

Identity and change in the Network Society

Interview with Manuel Castells by Harry Kreisler

<http://globetrotter.berkeley.edu/people/Castells/castells-con0.html>

Welcome to a Conversation With History. I'm Harry Kreisler of the Institute of International Studies. Our guest today is Manuel Castells, who is Professor of Sociology and Professor of City and Regional Planning at the University of California of California at Berkeley.

A social theorist, Professor Castells has won the C. Wright Mills Award, and he has received the Robert and Helen Lynd Award from the American Sociological Association for his lifelong contribution to the field of community and urban sociology. Professor Castells has published twenty books and over one hundred articles in academic journals, and co-authored or edited fifteen books. His works are international, comparative, and have been translated into many languages.

His publications include a three-volume trilogy on the Information Age: *Volume I: The Rise of the Network Society*, *Volume II: The Power of Identity*, and *Volume III: End of Millennium*. Anthony Giddens, Director of the London School of Economics, wrote in a review of the trilogy, "It would not be fanciful to compare the work to Max Weber's *Economy in Society*." And G.P. Zachary, writing in the *Wall Street Journal*, wrote, "Adam Smith explained how capitalism worked and Karl Marx explained why it didn't. Now the social and economic relations of the Information Age have been captured by Manuel Castells." His new book, *Reflections on the Internet: Business and Society*, will be published by Oxford University Press in 2001.

I. Background

influence of parents ... growing up in fascist Spain ... questioning authority ... flight to Paris ... education ... attraction to sociology

II. Focus of Research

first teaching position at Nanterre ... 1968 Movement in Paris ... the impact of the sixties ... cultural changes ... the importance of identity

III. Doing Social Theory

theory ... empirical research ... social theory ... influences ... comparative and global perspective

IV. The Network Society and Organizational Change

definition and dialectic ... implications for global economy ... implications for the state ... case of European Union ... The Fed as an actor ... implications for warfare ... technology and bureaucracies

V. Identity in the Network Society

the reassertion of identity ... power to excludedigital divide ... case of the anti-globalization movement ... the power of mind ... the women's movementbattle over images and ideas

VI. Conclusions

individualism and communalism ... advice for students

Background

Professor Castells, thank you for being here today.

Thank you, Harry.

Where were you born and raised?

I was born in Spain. I was born in a small town, La Mancha, like Don Quixote. I grew up in several places, but mainly in Barcelona. I stayed in Spain until the age of twenty, when I had to move to Paris.

Tell us about your parents. How, in retrospect, do you think they shaped your character?

My parents were very good parents. It was a conservative family -- very strongly conservative family. But I would say that the main thing that shaped my character besides my parents was the fact that I grew up in fascist Spain. It's difficult for people of the younger generation to realize what that means, even for the Spanish younger generation. You had actually to resist the whole environment, and to be yourself, you had to fight and to politicize yourself from the age of fifteen or sixteen.

So in a way, you instinctively came not to believe in the authorities?

By definition, authority for me was betrayal and lie.

Were you active in politics at all?

Very much. I joined the student anti-Franco movement, and I entered the university at the age of sixteen. I was so active that by the age of twenty, I was a political exile in Paris.

So the authorities knew about you and wanted you either in jail or out of the country?

No, out of the country, no. In jail, and tortured.

I see.

That's what happened, unfortunately, to all my friends. In 1962 at the University of Barcelona, the police raided the campus, and students were tortured, sent to jail, and spent quite a few years in jail.

And this was happening in the heart of Europe?

But remember, at that time, the Pyrenees were real, very real. Spain was only, in fact, supported and acknowledged by the U.S. government. Most of the European countries were boycotting most relations with Spain, [though] not diplomatic relations.

So when did you leave the country? What education did you get in the country and what out of the country?

I was studying both law and economics at the University of Barcelona. I studied four years, but I couldn't finish. Spanish degrees were five-year degrees at the university. So I finished in Paris. I finished first law and economics, and then I went into a Doctorate of Sociology at the Sorbonne.

What drew you into sociology and to the topics that you wound up working on?

I would say my interest in social change. If I had been in a normal country, law would have attracted me very much, and economics also; but I was driven to the necessity for social change, first in

Spain and then later in France. Sociology was a discipline that was more intellectually open, less dominated by a narrow view of the world, that things are as they are and you cannot move them. So the notion of integrating my intellectual activity, my professional activity, and the possibility of contributing to some form of social change and betterment of society was appealing to me, as I would say, to most sociologists.

Focus of Research

Where were you in the sixties? You were in France; were you still a student?

I became a very young Assistant Professor at the University of Paris at the age of twenty-four in 1966. I was appointed to the faculty at Nanterre, a new campus of the University of Paris, where there were professors like Alain Touraine, René Lefebvre, and Hernando Cardoso. I was there as an Assistant Professor of Sociology in 1968, and in that department on that campus the 1968 Movement started. So I would not say I was a leader of the movement, but I was certainly a participant in the movement. The leader of the movement was my student, Daniel Cohn-Bendit, now a very important political figure in Europe.

How did that movement affect you, do you think, in retrospect?

I think very fundamentally. Myself and my analysis and my theory. Mainly, in two ways. First, it showed me, concretely, that things could change, that the institutions that seemed immobile could be shaken, not just by protest, but by protest articulated with the interests and values of society at large.

And second, it showed me that the old bureaucratic environment of the industrial society was already, to a large extent, undermined.

That the issue was not, in fact, the division that at that point dominated the world, capitalism versus socialism, but something much more important. The issue was the expression of people's values and personal projects against the bureaucratic institutions, both socialist and capitalist. These institutions were trying to suppress cultural activity and the redefinition of life according to one's values. So in that sense, the 1968 Movement in Paris was very closely connected to the 1960s movement in Berkeley and in the U.S., which were not, by and large, anti-capitalist movements, but were movements that translated the cultural revolt and an expression of yourself beyond the institutions of societies.

You write in your trilogy, talking about the broader impact on society, "The cultural movements of the 1960s, in their affirmation of individual autonomy against both capital and the state, placed a renewed stress on the politics of identity."

Absolutely. And, actually, they had tremendous consequences, even on the technology of our society. This wonderful technological revolution was shaped by the cultural values of freedom. For instance, the simple notion of a personal computer -- a personal computer, certainly in the Soviet Union, was subversive by definition; typewriters were forbidden. And in the capitalist society, a personal computer was not something that was even thought of by major companies. It was still the time when IBM was saying that by the year 2000 there would be between five and ten computers in the world, or the time in the 1970s when the leader of the Digital Corporation said, "Who would want to have a computer at home?"

This notion of appropriating [technology] for the values and interests of the individual, of groups, of communities -- the most extraordinary transformation in technology -- was really alien to that culture. Through the 1960s cultural movement, our categories of thinking changed, and, to some extent, our identity. Personal identity, but also all kinds of collective identities -- religious, national,

gender, ethnic -- appear at the forefront of our societies. The entire rationalist world that both liberalism and Marxism had produced, in terms of diluting who people are through abstract categories such as "worker" and "consumer" or "the working class" -- these abstractions were, in fact, receding on the basis of a redefinition of cultural values and one's identity.

What you're talking about became the primary focus of your studies, namely the interface between technology and the social milieu -- the social structure in which it appears -- and the dynamic between those two.

Exactly. It's what I call the relationship between the net and the self. Many people would agree that our societies are being totally redefined by electronically based information technologies, and this is creating a new world -- not the technology itself but the uses of this technology on the basis of social and economic and political interests.

But what I think is specific to the kind of research I have tried to do is to show that societies, as usual, are not simply determined by one-dimensional development -- let's say, techno-economic development -- but by the interaction between techno-economic development and what people want to do with this techno-economic development, and in terms of who they are and what they believe and what they would like to happen in the world. This has been quite fundamentally built in terms of identity, of different kinds of identities, in the last ten years.

Our world seems to be shaped by the interaction between these two trends. When the two trends get together, then you have an extraordinary socially rooted technological development expressing identity. When they split and are opposed to each other, like, for instance, in the case of exclusion of many people in the world from the networks of power and information and wealth, then it's identity

versus the networks. And in that sense, we witness the potentiality of social crisis of a great dimension, because the way we work and the way we feel don't go together.

Doing Social Theory

You've given us some formidable insights into this nexus that you're talking about. Before we go into that further, let's talk a little about being a social theorist, thinking about the world, using your imagination, but also staying grounded in empirical reality. What does it take to do social theory? What skills?

For me in a very personal version, it's a combination of being attentive to the world and rigorous enough to capture what happens in the world, and then being able to theorize, generalize, and take the broad picture. What happened to me is, on the one hand, I was trained in Paris, I was trained by, in my opinion, the greatest theoretical sociologist of my time, Alain Touraine.

Both Alain Touraine and all the other major social theorists -- Foucault, Althusser, Polanyi -- were, to a large extent, able to provide broad views of society; but their connection to what actually was happening in the world was [limited]. The case of Touraine was better, but in most cases, the training I would receive in Paris was purely abstract and theoretical. I also learned methodology, but that was not the emphasis. The emphasis was on theory. In 1979, after I had been professor in Paris for twelve years, I accepted a professorship in Berkeley. One of the main reasons that I moved to Berkeley is that what I really was interested in was combining empirical research with theorizing. In the American university system is the other problem.

There is, in most cases, a complete split between empirical research and theorizing. So in France, it's just theorizing, or here, of course,

just research. The American university system is, by and large, empirically oriented, and theory is kind of a marginal operation. In a department like [sociology at] Berkeley, theorizing was important, but most departments just would emphasize empirical research. So what I think is central in my intellectual activity is that I do what some people have called "grounded theory." That is, I literally cannot think without observing and understanding what's going on in the world. It's a lot of work to do that. But at least I feel that I am not playing with words. I'm not constructing, deconstructing, reconstructing, but actually trying to make sense of what I've observed. So this for me is social theory. The rest is philosophy on the one hand and sociological artistry on the other.

What are the sources of that focus in your background? What led you to be that way?

I would say two things. First, my double combination of French training and American academic involvement, which came even before I came to Berkeley, because I was a visiting professor several times at the University of Wisconsin and other places. On the other hand, I would say, my political interest in social change taught me the dangers of being extremely dogmatic and ideological -- if you try to mold the world into your categories, then it doesn't work. And if it works, it's worse, because then that means that you are struggling to fit the world into what you think it should be, rather than starting with what's happening really in life.

So I would say someone [has to be] interested in social change. While having general ideas about society, has to be very attentive to society, or in other words, doesn't proceed with social change. You have to be pragmatic and realistic. And so the combination of trying to actually influence social change and not simply [study] ideologies about social change. And on the other hand, this institutional environment being a mixture of American and French academic worlds would help.

Ultimately, you can say that my biography, being Spanish, and therefore forced to think about social change; French, therefore theoretically trained; American academic, therefore sensitive to empirical observation and methodology -- this combination of my life is expressed in my way of theorizing.

What is quite striking in your work is the search for case studies for comparative purposes. Your journey led you to make the globe your laboratory and to look for all kinds of cases to make comparisons. That's been important.

At the age of twenty I had to reconstruct my life in a different country and different culture, and then later on I came to the United States. I am tri-cultural, if you wish, at least. And also, I had, very early, a strong interest in Latin America. I was first in Chile in 1968 and I came in very close contact with people like Hernando Enrique Cardozo, currently the President of Brazil, but my personal friend for thirty-five years.

When I started my work on the information technology revolution in 1983, 1984, at that time it became obvious to me two things: that something very important was going on, and that in Europe, from where I was coming, we didn't have a real feeling for it. Certainly, we knew about electronics and everything. But to feel it as I felt it in 1980, for instance, when I landed in Berkeley, it's a very different thing than just understanding; so it was clear to me that something very important was going on and I wanted to understand it. But it was also clear that to understand it was not to understand just Silicon Valley or just California, but to see how this extraordinary transformation would interact with cultures, societies, and institutions throughout the world. It's like someone would have studied the Industrial Revolution and capitalism only in England. So the notion was how to build an observation system in which the theory would emerge from the simultaneous observation of as many places as I was able to observe. I ended up starting at the same

time, looking at California, Europe, Latin America, the Asian Pacific, and the Soviet Union.

The Network Society and Organizational Change

Your trilogy is on the network society. Help us understand the defining features of that society and how it's different from what came before.

Well, as you well said before, in fact, my trilogy is on the interaction between the network society and the power of identity and social movements. It's that interaction which, I think, defines our world. So in that sense, my trilogy is one, two, three: *The Network Society* is the new techno-economic system; *The Power of Identity* is the key - the salient trend, in terms of social movements and politics, adapting, resisting, counteracting the network society; and then the result of these two elements expresses itself in the macro transformations of the world, which I described in the third volume, *End of Millennium*.

The network society itself is, in fact, the social structure which is characteristic of what people had been calling for years the information society or post-industrial society. Both "post-industrial society" and "information society" are descriptive terms that do not provide the substance, that are not analytical enough. So it's not a matter of changing words; it's providing substance. And the definition, if you wish, in concrete terms of a network society is a society where the key social structures and activities are organized around electronically processed information networks. So it's not just about networks or social networks, because social networks have been very old forms of social organization. It's about social networks which process and manage information and are using micro-electronic based technologies.

And when that happens -- when this new structure comes into play - the capacity of the society to process information and to learn has extraordinary consequences, does it not?

Absolutely. Because, let's take an example. The global economy: the global economy is not the same thing as the world economy of a highly internationalized economy. It's not. Because the global economy is based on the ability of the core activities -- meaning money, capital markets, production systems, management systems, information -- to work as a unit in real time on a planetary scale. Meaning that, at this point, we can process, and we do, billions and billions of dollars in seconds. And that can change from values to values, from markets to markets, from currencies to currencies, which increases the complexity, the size, and, ultimately, the volatility of global financial markets around the world. Which makes, in fact, impossible any kind of autonomy of financial markets in one country or one place vis-à-vis what's happening in the global system; which, therefore, makes extremely difficult any kind of monetary and budget policy which does not take into consideration the global financial market.

These changes -- economic policy, economic autonomy of governments, and, ultimately, the relationship between the governments and the economy -- are only possible because of deregulation and liberalization that took place in the 1980s in most countries, and because of the existence of an infrastructure of telecommunications, information systems, and fast transportation systems that provide the technological capacity for the system to work as a unit on a global scale.

One of the institutions that's in the path of this phenomenon is the state.

Absolutely.

What does it discover? That, in essence, it's losing control of some of its ability to manage its own economy, to ensure its own social welfare policies, and so on?

Absolutely. It doesn't mean that the states disappear, the nation state's not going to disappear. Let me just first say that. But the degrees of freedom of nation states have shrunk to an extraordinary degree in the last ten years. In some areas of the world, it has become explicit. Let's take the example of the European Union. Governments from the continent, the entire continent, decided to get together so that together they could have some level of bargaining power and some leverage to control global flows of wealth, information, and power. And they built a series of institutions which is not a federal state. It's still based on nation states, but also on supranational institutions which share sovereignty and also decentralize sovereignty to local region governments. These European states also subcontract sovereignty to international institutions, such as NATO, in terms of the armed forces.

So what we have, for instance, in the case of Europe, is a complex system of institutional relations, which I call the network state, because, in fact, it's a network of interactions of shared sovereignty. Under different forms, you have a similar situation in most of the world. In Latin America, some states are with others, but the main thing is that the key economic conditions are governed in connection with international institutions like the International Monetary Fund, through different trade treaties, MERCOSUR or the Andean Pact or the connection to the North American Free Trade Agreement [NAFTA]. So in other words, states operate, still exist, but operate as actors of a much more complex and interactive network.

Even in the case of the United States, few people think that the United States can act alone and impose conditions, both in military or economic terms. To start with, it's not the U.S. Government but the Federal Reserve Bank that has some kind of economic policy, but

this economic policy is highly conditioned and shaped by the interaction with the global financial markets. Alan Greenspan does not control the global financial markets. He follows and creates conditions for the economy to perform better under the conditions or the constraints created by the global financial market.

We could say the same thing in technology networks, in flows of trade and flows of information. So the notion here is not the disappearance of the nation state; it's the transformation of a world based on sovereign nation states into a world of interdependence, of nation states sharing sovereignty.

So someone like Alan Greenspan is better positioned to respond to these global flows than someone in another state, for example?

I would say Alan Greenspan is an independent economic authority. In principle, after being appointed, he doesn't follow the instructions of the president or the instructions of the Congress. So in that sense, let's say, the International Monetary Fund is largely autonomous of a specific set of instructions. Alan Greenspan is largely autonomous. The European Central Bank is largely autonomous. So, ultimately, all these decision-makers in the world economic processes have to interact with the global financial markets; with the other decision-makers in these regulatory policies, too; and with their political institutional environment. It's a meta-network of all these networks.

The impact of this information technology is evident even in the conduct of war. It's fundamentally changing how states that need to go to war will go to war.

Definitely. On the one hand, because of the post - Vietnam War syndrome in the United States and post - Algerian War syndrome in Europe, public opinion in most developed countries -- I would say in all developed countries -- is against war. Not only in terms of general

values of peace, but people simply don't believe that it's worthwhile to die or to have a fellow countryman dying for a vague, complicated, strategic geopolitical consideration. The Cold War, at least, justified for many people the notion that you had to sacrifice, because the other empire is going to get you. After the end of the Cold War, the dramatic threat posed by a North Korean invasion of the United States is not credible. The notion that Iraq was going to strangle the oil supply of the West, in fact, was halfway credible for a while and then disappeared. No one thinks that Iraq is really a threat for the Western world. At the most, it poses a threat as an element of the terrorist network that is part of the new geopolitics, but that is a different kind of war.

So because of that, the whole strategy has shifted to what I call the development of "instant wars" that are short enough and overwhelming enough to the adversary that public opinion doesn't even realize what's going on. I would say that part of the Gulf War was the beginning of this strategy. I say part, because it took months; but when it actually started, it was one hundred hours to finish. The Kosovo war against Yugoslavia was planned for three days. It just turned out differently.

But the notion here is that through technology, you target the key capabilities of your adversary, and you try to finish the war in a few hours or in a few days. And this is the kind of war we are moving to. On the one hand, technology allows it. On the other hand, public opinion will tolerate only this kind of war. There are dozens and dozens of dirty, slow, killing wars in the world -- the Sudan Civil War has resulted in two million people killed in the last twenty years. So this is another of the extraordinary disparities in the world. Through technology, the rich countries are able to do instant wars, while the poor countries go through machete wars for years and years.

One of the constraints on this war-fighting is the flow of information. It's not just that people no longer feel there are values worth dying

for, but their ability to get information about what's happening on the battlefield is the kind of information flow that leaders who want to engage in war have to respond to, and are therefore forced to get out of the war quickly.

Absolutely. The most advanced thinking in this line of argument is in the Rand Corporation. They have detected the emergence of two kinds of major military political tactics. One is the emergence of what they call "no politics," as opposition to real politics; that is, the ability to work on information, values, perceptions in our society and also in societies in the world at large is much more important. This "no politics" is much more important because it builds the public and institutional support for the kind of wars that we proceed with. And the other, in terms of military tactics, is something that is interesting, namely, the development of what is called "swarming" as the key military tactic, which is being experimented with by all major branches of the armed forces in the United States. The marines, probably, are the most advanced in this thinking, which is based on the idea of splitting the traditional large units and creating a number of self-sufficient, highly powered autonomous units which form the networks that are assembled and disassembled according to specific needs and operations.

These units can become networks only on the basis of strong communication technology capabilities and direct access to information sources, which are organized in a computer network and then accessed through computer networking. (Not on the net, because that would be open code.) So the notion here is of moving from vertical bureaucracies and vertical organizations of large armies killing each other for centuries, to what we are now seeing emerging as small units with a high power of destruction based mainly on air power and naval supply, and at the same time, equipped essentially with information and communication. If you don't have your information and communication, you are blind and you are destroyed.

So what we're seeing in today's world is a meeting of technology with bureaucratic organizations that essentially have to change, if they're going to adapt to the problems that they confront.

Definitely. You see at this point the contradiction between the ability of networks to be more productive and more competitive, and the fact that most societies are still rooted in vertical organizations in a bureaucratic logic: "I am here, I am big. I can destroy you if you move because I'm bigger." It's interesting, in the Silicon Valley culture there is this saying, "It's not the bigger that wins, but the faster."

One of the legendary business tycoons in the world, Barnave, who is the leader of the major engineering company, BBM in Sweden, in one of the meetings we had last year said, "Well, my company is the largest engineering company in the world." They're building in Thailand, China, India, South Africa, etc. "We are predicated on the principle, which is complimentary to this, if you're the biggest and the fastest, then you win." But what he would not challenge is the notion that if you have to choose between size and resources, and agility and adaptability, there's no question that agility and adaptability wins.

This is simple to understand, but difficult to actually implement, because people who are currently in power in bureaucracies, in political organizations, in large corporations, in universities, are there because they have gone through the hierarchy, they have their clientele, they have their systems of support. All this has been pushed out by the out-competing logic of networks. And therefore, they will resist to the end. But by resisting, they bring the organizations down with themselves.

Now, it doesn't mean that networks, by definition, are wonderful. It can be networks of destruction. Networks don't have personal feelings. They kill or kiss. But the issue here is that first you start

with a network which is equipped with information technology. That's the key. Then what the network does depends on the programming of the network, and this is of course a social and cultural process.

Identity in the Network Society

In addition to organizations -- hierarchical organizations; in some cases, dinosaurs, if you will -- having to adapt to this new reality of a network world, it's also the case that social movements and social groups have to respond. You write, "In a world of global flows of wealth, power, and images, the search for identity -- collective or individual, ascribed or constructed -- becomes the fundamental source of social meaning." Let's talk a little about that, the irony of how globalized flows on the one hand lead to a redefinition, a reassertion of identity in localities. And let's relate it, for example, to the environmental movement.

That's a very good observation, because yes, it is paradoxical. And, in fact, it's a paradox that I found empirically in my research; I didn't start like this. I started from the technology side, the network side, and then I found that part of the story about the transformation of power did not correspond to that logic, but to the logic of resisting the domination of values implemented through these very effective networks and trying to provide alternative meaning.

Here's the point: On the one hand, these networks are extremely powerful. But on the other hand, they include only what is interesting from the point of view of the values or sources of interest that program this network. Let's say, the global capitalist network, left to itself, will include in the network companies, countries, regions, people, that enhance the value of this network in money-making terms. This is an extreme situation, but it's not completely away from what's happening in the world.

Then, people who don't have this value, don't have the education, don't have the infrastructure, don't have the institutions, what do they do? They cannot live without these networks which provide them with everything and capture any wealth from anywhere through processing everywhere. At the same time, if they cannot actually contribute to these networks, they are switched off. So we observed two sorts of reactions. Some people in some countries, in some regions, are saying, "Well, if you don't value me as a producer of bananas, I'll produce cocaine, and then I become part of the cocaine network, and then what I do is smuggling; or I sell women and children," and that goes into the so-called perverse connection.

The global criminal economy is a new phenomenon. It's interconnected throughout the world. And at this point, it's equivalent, more or less, according to the IMF, to about \$1.5 trillion in the world, which is about the GDP of the United Kingdom. So, that's one reaction.

The other reaction is to say, "Wait a second. If you exclude me, in terms of your values, from your network, I exclude you." What I call the exclusion of the excluders by the excluded. And then they say, "You may be very rich and very technologically advanced, but I have gut. And my gut is better than your money, and that's different." Or "I have my historically rooted ethnic identity. I am a Chiapas Indian. As a Chiapas Indian, I don't care about your North American Treaty of Free Trade, because you will have to acknowledge me, or I will die for it. And that provides meaning to my life." Or, "I am a woman. And from the basic values of affirming my specifics as a woman, my equal rights as a woman, my reconstruction of a culture as a woman, I don't care if this is not valued in your network." So I think this is the extraordinary development that we are seeing in our world.

Now this is, on the one hand, very interesting, but on the other hand, it's potentially damaging to the coexistence in society, because

all societies are built around a combination of instrumentality -- what we do for working, for organizing -- and meaning. Instrumentality and meaning. If we break the world, as we are doing, into instrumental networks with no meaning for most people, and pure meaning but no instrumentality -- survival communes -- it becomes a very dangerous world, a world of aliens, aliens to each other.

Looking at what happens on the ground, seeing that the reaction to these networks can be a reassertion or a redefinition of identity, helps you understand the complexity of what's actually going on in the world. So getting a computer today doesn't necessarily change the world. It's really about how people use the computer and apply it. An oil company could distribute computers in Nigeria and suddenly discover that they're being used to organize protest movements, both locally and internationally.

Absolutely. You see, and it goes both ways. On the other hand, as much as I think the Internet's an extraordinary instrument for creation, free communication, etc., you can use the Internet to exclude, because you can exclude in terms of the access to the network, the digital divide. But you can also exclude in terms of the culture and education and ability to process all this information that has happened on the net, and then use it for what you want to do, because you don't have the education, the training, the culture to do it, while the elites of the world do.

So that's one thing, but on the other hand, this phenomenon is also expressive of the surprises that history prepares; that's why you cannot predict the future, because history is fortunately full of surprises. One of the greatest surprises is that suddenly, all these movements that were supposed to be traditional, that were supposed to be unable to understand modern processes, they are organizing themselves on the Internet, and they are using information technology and information systems to actually introduce

counter-trends to a one-dimensional logic of pure money and instrumentality.

The environmental movement is, first of all, a science-based movement. What most environmentalists do is, with the support of scientific experts, assess through the multiple interactions of systematic thinking what we are doing with our planet, with our environment, with our breathing, with our drinking, with our everything, by measuring or trying to measure and trying to extrapolate the consequences of certain types of modes of production.

Let's be clear. If we include, with no change in the modes of production and consumption that we have today, the 50 percent, 60 percent of humankind that is excluded from this level and mode of production, we destroy the planet. So we can only survive on the basis of extreme inequality. But on the other hand, the uses of the Internet are allowing the environmental movement to be, at the same time, local and global. Local, in the sense that people are rooted in their problems, in their communities, in their groups, in their identities, but then they act globally.

So it's not as activists used to say, "think globally, act locally." No, no: think locally -- link to your interest environment -- and act globally -- because if you don't act globally in a system in which the powers are global, you make no difference in the power system. And that, in spite of all my doubts about some of the elements in the anti-globalization movement.

But if I take the vision of a social scientist and not that of a politician or someone who would be interested in determining what is the good and the bad in the movement, as a social scientist, it is a very important movement, objectively speaking, because it's a movement that brings together, through the Internet, in a very flexible way, key

symbolic demonstrations that hit the system at one point, at one time, through the media, and then disperse.

It's informational guerrilla tactics, if you wish, with different components being part or not part of the movement, and, of course, no possibility of control. How you control the movement on the Internet? Yes, you can arrest people or beat up people in a particular demonstration, but the media effect of that -- in fact, that is helping the anti-globalization movement to introduce a debate that did not exist. Until three or four years ago, it was clear in the official ideology of companies, governments, institutions that "globalization is good and you just have to explain it to people. Technology, by definition, is good, and if you are quiet and patient for a couple of decades, everybody will begin." Well, the anti-globalization movement, right or wrong, has created a space for social and political debate that did not exist. And this is thanks to the ability of environmentalists and other groups to connect with the Internet, relate to the public opinion through the media, and connect their locality to the global processes through specific events and demonstrations.

You write in the trilogy, "Social movements in the Information Age are essentially mobilized around cultural values. The struggle to change the codes of meaning in the institutions and practice of the society is the essential struggle in the process of social change in the new historical context, movements to seize the power of the minds, not state power."

In a so-called information society, minds are not only the most important economic asset -- companies with minds make money; companies with money and no minds lose the money -- it's the same thing in everything. The networks are not programmed by technology; technological tools are programmed by minds. So the human consciousness [is the source], because everything now depends on our ability to generate knowledge and process

information in every domain and activity. Knowledge and information are cognitive qualities from the human mind. Yes, human minds usually are connected to bodies, which means that you have to take into consideration the overall system of human existence, social services support, etc. But fundamentally, the human mind has always been, but more than ever now, the source of wealth, power, and control over everything.

Now, therefore, in a world in which signals, processed by our minds, are constantly shaping and reshaping what we do, the ability to influence, to change the categories through which we think our world (here, what I call the code of our culture) -- this becomes the essential battle. If you win the battle of minds, you win the battle of politics, the battle of the economy, because people will decide what they want to buy or what they don't want to buy, for instance.

Let's take an example. In the last thirty years there has been the most extraordinary cultural revolution in history: women have changed the way they think about themselves. Once women in industrialized countries, but also in most developing countries -- there is a process toward this thinking -- decided that the patriarchal family (the institutional domination of men over women and children in the family) is not correct, that men and women are equal and women have to develop their own interests and culture, have their own relationship to work, to everything -- once women have changed that, everything changes. The family changes; therefore, socialization of children changes; therefore, personality changes, sexuality changes, everything changes. And that's the process we are in. Environmentalists: if you introduce the notion that production is not just growth but sustainable development, everything from the way we work to the way we produce to the way we consume is affected by this cultural transformation. And in democratic societies, this, in fact, translates also into politics. It translates into choices.

Now, it's a complicated matter there, because the battle of the minds is not simply the social movements changing the cultural codes of society, but the powers that be rephrasing the old categories with new words and new images but without changing meaning, like most of the so-called ecological thinking of many governments, which, in fact, are not so interested in environmental sustainability.

So it's a battle, but ideas and talents are, ultimately, the source of productivity and competitiveness. The same thing is true in terms of the overall social organization, how people change their minds determines how they change their behavior. And the change of behavior would, ultimately, translate into changes in the overall social organization.

Your analysis is subtle in the sense that a superficial look at the world suggests that the conglomerates and the mega-corporations are completely riding in the saddle and in charge of the direction of the society. But in fact, by looking at this more complex milieu, one sees, as you write, that, "ecologists, feminists, religious fundamentalists, nationalists, and localists are the potential subjects of the Information Age." That they can, in essence, come up with categories of thinking and responses that affect the way technology changes the world around us.

Definitely. But you see, first of all, there is this general misunderstanding that corporations run the world. Corporations run what they can run. But to start with, they don't even run the economy, because they are dependent on an uncontrollable system, which is the global financial markets. Corporations have their money in the financial markets. They depend on how investors perceive them and value them in the global financial market.

In March, 2000, Cisco Systems, which is a very good company in many ways in terms of the practice of the company -- I don't say

that in terms of their values, but the practices of the company, it's a very effective company -- was valued at \$550 billion and was the largest, the highest-value company in the world. In March, 2001, one year later, it was valued about \$120 billion and had collapsed in the stock market. Still a great company -- 85 percent of the Internet equipment market.

So the turbulences of information that control the financial markets, the ability or not of companies to ride the subjectivity of financial markets, determines the fate of the company. So in that sense, companies do not run the world, because they cannot even control the global economy. There are a multiplicity of factors and influences. There's not an executive committee of the capitalist class planning and running the world. But on the other hand, companies and governments don't run the world because more and more there are alternative actors, social movements of all kinds, identity, communal movements, as well as proactive movements such as environmentalists, women, etc., that ultimately shape the agenda of both corporations and government institutions. Governments in the world, at this point, have a tremendous crisis of legitimacy. Kofi Annan in the fall of 2000 commissioned a global survey of citizens' opinions in the world which showed that two-thirds of citizens in the world did not consider themselves represented by their governments. And this was also true for the advanced democracies, the United States and others, with the only exception being the Scandinavian democracies.

So, citizens are not trusting their governments by and large these days; are not trusting, in fact, anyone except themselves and their identity networks, and in some cases, social movements with alternative values. And in that sense, the complexity of our world is that the institutions of governments are crumbling, while on the one hand, networks of technology, capital, production are organizing our lives throughout the world and many, many, different alternative sources of values and interests are emerging as a response to this

one-sided domination, because people do not have institutions through which they can process their claims and their demands.

Conclusions

In the context of this new world emerging, you are saying then that there are possibilities for the individual. Do you have a positive view of what the individual can still do?

I do, although, as you probably have noticed (and most people have criticized me for this in my work, at least in the trilogy), I am very shy about any prescription or any normative attitudes. I try to be as analytical as possible. It doesn't mean that I don't care about the world -- it's obvious that I do -- but I think my role is mainly to provide analytical tools for people, then to decide what they want to do.

But, individuals, yes. This has two aspects. If we would need one word to characterize, in social terms, in terms of values and organization, our world, it is the growing juxtaposition of individualism and communalism. The two things are happening. Most people in our advanced societies, but also in others, are building their projects as individuals, in the family, in the economy, in everything. Even in the economy, people train themselves with the idea of having individual portfolios, which you can negotiate with different people.

So we are in a world of individuals. And the Internet actually is very good for that, because rather than creating virtual communities that practically don't exist, what exists is networks of individuals which provides the basis for increasing, not decreasing, our sociability, but our sociability as individuals. On the other hand, people who don't feel strong as individuals build trenches of resistance, and they close the communities. For instance, religious fundamentalists. For

instance, extreme nationalism. So we have individuals and communities, and in between, the civil society and the state -- they don't vanish, but they are dramatically weakened. And the civil society and the state were, in fact, the institutions that emerged as forms of social organizations in the industrial age.

One final question requiring a brief answer, because we're just about at the end of our time. You had said that "the twenty-first century will not be a Dark Age. It may well be characterized by informed bewilderment." How should students prepare for the future in a network society?

I think education is more important than ever. But education is not simply the traditional form of education. It is to develop what I call "self-programming capabilities." That is, the ability to adapt. To learn to learn, and to learn how to use the knowledge in the implementation of their projects and tasks throughout their lives. So, building, on the one hand, the knowledge capability not to have lots of information, but to know how to find information and how to recombine this information, which would, ultimately, mean to be very good and very strong in a broad educational training. Good mathematics, good verbal skills, good writing skills, a little bit of philosophy, a little bit of history and geography. Sounds traditional? And then, computers will count. Computers will do the work almost automatically by themselves when we know what to ask the computers.

On the other hand, on the personality side, in a world which is constantly changing, it is essential that education help provide what I call a combination of secure personalities and flexible personalities. Flexible personalities, because young people are going to go through extraordinary transformation in their lives. Finish the notion that you find your partner, your marry, you have children, but no, no, no, get ready for everything. And to reconstruct your life constantly. And so, flexibility; but not so flexible that you don't know who you are. So at

the same time, in order to have a strong, relatively secure personality, you need values. But not many values, because many values cannot be strong. I mean, you'll go crazy with so many values. A few solid values such as "don't do to the others what you don't want the others to do you."

Right.

If you have a good family, stick to it, take care of children -- they are good people until you make them bad. I mean, a few of these fundamental values such as tolerance -- not too many, anchored deeply, defended -- and then flexibility. So, self-programming capabilities; education, education, education; a few solid values; and flexibility to open up to life.

Professor Castells, on that very intriguing and positive note about preparing for the future, thank you very much for taking the time to be with us today and giving us an exposure to the intellectual journey of your life. Thank you very much.

Thank you Harry, it's a privilege.

And thank you very much for joining us for this Conversation with History.



