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TRANSCRIPT

Rethinking development in the global information age

by Professor Manuel Castells

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Good afternoon. Thank you to my dear friend and colleague, Nico Cloete (Centre for Higher Education Trust). Let me first of all thank all of you for your presence here. I feel honoured; and want to repeat my long-term commitment to STIAS and Stellenbosch and, beyond that, to South Africa, a country close to my heart and to my intellectual project. I want to start by thanking my sponsor at STIAS, Hendrik Geyer, and all my colleagues and fellows; also Johann Mouton (DST-NRF Centre of Excellence in Scientometrics) for his friendship and sponsorship. And then allow me to at least acknowledge a couple of friends: Bernard Lategan and Paul Cluver. I am very honoured by your presence. Thank you very much.

The topic of our lecture today came out from the effort that Nico Cloete mentioned about trying to rethink development on the basis of a number of empirical studies, interacting with different conceptions and different approaches to development. Over the past few years, we built an international network of researchers with different empirical interests and different theoretical and policy approaches, with people from six different systems. This involved AnnaLee Saxenian at the School of Berkeley University of California, Pekka Himanen at the Helsinki University of Technology, You-tien Hsing, Professor and Director of Chinese Studies at Berkeley, and Fernando Calderon of the Universidad Nacional De San Martin in Buenos Aires. We also worked with the two main South African researchers contributing to this group, Nico Cloete and Allison Gillwald, who not only presented a very deep case study on South Africa but also contributed much to the overall set of discussions. We worked together for about three years, meeting in different parts of the world, and

we came up with this volume¹ that is being published by Oxford University Press in August 2014. I will provide a more subjective interpretation of what we learnt. I am not presenting the book: Nico will present it in Cape Town after it is published. I am simply distilling the book, trying to see what we can learn in my own intellectual framework because it is not an integrated, conceptual book: it is really a conversation, a conversation informed by observation, which is what I always try to do.

I try to cut across the distinction between theory and empirical research in society because I always have in mind what this means for the world at large: what this means in terms of policy, politics and change. This is based, on the one hand, on some reflection informed by theoretical frameworks and, on the other hand, by observation, and making sure the observation modifies the theory. I do this because my principle is that when theory conflicts with observation, you don't throw away the observation: you throw away the theory.

We did in fact 'throw away' a number of theories. What I am going to present is not the surviving theories but theoretical approaches and insights that we reached after the process of filtering what we were thinking on the basis of observing.

We know that 'development' has multiple meanings. This is important: it's not just a terminological debate. Words matter. The world has been differentiating between 'developed' and 'underdeveloped' and 'developing' for a long time; and no one knows exactly what they mean anymore. Sometimes countries, like Singapore, still argue that they should be considered developing because that would mean United Nations subsidies. So in fact these categories don't work, and certainly don't work in a world in which everything is connected through networks which, as we know, both include and exclude. Everything is connected but much is disconnected. And therefore the 'developing' and 'underdeveloped' and 'developed' depends on where you are: in which neighbourhood, at which time and how and why. And that's a completely different notion to the one that created this distinction between what used to be the 'developed', meaning the West, and 'underdeveloped', meaning the rest, the huge majority of the world (with Japan being the exception: people said, 'They are developed but they are not Western,' until someone decided they are Western too because they use technology). Frankly, intellectually and epistemologically speaking, all these categories have been largely dominated by eurocentrism and colonialism, justifying domination through the notion of civilised and uncivilised, etc.

So we decided to cut across all of this and see actually what's happening in the world. My analysis here will try to go beyond the usual approaches which are either descriptive (these are the processes of development), or analytical (how this can be understood), or normative (that which development should be), or apparently technical (which in fact say, 'No, no, no, we're not doing philosophy or ideology here; we just are technical: growth, economic growth or social development'). Well, in fact, values – fundamental values – are all included in the measures of calculation: they are embedded. So the way we calculate already conveys a certain number of values and assumptions.

¹ Castells M and Himanen P (eds). *Reconceptualising development in the global information age*

To start with, I provide my own definition of development which I pretend is ideologically free – Wow! Imagine that: ideologically free! I do this not because it is non-ideological, but for the simple reason that it can be filled in with different ideologies, and therefore, it is not my ideology: you all can put in your ideology and it works. And it's open-ended in terms of content. I define development as the self-defined process – self is important – by which humans, as a collective, enhance their wellbeing by creating the structural conditions for the expanded reproduction of the process of development itself, so enhancing their wellbeing and, at the same time, creating the structural conditions for this process to go on.

But the values that inform these development goals – the Millennium Development Goals, for instance – can be very different. For instance, for some, economic growth and accumulation of material wealth as measured by GDP is the critical thing: Let's simplify life: this is development, and then the rest will follow. What was ultimately implied when it was not blatantly ideological was Western values; and these so-called Western values were Anglo-Saxon and northern European, and would certainly not include Italy, Spain or Portugal). So, for some, this is enough: measure development as GDP. But we know that GDP is a completely arbitrary measure that was, historically, a provisional statistical measure that Simon Kuznets developed in 1938 in the United States simply to measure how the economy was doing during the Depression. It was a Prohibition artefact, abandoned later on for more sophisticated measures. But people say, 'We have one way to measure everything all together', without considering the price, the floatation of prices or other forms of value, etc. Since then, GDP has become a god in the world: a political god. Any problem you have, you increase the GDP, then you are okay and the rest is subjective. But is the GDP objective? No. The GDP is a statistical measure that is historically situated, which has been refined and reformed many, many times to the point that now we don't know exactly what the definition of GDP is or on which calculations it is based.

For instance, we were talking yesterday with a group of African development scholars about the notion that last year Nigeria suddenly became the largest economy in Africa, overtaking South Africa, because new calculations came out. New calculations from where, by whom and under which conditions? I am sure that all kinds of statistical warfare are going on about this in terms of national pride, without measuring how much personal, human and ecological disaster is involved in this notion of overtaking South Africa with a new measure of GDP.

But for others, human wellbeing is development. But what is human wellbeing? This discussion normally starts the game. For yet others, you cannot talk about development without sustainability. But then, what is sustainability? One argument is, 'So birds or animals have more rights than poor people that have to actually eat.' So what are the different dimensions of sustainability? Again, it's subjective: it's when people consider, as I do, that the conservation of the liveability of the species on the planet is a fundamental value – more important than economic growth – that sustainable development becomes the most important part of development. (By the way, I always say the liveability of the 'human species', not the 'planet'. We are not saving the planet. The planet will be okay without us. It will be much better. What we are defending is ourselves on the planet, not the planet.) Others directly express the values behind the goals of development, and they just say

‘development’. Amartya Sen and others focus on human dignity. Development is human dignity: dignity is development.

And I will try to cover each one of these categories and assumptions. In fact, for a superficial observer, our book places itself squarely into that category of dignity as development. The two concluding theoretical chapters address dignity as development ... We were not all in agreement with that, although we assumed collectively that it was a good sign to send to the development analysis community, saying, ‘Look, we want to have something subjective, something grander than just economic growth. And this grander thing is dignity, and human capability is moving toward dignity.’ So, my purpose being analytical, I will propose a typology of meanings of development that, together, could shed some light on strategies and policies to improve the wellbeing of humans and their relationship to our environment, which is the only thing that ultimately really matters.

Let’s take economic growth defined, as we said, as GDP. There is a whole history of more refined calculations of GDP: more refined but more difficult because when you start including the issue of productivity and how to measure it, and the issue of the value, then how do you start measuring services, and what kind of services do you measure, under what conditions? Do we include the value that global financial markets assign to companies and to production in the value that we create? These values assigned by global financial markets are actually very important because the value of a company depends on that financial valuation. But this financial valuation depends, as Paul Volcker has analysed repeatedly, depends on perception. And this perception, as Paul Volcker said, well, it’s not that there is reality and then the perception: perception is the reality.

So, how do we include financial valuation in the calculation of GDP? Because that has a very concrete impact on the amount of wealth that the society generates. For instance, in the financial crisis of 2008, two thirds of the wealth in the world was wiped out; it disappeared. How did it disappear? Well, it disappeared from the financial calculations. But at the same time, the financial calculations were determining the way the economy was performing. So, if you have a company and suddenly you are completely devalued and you cannot borrow against the value of the company, that’s a very real effect. But what happens to the GDP depends on perception, and depends on calculation of the GDP.

In other words, with what appears to be a direct, no-problem approach to development – like, let’s just measure material wealth – the moment you start actually doing it, then all kinds of methodological, theoretical and statistical calculations arise as problems. Well, historically also, at one point, some experts and well-intentioned United Nations experts started to say, ‘Well, GDP does not really measure a number of other dimensions, such as quality of life, an area that depends on basically public goods like health, education, subsistence services, urban infrastructure,’ etc. All this was conceptualised as human development. The Human Development Index was basically constructed to include all these public goods and the provision of these public goods. In some cases, people even say, ‘Well, we don’t do something even more sophisticated that includes the actual happiness of people, not just their wellbeing?’ Bhutan created the Gross National Happiness Index in 1972. Well, why not? If it is human development, what about human happiness? Is that

development or not development? And it sounds terrific, except how is it actually calculated? The Bhutan Happiness Index is actually a survey. It's a survey that asks people everywhere in the country how they feel. So it's not too different from public opinion research on the relationship to poverty and policies of governments. And then along the way, they added a few other things. I like it: it's the idea that you have to measure something else.

But again the fundamental approach to human development in terms of the Northern development was a receivable approach. Everything that we can measure in terms of economic growth is regarded as development; and then that which we cannot measure, but which is still important – like education – is human development.

Now, the key element in my perspective is that those terms define some relationship between economic growth and human development, particularly under the conditions in which the economic growth is largely dependent on productivity growth generated by a much more productive aggregate production function (I will come back to this later). This means not only the capacity to introduce information and knowledge into production, but also the capacity to operate a much more effective feedback loop between economic growth and human development. Because the notion that we are in an information and knowledge economy is absolutely misleading. Not because information and knowledge is not important: it has always been important. There has been no economy and no society in the world in which wealth and power don't depend on information and knowledge. It has always been the absolutely critical matter for wealth generation and power generation. What has changed is something called the information and communication technology revolution, meaning microelectronics-based information and communication technologies, with all its consequences: the ability to create organisational forms; the infrastructure and the rapidity of processing information, transforming it into knowledge; and using these transformations into knowledge to make actual changes in the production system. That's the difference.

But how you actually process better information is not just about technology. Technology is what affords the possibility of this type of effective processing. The important thing is that the human mind – where the knowledge is embodied – has to be up to managing this capacity to process information, generate knowledge and implement it in different dimensions of human activity. Ultimately all of these goals influence the ability of society not just to generate technology for social productivity, but to generate what people call human capital. I don't like the term but let's say it refers to human subjects able to further their understanding and their adaptation of information and knowledge in every domain of human activity. This is ultimately about the quality of human labour in the broadest sense: not only the worker but the entire society.

Aha, education! Sure, education: but all kinds of education, not just higher education because if we have people in higher education who are uneducated at the primary and secondary level, we don't really have education. But, wait a second: it's not only education but also health because if we are completely neurotic and sick, we will not be able to process anything even if we are highly educated. So higher education requires health: not personal health with your doctor; it's also about the

environment. We have epidemics regardless of how good your health is in your individual existence. The issue is how this impacts the overall quality of humans as producers and creators of everything.

But this is not just about the actual embodiment in human labour of the ability to generate and produce. It's also about the social conditions and the conditions of stability. We use all of this to generate endless wars and terrors between us. The intelligence and the information that we have embodied in our capacity to create becomes at the same time a capacity to destroy. So the moment you say that information development is at the source of enhanced productivity, and enhanced productivity comes from the interaction and the feedback loop between actual material production and the conditions of existence that become a key element in the productivity of this material production: the moment you say that, you have to start including all kind of elements which have a synergistic relationship between material production and the conditions of material production, which are, at the same time, the wellbeing of society. That's what I call informational development.

This particular connection and this model of information development is the most effective model for generating productivity and competitiveness. This is something that I developed years ago and that we tried to test in this project. It was originally based on my empirical analysis of two very different contexts in South East Asia which was really about this feedback loop between the public sector that was providing good quality labour and stability, and then an economic sector that was extremely competitive at the global level. My book on the comparative development of Hong Kong and Singapore and my work on Finland, captured in the book I did with Pekka Himanen entitled *The information society and the welfare state: The Finnish model*, show exactly this synergistic relationship.

Then there is a fourth dimension of development: sustainable development, which includes the capacity to make both economic growth and human development compatible with the conservation of the liveability of us humans in our only home, planet Earth, at the micro and the macro levels.

And then, finally, there is another dimension of development, which is the holistic concept of development. This concept is normative. It says what we consider desirable in terms of values – such as human rights, animal rights, equality, gender, empowerment and gender equality, solidarity, and the ability to live in a multicultural world through the reciprocal enrichment of diverse identities without cancelling any of them out – but at the same time moves beyond the exclusive dynamics of identities. Peace and democracy: these are encompassed by this idea of human dignity that includes and presupposes all the other business of development. It's actually not a different concept: it presupposes all the rest. It's not descriptive and it's not analytical: it's normative. In that sense, it means that must increase the quality of life, must be sustainable and must not sacrifice human dignity: in fact, economic growth should actually support and make possible human dignity. And that is the way the different elements are interconnected.

So, on the basis of what we investigated for our project, I will try to look carefully at each one of these key elements and their interactions to see what the conditions are for these processes of development or the possible synergistic relationship between them. I will end by looking in some

detail at what for me is the absolutely key element in the whole discussion: the process of implementation of any developmental approach and the agency involved in the implementation, because development is as good as the agency that enacts development.

Any empirically grounded theoretical and policy discussion must be specific to the context in which it operates. And in our space/time, this is what we call the global information age. We cannot talk about development in general: we are talking about the specific conditions within which our world operates today. And this is the global information age. The global information age is characterised by the process of globalisation. Globalisation is not internationalisation and it is not the world economy: these have existed for centuries. It is the process by which a given system, be it economic or cultural, but mainly economic, operates as a unit in real time. This process depends on three new conditions:

- Firstly, the **technological infrastructure** that allowed this to happen. We are a global system because we did not have this technological (or ICT) infrastructure before.
- Secondly, an **organisational form** – called **networking** – that allows greater efficiency and greater capacity to manage everything on a global scale without losing the purpose and the efficiency in the process. In the same way that the Industrial Revolution created large-scale organisations (vertical organisations, big companies, big enterprises), the new forms of technology that manage information and communication allow the creation of a much more versatile, interactive, flexible, adaptable system on the basis of networking.
- And then, an **institutional condition: deregulation**, involving withdrawal from the rules that were anchored in the nation state (which contrary to some theories, have not disappeared).

It is the way in which states operate that opens up the connection between different states at the level of the world so that the networks can take over and crisscross the planet, articulating activities. So, globalisation is simply the network: it's a global network (or global networks) organising every activity in real time on a planetary scale. In that way, the whole planet is interconnected, which means what is valuable for some networks is connected; and what is not is disconnected. And therefore we go not into First World, Second World, Third World; we go into First World, which is everything that is connected everywhere; and Fourth World which has no value and is thus disconnected.

The information age refers basically to informationalism, that is, to the technological paradigm for our time that is based on the information and communication technologies. (By the way, these technologies are also connected to the biological revolution because they allow the processing of information that enables us to recombine DNA and therefore to start acting as the re-programmers of living matter).

That is why it is said that information is not what characterises our time. Instead, it's our ability to process and apply and develop information. I like to refer to one particular study published in *Science*, a great scientific journal. And I calculate the amount of information sitting across the planet, and the form and platforms of the information. And here is the revolution: in 2002, 52 per cent of the information (all types of information: measurement, understanding and everything else) on the

planet was digitised. The article calculated that it was 95 per cent in 2007. The same researcher told me the other day, it's now 98 per cent. So the large majority of this information is digitised and is accessible via the Internet and other computer networks. That's what the technological revolution means. Not that there is information: it is information that can be recombined, accessed, developed and utilised on a global scale. And that is just one measure of that.

So what are the key elements that redefine empirically, and then conceptually, the five dimensions of development, and under which conditions? And what are the conditions of their articulation? For this, let me then go into the empirical observation and try to emphasise the fundamental transformations operating in the planet in each one of these five dimensions in the last ten to fifteen years.

First of all, let's look at productivity growth (which, of course, characterises new economy) linked to information development. We have statistical evidence about the relationship, strong networking and human resources, conditions that massively increase after a period of time of productivity which is the surge of economic growth on the basis of information and communication technologies, diffusing information and applying knowledge.

However, at the same time, we also have statistical evidence that the productivity yields have been concentrated in the financial sector. And there has been a shift to a new form of capitalism, which is global informational capitalism, reutilising capital using precisely these technologies. The same technologies that increase productivity in the economy also make possible the reutilisation of capital in every aspect: derivatives, options, futures, etc. This ultimately created the major financial crisis that exploded in 2008–2010. (That financial crisis was a complicated thing that I cannot summarise here. For those who are not satisfied with this one-second summary on it, I refer you to the book published last year by Oxford University Press under my leadership, entitled *Aftermath: The cultures of the economic crisis*, in which we show the mechanism and then argue that it is the way we conceive the economy that led to the virtualisation of capital that led then to the financial crash.)

At the same time that this crisis emerged – linked to the new interaction between productivity, financial capitalism and new technology/other uses of technology – other economic dynamics took place in most of the world. That is why I always refer to this crisis that we are theoretically living in, (in Europe and the United States) as the 'non-global', global crisis. Because at exactly the same time – between 2008 and 2012 – most of the world grew more than ever on a sustained scale. There was a little bump in 2009 because external markets had to be corrected through domestic spending. But fundamentally, all the crises in Europe and United States over all these years, have witnessed the emergence of the so-called 'newly industrialising' or newly developing countries. No one knows what these terms mean. But it means China, India, Brazil and Indonesia; to a large extent, it means most of the entire world: Latin America has been growing very fast; Russia, on the basis of energy and raw materials, has been growing; East and South East Asia have been growing.

So, what are the key factors beneath these new development processes that have transformed the notion between periphery and the network? Technology is there. There is a notion that China is

cheap labour. No! China is high technology *and* relatively cheap labour which is increasing in price. The most valuable company in the world now in terms of capitalisation value is a company called Alibaba, an e-commerce company in China. It is one of the few very large Chinese companies that is not owned by the government. Another giant is Huawei: it's multi-sectoral and invests in everything (but that's a government company). The largest computer maker in the world is Lenovo. Among other things, for breakfast they just ate up IBM a year ago. IBM does not manufacture computers: we know this. IBM provides services. And most of the actual computer makers have disappeared from the Western world: their whole value evaporated but we still need computers. And we need computers to sell everything online. And to sell everything online, Alibaba is actually starting to control eBay. And so on and so on.

So, what are the factors for this growth that includes countries totally unlikely to be considered as growth sources? Can you imagine Bolivia being a miracle in the global economy? Ah, well, it has something called lithium, and lithium is decisive in much of modern micro-electronic production, plus medical applications of our time, namely antidepressants, which are a very important growing market. That satisfies our new needs in the market. Ecuador and Chile are the biggest sources of lithium. So what are the key elements that have allowed for the emergence of a completely new planet in which the economic growth process has been redefined in the last ten years?

First, macro-economic destabilisation. But this is not what people thought: simply about controlling public spending. In most of the countries I have mentioned – in Latin America, in Asia – public spending has increased. It has decreased in Europe and the United States, but in Latin America, even social spending has increased. The macroeconomic destabilisation is in fact the regulation of capital flows: the disruptive effects of free capital flows. Is China globalised? Yes and no. It is globalised in terms of the export markets but in terms of financial capital, it is not. There is a border. So China is in the global financial market but the global financial market is not in China, and the Chinese are insulated from the impact of the global financial crisis. You can take country after country. Brazil: it manages exchange rates very tightly. After the crisis they had in 1999, they decided they would not be taken again. And most of the Latin American countries have kept very tight financial regulation in their countries.

Second, knowledge and information has been important. But most of these countries have incorporated the new technological system into their production, not necessarily by having high-tech industries but by using high-tech in their industries and particularly their uses: science- and technology-based informational tourism; informational agriculture; informational fish farming.

Take Chile, which is now the economic miracle in Latin America. This miracle is not related to the Pinochet free market approach. It's related to the Chilean government democratic approach in terms of a state-led competitiveness in a free, open global market. Here are some examples. Chile has constitutionally made provision that two per cent of the copper exports – copper is the most important export for Chile – go into a reserve fund that no one can touch. This reserve fund invests in science and R&D, with one exception: if there is an earthquake; they can use it to reconstruct. But the fund is also a kind of saving for the future.

What is the main export of Chile after copper? Everybody would say wine. Yes, wine is an important one, but it is not the main one. It's another export that has three times more value (not volume): salmon. There were no salmon in Chile when I started working there 40 years ago. There were in some in the mountains but no real salmon. So they went to Norway and took note of everything that was happening there; and they have created a much more efficient, cheaper fresh-salmon exporting industry that has overtaken Norway in both the United States market – which is the important one – and the Latin American market. In Latin America, you eat salmon everywhere, as we do everywhere in the world, but that salmon is certainly not local or from Norway; it's from Chile.

Besides the companies I have cited, Indian companies and Indonesian companies have been investing in the structured industries practically everywhere. I mentioned Chile and salmon, but there is also agribusiness in soya in Argentina and Brazil. It's huge: there are entire areas of Argentina and Brazil which are getting developed for soya production for the Asian market. They use a new model which they call a network business (for some reason I used the same term in one of my theories), in which these major agricultural producers don't have land. They have no land ownership. In Latin America, they rent the land; they hire workers on a temporary basis; they license technology; they create all these areas. All this comes together when there is an order from China, from India etc. for a big pile of soya. Then they put together all the elements of this expertise; they act as the experts; and then they dissolve the network. After that, they recreate the network on the basis of another order for export. All this is about technology. All this is about communication, but it is not communication to produce chips: they produce chips to create communication to do their business as they do. Structured industries have a key role in all this new development. Structured industries are more important in the new growth in the world today than high-tech industries. They are, of course much more important than the old stuff, like automobile production.

And I am not even counting the real dynamic economy, which is the economy of drug trafficking and other illegal activities. According to the calculations of the United Nations Centre for Crime Prevention, money laundering alone – just money laundering within the criminal economy, not even its production – makes up about seven per cent of the world's GDP, which is literally more than the total earnings of the automobile industry and electronic industry in the world together. That's where the real money is going.

So the old industrial production system is really going downhill from doing just automobiles. Finally, at some point, they will unleash the capacity to produce electric cars. China has been the key market for the South, but so have India and Indonesia. What is happening now is that, on the basis of the extraordinary economic dynamism of these new giant economies, the rest of the South is developing. This is certainly so in both Latin America and Africa. As you know, China has created a new model of growth (let's not call it development), in which the need to absorb the huge amount of energy and raw materials coming from this economic growth of between 10 and 12 per cent per year (already over the past 15 years is pumping up all the structured exports everywhere on the planet. Because of this, all the other countries in the world are exporting to China, but at the same time China is investing in their countries. What is happening? As an example, Bolivia has signed a

major strategic agreement to sell China all its lithium production over the next 20 years; at the same time, it has not yet even started to extract the lithium from the mines. You know better than I do of all the strategic agreements between China and Mozambique, Angola, South Africa (to some extent), etc.

Higher education and R&D continue to be the central factors of production. This is critical; but the need here is not for something that has to be in unison everywhere. What all these countries are doing is tapping into global networks. If they can, they develop primary and secondary education but without great quality. They proceed with what I call warehousing of children rather than the education of children. Their university systems are expanding dramatically but not necessarily with great quality. What they have is enough knowledge, enough research, to connect in the global networks of research and have an interconnection, and then send students ... who come back to the country though a different model. You've got what my colleague at Berkeley, AnnaLee Saxenien, calls not 'brain drain' but 'brain circulation'. Which means what? It means you go to Stanford from India, Taiwan or Israel. Then you get a degree; you start a company; after a few years, you have a good establishment. Forty per cent of companies in Silicon Valley now have a CEO who is a foreigner, particularly Chinese or Indian. So, the human capital of the world goes to Silicon Valley. But they do not only stay in Silicon Valley. They go back to China; they set up a company; and they move between China and Silicon Valley; and that sustains the network. Then other people come; they do the same thing. So this network of high-tech production is not necessarily concentrated in only the main centres but extended throughout the planet.

Basic research, is more and more concentrated, but the uses of this research depend on entrepreneurs and innovation that is being globally distributed. Of course the dark spot in that flexible model continues to be Africa because it is very difficult for anyone to set up minimum levels of innovation, technological research, etc. in most of the African countries. But in Asia and Latin America, it's already happening.

However, because this network process is the way I describe, the wealth being generated is being concentrated – increasingly concentrated – in global networks, reproducing and enlarging the process of accumulation, but at the same time expanding massive social inequality (measured in income and assets). It is interesting to know that, in the last three months, the most successful book on Amazon in the United States is Thomas Piketty's *Capital in the twentieth century*. This shows statistically that this particular model is highly dynamic. It's not going to collapse by itself but it's increasing wealth at an unprecedented level, and not recycling the wealth into the economy, but recycling the wealth into massive asset control that ultimately makes an oligarchic group that does not need to do anything except accumulate and keep accumulating.

So we have, on the one hand, a decline in spite of the traditional supremacy of the Cold War, and a massive expansion of wealth and markets in the large majority of countries (about 75 per cent): not humankind, not wealth for the people, but for the countries that control the people. And at the same time, there's an increasing concentration of wealth on the social and economic problems that these represent, as well as the essential condition of human development. Overall, in quantitative

terms, human development has improved, no question about it, if we use quantitative education indicators (general education indicators; or health: infant mortality, mortality, life expectancy). All this is in spite of the epidemics that we all know. But in the world, and particularly in the so-called 'newly developing' countries, has there been quite a substantial improvement in education, health, basic delivery infrastructure, sewage, water? Yes. Housing is not good, but it's much better in terms of the rate of growth. Is there less poverty? It's interesting: I said there is huge inequality but less poverty, defined in the bureaucratic terms that poverty is defined, meaning a certain level of income according to whichever statistical agency is measuring.

I was reminded that this is also culturally determined. I was reminding some of my colleagues this afternoon that my friend Fernando (a great Latin American sociologist who is from Bolivia,) told me there is no word in Quechuan for poverty. The word is *pasha*. But *pasha* does not mean that you don't have money. It means you don't have friends and family. Then you have real *pasha*; then you are really in trouble. But no money? It depends: sometimes it is good; sometimes it is bad. And he reminded me of the anecdote from one of his fieldwork studies when he was in Bolivia at the time of the Argentinean crisis. He asked a poor Bolivian in the street, 'So what do you think about the world?'

'Oh bad, the world is going very bad, particularly for Argentina.'

'Wait a second, you are much poorer than any Argentinean.'

'Yeah, but they are not used to being poor.'

So, the point really is about how you perceive all this; and not whether the bureaucrat said, 'You are poor' / 'You are not poor'.

But, with all these provisos, there is still the notion is that statistically defined poverty has diminished in most areas of the world. Just to take Latin America as a whole, not even taking the star countries: in 1990, 48.4 per cent of the population of Latin America was below the poverty line. In 2013, 27.9 per cent, a 20 points percentage decline, at the same time as massive demographic growth. So that's happening.

Communication: it's not that I am biased towards communication because I am a communication professor. I became a communication professor because I considered that it's important. It's not that I forgot about sociology and went into communication. I go after the problems rather than finding the way that the problems come to me. So, communication is essential, absolutely essential. Every survey in the world – the study we did on communication in Latin America, the study we did in Africa or in China – showed that communication today is absolutely fundamental for people. It's the most important thing in the poor people's budget. What are the data? The data show that, at this point of 7.6 billion people on the planet, we have seven billion mobile phone numbers. Not devices: numbers, subscribers. Everybody is connected in different ways: good quality, bad quality, however. Bad quality, yes, but still, of this seven billion, three billion are smart phones. Certainly, some

Swedes have three smart phones and know how to use them. But in Argentina, the rate of penetration of mobile phones of the population is 120 per cent. These Argentineans chat-chat all the time. In Bogota, it's 95 per cent.

So my point is that of having massive access to communication. We have shown statistically and demographically in Latin America that it's directly correlated to the economic growth, of course, but also to reduction of poverty. But it doesn't do anything for inequality. On the contrary, it increases inequality in the society: the more you communicate, the more unequal you become. But poverty does reduce. Increasingly, there is a synergistic feedback between human development and productivity growth. And again it is not just education per se but the ability to connect educational institutions, and to advance production of goods and services throughout the world.

A most interesting case is Costa Rica: a small country – 4.5 million people – which has had democracy since World War Two. It has been growing steadily, not spectacularly but with one of the steadiest rate of growth over the years in Latin America. So what are their exports, and based on their exports, what is the export industry of Costa Rica? If you don't have direct knowledge of Costa Rica, you would never guess. 43 per cent of their exports is microelectronics. Little Costa Rica! And then after that, ecotourism which is also an informational thing. In order to have ecotourism, you have to have a very serious environmental policy. So 25 per cent of Costa Rica territory is national parks. This is a huge value-add to tourism to Costa Rica. But how has this been possible?

First, through pacifism (addressed in our forthcoming volume in the chapter by Isadora Chachon entitled 'Pacifism as a development model'). Why pacifism? Because Costa Rica took the decision in 1948 to eliminate all armed forces forever. It is the only country in the world with no armed forces. They have been living in one of the most violent regions in the world with no army, no national guard, no nothing. They specialise in diplomacy. And they have a whole army of diplomats, sending them everywhere, every time, though usually only the Nicaraguans bother them. But other than that, nothing. And they have shifted this through a constitutional amendment, saying that what they were spending in military – about 8–10 per cent – should be constitutionally directed to education and/or health. So they created a welfare state; and destroyed the welfare state at the same time. They did not have a military coup. (You need a military to have a military coup.) And therefore they have stability. All the international institutions are in Costa Rica. Every major corporation that wants to do something in Central America or the northern part of Latin America goes to Costa Rica. It's a nice country, with peace, stability, etc.

Secondly, through human development. They created the welfare state with full coverage of health, with good quality technical labour which go to universities and technological institutes. This attracted Intel, the microelectronic giant, to locate there; and that was the beginning of this cluster of high-tech in Costa Rica. Many other companies started to come in, but using local labour from the Costa Rican universities. That is the second observation.

But the third observation is, 'Be careful when you are too smart,' because for this very reason, Intel is leaving Costa Rica for China as of today. As nice as it is to live in Costa Rica, the notion of being in

the middle of the Chinese market is more attractive. Now we'll have to see if Costa Rica has been able to do the smart thing, meaning bringing Intel, creating clusters, creating technical labour; and whether it can then survive when Intel goes to China. If you marry a multinational forever, then you are finished because they will move with the global market. If you relate to a process of synergy and development, in which you create the basis for your own technological development, that is a clever strategy. But the jury is still out on the matter of Costa Rica.

I said that human development is working, shown by quantitative indicators. But indicators of quality of life in most countries show a massive declaration on what I would call the subjective conditions of life: violence; fear; metropolitan areas that are destructive in terms of health, transportation, pollution, etc. So, on the one hand, if we measure human development with traditional indicators, things look wonderful. If we measure what people do and think about their actual living conditions, we see a different situation. Take Brazil: a progressive government, their distribution policy, halving of poverty and major economic growth. They are doing great at economic growth. And all indicators that we have mentioned are positive. But the Brazilians, starting last year and continuing to this day, revolt more and more, specifically against the urban conditions; and also against the fear, the violence, the housing, the transportation, the pollution, the massive respiratory diseases, etc. So my one-line summary on this is that we are improving human development, but we are moving toward inhuman development, which is all these other conditions.

Quickly, the other dimensions: unsustainable development, meaning sustainability with what the indicators say is not relevant if we take development as sustainable development. Most indicators around the globe are deteriorating. Global issues are not being tackled globally because of the fights between governments. And we always knew the bottom line for the environmentalists was whether the whole world would follow the same model of development as the United States. With the same intensity and with the same growth as in the US, then the whole world would grow and – the US too – would be totally unsustainable. We are there, we are there. The rest of the world is using the same model that the United States traditionally used, and is growing three to four times faster. Antarctica is melting. It was forecast, and now it's happening. Some people say, 'Who cares about the penguins?' But we will have to pay the consequences: everybody will feel the consequences. Science and technology are absolutely capable of controlling this process, knowing exactly what is happening and why, and measuring and establishing a number of indicators. But given the state of global governments, what indicators does science and technology apply to environmental degradation? Basically, its main use is to tell us exactly and precisely how we will die, and not how we will be saved, because it is not science and technology that can save us: it's policies, it's countries, it's people, etc. And in this, we are way behind.

Dignity: on the one hand, there has been the rise of global consciousness on basic dimensions of human existence. Gender equality: in spite of everything, still a major improvement in gender equality because of the consciousness of women, which is the most important thing. It's not the law, it's how women think about themselves. Protection of children; dealing with a dignified ageing process: all these are positive trends or indicators. Animal rights: there is still a big fight, but the culture that we are as good as the way we treat our animals (or the animals that are not ours, by the

way) is there. This is a major indicator. Banning torture and illegal imprisonment: it happens all the time but in principle it shouldn't, which again is another transformation.

On the other hand, we still have heavy racial discrimination; we still have slavery. Political rights are formal but not enforced; freedom of expression is free until it's not. Peace is there but we have multiple wars all the time. The banning of armed trade has never happened because the most important powers in the world are the main arms dealers. Global organised crime is rampant and controlling entire countries through its institutions; and we know exactly where they are and when there are attempts to deal with that. In fact, if it's a country, they take over the governments. And then, we have observed a major rise in racism and xenophobia all over the world, particularly in Europe. At this point, depending on country, between 15 and 25 per cent of the population in Europe have explicit racists and xenophobic tendencies, and are ready to translate this into politics.

So, if we measure by these standards, where is dignity? We are going backwards. The principles of dignity are all now enshrined in all the laws, even international laws. The practice of dignity is only enforced when people, particularly women, are able to resist the trends in society. But the trends in society go against what has been achieved in terms of consciousness and in terms of the law. We do have some elements which are linked to the capacity of people to inform and mobilise themselves and alert public opinion. And that largely depends on Internet freedom and the global capacity of people to communicate with one other, which is, by the way, not a small minority: it's now three billion people in the world who have access to the Internet, and connections to seven billion mobile phones. We have a global network of communication that can mobilise and construct what I call the spaces of autonomy from which societies change themselves. But, because of that, there are increasing threats against Internet freedom. The Internet is being used more and more for surveillance and is becoming a target for most governments in the world.

My last point: the key issue is that none of the debates on development and none of the policies we design, can work unless there is a transformation of the agency. This means a transformation of the institutions, organisations and human constructions that ultimately manage development, assign goals and implement them. Starting empirically, the recent processes of economic growth and human development have been enacted fundamentally by the state, so by governments and not by markets. This is extremely important to understand. Latin America in the 1990s decided that deregulation – free markets – would be the way to development. It collapsed: it collapsed economically due to several kinds of crisis, and it collapsed socially and politically. And throughout the continent either populist or democratic governments were elected, but with a different orientation that established a new model of development in most of Latin America.

An exception is Columbia. Columbia is a special and different case because it had a very deep civil war that it is trying to finish. But by and large, a new model has started: a so-called neo-developmentalism in the Latin American countries, meaning the state taking the lead.

Guess what? That was exactly the process that happened in East Asia. Remember that famous World Bank report about 12 years ago, that said, 'You know what? We said markets were key for the

development.' Markets are key to opening up the global economy, and therefore increasing global competitiveness as a way of development because the domestic markets were too small and too poor for development. But the actual key actor in East Asia and South Asia, according to the World Bank and according to my own empirical observation, was the state. It was government. We now have the same thing repeated in Latin America. After all, there is this wonderful paradox that the so-called miracle, the economic miracle of our time that has saved capitalists from deeper crisis in terms of market function, is China, meaning a communist state. China is a communist state that remains communist and remains a state; and controls everything politically and bureaucratically, mainly through large government-owned companies and with a strategy throughout.

Interesting: the same thing is happening in Indonesia; to a large extent, the same thing in China [sic] with the military production; and in India, this was what ultimately led to Bangalore as a hub of government stimulated technological development. I could go on and on.

But in Latin America, it is absolutely clear this has been the case. Sometimes it's a bad example, like how Venezuela has destroyed the economy through a patrimonial state. But in other cases – Brazil particularly but also Chile – it's not the market; it's different levels of state initiative and state policy. However, if the state is the actor of the new process of development, it requires major transformations, because most states are inefficient, bureaucratic, corrupt – certainly corrupt – and in some cases more than that. They require organisational transformation. They require what we call in one of our chapters the 'welfare state 2.0'. We show empirically that the European welfare states are going downhill, not because of economic factors but because of increasing costs and bureaucratisation of the welfare states.

We also observe massive corruption of the state which makes the key agency of development unable to perform in the long term, particularly in such areas as Africa. I would say the most important development problem in Africa is that the key actor for development in the world now is still the state. And the African state is the weakest, most corrupt, most inefficient, most predatory of all states. Let's put South Africa to one side: still corrupt and inefficient but not predatory, not yet. But if we take state by state in Africa, the main problem is that the states are instruments, not only for oppression – that's normal – but of predation for their societies. And predatory doesn't just mean corrupt: it means it organises the economy of the country to sell the structured economy – the resources of the country – to whoever and then put the wealth into the pockets of individuals or their families, in a Swiss bank, or (increasingly) in a Bahamas bank, which is safer, or in a Russian bank. That is currently happening. So the predatory state is a fundamental problem in Africa.

At the level of the world at large, the issue is that there is an increasing disconnection between citizens and their governments, even in democratic governments. The data show that two thirds of citizens in the world don't recognise their governments as democratic, including in the United States and Europe, because in the United States, money controls politics; and then money controls America. This is what people feel but they don't have answers. So they vote for whatever; or they develop new social movements.

The United Nations: it is not an international independent institution; it's a co-governmental institution. And I know this personally because in 2000, Enrique Cardoso was appointed by Kofi Annan to organise what they call a panel of high-level personalities in which there were all kinds of prominent people, and one academic: me. For two years we worked on the relationship between the United Nations and the global society, looking at how we could establish a non-governmental connection. We presented the report, Kofi Annan liked it very much; and then it had to be presented to the General Assembly. The General Assembly took 20 minutes to return the report to Kofi Annan and tell him, 'Wait a second. Who do you think you are? We are the representatives of the people of the world and we pay your salary, by the way. So, shelve this report and don't ever come back with such an idea.' It's in the minutes of the UN General Assembly.

NGOs are sometimes a partial answer in terms of legitimacy: they are much more legitimate than any other institutions in the world. But guess what? I call them neo-governmental organisations, not non-governmental because, in most cases, they are directly or indirectly subsidised by some kind of government.

And so, the consequence of all this analysis, on the one hand, is that if we consider that development is the process by which empowered and informed people define their own goals (not the Millennium Development Goals, but their daily goals) and try to implement them, there is a fundamental problem. More serious than the models of development or the conceptions of development, is the disconnection between people's capacity to decide their lives and the nature of the institutions that are supposed to implement all these programmes. This is ultimately the most important problem of development. In fact, in the interests of the developmental state, what is required at this point is the development of society, with people taking development in their own hands. And they are doing it. They are doing it; but not through institutions yet. We are in the process of historical transition, caught in a very special moment in which the existing economy is highly dynamic. Human development – measured by traditional forms of indicators – is improving and increasing, but the actual perception of this and the living conditions of people are deteriorating. The main reason for this is violence, fear, institutional crisis, the predatory state, corruption, and inability to feel safe because those who are charge of making you safe are themselves the most unsafe institutions.

Under such conditions what is happening is that we enter a period of historical transition in which people resort to the oldest forms of social change in humankind's history. We take it into our own hands: we confront the institutions; we try to solve the problem by ourselves. We don't know how but eventually we will do it. And this goes with all sorts of consequences, good or bad. I'm not normative in that sense: people can do horrible things, but they will do it by themselves, and they are doing it by themselves. And that is what is behind this wave of social movements I have been studying during the last few years, in which literally hundreds of millions of people in over 100 countries in the world and in over 5000 cities in the world have been protesting, camping, marching, organising on the Internet, etc. against the institutions, with little negotiation with the institutions because they don't trust them.

For me, frankly, one interesting thing in all these developments is what I see happening in Brazil these days. I was there this time last year when the movement had started a year ago. They wanted me to go again, but I could not. I had to be in South Africa. They said, 'But we have the World Cup'. I said, 'But at this point, there are other problems in Brazil.' They answered, 'No, you will see, it will be a very fun World Cup.' Could we have imagined that Brazilians would be totally opposed to the World Cup in Brazil in the opinion polls and demonstrating massively, even though they are very proud of their team and they want it to win the Cup? They are against the World Cup because of the corruption of FIFA, because of the corruption of the local authorities that has given in to the interests of the construction companies that are taking over cities and then destroying much of the environment. This notion was expressed very well in one of the major demonstrations recently: 'We exchange one hospital for ten stadiums.' Well, if the Brazilians can do that, the world can do that.

Thank you for your attention.

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