develop and make your economy more complex than to simply acquire technologies from large trading partners, and that's exactly what China is trying to do. And so, this is why you see some transatlantic cooperation in this area, because Europeans are very worried and they are implementing their own versions of America's national security regulations around foreign investment in technologically sensitive areas; because they see that if they lose their geo-technological edge, that will accelerate the demise of our collective... of the collective western geopolitical edge.

Now, there are a lot of technologies emerging from Asia, you benefit in this region in some ways from the accelerated competition to acquire the latest technologies, to mass-produce them, to marketize them, which brings down the cost. And some examples of that are artificial intelligence and solar power and

mobile financial apps and ecosystems. Because of the soft banks, very substantial investments in artificial intelligence, you will see Indian companies for example, move rapidly ahead, bring down the cost of applying machine learning technologies into the commercial space and even into the national strategy making. You can see the same thing with Alibaba and Wechat and these apps ecosystems, these lifestyle ecosystems that are embedded in the Chinese mobile services. Those are now being exported here to the Arab World- which means that you can have not only cash transfers, you can have investment products and all sorts of other things at a very low price. This is partially why I'm advocating thinking about the value added of joining more aggressively the Asian economic system, because you are going to get the latest technologies at a lower cost, the more you partner with countries like India and China and take that investment capital from Asia as well. All of this points to looking to the future. You're familiar now with the right-sharing systems and mobile financial services, and these basic... what would now qualify as fairly basic rudimentary new technologies.

What about the fourth industrial revolution? What about this set of technologies that are coming together in many ways from the Internet of Things, artificial intelligence, 3D printing, nanotechnology, synthetic biology, quantum computing and so forth, there's too many to mention. What's important is that, I think, each of you have heard about them one by one. The point of the fourth industrial revolution is that they also converge, they give rise to entirely new fields, to entirely new companies, entirely new business models and applications. And the role of government, role of governance, is to think about how to adapt these to your society in a way that helps to enhance your productivity, enhance your human capital, create indigenous companies that are going to participate in this global tug-of-war. And that is what I think is, where there's enormous opportunity for this region of the world.

Let me talk about some of these. One is artificial intelligence, and how that is impacting local economies. Machine learning, neural networks, these are already rapidly changing the industrial landscape in many countries, we're seeing for example labor automation with increased efficiency of output, we're seeing companies that we think of as more e-commerce and retail companies actually becoming big data companies like Amazon for example. Now already the research tells us exactly which sectors of the economy are going to be most affected by this artificial intelligence revolution. And it is sectors that are very critical to this region of the world. It is retail, transportation and logistics, travel, the automotive sector, health care, light manufacturing, all of those sector are very prominent here in this region, and it's going to be critical for all of the governments here to focus on how they are going to incorporate these technologies. At the same time, there's the challenge of maintaining employment while you do so, which means of course, one has to think about the skill-building element, again, the human capital, the educational systems.

So let's focus very briefly on this region, on this country, the UAE is truly an oasis in this region, it is ranked certainly as the most innovative economy in the region, it has some strengths in terms of incorporating the latest technologies because investment is coming into those areas, but so much more has to be done to translate those into broader benefit for society and to spread them around the region.

Mobility as a service is critical, using drones for logistics, leveraging blockchain which is certainly a priority for this government for many areas such as personal finance, mobile services, incorporating 3D printing into manufacturing so that this can be a real hub in the machinery and logistics sector for the world. Looking at new energy technologies and how one can reduce the domestic carbon footprint and generate more revenue from the hydrocarbon exports and so forth. So, final point I leave you with is this, this country has done very well to get connected, to attract investment and to develop a strategy around the latest technologies, but as I said, this is an oasis, this is 10 or 12 million people in a region of 400 million people, and I've always viewed the UAE as in a way, the de facto capital of this region. Your country has

a responsibility, this country has a responsibility to take the leadership in spreading these technologies for the benefit of the region.

What I show you here is that so much of the infrastructure that I highlighted at the very beginning is lacking in this part of the world, in this region. So many of the technologies, the basic connectivity infrastructures that would transfer oil, gas, water, food and so forth and allow the labor mobility for those to go, those resources to migrate from where they are to where they're needed are lacking in this region, and that's what I call the Pax Arabia, the peace among Arab nation. And the conversation today that we've had has focused so much again on the uncertainty, the dilemmas, the tensions, and yet here is the opportunity. And this, here we are not talking about your relations with Iran, not talking about your relations with Europe, not talking about the US or Russia, I'm talking about the things that Arab nations must do for Arab nations, Arab governments must do to provide the broader welfare for the region.

So that is the challenge that I want to issue to you, these are some of the issues that you must start to face immediately, and I hope that the agenda is going to carry this forward with great success.

--

Please credit Beirut Institute Summit when using this material.

© Copyright 2018 Beirut Institute.

All rights reserved.