Barricades of Yesterday, Building Sites of the Future[1]

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In 2004, I was invited to attend the 11th United Nations Conference on Trade and Development (UNCTAD) in São Paulo, for two reasons: as a dinosaur who had taken part in the preparation of the first UNCTAD in Geneva 40 years earlier, and as the author of a recent study on less developed countries, sponsored by the UNCTAD Secretariat, titled "From Poverty Trap to Inclusive Development in LDCs."

The organizers of the conference in São Paulo asked me to present an outline of that study at a round table with development ministers. During my presentation, I stressed the prospects of a new round of rural development in tropical countries, well-placed to build modern *civilizations du végétal* – much like the great vegetable-based civilizations built by other peoples in ancient times, but running on solar energy captured by photosynthesis and situated on a much higher tier of the knowledge spiral.

The exploitation of the biodiversity-biomass-biotechnology triad carries the promise of a radiant future, because biotechnologies intervene in both extremities of the production process, i.e., they are used to increase the yields of biomass and to expand the range of byproducts – food for humans and animals, green fertilizers, biofuels, building materials, industrial raw materials, green chemicals, pharmacopoeia, cosmetics. According to this view, tropical countries, where water is not a restraint, stand to gain from a double comparative advantage, namely, their great biodiversity and an adequate climate for biomass production.

The important thing is to move in this direction without forgetting that, first and foremost, these countries must resolve their social crisis and the acute lack of decent work opportunities. The poor are much too poor to afford the luxury of not working. That is why full-fledged unemployment is less widespread than underemployment, precarious jobs and all sorts of informal activities needed to ensure survival, at best, but not development.

Rural development that is socially inclusive and in harmony with the environment requires solutions that are both knowledge- and labor-intensive, and parsimonious in their use of capital and natural resources. These solutions must be compatible with a "twice-green revolution" (one that ensures higher yields per acre and respects ecological constraints) and address the needs of tropical peasants, whom René Dumont called "the silent majority of the rural world," the planet's most important social category, comprising almost half of humanity.

My exposition took place at a timely moment. By 2004, high oil prices had become worrisome because we realized that they were linked to the depletion of reserves – that is, for some time, newly discovered deposits accounted for less than the volume of oil production. Competent geologists are announcing that "peak oil" is imminent and, therefore, that the end of the oil age has begun. Although the age of oil will still linger on for several decades, it is expected that oil prices will be geared toward a structurally higher level – not to mention the resulting dangerous uncertainties and vagaries of oil geopolitics! In other words, the bells of biofuels are now tolling, especially since ethanol used as a gasoline additive or substitute becomes competitive when oil rises above $35 a barrel and biodiesel becomes competitive from $60 a barrel, a threshold crossed in 2005.

As I was leaving the round table in São Paulo, I was contacted by an employee of the United Nations Foundation. This opened doors for me to which I normally had no access and, thus, the year 2005 allowed me to launch several operations concerning the changeover from "the oil age to a new green civilization." Six months of high-priced oil accomplished what 30 years of environmentalist speeches had not.

Long Live the Crisis!

I have just finished another study for UNCTAD on the consequences of high oil prices for less developed countries.

If the past is any measure, the manna of extraordinary profits brought by the price hikes will make oil-producing countries succumb to what economists call the "Dutch Disease," that is, the fact that the windfall money will not be used to finance development; instead, it will be monopolized and dilapidated by the ruling elites. The appreciation of local currencies and the abundance of foreign reserves will encourage imports, eventually destroying local production. Nine times in ten, oil's easy money becomes a curse.

As for oil-importing countries, their situation will initially border the catastrophic. Yet, disasters often herald at least some good. It is hoped these countries will seriously examine their potential to save energy and replace petroleum-based fuels with biofuels, and that international organizations will effectively help them to achieve this. Since Brazil is the country with the highest cumulative *savoir-faire* in this field – at least with regard to ethanol –, the South-South technical cooperation is a welcome event.

In June 2005, I was invited to open a debate on the biofuels option at a seminar in Paris sponsored by the International Energy Agency – a unit of the Organization for Economic Cooperation and Development (OECD) – and organized jointly by the Brazilian government and the United Nations Foundation. More or less at the same time, I gave a lecture at the Institute of Advanced Studies of the University of São Paulo, describing the broad outlines of an ambitious project we hoped to undertake in 2006-2008, with

the collaboration of several research organizations, to assess the prospects of transitioning Brazil from an oil-based civilization to a new one, based on biomass. I remain convinced that this country, more than any other, enjoys the perfect conditions to accomplish this feat within three to four decades. As Pierre Gourou used to say, the great tropicalist geographer from whom I borrowed the term *civilization du végétal*, Brazil is one of the "Lands of Good Hope."

According to a recent study by Amory Lovins, a brilliant expert on energy issues, another candidate is the United States. This study, partly funded by the Pentagon, posits that instead of spending billions of dollars to maintain the oil supply lines of the Middle East, it would be better to spend the money on a program to replace oil imports. Fuel consumption could be reduced by half if the automobile fleet of the U.S. were replaced with a new generation of ultralight cars. A massive program of biofuel production – largely from plant detritus transformed into cellulosic ethanol by recently developed technologies – would reduce current imports by one quarter, to which should be added a more rational use of natural gas.

Worldwide, estimates still have to be made regarding how much and how fast we can advance in replacing fossil fuels with agroenergy products without putting the goal of food security at risk and without causing massive deforestation of natural woodlands.

We can expect over the next decades a drastic rearrangement of the world's agricultural map due to the mismanagement of water resources. Past overexploitation of aquifers ensured the current prosperity of certain regions in the United States, Mexico, Pakistan and India, but their agricultural production may collapse in the fairly short run for lack of water. An overexploited aquifer is a water mine that runs out, much like a depleted oil deposit. Geologists have sounded the alarm: groundwater levels are falling everywhere.

I am committed to inspiring this kind of study in Brazil and I two new channels recently have opened for me in international organizations.

First, UNCTAD has just launched a "biofuels initiative" and has entrusted me with the chair of the advisory group of experts who will assist in the endeavor. Second, the FAO conference on agrarian reform and rural development, held in Porto Alegre in March 2006, became for me an occasion to learn more about the prospects of rural development in the 21st century and the role agroenergy may play in this scenario, as well as to try to answer the sometimes violent objections that these claims raised.

Disagreements come in different shades. To begin with, many still believe in the virtues of mimicry and really think that Third World countries will be able to effect the transition from a predominantly agrarian rural economy to a predominantly industrial urban economy by emulating the same trajectory of Western Europe. As if conditions had not changed… Millions of Europeans peasants crossed the Atlantic since the mid-19th century to establish themselves in the Americas. Who nowadays would accept a tenfold larger flow of refugees

from Asian, African and even Latin American camps? Many others disappeared in the two World Wars and in the gulags. Hopefully, we will not experience another Holocaust. It is true that a large number of peasants settled in cities, where factories created plentiful jobs, especially after the advent of Fordism. But that time has long passed. High-tech industries do not hire large numbers of people and their expansion is achieved through productivity gains.

What is to be done, then, with the silent majority of the world, the tropical peasants – two to three billion men, women and children?

Statistics indicate that approximately half of humanity now lives in cities and the other half in the fields – a little over three billion on each side. Over the next half century, the world population will grow slightly more than 50%. If the rural population were to remain stationary, without absorbing part of this population growth, we would need to double the capacity of cities in 50 years, enabling them to receive three billion new residents, find them decent and proper housing, and assure conditions for their effective exercise of citizenship. Otherwise these people will not be urbanized. Should we stack them shantytowns and unremittingly condemn them to seek new and ingenious survival strategies? No. It is better that we accept the evidence. In other words, starting a new round of rural development seems to be a social imperative.

A social imperative that unfolds into an ecological one, whereby farmers can render essential environmental services as guardians of the countryside and managers of the resources on which our existence depends: land, water, forests and, by extension, climates. To be sure, they will have to be encouraged and even compensated for this, e.g., by granting them heretofore denied access to the land and the natural resources they require for their sustenance. In the absence of this, these prisoners of inequitable land ownership structures will be forced to take over, by predatory means, at least the bare minimum of resources indispensable for their survival – either that or emigrate to urban slums.

It does not suffice to say that rural development is necessary; we must also show that it is possible. Many skeptical voices are heard on the potentials of a modern biomass-based civilization, but these voices remain captive to a concept of modernity overly focused on the urban scene and on state-of-the-art technologies (which speak far more to the imagination than the advances of biotechnology applied to agriculture and green chemistry), e.g., the conquest of space in one extremity, nanotechnology in the other, and with regard to energy, nuclear fusion and the construction of satellites that capture solar energy in space and relay it back to our planet.

For these voices, modernity also means concrete jungles of exorbitantly expensive skyscrapers, built at the expense of rural development in Shanghai and other large cities in emerging countries, displaying a technical prowess that is as spectacular as uncalled for. Impossible not to think of those towers erected in the Middle Ages by the nobles of San Gimignano, in Tuscany, whose sole purpose was to show they could afford the useless expenses of raising a taller edifice than their

neighbors'. Who would dare that the potlatch is prerogative of certain primitive people and that Georges Bataille's *La Part Maudite* should not become required reading in every high school?

This absolutely does not mean that the *civilization du végétal* should become a panacea or the sole subject of research; nor does it mean denying the civilizing functions of the city or inciting a reflow of urbanites back to the countryside. The implication is merely to slow down the rural exodus and, at the same time, to humanize the fields and seek a new demographic, social, ecological and cultural equilibrium between the various points of the urban-rural continuum. To achieve this, we must make better assessments of the potentials and limits of new vegetable-based civilization, which in turn requires us to rethink the direction of our research. We need to bid ourselves full-heartedly to this new task, which will require great effort and much time, more than struggling against biases and prejudices. In the stage we currently find ourselves in, I will simply suggest that another kind of modernity, one with a strong rural component, based largely on the use of solar energy captured by photosynthesis, is both possible and desirable, because it fulfills social as well as socio-environmental imperatives.

Ultimately, we must determine to what degree the arable areas of our planet and the available water resources can sustain the production of different biomasses without placing the principle of food security at risk. An additional restraint is maintaining, and even expanding, existing forests, whose regulatory role on the climate is well known. In this regard, forests planted for economic use, or even for energy, are inevitably bound for a bright future – and not only in tropical countries, as the example of Sweden shows.

Such an assessment is possible, but will never be exact and will always be dependent on hypotheses about scientific and technical progress. At present, researchers who work on the "ecological footprint" of our civilization are sounding the alarm. The portion of the net primary production of biomass consumed or destroyed by humankind every year reaches, according to some authors, 40 to 50% of the total available. We lie dangerously close to the critical limits: world population will increase 50% over the next half century so we can only afford a single doubling of consumption (and/or destruction)!

I do not subscribe to this catastrophism. Apart from eventual inaccuracies, the above estimate does not take sufficiently into account the possibility of intensifying the production of biomasses and, even more to the point, of reducing destruction and waste.

What distresses me in certain estimates deemed reliable is the breadth of the range from which the averages are taken, i.e., the numbers that everyone quotes. Let us take an example. According to an estimate published by Science in 2001, the most prestigious scientific journal alongside with Nature, humans appropriate themselves of 10 to 55% of the products of photosynthesis on Earth.

The higher estimate is an omen of impending doom, the lower incites unconcern. I propose to take a different view of those ranges. What they actually

Photo: Adriana Zehbrauskas/ Folha Imagem – 3.25.1997

A farmer picks irrigated rice from a plantation in Lagoa da Confusão, Tocantins (TO).

show us is that the future is still in our hands, at the reach of our decisions and actions. Instead of making conjectures about the revenge of Gaia – the Earth seen as a living goddess endowed with the power of self-regulation, according to James Lovelock and other "profound" ecologists –, we should mend our ways. From clumsy and disorderly passengers on Spaceship Earth we must become passengers who learn to pilot our planet like true "geonauts," as suggested by Eric Orsenna. There is still time to invent a future that does not lead to catastrophe.

Hubris? Promethean delusion? On the contrary, a preference for responsible voluntarism [human will as a fundamental principle], without falling into the aberrant Malthusianism that led Lovelock to say that the planet's population should stabilize at around half a billion – mercifully, without suggesting methods to achieve this.

Even broader ranges are strewn about with regard to the surface of arable land available for nonfood crops. In any case, the controversy about the limits and prospects of agroenergy has reached an apex, contested and even spurned by some environmentalists. They believe agroenergy will deprive agrofoods of areas that are essential to preserve our food security and, in the bargain, cause the leveling – or, even worse, the scorching – of native forests. (Actually, forests are already suffering with the predatory removal of firewood and the wild sourcing of charcoal.) The danger exists, but in several countries, bioenergy can aspire to an auspicious future and, furthermore, contribute to virtuous rural development, that is, development that creates numerous opportunities for decent work.

Agronomists have grown accustomed to thinking in terms of products and categories. In their estimates of required arable land, for instance, they reason by juxtaposing cultures and by underestimating the synergies between various crops and livestock in integrated systems of food and energy production. Although it might not be a Copernican revolution, I remain convinced that this is where we should start, namely, by proposing integrated systems tailored to the different biomes – beginning with a rural area and placing a system that mimics natural ecosystems, articulating among them various production modules so that the residues of one module become the input of the next. The food-energy nexus program, which I headed for the UN, sought to highlight these synergies and, in addition, to popularize the concept of integrated systems, such as the oft-describe ancient system of lakes and levees in southern China: four species of carps in a pond, each occupying a different ecological niche, plots of greeneries on the levees, ducks fertilizing the pond with their droppings and eating predatory insects on the levees, the leaves of the greeneries feeding the carps, while the slime from the bottom of the lake fertilizes the crops…

The huge amounts of oil-cakes (byproducts of seeds pressed to make biodiesel) are excellent cattle feed and would enable a changeover from more extensive to more intensive cattle raising, freeing millions acres of pasture in countries like Brazil. Perhaps the balance might even be positive: more pastures would be freed for use in agriculture than the area required for biodiesel!

However, the future of agroenergy will depend largely of our ability to transform straw, leaves and other agricultural and forest residues into biofuels, and to turn waste into wealth, as proclaimed by an old Maoist slogan with an odd capitalist overtone. It seems we are about to achieve this. See, for instance, the so-called "cellulosic" ethanol, obtained by enzymatic hydrolysis of enzymes found in the innards of termites and in elephant droppings. This is no coincidence. Elephants and termites have in common a high consumption of cellulose. Agroenergy has a radiant future ahead if, in my view, three conditions are met.

First, we must properly evaluate the various options from the perspective of energy efficiency. Whereas sugarcane ethanol has an efficiency rate above eight – that is, one unit of fossil energy produces eight units of bioenergy –, the efficiency of ethanol produced from corn in the United States does not exceed 1.4. We must ask if this is worth it.

Second, we must incorporate the replacement of fossil fuels with biofuels into our energy strategies, the most important and most difficult part of which is, by far, reducing energy demand through changes in lifestyles and styles of development. To this should be added the savings resulting from more effective production, transmission and consumption of energy by end users.

Third, it would be wrong to see bioenergy as a *pars pro toto*. Whatever its importance and current relevance, bioenergy is just one part of a modern biomass-based civilization. We must aim higher, extending the range of bioproducts! On the way, we must not fall prey to the idea that increasingly expensive oil, through the mere interplay of market forces, will steer us to actually developing a modern biomass civilization. I never tire of saying that the market is by nature shortsighted and insensitive both to social and ecological issues.

Rethinking the Developmentalist State

This brings us to the role of the State and of central planning. In these early years of the 21st century, we cannot evade the issue of the functions and forms of the State in regulating mixed economies with strong market components and keeping them on the path to socially inclusive and environmentally benign development.

Rethinking the developmentalist State requires a thorough analysis of the major paradigms that have competed with, or succeeded, one another in the latter half of the 20th century, before failing: real socialism, reformed capitalism of the "Glorious Thirty", neoliberal counter reformation, the socially perverse growth of the "Brazilian miracle", European social democracy entangled in the aforementioned oxymoron, "yes to market economy, no to market society." Undoubtedly, the most conclusive experience was that of the developmentalist States of Asia.

What would I do, lost in the building sites of the future, without my thread of Ariadne?

In 2004, at the request of the commission for social development of the International Labor Organization, I wrote a study on inclusive development. For a long time, I tried to resist the faddish attachment of a growing rosary of adjectives to the noun "development": economic, social, political, cultural, sustainable, and now (socially) inclusive. I would rather use the term "total development," but I don't have the habit of wasting time on semantics.

"Inclusive development" contrasts with another notion current in Latin America, that of "exclusive, wealth-concentrating development." The core of inclusive development is decent work, as defined by the ILO. The adjective may seem vague, but it stresses that it is not enough to multiply job opportunities without taking into account the often abominable conditions in which work is performed and the human relationships that it entails. As the famous British economist Joan Robinson liked to emphasize, the poor are much too poor to afford the luxury of not working. Clearly, wherever unemployment or underemployment starts to take hold, people will accept any job.

There is an entire literature, completely absurd, that explains this away as a case of very strong entrepreneurship of this or that ethnic group. In most instances, it is indeed a matter of entrepreneurship, but of entrepreneurs moved by despair! The dynamism and the incredible resilience of the informal sector rest upon survival strategies, and one should distinguish clearly between survival strategies and development strategies. Not because we should not help people survive, but because the goal of development is far more ambitious. Therefore, we must include some qualitative criteria in their definition of goals, which bring us back to the adjective "decent." Decent work is work that is properly paid, taking into account a country's level of development, performed in acceptably salubrious conditions, and entailing human relations that respect the dignity of the worker. I believe that the ILO is on the right track, despite the opinion of hard-core economists who deem the concept particularly slack.

Therefore, I tried to improve the formulation of this idea and would occasionally come back to what I believe is one of the central points of development theory, namely, that development cannot be reduced to economic growth alone. We use two simultaneous approaches: on one hand, a focus on growth, which leads us to GDP growth, capital accumulation, technical progress and the increasing productivity of capital; on the other, an approach that considers employment and self-employment as a gateway, and assesses to what extent the development process fosters the social inclusion through decent work performed by everyone that feels the need and desire to work. These two approaches are not mutually exclusive. On the contrary, it is essential to articulate, combine and reconcile them through flexible planning.

Take the case of Brazil, a country I have dealt with quite a lot lately. It is clear as daylight that Brazil should prioritize its investments in highly technical industries, both to upgrade the country's productive apparatus and to integrate its economy into the international division of labor. However, this modernizing core,

which will mobilize the bulk of financial resources, will create very few jobs – I mean direct jobs. Hence the need for a three-pronged strategy.

Firstly, the development of the modernizing core mentioned above. Secondly, a social service network and its universalization, because these social services bear directly upon the welfare of the population, especially of the poorest. Instead of waiting for the country to become wealthy and then reproduce the Welfare State as we know it, we must instead take advantage of low average wage levels to develop social services, especially those that are heavily people-intensive. To these two items I would add a third: exploiting growth opportunities derived from job openings in the relevant sectors.

And which are these sectors? Where are the frontiers of freedom? Above all, they can be found in the sectors that produce goods and services exempt from international competition – what economists call non-tradables: in addition to the social services mentioned above, the technical and people-oriented services, commerce, public works and construction. Housing projects can, at least in part, take on the form of assisted self-construction, putting to good use the strong tradition of mutual help that exists in many southern countries. The absence of international competition means that all these areas can make resort to more labor-intensive techniques.

In Brazil, however, the largest reservoir of jobs and self-employment is to be found in the countryside, easily tapped through a new round of rural development. Brazil has the largest biodiversity in the world and a tropical forest that, albeit being somewhat massacred, nevertheless extends across millions of acres in the Amazon – not to mention reserves of untapped agricultural land and extensive pastures that can be readily converted to grow crops. Water resources are (for now) abundant outside the so-called "drought polygon" in the Northeast, and climates are varied and favorable for the production of diverse biomasses. Add to this world-level biological and agricultural research and expertise, and you have the conditions to promote a modern, socially inclusive, ecologically viable, biomass-based civilization. It is possible to ensure the prosperity of millions of family farmers, as long as the agrarian reform that has been dragging along is finally carried out, numerous non-farm jobs rural jobs are created and, where options are possible, large highly mechanized agriculture is not favored to the detriment of family farms.

With regard to financing employment-driven growth, we must refer to Keynes, Kalecki and the advocates of the structuralist theory of inflation. Despite what monetarists say, growth can be partly financed by increasing the availability of credit – and even through budget deficit – as long as the national economy remains capable of producing "wage goods" (food, beverage, clothes etc.) in large enough quantity to absorb the additional demand created by the greater wage mass. Indeed, at the end of the month, laborers employed in public works and in construction will spend their salary purchasing essential consumer goods. Obviously, one must pay attention to the danger of excessive indebtedness,

Photo: Rodrigo Baleia/ Folhapress – 2.17.2008

Deforested land for soya plantation in Itaituba, north of the State of Pará (PA).

ensure that the supply of goods is truly flexible vis-à-vis wages, and schedule short-cycle public works with low importation requirements (so as not to weigh on the balance of payments). That said, the room for maneuver is much greater than those laid down by the strict monetarists. Nothing prevents Brazil from accelerating the construction of cisterns in the semiarid regions of the Northeast and to launch large-scale public housing programs based on assisted self-construction using locally available building materials.

We should also start thinking systematically about the best ways articulate large and small companies along the production chain. Often their relationship is conflictive. Peasants and micro-entrepreneurs complain of being exploited by large customers or suppliers. We must strive to establish positive synergies between these two players, with more transparency and social control where they interface. It is not possible to encourage small companies and, at the same time, neglect their integration in the economic fabric dominated by large corporations. This issue should be negotiated between all the social players and become a standard for development planning in the future. It is with this in mind that I try to work today in Brazil, within the triple perspective of socially inclusive, ecologically viable and economically sustainable development.

In a way, my study on inclusive development helped the ILO commission to draft the report on the social aspects of globalization – which, by the way, was published in *Revue Internationale du Travail.* I am pleased, especially because this study had two spin-offs.

The UNCTAD secretary asked me to decline the concept of inclusive development in view of the challenges facing the least developed countries. UNCTAD regularly prepares reports on these countries. In response, I wrote a document titled "From Poverty Trap to Inclusive Development in LDCs," focusing on the problems of countries where the non-monetary economy and subsistence economics still play important roles. The study was published in the prestigious Indian journal *The Economic and Political Weekly*, and also in Brazil.

The second request came from the ILO office in Brazil, who invited me to explore the concept in terms of the country's specific problems. This third study was circulated widely in Brazil and was published in *Estudos Avançados*. I have brought together the three essays in a book, to which Celso Furtado was friendly enough to write a preface.

In Behalf of a Culture of Development

At the onset of the 21st century, the impasse is profound. We are sitting atop the debris of four paradigms.

With the invasion of Czechoslovakia in 1968, which crushed the project of socialism with a human face, real socialism began to agonize. The fall of the Berlin Wall in 1989 announced its funeral.

The descent into hell of Argentina marked the failure of the neoliberal paradigm known as Washington Consensus.

What about economic growth, even strong economic growth, achieved by enhancing social inequalities? This was the case of the "Brazilian miracle" during the generals' mandate and is now the case of China as it drifts toward a post-socialist – and, I would add, proto-capitalist – authoritarianism. I believe this paradigm, deeply perverse in social terms, and therefore undesirable, will eventually implode, victim of the political tensions it gives rise to, plunging into an authoritarianism that sooner or later will halt its own escalation.

There remains the social democratic paradigm, now facing a crisis for having renounced its socialist origins. Unconditional acceptance of the market economy is incompatible with the ostensible refusal of a market society. Welfare policies alone are not enough, especially since corporate heads evoke the imperative of competitiveness in global markets to demand a lower tax burden, thus reducing the scope of the State as an agent of redistribution.

It is upon the ruins of these paradigms that we will have to build new, plural projects. To discuss them, we need a set of ideas to organize the conceptual framework of the debate. I am not saying that the theory of development provides ready answers, a kind of *prêt-à-penser*. On the contrary, and I say it once again: the social sciences, particularly in the fields that interest us here, have above all a heuristic role. They help us to ask the right questions, to nurture debate in society. The answers, on the other hand, must come from the political praxis.

Thereafter, the culture of development should become an element of education from high school on. By this term, I mean a set of notions that help us to better understand history and prepare us to discuss the future of our societies with regard to both a cultural ecology and a natural ecology. Celso Furtado was right to say that development is a cultural concept, as it implies inventing the future. I regret that the quotation from Jean-Paul Sartre, "man is a project", no longer appears in the Le Petit Robert dictionary, because if man is a project, then, even more so, is society.

Lenin made the unfortunate remark that, under communism, even kitchen maids would know how to manage the State. It's not true. Management of the State, management of development, requires much more professionalism and, at the same time, much more social control over the professionals. We need a conceptual framework to ask questions that are far from obvious in order to get to the bottom of things and to articulate them together.

As for the answers, they will depend on the different cultural ecologies, on natural ecologies, on the weight of the living past, on our set of values and on the lifestyles that compose a society. They will also depend on our ability to organize ourselves to invent the future. One of the most erroneous readings of Marxism presents it as unabated historical determinism, when in fact Marx was fully aware that men should take the future into their own hands.

We face an open future, and that is why I advocate a responsible voluntarism. The great difficulty lies in establishing where utopia ends (etymologically speaking, utopia is something that exists nowhere and perhaps cannot exist anywhere) and where the project begins. Utopia can help us to clarify the big choices that have to be made, even if does nothing to measure the obstacles on our path. The difference between "utopia" and "project" corresponds to the fissure between policies of "unrestrained voluntarism" and policies of "responsible voluntarism" that would turn the project into reality. The project takes into account objective scenarios and assesses the subjective forces that are mobilized in the desired direction.

I believe politics will increasingly bear upon our societies. In a complex world of multiple options, with contradictory forces confronting each other, there is little room for ideal decisions made on "objective", scientifically established foundations (except through intellectually dubious procedures that reduce the multiplicity of mutually irreconcilable goals to a single objective by means of a set of arbitrary deliberations). I'd much rather have full-blown political discussions whereby the search for negotiated solutions among all the players of the development process walks hand in hand with the improvement of democratic institutions, paying no heed the frantic pace imposed by the immediacy of election timetables. A comparative analysis of the roads to development/bad development followed by different countries is called upon to become a powerful instrument of political education, delimiting the range of discussions on national projects.

Note

1 Chapter 19, "Barricades d'hier, chantiers d'avenir" of *La troisième rive: à la recherche de l'écodéveloppement* (Paris: Editions Bourin, 2008). Translated into English from the Brazilian edition, *A terceira margem: em busca do desenvolvimento.* (São Paulo: Cia. das Letras, 2009), p. 334-54.

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