Interview with Alejandro Nadal

The Key Organizing Principle of Society:

Macroeconomics – Markets or Sustainability

Part 1: The Myth of the Invisible Hand

Part 2: The Day That Capitalism Changed Forever

Mexico City, Mexico

Alejandro Nadal is, “an economist. I studied law first and discovered economics when I was finishing law school. I decided to finish law school and then go into economics. I teach comparative economic theory. I’ve done a lot of work on microeconomics, which is market theory, how prices, how the Invisible Hand works. But then I’ve done a lot of work on macroeconomics, which is the analysis of entire capitalist economies. How do they work? I’ve done a lot of work on separate levels of studies in different industries.

“And then at the same time, I did a lot of work on the environment. I’m really concerned about what we are doing to our planet. I’ve done a lot of work on the drivers of economic degradation, not only talking about how bad things are but exactly what economic forces are driving the destruction of the environment. There are many dimensions, from climate change to genetic resources, and things like that.

"I write a weekly column in a newspaper in Mexico, *La Jornada*. I think that's very important, to get out there and try to send some of the messages of the alarming things that I've discovered in my research to the general public. That's more or less what I do."

Nadal taught economics for many years as a professor at El Colegio de México and was director there of the Center for Economic Studies. "I just retired a couple of years ago. But now I teach in other places. I have a course in Barcelona at the University of Barcelona. I have a course in South Africa. These are compressed courses – a very intense, 12-hour course in 2 weeks on macroeconomics, the state of the global economy, the evolution of macroeconomic theory. And here in Mexico I also teach post-graduate courses in things like theory of economic development, macroeconomics, that sort of thing."

Nadal is the author of *Rethinking Macroeconomics for Sustainability* and *Arsenales Nucleares: Tecnología Decadente y Control de Armamentos*. He is a former member of the Board of Directors of *The Bulletin of the Atomic Scientists*. He was an economic advisor to the Zapatista negotiating team in 1996. Also, in the context of the Convention of International Trade in Endangered Species (CITES), he is currently involved in analyzing the economics of wildlife trade.

This interview was conducted (and later edited) by Nic Paget-Clarke for *In Motion Magazine* on August 2, 2018 in Alejandro Nadal's home in Mexico City, Mexico.

Part 1: The Myth of the Invisible Hand

Section 1: The Distinction Between Markets and Capitalism

In Motion Magazine: Can you please talk about why markets and capitalism are not the same thing?

Alejandro Nadal: Markets have existed all along human history, you can say in general terms. You had markets in Babylon. You had markets in Egypt. You had markets in Mesopotamia, and in Rome and Greece, of course, in classical times. But you didn't have capitalism.

The reason why there is this distinction and why we have to make this distinction, is that people tend to identify capitalism … the narrative of capitalism has been that capitalism is a natural way in which human societies should be organized, or have been organized through history. History becomes like a long quest for the development of this natural way in which societies, human societies, are organized. This is a complete fallacy.

First of all, you identify the fact that markets existed all along and therefore they existed in and before capitalism. The second idea that needs to be understood is that these markets, they existed but they were not the way that society was organized. They were always, let's say, embedded -- that's the work of a great thinker, Karl Polanyi. They were embedded in society. Society was always organized around, let's say, some hierarchical principle. Maybe you had a king. There was a division of labor. Everybody was going around their own tasks in society. Some had to go fishing. Some were doing agriculture. And at the end of the day, or the economic period, you had to distribute the products of these different groups of people.

Maybe the king had a system that was centralized and there was a distribution of these goods. There was production and distribution but it was not carried out by a market. There *were* markets, there were individual markets. Maybe there was a guy who made sandals, and there were women who were weaving, whatever. You had individual markets, but the way in which society was organized made it such that these markets were embedded in a larger social system which was not dominated by a market, or by market forces.

< Differing organizing principles of society >

In the eighteenth century, very recently, this changed completely, radically. The market became the central principle for social organization and you ended up with a market society, and all other social relations now were embedded in a big market.

Do you see what I mean? You had markets before, in previous times. Individual markets existed. You even had money. You had monetary transactions and you had prices. But all of these things were embedded in a social system that was organized along different lines, different principles -- like reciprocity, hierarchies, kinship. All of these things were the organizing principles of society. You did have individual markets but there comes a period of history in humankind in which this is radically changed and you have a market and other social relations embedded in a market society.

This is very recent. There is a transition which starts in the seventeenth century but it culminates mid- to end-of the eighteenth century. You start having a market society.

In Motion Magazine: Was this because of the industrial revolution?

Alejandro Nadal: It was because of a whole bunch of things happening. It is related first to the enclosures *(Editor: the "enclosures" were a variety of processes which literally enclosed and privatized, with hedges and fences, community-owned and community-used open land and forest land.)* and then it intensifies with the industrial revolution. It's before the industrial revolution. In fact, the industrial revolution couldn't have happened without this transformation already taking place. Polanyi's book, which was published in the 1940s (1944) called *The Great Transformation*, it talks about this exactly, about how it happened, how it came about.

People resisted this transformation. Communities and societies resisted this transformation. They understood the danger of this transformation and the perils for human society, for humanity, and they resisted. But it came about nonetheless. The role of the state was (also) very important. This is why market (versus) state, this juxtaposition is another fallacy. The role of the state in bringing about this market society was absolutely crucial.

When I say that people understood the perils of this, I mean that they understood that when you do this all social relations become subservient to the idea of commodification and of transforming social relations into mercantile, commercial relations -- therefore, putting a price on everything.

< Transforming labor into a commodity >

(And) this is also closely related to the tendency of markets today, in this market society, to put a price on everything. Everything becomes a commodity, even things like social relations. Not only your daily needs for food intakes, for example, become a space for profits, and a space for markets, but even things like friendships and family relations become contaminated with the idea that there is an economic interest.

So, I've spoken about what is a market society, where does it come from, how recent it is. (But) I haven't spoken about capitalism. This is very closely related to the development of capitalism. The role of enclosures is closely related to the fact that you need, for capitalism to develop, you need to liberate a whole bunch of people, as a group of people, from the land and from these other hierarchical social relations that existed, from the feudal relations. So, you open a space in which you can hire people and transform their labor into a commodity, which was something that did not exist under feudalism.

Section 2: The Emergence of Economic Theory

< The difference between Aristotle and Adam Smith >

In Motion Magazine: Is this when ethics changed, as you were discussing earlier in reference to your next book?

Alejandro Nadal: Well, yes, in the sense that when you develop a market society, you also develop a very strange form of discourse, or analysis, which we now call economic theory, or economics. And this form of talking about society is again also very new. We say all the time that the father of economics is Adam Smith, and yes there is a transition there too, (but) before

Adam Smith, before the eighteenth century in Europe, you had a lot of people talking about money, and prices, gold, and accumulation of wealth. Everybody was talking about these things because you do have markets and you have prices and you have money and people think about these things, all the way back to Aristotle -- even before him.

Aristotle was a guy who analyzed prices and analyzed monetary transactions (but his analysis) had nothing to do with the way economists talk about prices and money (now) -- in spite of the fact that books of history of economic analysis, for example, all of them say, "The whole thing started with Aristotle because he was the first guy to analyze prices and monetary transactions." That's not true.

Yes, he analyzed prices and money, but he analyzed them as part of his thinking about ethics and politics. Prices and money come into the analysis but they don't dominate the analysis. The perspective on prices and money is an ethical perspective and a political perspective.

For example, money for Aristotle is not a means of exchange. It is not a reserve of value. It is not a unit of accounting. It is an ethical and a political object -- which radically changes your view of his analysis. The same thing with prices. The whole discussion in Aristotle about a just price, what is a just price, has nothing to do with how we calculate prices today or how economic theory today goes about talking about prices. From Aristotle, you have an ethical and a metaphysical perspective of prices and money. There's a huge historical chasm that differentiates the analysis of Aristotle and the analysis of economic theory on prices and money. That is something that is totally lost today. Nobody deals with these things except students of philosophy, for example.

He analyses prices but it has nothing to do with the analysis of economic theory.

< “The eternal laws that regulate the economic mechanism” >

So, once you have a market society developing, … (you have this) very strange discourse about how this market society works. And this is where you get this idea of mechanism. All of a sudden you had a society in which there is a crucial dimension of social life which is ruled by its own rationality and its own laws.

“We as economists,” this is Adam Smith now talking, I’m putting words in his mouth, “Our task as economists is to unravel the laws, the eternal laws that regulate this mechanism, the economic mechanism. We need to understand how prices are formed; how our resources are allocated; profits and wages; and interest rates; and money. We need to understand all these things. And thankfully we have an economic theory that is developing, allowing us to understand these things.” There was a mechanism out there that was the market society that needs this analysis.

So, economic theory co-develops with the emergence of the market society.

In Motion Magazine: Was that a good idea?

Alejandro Nadal: Well, it was a good idea from the perspective of the dominant classes, or dominant social groups that were also emerging. Because once you do this, you say, “Look, this mechanism, it evolved naturally. Here it is. It has great advantages. We are producing wealth.” This is Adam Smith, you know (his book) *The Wealth of Nations*.

“We are producing wealth as never before in the history of humankind. The division of labor is beneficial.” And how this market society works, especially capitalist society, the capitalist market economy works, “is highly beneficial. We live in the best of all possible worlds and economic theory is a scientific way of proving that we are doing fine and we should let this mechanism operate with its own rationality. It works fine.”

This is the ‘Invisible Hand.’

Section 3: The Myth of the Invisible Hand

< The two components >

Alejandro Nadal: The Invisible Hand myth has two components. Number one, which is what everybody knows, is that, “Greed is OK, is good, because we are looking out for our self-interest, but we are doing something beneficial for society in the aggregate.”

And this is the paradoxical thing. This is why it is such an important myth. If everybody is greedy they will stab each other in the back. “No,” Adam Smith says, “No, that is not true. If we let people operate freely, in spite of the fact that they are greedy, as if guided by an invisible hand, they will in the aggregate reach a beneficial outcome for everyone."

(And), the crucial thing here is not only, 'What is the mechanism by which the Invisible Hand works?' The other question is, 'What does the outcome look like?'

< How does the Invisible Hand work? >

So, the first question -- 'How does the Invisible Hand work?' Let's look at markets and prices and how they interact. This is why General Equilibrium Theory is, let's say, the descendant of this idea -- this is why the fathers of General Equilibrium Theory recognize themselves in the Invisible Hand metaphor of Adam Smith: they are trying to give a scientific proof that it is not only a metaphor, it is a scientific fact. "We are going to prove that through a mathematical model."

By the way, spoiler, this failed. They could never come out with a mathematical model that showed how market forces compete. "The competition between consumers and producers, all these things lead to a socially beneficial outcome which is called 'general equilibrium' in which the individual plans of greedy individuals become compatible through market forces." That scientific research program failed (and) it is really well known.

It is well known among the theoreticians that developed this, but it is kept out of sight and all that failure is forgotten. Everybody talks as if that theory had been successful, that you have successfully proven through the rationality of the mathematical model that this is a scientific fact. (But) that's a failure; kept out of sight – and the failure is not taught at universities. On the contrary, teaching of these things is totally distorted and misleading.

< What does the outcome look like?>

Now, the other part of the myth is, 'What does the outcome look like?' Just imagine that you have a theory about the Invisible Hand that is saying that individuals are guided as by an Invisible Hand but there is a social conflict among them – that is the outcome. That would be terrible, no? The outcome would be negative. You would need to combat market forces. Right?

For the ideologues and the people that were making this theory, their research program had one key objective: to prove that the outcome is beneficial for everyone. This is crucial. If you don't prove that, then your theory -- from the perspective of the 'establishment,' the power of the elites, of the dominant classes -- is a terrible theory. "I don't want to hear about it."

So, they took it upon their backs. They had this load, and they had to carry the load. They took it upon themselves to prove that the outcome was beneficial. They (sought to) prove that if you have an equilibrium, it is beneficial for everyone. And, if you have an allocation of resources that is beneficial for everyone then that is a 'general equilibrium' – meaning that the quantities of any commodity offered in the market and demanded in that market are equal. That's equilibrium – supply and demand – 'supply equals demand.'

The crucial thing is that 'supply equals demand.' The producers that take this supply to the market, and the consumers that demand this commodity in the market, are both happy. They are maximizing their profit functions and their utility functions, or their satisfaction parameters. OK?

The outcome is not only 'supply equals demand,' the outcome is that at those quantities and at those prices every agent in society is extremely happy. They've realized their plan. That was the research paradigm that economic theory had all along since Adam Smith, all the way until General Equilibrium Theory. (But,) this research program failed.

The big question is, do market forces when left freely to operate – and by 'market forces' I mean the competition between producers, within themselves, and consumers within themselves, bidding in the market there – these market forces, do they lead to this beautiful outcome? That failed. The dynamics of the market – that is what failed.

< But is this equilibrium stable? >

(But), let's accept you have an equilibrium in which everybody is happy. … (Now) the big question is, 'Is this equilibrium stable?' And initially that meant, 'If I disturb it, are there economic forces unleashed within the system, in the mechanism, that restore the equilibrium -- or not?' For example, if I have a bowl and I have a marble here at the bottom -- it's in equilibrium. It's at a resting point. If I disturb that ball, it goes around and comes back to that equilibrium -- that equilibrium is stable. The analogy here would be, "If I disturb it, does it come back to equilibrium?"

Then the question became even more interesting and more relevant. ‘Given *any* starting point, do these forces lead to equilibrium or not? ‘In other words, -- coming back to the bowl – ‘If I drop this marble here, or here, does it go to this resting point or not? Yes, in that case yes. But, if I have a pyramid and I have a marble, and I start here, the marble will not come to this equilibrium point. It will go to another resting point.’

The analogy in economics was exactly that -- to prove that markets, this mechanism in market society, (was stable.) (And they wanted to do this) because it existed already, they were having this transformation in Europe. Market relations were becoming dominant all over Europe.

< Adam Smith’s theory of the guiding forces of this great transformation? >

And this was the world in which Adam Smith was writing. He was a very intelligent guy. He was looking at this fresco, this landscape in Europe, and he says, “Wow, this is amazing. This thing is being transformed.” And he looks in a very particular manner -- with Bacon’s rationality in mind. *(Editor: Francis Bacon was an English philosopher and scientist)*. He’s going to unravel the laws that are the guiding principles, the guiding forces of this great transformation taking place. And he comes up with something that most economists have never seen.

(Adam Smith’s book) *The Wealth of Nations* is a very large book. The first six chapters are pure theory of prices -- though nobody talks about it (today). Everybody talks about the Invisible Hand, or monopolies. (But) Adam Smith has a theory of the process of how this market works. It is called the "Theory of the Gravitation of Market Prices Around Natural Prices." You have a fixed axis of reference, which are natural prices, rigorously defined, and then you have market prices that gravitate around this axis of reference. Those are the first six chapters of Adam Smith. The discourse of Adam Smith, you can put it in mathematical terms.

And, by the way, this theory of prices of Adam Smith is very, very different from General Equilibrium Theory, but there is a continuity between them. The idea (is) that we need to specify and demonstrate rationally, scientifically, that the Invisible Hand metaphor is more than a metaphor, that it is a faithful description of how a market society works. (But, up) until today, economists do not have a theory, a mathematical model showing how a market society works. As simple as that.

< Failed as a scientific endeavor>

If you had a fully-packed stadium and the world was looking at the center and in the center you were having all these disciplines coming by, you would have astrophysicists and they would be interrogated. "What were your achievements after a thousand years of work?" And they would describe expanding universes and galaxies and the Hubble Effect. "Very good, very interesting."

"OK, let's talk to biologists." And they would come in and say, "We have a great theory of evolution. There are scientific debates. We understand how evolution works." "OK, great."

And then they would bring economists. “What was your achievement as a scientific discipline? What have you guys done? Have you shown that the Invisible Hand works?” And they would have to say, “We worked for two hundred years trying to develop a model to show that the Invisible Hand works, that the competitive forces of markets lead to equilibrium at which the outcome is beneficial for everyone.”

“OK, that’s interesting. And what was the result?” “We failed. The models that we have show that the equilibrium exists and is stable -- that market forces lead to an equilibrium beneficial for everyone -- in only two cases, and they are both logically inconsistent. *(Editor: Nadal here refers to economic studies of instances of “gross substitutes” and “the weak axiom of revealed preference.”)* Those are the only two cases in which an Invisible Hand works.

The interviewer would have to tell them, “So, you guys have failed.” And the economist, if he was an honest one, would have to say, “Yes, we failed in that attempt.” And everyone in the stadium would boo them.

These are some of the metaphors I use when I write papers to try to explain that this is a scandal. Economists like to parade their theory as, “We use mathematics. We are scientific. Not like sociology or anthropology which are very strange. Economists, we are very rigorous. We use mathematics.” That’s right, you use mathematics and when you understand those mathematics, it is very easy to say, “You guys are naked … the emperor is naked. Precisely because you use mathematics, it is easier to say that your discourse has no basis whatsoever. You have failed as a scientific endeavor.”

It is true. It is ideology.

Section 4: A Market Society In Which You Commodify Labor

< The elimination of ethics >

So, let's go back to the market society and capitalism. "At some stage, what capitalism needs,' this is Polanyi again speaking, "you need to transform labor into a commodity and you need to talk about land as a commodity." And then he says, "You need to talk about money as a commodity." And there I disagree. I think Polanyi was not conversant with monetary theory. You don't need to transform money into a commodity. You need to take away the power that society or the king, let's say the sovereign power, has over monetary creation. And you have to give that to a segment of the capitalist class, which we call bankers. But that's a different story.

In essence, market economies require to dominate the total space of society, of social relations. And, yes, we do have a party or a fiesta with my family and that's not entirely market transactions. But those kinship and family relations are not the key organizing principle of society. The key organizing principle of society is now market rationality, prices, and profits. The origin of capitalism is a market society in which you commodify labor. Basically, that's the crucial turning point. And that's where we are today.

(But, as I mentioned earlier,) there was the resistance of communities, which is very well analyzed in Polanyi's book. They understood the dangers of this. And, for me, the crucial danger is the destruction of ethics, the elimination of ethics from the social space, because now all relations are regulated by this mechanism, by this mechanism of prices -- price formation. That's what really dominates social relations, social dynamics. Generosity becomes an anecdote in this society. "It's great that you are generous and you gave 10 pesos to a beggar. Yes, ok, that's fine. But it is aside from your real social life in which you aim at making better income. If you have to push your neighbor down the cliff, you will. And that's ok because this is market rationality."

Today, under neoliberalism, you see this to an extreme. The whole idea that, "Listen, if you work really hard you may succeed -- you will succeed." We know that's not true, but that's the ideology. And the backdrop of that ideology is this market society in which everything is commodified and thought about in terms of prices.

The danger was very real. A very serious danger. (But) I have an optimistic view on the whole thing. I think that this will change. How? I don't know. But I think that it will change because this history is very recent. This market, this view of society and of social relations is very, very recent. If I say the eighteenth century, we are talking 250 years, maybe 300 years. But humans have been on the planet for 200,000 years. Two hundred thousand years. It's only a tiny part of human history that is dominated by this really amazing, crazy idea that through this mechanism and numerical magnitudes that social relations are developed. That is very recent. Before this you had wars and you had empires and you had terrible things happening, but at the same time societies did not have this idea -- never had this idea.

For an ancient, for somebody in classic Greece -- if I went back in time and described to them what was going on today, Aristotle would have said, “I told you so.” He did, in a way, (when) talking about interest in *Chrematistics*, his book on politics. There’s a chapter on money, (and) that’s where he says this famous phrase, and everybody quotes it, “Interest is counter to nature”. The idea that a sum of money begets more money through the passage of time by interest. It isn’t only bad because it’s too much, or too little, it’s counter to nature. And for Aristotle, that is the worst thing you can say.

He says that money circulation that involves interest payments is dangerous because it can destroy the city, *la ciudad*, and the social order. It can destroy the social fabric, as we would say today. It can destroy society. He would tell us, “I told you guys. Two thousand years ago, I told you.”

So, it’s a fascinating, it’s a thrilling story. I’m optimistic because I think in those 200,000 years there’s more room for solidarity than what we find today in human societies. I hope and I’m confident that this period will be somehow reversed.

It will take some time. It won’t be next week.

Section 5: Macroeconomics: Looking at the economy as a whole

< Do we get crisis sometimes? >

In Motion Magazine: You mention in one of your books, *Rethinking Macroeconomics for Sustainability*, that John Maynard Keynes invented macroeconomics. What is macroeconomics? And if he invented it, what was there before?

Alejandro Nadal: Macroeconomics, to define it, would be the analysis of how capitalist economy works as a whole -- not (just) looking at the steel industry or the market for shoes. It's, how do all of these sectors interact with each other? Not only in terms of price formation, but in terms of when I look at the aggregate do they generate enough employment?

For example, do monetary aggregates play the role that they are supposed to play when I look individually and say, "I need money for this market to operate"? Yes, but (what about) the entire society, how do monetary aggregates operate? And do we get crisis sometimes? Is there room for a general crisis? (And) not only in the shoe market because there's too many people demanding shoes and producers can't cover that demand; or, contrary to that, there is not enough supply and everybody wants shoes and there are problems with the shoe industry because there's not enough leather. Or whatever.

We are talking about a general crisis in which you have important levels of people unemployed and therefore prone to all sorts of crazy ideas, like maybe fascism. This is what Keynes was thinking of, these things. Macroeconomics is looking at the economy as a whole. How does it work? How does it operate? Is it stable or not? The entire economy, is it prone to crisis or not? That's what really macroeconomics is looking at.

< What is your level of aggregate demand?>

So, this means looking at how people save -- savings, investment -- is investment enough? And when Keynes wrote, he knew very well what economic theory was before his writings. He had been trained in that. In fact, he tried to develop that sympathetically. “This is great, but how does it work?” He was trying to develop how it worked and in doing that he understood this was not such a great idea.

He develops a discourse in which he looks at how the economy works as a whole. Before his time, this had not been done. You had partial, we could call them, forefathers, precedents, people talking about how it came down that people could accumulate gold or wealth in metallic form, precious metals, things like that. But nobody was looking at how does the economy work as a whole -- in terms of does consumption and investment allow for enough aggregate demand so that entrepreneurs are attracted by that demand and invest and people can consume that? Is aggregate demand enough to maintain a level of consumption and development in that economy? Or, are there other forces that lead to problems?

When he started writing, the Great Depression was starting, in 1929. In 1930, Keynes was still struggling with a lot of theoretical questions that he hadn’t made up his mind about how these things work. But he already had this idea that there is something wrong with capitalist economies. And, basically, the whole idea was that aggregate demand could be insufficient to generate full employment.

In other words, if you have aggregate demand you have investment opportunities. And, if you have investment opportunities, you create jobs. So, the whole thing hinges around what is your level of aggregate demand? For him, aggregate demand is a driving principle of the economy. It was totally different for Marx.

< Instability, crisis with a different perspective >

In Motion Magazine: How does (Karl) Marx fit into all this? Wasn't he looking at the whole picture?

Alejandro Nadal: Yes. And, by the way, Keynes had no kind words for Marx. He was totally ignorant of Marx, but he didn't like the idea.

Obviously, Marx was looking at the whole, but not in the same way. For example, I said precursors of Keynes, well, Marx, in book two of *Capital,* he develops something called 'the schemas of reproduction.' The question that Marx poses is, "I've analyzed how the exploitation takes place. The source of profits is unpaid labor. That's what I call exploitation." Marx would say that, "Now I have to show you guys how a capitalist economy works." So, he sets (up) the schemas, diagrams, in which the capitalist economy works in a stable manner because you have investment here and it circulates to the guys who produce the machinery and these guys buy other things. These are schematic ways of showing how a capitalist economy works and works fine.

This is the interesting thing about Marx. In those schemas of production there is no room for crisis. The capitalist system works perfectly fine, because what he is trying to show is that in this economy in which there is exploitation the economy works. The profits of capitalism do not arise from corruption or robbery. Capitalists don't steal from workers, they exploit them. In true commerce it is unpaid labor, surplus labor, surplus value which is appropriated by the capitalist class and this is what he tries to show. He wants to show how on a daily basis this is how this thing operates. It is not disturbed by endogenous forces.

If you want to look at that – the theory of crisis -- then you have to go all the way into book three of *Capital* and then you will have some explanation of crisis. But, in fact, Marx doesn't have a macroeconomic theory of crisis.

Marxists today have developed parts of his thoughts and original new lines of research. They can develop a theory of crisis, even monetary crisis. But Marx's thought on these things was totally different. He was trying to prove that capitalism is synonymous with exploitation. That is what he was trying to prove. He was not trying to prove that capitalism is unstable or prone to crisis, although there is that undercurrent in Marxist analysis. This is why I say that Keynes was the guy that inaugurated this way of thinking.

Now, you can go back and say, "OK, what about a macroeconomic analysis, taking Marx as the starting point? -- taking the exploitation of capitalism as the starting point for macroeconomic analysis." That is being done and there are Marxist authors that do that. But I think it is accurate to say that Keynes was the first guy who really opened up a new field of analysis which was macroeconomics.

The big advantage of macroeconomics is if you look at the economy as a whole, then you are able to understand how the system works. How this mechanism works. You are able to approach the whole question of instability of the system, of crisis, with a different perspective. If you don't do that then you are talking about the crisis in the ice cream industry, but that doesn't allow you to look at the entire system.

So, the big question of Keynes was, "How was it that we have today socially unacceptable levels of unemployment that can last for a long period of time? How is that possible? And the question is very important because that is a very dangerous situation." Of course, (as I said,) he was thinking of fascism. Remember that in 1919 Keynes wrote his little book on *The Economic Consequences of The Peace*, and he's alerting people, saying, "Hey guys, down the road something really nasty is going to happen in Germany." And it did. He didn't know exactly how it would play out, but he was saying, "Guys, these war reparations in Germany are unpayable."

Then, in 1929, he's looking at this implosion of the most developed capitalist economy in the world, the U.S., with unemployment, the Great Depression, unemployment skyrocketing to 25%. He's really concerned. Don't forget, in the interim he's also looking, literally, at Germany and he has seen the rise of fascism in Italy. In the '30s, he's looking at Germany as "some strange things are happening there." But before that he's also looking at the Soviet Union. There was a Russian revolution. "You have fascism, you have Stalin and the Soviet Union -- something is going on. If you want, you call it communism, or whatever, but that's another danger." He likes capitalism. He's fond of capitalism. He wants to save it from itself. He sees capitalism as not stable.

Section 6: Packages of Ideology and Crisis

< From the Welfare State to Neoliberalism >

In Motion Magazine: In line with that, one of the words you used when you were writing about what some people call neoliberalism, is "package", as in "a package of policies." Is macroeconomics an overview of a whole economic system, but then people apply on top of that overview various packages?

Alejandro Nadal: That's right.

In Motion Magazine: ... packages which come from their own ideologies or theories?

Alejandro Nadal: Right.

In Motion Magazine: So, for a while, people used some of Keynes approaches – and that was a package of macroeconomic policies.

Alejandro Nadal: The Welfare State.

In Motion Magazine: And then there's Import Substitution Industrialization, and after that the Neoliberal packet? You are saying it's a level of analysis from which point you can then say, "We need to take various monetary and fiscal policies and apply them in such and such a way?"

Alejandro Nadal: Right. Absolutely. Macroeconomics just said you look at economies as a whole, how can it work. The big questions are, 'Is this prone to crisis? Number one.' 'Number two, how can I have a macroeconomic system that is beneficial for most of the people?'

Let's say, we have a question for the Welfare State, "How do we organize this economic mechanism so that most people benefit and they don't have to suffer things like unemployment, things like that? Or inequality and poverty? There are different approaches to this.

Let's say you believe that the Invisible Hand is a beautiful theory, which it is not, but OK, let's say you believe that. "Well, we need to organize a macroeconomic policy package that allows for the Invisible Hand to work. Yes, we are going to need taxes but let's minimize that. We are going to need public expenditures but we will also minimize that because we don't want to distort markets. And we don't want to distort the way the Invisible Hand works because we know it works beautifully." It's an ideological perspective.

And, as far as monetary policies (go), well, again, "Let's be very careful because the central bank can be used by governments to print money and then you have inflation and this will have terrible impacts on society. So, let's put the central bank outside of the reach of the politicians and let's call that autonomy for the central bank, blah, blah, blah."

That would be, say, a theoretical approach to macroeconomics. That's a neoliberal approach, basically, because it's based on the idea that you do have a theory of the Invisible Hand that shows that it works beautifully.

< Macroeconomics and climate change >

A different approach to macroeconomics would be, number one, "We don't have that theory of the Invisible Hand. And even if we did, we know by social experience, by historical experience, that macroeconomic relations (can) lead to very serious problems. We know that in our world today -- of inequality, of international imbalances, of crisis of all types. And therefore, we need a different kind of macroeconomic package.

You have two competing paradigms, and you can throw in the environment also. We need to do that. The whole idea of that book is, "Hey guys, everybody talks about the environment but normally you don't see people discussing the environment, things like climate change, and macroeconomic relations. The global economy, how is it working? How are these economies operating? Do interest rates and exchange rates and monetary aggregates have anything to do with emissions of greenhouse gases?"

Of course, they have a lot of things to do with that. Just think of investment – replacing old technologies with new ones. You are talking about investment. Immediately you are talking macroeconomics. Immediately. And, therefore, you are talking about monetary relations, interest rates, exchange rates.

The division of work that humans have found today to talk about the environment is really inadequate. Totally inadequate, to put it mildly, because if I look at the global discussions of climate change they are totally unrelated, divorced, separated completely from any discussion about the global economy. That doesn't make any sense. When I look at the reports of the Intergovernmental Panel on Climate Change, the IPCC, there's absolutely no mention whatsoever of these very fundamental issues and macroeconomics.

For example, the global economy has been growing at lower rates for the last three decades. The rate of growth of the global economy has been going down. The average global growth rates for the world between 1945 and 1975 were something like 4.8 percent per year. If you look at the period 1975 to 2000, that rate of growth was cut like 40%. The average global rate was something like 2.8 percent, a maximum of 3%. It has been going down.

Is that good or bad for emissions of CO_2? Is that good or bad for deforestation? Is that good or bad for the environment? How did that play out? Well, the environment has continued to be degraded at alarming rates even though growth has been slowing down. Of course, you have a large global economy today, more population than before, but you need to rethink the relation between growth rates and environmental degradation in a different manner. What are the drivers of this degradation if growth is going down? What is happening?

< Competing paradigms >

If you look at these two competing paradigms of macroeconomics you have to compare them, and not with the Invisible Hand myth or with microeconomic theory. Leave that aside. Just look at the empirical reality that we encounter today. If you look, the first thing that will hit you in the face will be the global financial crisis, the Great Financial Crisis. The GFC – it is becoming an acronym that I encounter more and more.

The crisis in 2008 is something that explodes in your face when you are doing macroeconomics. And, basically, because the models that we used in macroeconomic theory up to 2007 had no room for crisis. Those models were models for a good weather day. “If you are sailor, you have a model that says how to sail in calm seas with bright skies. Everything is fine.” And then all of a sudden you find yourself in a storm. “Oh, my model didn’t mention anything about storms and there are thirty-foot waves. I’ve never encountered these things.” That’s macroeconomics up to 2007. It’s an ideological paradigm saying that everything is fine.

In fact, the way macroeconomics can be described up to that date is the following. “The markets work fine, that’s a key assumption - - the competitive forces lead to equilibrium.” But, number two, “There are all sorts of interventions, frictions, rigidities. Governments make mistakes. Politicians are corrupt and they spend more money because they want to tend to their bases. There is greed. Unions, unions, my God, they impede wages from going down. That is a rigidity in the labor market and then the labor market doesn’t function smoothly. Our macroeconomic model assumed markets work fine, except for the fact that there are rigidities. We then have to look at these rigidities carefully and as much as possible get rid of them.”

That’s the neoliberal policy package.

< Economic relations with other economies >

In Motion Magazine: What is the Open Economy Model?

Alejandro Nadal: The open economy model is a different notion. It’s the same as what I’m saying, the only thing is that also you have an external sector. You have economic relations with other economies.

What I’m saying is, number one, look at macroeconomics, per se. It’s looking at the economy as a whole and you have these competing paradigms. And in addition, you can make things a little bit more complex and say, not only is there the economy as a whole, a self-contained thing, but this economy as a whole has relations with other economies through trade, through capital flows, investment, whatever. And these relations need to be taken into account because there are things like a balance of payments, which is the account of your external relations. And there is something called the exchange rate which is the relation between your currency and the currencies of other countries and it has a lot of impact on your activities.

Macroeconomics can become more complex when you deal with these international relations. "So, we need an open economy." (But) it's not a specific model. All macroeconomic models normally will make two distinctions. Is your economy big or small? Are you China or the U.S.? Or, are you Malaysia or Mexico? -- because it makes a lot of difference. When you are dealing with a Chinese economy you know that the activities of the Chinese economy will impact international prices. For example, the price of oil – if China contracts you have a problem, the price of oil will go down worldwide. The size of your economy matters. That's the first distinction when you are dealing with macroeconomic systems: are you a large or small economy?

The second distinction is, are you talking about the economy as a self-contained, enclosed system or are you also taking into consideration international economic relations: trade and financial relations with other economies? First, we analyze the economy as a closed economy to get a grasp of ideas, but then we need to have a more realistic model that has economic relations with other economies. And we call that the Open Economy Model.

The two distinctions are: are you a small or big economy; and the second, are you a closed or open economy. But you are dealing with macroeconomics as a whole.

Then you choose your paradigm. Does your paradigm say that markets work beautifully and therefore we need to look at why is it that they are not working in a particular case? (Or, do) you have another paradigm saying, "I don't think it's the rigidities by themselves. I think you have some other very serious problems."

Essentially, Keynes says, "Even if you have perfect price flexibility, … even if the Invisible Hand works, (and we) assume you have price flexibility, you have no unions, no fiscal distortions, you don't have any central banking printing too much money, even if everything is fine from the perspective of some rationality in economics -- the capitalist economy will run into problems.

Even if you have flexible prices in all markets, the capitalist economy will run into problems." That's Keynes.

Section 7: Understanding the Key Role of Aggregate Demand

< The two components of aggregate demand >

In Motion Magazine: Are you referring to the three fundamental perceptions of his which you highlight in your book? 1) uncertainty in investment, 2) the key role of aggregate demand, and 3) the demand for money is determined by liquidity preference.

Alejandro Nadal: Exactly. You will have problems because aggregate demand may not be sufficient to ensure that you have full employment. Keynes says these things because he has this outlook: there was uncertainty; there was instability.

Aggregate demand has two components. One is consumption. One is investment. When you invest, you demand. When you set up a plant you need cement, you need steel, you need machinery. You will demand things from other industries. When you are a consumer, you go to the supermarket and you buy all sorts of things. That's another source of demand. So, you have two sources of aggregate demand.

Consumption is very stable. Everybody needs to buy clothes and food, but it is insufficient for full employment. Why? Because you consume less than you get in your income. When your income grows, your consumption also grows but at a smaller rate. He called this the 'Marginal Propensity to Consume is Less Than One.' Meaning that for every new extra dollar that you get as an income, you will not spend the entire dollar. Well, maybe at the beginning you will respond with some consumption -- but next week you will not go and spend the entire new dollar on consumption. You will spend less, maybe 80 cents. And the other 20 cents you save. You save, you put aside.

That consumption is stable. Everybody needs to buy food and basic necessities, but it is not sufficient to maintain aggregate demand at the level required by the system to maintain full employment. If it were, it meant that all these industries would be tending to that aggregate demand coming from consumption and they would hire a lot of labor and they would lead us to full employment. But it's not. You spend less than you get as an income.

The gap could be filled by investment because investment is the other source of aggregate demand. As I said, you buy cement, inputs, etc. (But) the problem with investments is that it could be sufficient to fill the gap (but) … it depends on your – and this comes with another metaphor in economics – your ‘animal spirits’ -- it comes from your expectations.

You, as an entrepreneur, as an investor, you sit down and we would be sitting here, “What are the opportunities for investment, right now?” And I would say, “You know, Nic, today the outlook is not very good. All the industries that we have examined are not doing well. There is over-investment, all sorts of problems. So, let’s take the money and speculate on the foreign-exchange markets, or do something else with it. I don’t advise you to set up a plant right now for the production of glasses or cigarettes, or whatever, because things are not well in the economy.”

And that’s the outlook we have, of negative expectations, so we don’t invest. But tomorrow we wake up and we say, “Have you seen the news? Everything is doing fine. Let’s go for this plant on plastics. We’ll go into the field of plastics.” It depends on which way the wind is blowing, and your perception and your expectations, your animal spirits. Investments could be enough to fill the gap for aggregate demand to generate full employment, but it is unstable.

< “The more people we hire the more wages are distributed in the economy” >

So, you have two sources of aggregate demand. One is stable but insufficient. The other one could be sufficient but it’s unstable. Keynes, his response to that is, “OK, let’s fill the gap of aggregate demand. Let’s stabilize the economy by making sure that aggregate demand is always sufficient to generate full employment.”

And notice that when I say this, ‘aggregate demand is sufficient,’ I’m meaning that investors will look at aggregate demand and say, “Wow, this market is moving along fine. Let’s invest and therefore let’s hire people.” This is a virtuous circle because the more people we hire the more wages are distributed in the economy, the more purchasing power that you have in the economy, the more aggregate demand you have, the more investment … all the way to paradise. This is how he’s looking at things.

So yes, (there are) these two paradigms: – (with one) saying, “We have rigidities;” and Keynes saying, “Even if you get rid of all rigidities and you have fully flexible markets all across the entire economy, even then you may have a problem because aggregate demand may not be sufficient.”

And for people in 1936 to understand this … it was a revolution.

< A recipe for a crisis >

… (But) it is not only insufficiency of aggregate demand. … One problem is low wages. What should wages look like? In a truly Keynesian perspective, wages would have to be adequate, and he would be against the idea of depressing wages because you depress aggregate demand.

In a crisis, people don’t know what to do and would say, “As a capitalist, my problem is I encounter a demand, it is receding, it is not growing. What do I need to do? I need to lower my prices. How do I do that? Well, I need to cut costs of production. The very first cut I can make today is to lower wages. Or fire some workers. Or put them on a part-time basis. I need to lower my wage bill so that I can lower my prices so that I can maintain my profitability.

“If I do that, I’m taking aggregate demand out of the equation. I am contributing to the entire reduction of aggregate demand.” But if every capitalist does that (‘I mean for me it’s fine, it makes a lot of sense’) – but for the entire capitalist class to do this, then you will depress aggregate demand and you will depress your source of profitability, and you will invest less. You invest less, you create less aggregate demand in the next round, and less investment, and so you have a recipe for a crisis. You have a vicious circle and instead of going to paradise you are going to hell. You are going downwards.

The key idea was Keynes saying, “Even if it works fine, you still have a macroeconomic problem due to the deficiency in aggregate demand.” If your economy is not growing, or it’s growing in a very erratic pattern, and then you lower wages, which is what happened in the United States (-- then you have a crisis).

Part 2: The Day That Capitalism Changed Forever

Section 8: Bretton Woods -- How Do We Organize the Monetary System?

< The dollar-gold standard / the reserve currency of the world >

Alejandro Nadal: In the United States, one of the most amazing facts that people don't know is that since 1973, the rate of growth of wages (has) become zero, or close to zero, of real wages. This is amazing.

In Motion Magazine: Well, related to that, could you tell the story of the process which starts with the United Nations Monetary and Financial Conference held in 1944, in Bretton Woods, New Hampshire, and brings the U.S., the world, to its current, extraordinary period of financialization?

Alejandro Nadal: The expansion of the financial sector is one of the key traits of the world economy since the '70s, the '80s. So, how is this related to Bretton Woods and also to profits, which is the key variable in any capitalistic economy? And, strangely, you never see those in the national accounts. You don't see statistics about profit rates, anywhere. You have to build them. You have to construct an analysis to understand what happens to profit rates.

After the Second World War, the United States emerges as the dominant power. Its infrastructure is intact. Its industrial base is intact. Germany and Japan are devastated. Europe is devastated. Russia was devastated. China was just beginning their great civil war after a lot of turmoil and the Japanese occupation. The world is a mess. The U.S. has the largest gold reserves in the world, and you convene a conference in Bretton Woods trying to reach an agreement on how the international payments system would work in the future. How an international monetary system would work in the future. Trying to avoid the mistakes and problems of the '20s and '30s. To get away from the gold standard. Try to get away from competitive devaluations to maintain your competitiveness in the international markets. Trying to get away from these things. How do we organize the monetary system?

And they come up with a system in which every currency would have a fixed exchange rate. And they would all be related to the dollar and the dollar would be pegged to gold. The dollar would be the only currency pegged directly to gold at a rate of $35 per ounce of gold, and all other currencies would have a fixed exchange rate with the dollar and among themselves. And everybody would know that if you had dollars you could exchange your dollars for gold at that rate.

This was a system of fixed exchange rates. It wasn't the gold standard. It was a dollar-gold standard. It was designed to give hegemonic power to the United States.

The gold standard had a lot of problems because the supply of gold is limited and you need to get gold to expand your monetary supply. It's a big mess. The gold standard was not the solution of anything. Everybody knew that one of the important belts of transmission of the effects of the Great Depression had been the gold standard so that mechanism was rejected, correctly in my view. That's not a good idea.

But it still subsisted in a very limited way through this relation between the dollar and gold. It was a way in which the United States could impose monetary hegemony on the entire world. The dollar became the preferred currency for reserve – the reserve currency of the world – and the privileged means of payments, of settlement of transactions in the world.

You had this system of fixed exchange rates that had to be accompanied by controls over capital flows. If you do not have controls over capital flows then it's going to be very difficult to maintain a fixed exchange rate, as we know from the world today.

< The IMF, the World Bank, and GATT >

So, what came out of Bretton Woods were three or four basic things. Number one, fixed exchange rates, U.S. dollar convertibility with gold.

(Number two,) the creation of the IMF (International Monetary Fund) to supervise the entire operation of the system and to provide assistance to countries experiencing difficulties with balance of payments. In other words, you could allow for some adjustment in exchange rates but only if you informed the IMF and only if you had a certain degree of difficulties in your balance of payments. There was some degree for adjustment for exchange rates.

And what else? (Number three) you create the World Bank which wasn't called the World Bank it was called the International Bank for Reconstruction and Development.

And as far as international trade, (number four) you had the General Agreements on Trade and Tariffs – GATT -- which was the precursor of the World Trade Organization (WTO). The United States Senate rejected the idea of a world trade organization, so they just had the General Agreements on Trade and Tariffs.

That’s basically what comes out of Bretton Woods.

< The competitiveness of the U.S. starts to deteriorate >

The life of the Bretton Woods system coincides with the golden era of capitalist developments, what everybody calls the Golden Era of 1945 to 1975. The world economy grows at a very swift pace. Per capita incomes double in the United States. This is the happy era of capitalism.

In this period of time (though), very rapidly after the war, the competitiveness of the U.S. starts to deteriorate and you begin to have trade deficits with the rest of the world. I don’t know exactly the year in which this happens, (but) when I say very rapidly I mean fifteen or twenty years after World War II, Germany and Japan rebuild very rapidly. It’s an amazing story of how this was rebuilt, but you had the technology, the education, you had a workforce that was highly trained, very well trained.

Very rapidly, Germany and Japan start, for example, eroding the position of the U.S. in international markets even, and what is most important, not only in consumer goods but in the machinery to produce consumer goods -- machine tools for example. So, the deficit of the U.S. starts to show very rapidly, which meant that you were paying the world with dollars and these dollars could be converted into gold because of Bretton Woods.

I believe in 1968, maybe even before that, the amount of dollars circulating in the world, in the global economy, in the world economy, was greater than the amount of gold reserves that the U.S. had. So, the whole idea of convertibility was going down the drain.

The French, (President Charles) de Gaulle, as the outspoken leader of a country, of an ally of the U.S., says, “You know I’m getting worried because you guys are printing dollars, you are paying us with little green papers, and if I were to change this into gold, you guys don’t have enough gold. According to my calculations you have a deficit. If everybody wanted to trade those dollars for gold, you don’t have enough gold to maintain this arrangement that came out of Bretton Woods.”

< August 15, 1971: the day that capitalism changed forever >

So, in 1971, August 15 -- that’s the day that capitalism changed forever – (President) Nixon closes the (gold) window. He orders his Secretary of the Treasury (John Connally) to close the window and announces, “We are not going to let you change your dollars into gold anymore.” Wow! That’s really amazing. It’s the United States reneging from the most important multilateral treaty that existed in the world. The news is a shocker for everyone. But, if you look at the story, nothing really happened.

Section 9: Trust, Money, and Seigniorage

< Trust in the health of an economy >

Nothing happened, for one good reason. Money doesn't need to be backed by anything except trust. You don't need to have silver or gold or whatever metal you want to imagine to back up the value of a currency. If you look at the world today, all currencies are what we call fiat money. Fiat money means it is not backed by the value of any commodity, or anything.

In Motion Magazine: Is it trust in guns?

Alejandro Nadal: No, you don't need guns to back the value of your currency. You need to have trust in the health of an economy. That's all. Those are big words. 'Trust.' What does that mean? 'Health of an economy.' What does a healthy economy look like? But basically, that's what it boils down to.

For example, I tell my students, "Take out a hundred-peso bill, in Mexico. What does it say? It says '100 pesos.'" That's the only thing it says. In the old days, when I was a kid, those bills said, 'The Bank of Mexico' – the central bank – 'will pay to the bearer of this note the value of a hundred pesos.' If I went to the Bank of Mexico previous to when I was born, that meant that the bank would give you 300 grams of gold for that hundred-peso bill – or whatever it was. (But), all of that disappeared and the bill said that the bank would give you 100 pesos, which meant that they would give you another new bill of 100 pesos.

Today, a 100-peso bill, or 20 or 50, whatever the denomination is, doesn't say anything. It just says Banco de Mexico, 100 pesos, 50 pesos, 20 pesos. It doesn't say that the bank will pay you

100 pesos. It doesn’t even say that. And that’s good enough for everyone. If I go and buy a meal at a restaurant, I can pay cash and they will not say, “What is this piece of paper? What do you mean 100 pesos? What is this?” They have trust in the fact that everybody accepts that bill. And everybody accepts that bill because that bill has a certain purchasing power.

Of course, if you have hyper-inflation, then that trust will break. Everybody knows that if tomorrow a piece of bread will cost 3,000 pesos then they will not take money, like living in Zimbabwe or the Weimar Republic, typical examples of hyper-inflation.

Fiat money, ‘fiat’ means faith, it means trust. When we say fiat money, we mean exactly that.

< The origin of money >

The origin of money is closely related to the problem of trust. Is there trust or not? In the very, very old days, and I’m talking three thousand years ago, we don’t need money. I brought you a chicken and I gave you a chicken because I was going to the store and I heard that you were going to have a party tomorrow and I thought, “I’ll take this chicken to him.” And you say, “What can I ...” And I say, “I was walking down to the store and I thought maybe you need this chicken. Goodbye.”

And then a week later, you will drop by my place and you will bring a pancake that you cooked and you thought it would be good for me to try it. Because we trust each other. We are neighbors. We are friends. We live close by. We help each other. You helped me last year with the floods and I helped you ten years ago. Whatever. We trust each other. We don't need money.

But guess what? Alexander the Great was marching nearby with his army and the soldiers came and said, "Hey Nic, we need to eat something. What do you have?" And you said, "Huh, I'll never see these guys again." And you said, "Well, I can bake you a cake for this evening, but how are you going to pay me?" And they say, "Well, we have some pieces of gold we picked up from these Persian guys two weeks ago." "OK, that's fair enough. Give me those pieces of gold."

This saying, "Money is the source of all evil." I put it the other way around, "Evil is the source of money" because I don't trust these guys. Hey, they are marching soldiers, they are going away. I want to get something back for my cake.

So, money becomes a central part of the equation because there was this lack of trust.

< The power to create money >

(Now,) 'seigniorage' is the word used to describe the advantages of you having the power to create money. Imagine you are the king and I am your banker. And you say, "Alejandro, I need to buy stuff. I'm organizing a big party and we don't have any money." And you ask me, "Can you create some money? You are my banker." "Sure. Of course." So, I (set up) my printing press and this afternoon I will give you a thousand dollars. That's great because now you have purchasing power that didn't exist before. You didn't have a thousand dollars. And tomorrow morning you will go to the market and you will buy stuff for a thousand dollars. You had purchasing power out of nothing.

That ability to create money confers on you a huge economic advantage. (Of course,) I will tell you, “Hey, Nic, wait a second. I did have some costs in printing money. I needed to pay for the electricity and the ink and the paper and my employees and that amounts to one dollar. So, instead of you having the purchasing power of one thousand dollars, you have the purchasing power of nine hundred and ninety-nine dollars.” And you will say, “I’m happy with that.”

That’s ‘seigniorage’ – the difference between the cost of producing a bill of money and the purchasing power of that bill of money. That is your seigniorage.

So, the biggest advantage of fiat money is you can create it without having to get gold or silver. How can I back this new purchasing power? Forget about it. That’s a relic. In fact, Keynes, has this phrase. “The gold standard,” he says, “is a barbaric relic from the past. It prevents you from creating money and when you have a crisis you may need to increase your supply of money. And if you are hamstrung because you don’t have gold then you cannot increase your supply of money. Forget about this relic from the past.”

In Motion Magazine: Isn’t it dangerous making money out of nothing?

Alejandro Nadal: Yes and no. Yes, it is dangerous. In fact, I think today it is dangerous, because, you know what, the power of making money out of nothing, or creating money out of thin air, as the expression goes, is now in the hands of private commercial banks. *They* have this power.

Section 10: The Separation of Finance from the Real Economy

< Flexible exchange rates >

So, back to Bretton Woods. Bretton Woods collapses because the U.S. reserves of gold are insufficient to keep it in place. It collapses, and now what happens? Well, you get rid of the system of fixed exchange rates because when the U.S. says, “I cannot convert your dollars into gold,” it means that the keystone of the entire edifice is gone. You don’t have a fixed exchange rate between the dollar and gold, and you immediately open the door for flexible exchange rates in the entire system.

(Then) what happens? A company in Mexico that needs to buy some Mercedes Benz trucks because it is building a road (says), “My problem is I need to get some Deutsche marks to buy those Mercedes Benz trucks. I (was) ok because we live(d) in a world of fixed exchange rates. I knew how many pesos for each Deutsche mark, and I knew what was the price of these trucks. But now that system is gone and now the exchange rate may fluctuate so I have a risk now. And Mercedes Benz has a risk with me also.

“We need to take care of that. We need to hedge against changes in the exchange rate. We don’t want to lose money in the operation. We need to hedge against that risk and the way to do that is we need to be able to move capital from one country to another. From one economic space to another. We didn't have that because Bretton Woods had controls of capital flows but now the need for those controls is gone but the controls are still in place. We need to dismantle that somehow."

But then we also realize, "Hey, there is a risk but I can do some calculations and some arbitrage." The idea of making arbitrage is taking advantage of the fact that there are differences in prices in a given market. "I can make a benefit out of changing the path of my transactions." It is very simple.

Just imagine that the value of all currencies is moving among themselves and these exchange rates are fluctuating. "What do I need to do? If today I buy U.S. dollars and with those U.S. dollars I buy Sterling pounds, and with those Sterling pounds I buy Swiss francs, and with those Swiss francs I buy Deutsche marks, at the end of that sequence of transactions I may get more Deutsche marks for each unit of peso that I spend than if I go directly to my bank and buy the Deutsche marks directly against the pesos because these exchange rates do not form a system of prices."

The end result depends on the sequence. There are disparities. In other words, the end result is path dependent.

< System of prices >

By the way, ask any economist, “What is this ‘system of prices’? I hear you guys, you talk all the time about this ‘system of prices.’” Ninety-nine percent of economists don’t have an answer to that. They don’t know. And a well-educated economist should be able to tell you that a system of prices is one in which -- regardless of which sequence of transactions you (follow) between different commodities – in an exchange of two given commodities – (again) regardless of the path that you follow in the transactions -- you will always get the same result. The price of apples expressed in shoes will be the same regardless of your transaction directly between apples and shoes, and going from apples to cheese, and then to whatever articles you want, and then to shoes – you will get the same amount. That is a ‘system of prices.’ The definition of that is given in Walras (Marie-Esprit-Léon Walras), the father of General Equilibrium Theory.

Anyway, exchange rates today are not a system of prices.

< The foreign exchange market: a playground for speculators >

So, when Bretton Woods collapses, you have these risks of exchange. In those days, everything was fluctuating so you had to make these transactions and you had a risk, but you also realize you had profit opportunities. You can speculate in the exchange market and the forex (foreign exchange) market. The foreign exchange market is now a playground for speculators.

What do you take into account? Inflation rates. If I want to speculate in the foreign exchange market, I look at the rates of exchange, at their differences, at the margin between buying Japanese yen and selling Japanese yen because I’m going to do both operations. What is the time span that is required by their bank? If I need to stay there for five days, or two days, or six hours. What is the rate of inflation? What is the local rate of interest? I look at these differentials: exchange rates, inflation, interest rates -- and then I speculate. I have a robot. I have great software that calculates optimum paths for exchanges in the forex markets of the world. And that is why today the forex markets of the world have nothing to do with trade relations, with the value of commodities that are being traded.

I don't have the number right now because they change all the time, but it's 300 times or 160 times – those orders of magnitude – greater than the value of trade flows. It has no relation with whether you are buying Mercedes Benz trucks or soy beans from Brazil. It doesn't matter because this is a casino.

The collapse of Bretton Woods opened up a gigantic space for speculation and profits and that is pure finance. That is a huge step in the separation of finance from the real economy. And that has led to a whole bunch of problems and difficulties

< Dismantling capital controls >

But with that collapse you still have capital controls. "You needed to get rid of capital controls." Gradually there was a movement to get rid of those capital controls (and) luckily for global capitalism, in 1979, 1980, Paul Volcker, the president of the Federal Reserve, appointed by (President) Jimmy Carter, he increases the leading interest rate from 4, 5% to 17% because, "you want to quell inflationary pressures in the U.S." It wasn't hyper-inflation. It was 12%, maybe.

He introduced this huge hike in the interest rate in the U.S. and that provoked – because it is a big economy, the largest economy in the world – that measure in the U.S. provokes a global recession. A very important recession. In 1980, '81, everything contracts. The price of oil and most basic commodities and raw materials drops dramatically, while the cost of servicing debts increases dramatically. You have a perfect recipe for a crisis.

Mexico exploded in 1992.

And still you have to get rid of these capital controls because this prevented you from exploiting these opportunities for speculation. "If I cannot move in and out freely, how can I take advantage of these disparities, and exchange rates, and the fact that they are moving around? (How) can I make some profits by speculating? I can't because the French require so many things for me to move in. The Japanese are so resilient with capital controls. I cannot go into those economic spaces in such a way that I can reap the benefits of speculating in the currency markets and the forex markets."

In Motion Magazine: And this is simultaneous with (U.K. Prime Minister) Margaret Thatcher saying, "I like (economist Friedrich August von) Hayek"? She initiated these changes along with (President Ronald) Reagan, no?

Alejandro Nadal: They co-exist, all these things. She's a spokesperson …

In Motion Magazine: ...of what was happening?

Alejandro Nadal: Exactly. The most important thing is that those capital controls were still there, regardless of Reagan and the rest of the world. This structure was still there.

So, how do you dismantle this thing? Slowly and gradually some things were being dismantled. But, in '79, '80, the U.S. provokes this global recession, the global economy contracts. What does this mean?

(As I just said,) it means the price of oil and raw materials collapses -- they go down. And the cost of servicing the debts that many countries had at the time -- some of them had increased their indebtedness, very importantly – (they) became prohibitive because now the interest rate goes up (and) the raw materials that you sell, especially in the South, (their prices) go down. You have a crisis going on.

Something happened in the global economy. It was that this crisis was going on and a lot of countries had to go on their knees to the IMF to ask for help. Mexico was number one. We declared a unilateral moratorium on payments. "We cannot pay our debt. We cannot service our debt. We are up to here in debts and oil -- which we are very rich in." Mexico had a lot of oil. We had just made a giant discovery of oil in offshore Campeche, but the price of oil has gone down. "We need help."

And the IMF says, "Sure. Don't worry. You came to the right place. We're going to help you and we're going to stabilize your economy -- under these conditions." And that's where you bring in neoliberalism to all these countries who request assistance from the IMF.

And the World Bank says, "Yes, I will also help you but with the same conditions that my colleagues with the IMF are asking of you, which makes sense because this is how you should do things because markets work well and you guys have all sorts of controls over markets. We have to get rid of those things. Your fiscal expenditures are too high and wages are too high. And the size of the state -- you have a company producing bicycles owned by the state! You guys are crazy. You need to downsize the state, privatize things, deregulate markets. You need responsible fiscal policy -- reduce all these expenditures you have. And you need to deregulate the financial markets. You need to get rid of these capital controls that you have."

This was the golden opportunity to dismantle the remnants of the Bretton-Woods system. "You already have flexible exchange rates but you still have capital controls. You have to get rid of them." So, the 1980s was the golden opportunity to finalize this dismantlement of Bretton-Woods.

The '90s became paradise for speculation and capital flows. The '90s is filled with financial crises involving inflow of capital into many "emerging markets" -- that's what they call these countries now – (and then) reversal of capital flows and crises like the ones that hit in 1994, 1995. You had Malaysia, Thailand, Indonesia, Korea – you name it. All over the place. Which, by the way, (follows on) other crises like the Savings and Loans Crisis, – but that was way before.

What I'm trying to say is the economic history of the second half of the 20th century coincides with this expansion of finance and one dimension of that is the forex markets. The other dimension of that is something that was already happening but it consolidated in the second half of the 20th century, which is the role of private banks as the most important source of money supply. And that is an amazing fact, an amazing story by itself.

Section 11: Private Banks as the Most Important Source of Money Supply

< Means of payment >

In Motion Magazine: What is that story?

Alejandro Nadal: Let's start with today and then we'll make a little bit of history. Today, in any capitalist economy in the world, the amount of money in circulation, in other words the amount of means of payments that allow an economy to function, the vast majority of that money in circulation is not created by the central bank of these economies, it is created by private commercial banks.

Typically, only about five or seven percent of the money in circulation in a capitalist economy today is made up of money created by the central bank, which is what we call 'high power money'. In other words, if you look at the amount of money in circulation in Germany today, or Europe, because of the European Economic and Monetary Union, or Mexico, or Brazil, or the United States, only about five or seven percent of the money in circulation is really made up of federal reserve notes, cash, and coins. The rest is made up of things that are used as means of payment, in other words as money, by agents in the economy -- and those things that are used as money are created by commercial banks.

And what am I talking about here? I'm talking about checks. I'm talking about things like debit cards. And for transactions involving huge amounts of money, I'm talking about lines of credit, credit letters, all sorts of different financial titles that are used in transactions. If I'm buying a ship made in Korea, obviously I am not going to be paying with a check. I'm going to be paying with lines of credit and other types of titles – but they don't involve cash. So, most of the transactions in an economy, 93 or 95% of an economy, are carried out through means of payment, are carried out by private banks.

< The fairy tale about banks >

Now, this is difficult for many people to understand because it's counter-intuitive, but also it goes against the idea we have been given since we were kids, that when you save money you deposit your money in the bank to keep it safe and the bank pays you an interest. And then the bank, with those deposits then lends that money to investors who demand credit to make their investments, their transactions, and they pay you interest. And the difference between the interest that they pay you and the interest that the bank pays you, that's the profit for the bank. The banks are, in other words, simple intermediaries between people who save and people who demand capital for certain transactions -- for consumption or for investment. It doesn't matter.

That's the idea that everybody has in their mind. How banks operate in our complex world, etc. The only problem with that idea is it has absolutely no validity whatsoever. It's a fairy tale. That's not the way banks operate at all. And there are many ways to demonstrate this.

One way would be if you look at the amount of savings in an economy, and you look at the amount of credit provided by the banking system, there's no relation whatsoever. If the amount of credit given by the banking system were to be limited or constrained by the amount of savings that are deposited in the banks, credit would be a tiny fraction of what it is today.

So, what is this thing called credit? And what are these deposits? How does this work? The advantage of the fairy tale is that it is very simple and easy to believe. Easy to understand, and people believe. The funny thing is … I always wondered, people believe simple stories, but they also tend to believe in complex mysterious stories. And the more mysterious and the more unreal, sometimes they are more credible. … Precisely because of that, people believe it.

Well, this is the other way around because it is a very simple story. "Some people save, they deposit – and the deposits are lent. And," -- to finalize the fairy tale -- "this operation happens in something called the 'loanable funds market'. There is a market for funds that are loanable. They are deposited and now the bank can lend them. They are loanable funds." The inventor of this expression is a Scandinavian economist called Knut Wicksell. Irving Fisher, in the U.S., also has the same terminology. “You have a market for loanable funds and in that market, what is the price? The price is the interest rate. There is a demand for loanable funds, and the supply of loanable funds, and the equilibrating price for that is interest rates.”

That is a fairy tale. That’s not how it works.

< This is how the banking system works >

And by the way, don’t think of one bank, think of the banking system in order to understand the story. Because if you think of one bank it is difficult to understand. I’ll explain why.

Let’s start with one bank. You have a project to invest in a factory for the manufacture of shoes. OK? You go to the bank, you talk to the manager. The manager asks to see the project. And you say, “Well, this is the project, these are my projections.” The banker says, “OK, Nic, you know we like you, you’ve been a client of the bank for a long time. We know you are a responsible client. You always pay your debts. My group of experts will examine the project. Come back next week.”

Next week, you come back and the guy says, “We love your project. Everybody thinks it’s great. The committee that looked at the project, looked at the economy, the economy is booming. Everything looks great. Let’s approve the loan.” So, he will tell you, “Here’s the million dollars that you requested. Here’s a contract. You sign the contract. We have just opened an account for you here in the bank and if you go to the ATM machine you can put in your debit card. Here is your check book and your debit card." And you go into the ATM and you say, "Wow, yes, one million dollars is credited to Nic. Yeah, OK."

And then you go out with your checks and your debit card, you start doing all sorts of transactions. And remember, this is fiat money and everybody will accept your check, you know. And the guy selling whatever that you need will accept your check because he knows that this check that you gave him from Citibank, he is going to deposit that in his account in Bank of America, and Bank of America and Citibank will settle the account in a clearinghouse and the accounts will be balanced by the end of the day. And you know that. And tomorrow you know that, and your supplier of cement knows that, and next day he will go up to his ATM and he will see that, "Oh, now I have now nine hundred dollars credited to my account because this was the amount Nic paid me yesterday."

The banks recognize all of these titles and documents and instruments, means of payments, among themselves. That is why you have to think of the entire banking system. They all recognize each other through the clearinghouse.

What has been happening is, first of all, the loan that your bank gave you was a piece of paper saying that if you needed a million dollars in cash right now they would give it to you. "But I know that you don't need a million dollars in cash right now because I have a series of calculations and my routine. I have a hundred years in the business. I know that the only thing I need to do is keep some in reserve because you might need $50,000 in cash tomorrow. I need to keep some reserves because I know you may need that. OK?"

But really what happened is we signed a paper saying that I promise that I will put at your disposal a million dollars in cash, cash meaning high power money emitted by the central bank. If you need greenbacks, I will give you a million of greenbacks. It's a promise but I know you don't need the million dollars right away -- but I do need to keep some reserves.

On the other hand, you signed a contract and you now have the obligation to give me back a million greenbacks, plus interest. That's your promise (over) a certain period of time. That's a contract that you signed. And the guy, your supplier of cement, he received the promise (on) your part that you will give him $900 in cash. Your check means, "I promise to give $900 in cash whenever you need it. If you go to the bank today with your proper ID, go to my bank, my bank will honor this promise and will give you $900."

So, we are talking about promises. The bank promises you. You promise your supplier. Your supplier goes to the bank and the bank recognizes that promise, and takes that check into his account, and the clearinghouse will honor that promise. But really nobody took the greenbacks and gave you the million dollars in greenbacks. You didn't give $900 of greenbacks. We are dealing with promises to provide greenbacks.

But it's money. It's money. It's used as means of payment. You got your cement and started operating. You hired people. You also paid them by checks, or your bank credited their account electronically, because you gave orders to your bank, etc. There's no physical transmission of greenbacks. Ninety-five percent of the transactions in the economy are carried out in terms of these means of payment emitted by private banks.

It doesn't mean that the banks don't need deposits. They want all the deposits they can get from the public, from people who save money. The bank needs to have some cash in reserve. But if the deposits are reduced and people don't always make deposits, and the bank finds it doesn't have enough cash reserves to keep safe all these clients that I have coming around, as a bank I benefit from these contracts because you, if you are my client, you have to pay me in greenbacks. Not a little check saying I make a promise. No, no, no. Where are the greenbacks? You need to pay me in dollars and with interest. I will benefit from all of these operations. I have an interest in keeping them growing.

Now, if I run low on my reserves I need to do something about that to keep the thing going. So, what I will do is I will borrow some cash from other banks who have an excess of reserves and I will pay an interest on that because I need to maintain my reserves. And if all of us banks are running into the same problem, which means we are lending a lot of money and our loans are increasing and we don't have enough reserves as a system, guess what? The Federal Reserve will come to our help and provide us the cash needed for those reserves. And of course, we will have to pay interest on that.

< The Federal Reserve accommodates its policy to the needs of the banking system >

But this means something really profound. It means that the Federal Reserve not only does not control money supply, but it accommodates its policy to our needs as a banking system. Now this is a major, major thing. It means that what we think of as a central bank in reality is at our service.

I know I am making a bit of a caricature of the whole system, but essentially, I think that is how it works. You know people think that the government or the Federal Reserve will impose regulations on reserves. Yes, sure, of course, when there is need for reserves the Federal Reserve will come into back up the banking system. Why? For a very simple reason. The Federal Reserve doesn't want the economy to collapse or to slow down. The government doesn't want the economy to slow down. So, it's happy with these autonomous decisions of the Federal Reserve.

In Motion Magazine: So, the Fed's money is the money we give them in taxes?

Alejandro Nadal: No. The Fed is not the government. That is the Treasury.

In Motion Magazine: The Fed itself is private banks?

Alejandro Nadal: It's private banks. It's not the government.

In Motion Magazine: Even the people making the decisions come from other banks?

Alejandro Nadal: Sure.

In Motion Magazine: What does that mean as far as who runs the country?

Alejandro Nadal: What composes the dominant class or the elite in a country like the U.S., the driver's seat? Somewhere in that important seat is the financial and banking sector.

Section 12: The Banking and Financial Sector

< Banks are multinational corporations >

In Motion Magazine: Has this process gone beyond country borders?

Alejandro Nadal: Oh yes, in many, many ways. These banks are multinational corporations in and by themselves. Citigroup owns the largest bank in Mexico, for example, which is a very important source of profits for them. And they are all over the place. And they speculate.

We just spoke about banks, but maybe that is not even the most important part of the banking and financial sector. It is not the most important sector. You still have the stock exchange, the forex markets, and most importantly, the market for financial derivatives, and another market which is the shadow banking system and the over-the-counter-transactions which are not regulated by anyone.

When I focus on the banking system, everybody is working on that, but much more difficult to understand is how do these other financial markets operate and what are the implications.

In Motion Magazine: Who are those people?

Alejandro Nadal: They are the 0.001 percent. They don't see the world except through the lens of some numbers, dynamic flows of currencies and instruments and derivatives. The institutions are more well known. You have hedge funds, pension funds, gigantic ones, that get involved in these financial transactions. You have the banks and other financial agents. There are many things here that are very opaque.

One of the things that I do is I look at the apparent implications of this and one of the things that comes out of this is if you look at macroeconomic policies, as I tried to do in that little book, they are geared to the interests of the financial sector. They are not organized for the objectives of economic development, or sustainability. They are organized around the needs of the financial sector.

What does the financial sector need? Well, first of all, it needs to fight inflation because inflation is really bad for the financial sector. Then it needs stability.

In Motion Magazine: Because inflation devalues their money?

Alejandro Nadal: Well, yes, exactly. If I lend you money and then the inflation rate is very high, even if I try to earn interest I lose money because when you re-pay me the purchasing power of that money is less. (Also) the financial sector discovered that there was another enemy which was called deflation and they cannot decide which is worse. That's when the prices are going down.

So, the financial sector exploded, and maybe it's not an exaggeration to say, but the global economy caters to the needs of the financial sector. And that's a terrible thing because we do have environmental and social problems that are critical and if we are thinking of catering to the needs of the financial sector, then we are moving in the very wrong direction. That's not a good road to take.

Section 13: Macroeconomic Priorities for Social and Environmental Sustainability

< Urgent for our own survival >

In Motion Magazine: In the last portion of your book you offer various proposals for macroeconomic policies which would place social and environmental sustainability at the core. Can you talk about the main ones?

Alejandro Nadal: As I just said, maybe it's not inaccurate to say the global economy is organized around the priorities and interests of the financial sector and we need to change that radically. What we need to do and it is urgent for our own survival, is to organize macroeconomic policies around the priorities and needs of, let's say, sustainability in a broad sense.

That would include the question of reducing social inequality and increasing the capacity of the environment to resist the onslaught that we have unleashed on soils, water, genetic resources, biodiversity, climate, the atmosphere, etc. We need to organize our economies in a different manner. We are not moving in that direction whatsoever.

To do that, I don't have a recipe for that. You probably need to change the political landscape and that's not going to happen until we have a very serious crisis on our hands that tells people that we really need to get our act together. But if you asked me today, "What would you do?", we could find some general principles of how to organize matters so that we could advance in that direction of sustainability – social and environmental sustainability.

One of the principles would be immediately putting a rein on, controlling, the main components of the financial and banking sector. This would be urgent because without that the Titanic will continue on its path to the iceberg.

We need to reorient how money creation is carried out. We need to reorient credit. Just imagine, today, poor campesinos worldwide, and I'm sure you have encountered this from your contacts with La Vía Campesina, they are not eligible for any kind of credit, for loans. Credit for small-scale agriculture worldwide is at a very, very low level. In Mexico, it's zero. I would say it *is* zero. You need to do something with the financial and banking sector. You need to control that and regulate that. This would allow you to recover your monetary policy as an instrument for development.

Fiscal policies – you need to do something with fiscal revenues, and move away from this idea of, ‘You cannot touch the one percent because then capitalism will go elsewhere.’ That’s absolute rubbish. You need to change that. You need to increase expenditures in education. Just imagine environmental education. Education in general. Health. Infrastructure for environmental expenditures needs to be increased seriously. In Mexico, I can tell you right now that expenditures that can be quantified as environmental investment are marginal. Public expenditures in these things are marginal.

You need to re-regulate or revisit trade relations. This is terrible. Once again, if you look at small-scale agriculture and look at, I already mentioned credit and loans are at a very low level, or zero, if you look at public expenditures for these social groups, they are very low. Even if you focus against poverty elimination, that’s not sustainable, it doesn’t make a big difference. You still have all these problems. But in addition to that you have trade relations that have created very unfavorable economic context for these social groups, in terms of prices. Very adverse price structures against them. Expensive inputs, everything they need has gone up but the prices of their output have either stagnated or gone down. The terms of exchange for these groups are very unfavorable.

Combine these things: unfavorable terms of exchange, loan credit, and very small public support – you have a catastrophe. You have a social and environmental catastrophe because these guys (the farmers and peasants) are curators of the environment. Certainly, they are the curators of genetic resources. They are the guys that select seeds. ‘This corn is very good. This one is not so good.’ If you dismantle the social fabric that underpins this capacity of communities to select seeds and conserve genetic resources – if you undermine that, then you have a big, big problem in your hand. You don’t notice it today, but you will in a few years down the road.

Look at wages. Look at key processes for the economy. We need to reorganize the entire macroeconomic policy package and that means, yes, re-regulating a whole bunch of economic activities.

< Growth is the engine >

In Motion Magazine: You say in your book that growth is the engine of capitalism. It’s what makes it keep going.

Alejandro Nadal: Well, capitalism has in its DNA letters that spell growth. Capitalism is accumulation, growth. What we call companies or firms in a capitalist economy are what Marx calls -- very accurately I think … -- “private centers of accumulation.” They need to grow because if they don’t grow the competition will eat them. Every unit has to keep on growing. And, if you look at the formula for the circulation of capital, capital implies growth.

In Motion Magazine: Which makes a person rather anti-growth. But you point out that that's a classist approach to life. There's a lot of poor people in the world and they shouldn't be living their lives in that manner.

Alejandro Nadal: Absolutely.

In Motion Magazine: Is it possible to have a sustainable society while also growing in order to deal with the situation? The changes that you propose in your macroeconomic package are reforms, current ones, they are not new ones.

Alejandro Nadal: I don't talk a lot about these things because I don't have a very sophisticated set of answers to the questions that are really the urgent questions that you are posing. And those are *the* questions that we face.

My simplistic take on this is the following. First of all, the world economy *can* have growth in a sustainable manner, that can be growth that is environmentally responsible. I think that is possible. And socially responsible too. But for this to happen you need to have some kind of democratic social control over the forces that are behind growth. I guess what I'm saying is growth is too important to leave it to the capitalists. -- I'm paraphrasing the idea of, "War is too complicated to leave it to the military." Growth is too important an issue to leave it to private capitalist centers of accumulation.

So, what do you need? As you point out, you have half of the population of the world, I think more than that, living in poverty, in conditions that need to be improved urgently. We need growth for that. We need socially-, democratically-supervised, monitored control over this growth.

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