

# ***Ein Ding ist ein Thing - a (Philosophical)*** **Platform for a Left (European) Party**

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A paper presented in Koln to the meeting on the  
“Innovation in Science, Technology and Politics ”  
organized by the ***Friedrich Ebert Stiftung***

May 1998

Published in *Concepts and Transformation*, Benjamin, Amsterdam/Philadelphia, Vol. 3,  
No. 1/2, pp.97-112 (1998)

The Fall of the Berlin Wall was supposed to render us all intelligent. Deprived of one arch-enemy, political reflexion too could enjoy the “benefits of peace” and stop making arguments, no matter how stupid, simply because they were expedient weapons during the Cold War. The forecast was that, in a more peaceful time, we should have become able to examine more quietly the inner quality of all these political philosophies the Left and the Right had thrown at each other for decades. The disarmament of arguments should have quickly followed the disarmament of weapons: swords should have become ploughshares.

Alas, in reading the prose of the present European leaders on the Left, exactly the opposite happens. Instead of the large diversity that was expected from more peaceful times, everyone of them speaks exactly in the same way as if we were still at war. “Globalization”, “freedom for the markets”, “deregulation”, “flexibility”, “information technology”, they all say the same thing, without forgetting the new catchword: “innovation”. After the Fall of the Wall, everything happened as if the Left parties alone had disarmed; as if they had been unable to profit from the changes of epoch to articulate in their own terms their issues and predicaments. Their discourse is that of their enemies, plus or minus a few changes. They are all vying for modernizing the modernization. No wonder that their voters have some difficulty in telling their Left apart from their Right and if they chose leaders on how youthful they look.

In the note below, I propose to reap the benefits of peace by reexamining some of the assumptions of the past fight between Left and Right, and by offering a very short ten points platform for reinventing another difference between Left and Right, a difference that will not inherit from the now defunct ones devised in the course of this century Cold Wars. It will be, I am afraid, a very philosophical platform, and each argument will be simply sketched in order to keep in the time allotted to me..

**Plank 1: Should we modernize the modernization?**

I am not sure a left party should advocate modernization at all cost, as if more modernization was still the order of the day. To be sure, the Left, in the grandiose scenography of the past, was associated with a thrust forward, with the great tale of Progress, with the arrow of time breaking free from the shackles of archaism to deliver us into an emancipated future. The problem is that times have changed so much that their ways of changing have themselves changed. If by the thrust forward is meant the idea that the future will be less entangled, less complex, less implicated that the past, this is clearly wrong. Only the Right can believe in a tale of Progress that means less regulation, less impediments, more freedom in the future than in the past. The only thing we can be sure of is, on the contrary, that whatever topic we chose to focus on, from ecology to genetics, from ethics to law, the future will be even more entangled than the past. There is still an arrow of time, it stills goes forward, but it does not go from slavery to freedom any longer: it goes from entanglement to more entanglement. A left party would be well advised to come to grips politically with what has been captured by philosophers, journalists and thinkers alike under the vague and various words of postmodernity, reflexive modernity, hypermodernity. Whatever the words, something essential has happened in the way time flows, and the left parties cannot ignore it by trying to beat the Right at the great tales of Progress by simply pushing forward the youthfulness of their leaders as if the dispute was to decide who should modernize the modernization faster. Maybe we have entered a different time than that of modernization. It is time for a left party to engender a new difference with the Right on the way time flows and what the future will offer in terms of freedom and entanglement. To sum it up in one more provocative way, the quest for emancipation might no longer be the slogan of the Left.

**Plank 2: A special responsibility of Europe**

Europe invented modernity, it has a special responsibility to, so to speak, desinvent it. I am not sure a left party should have the United States's worries as its own and only horizon. The United States are too powerful, too isolated, too insular in a way, to be interested in the specific European problems of remaking modernity. When manufacturers realize that one of their products leaves to be desired, they do what is named a "recall" of their products to fix, at their own expense, the problems and retrofits the new devices that will make the product better. I believe that Europeans have to "recall" modernity in order to turn it into a different project, especially a different way to tackle again the huge labor of universalizing the world (see plank 5). This task will not be done by the United States who go on endlessly on the road of Progress, doing even more of the same, and still ignoring the consequence of their action, as if modernity was still the order of the day. No one seems to know exactly what it is to be European. Now the occasion arises to decide collectively

what it is to be European: it is to have inherited the formidable project of modernization and universalization, and then, at the end of this century, to realize that something different is needed, that is, to desinvent it and to deeply modify what it has inherited. Just at the moments when there is much talk on the topic of globalization, it is just the time *not* to believe that the future and the past of the United States are the future and the past of Europe. A left party should produce a new difference, utterly unrelated to the Cold War, between the future of the US and that of Europe. Actually, only the Left could imagine a European future, the Right —the neo-liberal one at least— can only imagine a universalist future, that is, in effect, an American one.

### **Plank 3: from successions to coexistence**

I have the feeling that we are slowly shifting from an obsession about time to an obsession about space. This is especially important for a left party, since it has associated so much of its energy and so many of its arguments around the notion of revolution, seeing reform as a disappointing and coward way of missing the call for revolution. Some people have argued that the Fall of the Wall marked the “end of history”. If this means the end of events in history, this is plainly ridiculous, but if this means the end of an irreversible succession of epochs, each of them replacing the former one and being replaced by the next through a sudden and radical revolution that leaves nothing but a blank slate, this “end of history”, like that of the end of modernization, might be a profound insight. If, as philosophers argue, time is defined as the “series of succession” and space “as the series of simultaneity”, or what coexists together at one instant, we might be leaving the time of time —successions and revolutions— and entering a very different time/space, that of coexistence. The key problem for a left party is no longer to “make the revolution”, nor even to substitute slow reforms to radical revolutions, but to explore coexistence between totally heterogeneous forms of people, times, cultures, epochs and entities. This is precisely what the Right is unable to do —even when it claims to be reactionary— since it goes on endlessly into a great narrative of revolutionary times —technical and economical upheavals— without being able to absorb the new obligations of coexistence. It is as if the Left had a duty of becoming “reactionary” vis à vis these new Levellers who claim to prolong the continuous revolutions of the past. The Left should be able to say “the time of revolutionary times has ended”. To the now empty dreams of revolutions, a left party would be faced with a completely unexpected (and truly “revolutionary”!) task, that is of rendering coexistence possible on an Earth that no revolution cannot *simplify* any longer. During the Cold Wars, the only difference the Left could enforce with the Right was that of being “for” revolutions. The new difference that could be elicited would be between an obsession for radical changes that eliminate the past for ever —now associated with the neo-liberal Right—, and the new obligations of coexistence (that is the production of space), of

heterogeneous entities no one can either simplify nor eliminate for good. Such a new distinction would also provide a clearcut way for the new Left to distinguish itself, once and for all, from the old Ultra-Left, always lingering in the rear-vanguard of political action, and always agitating its red flags of total upheaval. There is no longer any Left left of the Left. The “Ultras” are simply other types of reactionary revolutionaries.

**Plank 4: Learning to live in time of scientific controversies**

A left party, it seems to me, is on the side of complication against the beautiful simplification, the speedy shortcuts of the Right. In the recent past, that is in the times of modernization, simplification was the order of the day, objects could be produced which had no unexpected consequences and that could replace older objects for good. The more science and the more technology was thrown in, the less disputes, so the idea was, would ensue. There was one best way, one economic optimum, one most efficient solution, means for ends. We are entering an entirely different playing field, because whatever we do we are expecting unexpected consequences. These many consequences (risks, unintended effects) feedback on the very definition of the objects. We are witnessing, so to speak, the revolt of the means. The completely unexpected feature for the Left is that science and technology do not simplify the discussions about objects any longer. Instead of extinguishing the political fires, they add fuel to the political, ethical and ecological controversies. This is why people like Ulrich Beck speak of “risk society”. It does not mean a catastrophic version of society where the distribution of “bads” will have replaced the distribution of “goods”, but simply this small and radical change that everyone can read about in the newspapers: science and technology add their uncertainties to the older ones, they do not subtract any. This creates an immense problem for the renewal of the Left because it has associated itself so much with science and technology. The Left knows fairly well how to expect more certainty from Science, but it has not learned yet how to thrive politically on scientific and technical controversies that it would much prefer to paper over. It is at this juncture that a left party could create a major new difference with the Right, by letting the Right go on in the traditional—and now deeply reactionary—call for more scientism, more acceleration of technology without discussion, less controversies, less regulation.<sup>1</sup> As in earlier times the mobilizing slogan has been: “No taxation without representation”, the Left could revive this progressive call for action by chanting: “No innovation without representation”. The time is gone when Science could be used to simplify the components of social order, to bypass politics. The Left should

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<sup>1</sup>When I am using the word Science and Technology, I do not refer to what scientists and engineers and the rest of the collective do in laboratories but in the very specific politics of shortcutting politics invented by the West under the name of epistemology or philosophy of science.

render life miserable to the simplifiers, to those who want to shortcut due process by kidnapping science and technology.

**Plank 5: Globalization is not the order of the day**

I am convinced that a reestablished left party should be extremely careful with the term of globalization that has become the new catchword. As many anthropologists have shown,<sup>2</sup> we are not entering a new globalized world characterized by the disappearances of cultures. Exactly the opposite is happening, that is, the neoformation of many new cultures that subvert the very definition of what it is to be local and what it is to be global. We in Europe, have invented, at some point, one idea of universality based on a certain version of a few peculiar sciences, and by comparison the “local” was defined as exotic, odd, archaic and in its quick path to extinction. To the unity of global nature was opposed the multiplicity of local cultures . This is what happened when we were aiming at modernizing the planet. But the two terms of that opposition between nature—in the singular—and cultures—in the plural—are being modified at once: the types of universalisation allowed by networks of scientific practices have lost the ability to render the other merely local by comparison; and the former “locals” have invented, all around the world, especially through the new media of communications, new ways to make their difference heard and respected. This new “globalization of differences” (Appadurai) is exactly the opposite of the catastrophic scattering of incommensurable view points expected from the breaking up of modernization. It would be a great pity if the Left, just at the time when the connections between local and global are utterly subverted by the rest of the planet, was finally embracing the repetitive mantra of globalization and the “new world order”. In addition, this would be a major political mistake, especially because, as it has been often shown, the Right itself, everywhere in the world, is being split according to the now obsolete division between universality and locality: on the one hand, a neo-liberal Right that embraces globalization, that is, in effect, Americanization; while on the other hand, a second Right, in reaction with the first, capitalizes on the neoformation of cultures, and invents new ethnic localities, established on soil, blood and even genes. If there is one feature that could redifferentiate the Left from the two opposing Rights, it would be to explore the new connections between locality and globality that would, in addition, help Europe rework what it meant in the past by modernization and universality. No one else but the European Left will find that task so urgent, given the extraordinary diversity of Europe, and this fabulous entanglement of various contradictory universalities it finds itself built in and entangled with. In that respect, a new Europe shows a much more interesting type of future than the mere extension of America to the whole planet (plank 2)..

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<sup>2</sup> Appadurai, A. (1996). Modernity at Large: Cultural Dimensions of Globalization. Minneapolis, University of Minnesota Press.

These five first planks together define less a framework than a decor, so to speak, for the tiny platform on which I try to stand. It is extremely difficult to summarize them better in such a short time. They are just enough, I hope, to show that after the Wall has fallen, many chances to redifferentiate Left from Right have been missed that could be seized now, if only we redirected our attention to the new events. Sometimes it is difficult to detect what is contemporary. The Left, in my view, should not be like a disappointed heir who, after inheriting from the broken past of Cold Wars, would foolishly reject in disdain the brand new heritage that falls on it by happenstance, simply because it is not connected in any way to what he expected from its ancestors. Sometimes one can change ancestors or, as so often happens in genetics, discover that one inherits quite different traits from them. This is the historical change that should be seized on.

The five next planks are more substantial, but not easier, I am afraid, to summarize.

### **Plank 6: one viable political order or two unviable ones**

The Left has always had bad relations with Science —capital S— that is, with an epistemology unrelated to the real practice of the sciences that allows one to shortcut the political process. Instead of criticizing and undoing this definition of Science invented by its enemies, the Left, for more than a hundred years, has attempted to kidnap it to its own use. It has thus embraced without qualms this fabulous power: undisputable laws of society and economics, and even laws of history. Armed with this power that was not congenial to its real ancestry, it begot this monstrous beast that is responsible for so much misery: a scientific politics. The blood shed by this deadly association between science and politics is still on the hands of many people in the Left today. In spite of all the crimes committed by this idea that a science of society and a science of history could allow one to bypass due process, there still exist social scientists who believe they finally have gained the right to produce the ultimate scientific politics through the accumulation of enough “symbolic capital”. Fortunately now the situation has changed so much in the practice of science (plank 4), that the idea of a Science bypassing due process has changed camp entirely. It is now the Right who believes it has the right to shortcut political process because it benefits from the undisputable laws of one science, economics, that explains everything else provided the uncontrovertible results of a few other sciences are thrown in as well —a bit of neo-darwinism, some “eugenetics”, a few results of cognitive sciences (no matter if the real scientific disciplines that deals with life and brain offer totally different pictures). This shift in the appeal to Science is a great chance for the Left to elicit a new difference with the Right. The question has now become simple enough: do you want to build a political order with *two* chambers, the first one, called Science capital S, that is said not to do politics but which take all of the important decisions, and the other, called Politics, that is said to make the decisions

but that is left with nothing but passions and interests? Or do you want, on the contrary, to build *one* due process where the questions of what ties all of us together, things and people, *Ding* and *Thing*, is explicitly tackled as politics. The first political order with, so two speak, two attractors is not viable and has produced a great many of the catastrophes of our age; the second, with only one attractor is new but is to be experimented if we want to imagine a viable Body Politic. Because of its calamitous association with Science capital S, because of the crimes committed under the name of a Science of the laws of history, the Left has a special responsibility if it wishes to exist again and anew and to redifferentiate itself from the Right, to let science and technology be submitted or coterminous with due process, instead of being what bypass the production of political order. This is especially important to fight those who, calling themselves the Greens, are trying, in the name of ecology, to reinvent one more avatar of the nightmarish scientific politic and who claim that they know, because of their Science and not because of due process, what counts and what does not count, who is important and who is not important in the great chain of beings. A new shibboleth, here again, could tell apart the Left from the Green: the Left lives under one political process of people and things, *Thing /Ding*, while the Green still use the good old modernist two-attractor Body Politic. They want to save nature as a weapon against politics, the Left wants to save politics, so to speak, from nature. A new left party should be able to take up all of the issues put forward so diligently by the Greens, but to undo the double-bind that renders Green politics so inefficient.

### **Plank 7: collective experiment**

If the Left wishes to create a new difference between itself and the two Rights —the globalizing Right and the ethnicising Right— and also to distinguish from the Greens with their dual collectives of nature and society, it has everything to gain in registering a difference between Science and Research.<sup>3</sup> Given its past and the importance of science and technology, the Left should be strongly associated with the sciences and engineering, their development and innovations, but no longer with their politics of shortcutting politics. In other words, the Left has been associated with Science —and with catastrophic consequences— but not yet with Research. All of us have become members into collective experiments on global warming, the influence of genetic engineering, conservations of species, demography, pollution, etc. We thus all have to practice something which, until recently, was the calling of very few specialists, namely *science policy*. Everyone now is led to practice science policy over a vast range of scientific and technical controversies. This has entirely modified the relations of the public with the producers of science and technology. We have to reorganize our polity accordingly. To be true to its glorious past of fighting on the side of *Aufklärung*, the Left does not have to embrace

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<sup>3</sup> See in Annex a short paper for *Science*, 10th april, 1998.

uncritically the call for industrialization, modernisation, etc. If it wishes to fight obscurantism it can still do so, but the obscurity to be enlightened has changed shapes, it is now the idea of collective experiments in which billions of people, animals and things are engaged, whereas there is no protocol, no feedback loops, no debriefing, no archives, no monitoring, and no due process, that is no procedure to detect what has been learned and to decide what to do next. By moving from an association with Science, to an association with Research, the Left will have to wean itself from the secondary advantages that Science capital S gave to its program, the possibility of bypassing due process by appealing to incontrovertible laws. This has become impossible if the Left defines itself as what monitors a collective experiment in which no shortcut is possible to decide how many entities are to coexist together.

### **Plank 8: the collective appropriation of economic calculus**

A different conception of science means, first of all, a different conception of economics. It is quite stunning to realize that after 150 years of left politics, political economy is still unexamined and uncriticized. To be sure, there has been many critiques of political economy, especially from the Marxist Left and former Ultra-Left, but, to the remarkable exception of Karl Polanyi, their goals have always been to *substitute* a more scientific economical theory to the ideologically tainted ones. In other words, the critique of political economy has always been done in the name of Science, that is of this extraordinary power to bypass political process in order to define better and faster the Optimum. I would be tempted to define political economy as what allows one to “economise” politics, that is, literally, to shortcut its specific task, to save the social scientists from the incredible burden of producing collectively the calculation of the optimum. Political economics is the economy of politics. The Left has been obsessed, and still is, even when it dreams to reinvent itself, by the goal of “appropriating the means of production”. But it has always been dramatically uninterested in the much important task of collectively appropriating calculation. This is a great pity, since, for the new Left, a leftist science of economics is exactly as detrimental as a rightist science of economics. If, that is, by economics we means this hardest of all social sciences which succeed in the extraordinary double feat of being at once a *descriptive* Science without describing what it is that people practically do when being entangled with goods, and of being a *prescriptive* Science without paying the price of consulting all of those who are concerned by the calculation of the optimum. Double shortcut of the two hard travails of description —necessary to be legitimate science— and prescription —necessary to be legitimate ethics—, that is indeed worth a careful critique. There is no way to shortcut the slow and painful composition of the whole collective simply by reading bottomlines on spreadsheets, no matter in which unit of count one does the calculation. Instead of embracing main stream economics, or instead of dreaming of substituting a more scientific

“proletarian” economics to the “bourgeois” one, the Left has the extraordinary opportunity to establish the first “non-Marxist party” in the history of the West, that is the first party which does not believe in the slogan that one Science, economics, hold the laws of history and society.

### **Plank 9: from calculability to descriptibility**

The question for the Left is no longer to base itself on an alternative economics, but to ask the question again: is there a *successor* to economics, construed as this double bypass of description and prescription, of facts and values —facts in the name of values, values in the name of facts? I would be tempted to say that we might be shifting slowly from an ideal of calculability to a new ideal of *descriptibility*. Calculations allowed to shortcut politics by ignoring all of the externalities that were shed outside of the realm of what is to be calculated. Capitalism itself, in this view, is one among many of the powerful ways of distributing what is to be calculated —internalities— and what is not to be calculated —externalities. The limits of capitalism as a mode of calculation —not as a mode of production— is that it renders itself voluntarily very inefficient at calculating what it has left aside: unintended consequences, entanglement, due process, externalities. Actually, this is the only way to define itself as capitalism, as what can extract from entanglement and allow someone to say confidently: “we are quit”, “we do not have to deal with all of those other people, all of these needless entanglements”. Without the enormous task of limiting calculation —of which accounting and economics themselves are an integral part—, without the formatting of all interactions into those two parts: what is and what is not calculable, neither appropriation nor capitalization would be possible. The Left has thus an extraordinary opportunity, not in fighting capitalism as if it was a mode of production which had one and only one alternative (for instance another system of production), but in not pursuing economics at all, that is in not accepting that this strange double bypass invented in the 18th century to settle political order is the final word on what binds people and things together. The search for the optimum, or for the Good Life — this old definition of politics and economics— are not to be left to the Right using economics to shortcut description and prescription, but could be the object of a new political process that will sacrifice neither the task of description nor that of prescription. If there is one subject on which the Left may be true to its radicalness or cease to exist, it is that of reintroducing a new difference with the Right by insisting on finding a successor to economics as a way of organizing the polity. The master Science of the modernization cannot be master in the new times that succeeds modernization. Instead of pursuing the vain hope of being agnostic in matters of theology, the Left might be well advised to begin at last to be agnostic in matters of economics. What entangle people and things is still a complete mystery that the illusory mastery of political economy cannot even begin to fathom.

### **Plank 10: a strong state**

Everywhere in Europe, the remnants of the various old Lefts, in order to fight the cruelty of markets, are rallying to maintain what remains of former strong States that have been devised during the modern times. A new divide ensues between the Old and the New Left around the strange question of knowing if one should dismantle entirely the State or keep it as a buffer against the tides of globalization. To rejuvenate themselves, leaders of the left parties are often trying to show that they can beat the Right at the game of dismantling the State faster even than their competitors... Strange situation indeed that is inherited again from the various Cold Wars of this century. For the new Left to be invented, this is a caricature of a political debate. To be for or against the State, for or against the market, is no longer the telltale to decide if a party is left or right. At least this is the sort of empty questions from which the Fall of the Wall should have freed us. Markets, networks and institutions are ways of organizing the types of attachments that people and things have with one another. There is no a priori privilege of one form of organization on the other. The Left should be entirely agnostic vis à vis one of those forms and it should leave to the Right the extravagant commitment to one at the exclusion of all the others. The Left should use another touchstone to decide which mode of organization to use in specific cases: which one *increases* the ability to describe and to prescribe in the collective search for the optimum. If an institution allows to go from ten powerful calculators to a thousands, then let's chose it; if, on the contrary, a pocket of market allows to go from ten powerful shorcutters in the administration to a million consumers, then let's go to it. Yes, the Left should show its flexibility, by being indifferent to the *nature* of the organisations chosen, but it should be, on the other hand, obsessed by which one of those means of organization increases the collective appropriation of the modes of calculating the optimum. Yes, the Left can be true to its urge to "unleash the forces of production", meaning the forces of description and calculation, that is unleashing the forces of democracy. For those procedures to be in place so as to be able to chose collectively which mode of organizations is better, a strong state is indeed necessary, but that is not a state that substitute for the ability of civil society to calculate and to reach the optimum. Yes, the state should be freed, freed, that is, from the burdening task of substituting for the market and for the networks. "*Laissez-faire, laissez-passer*" is no longer a slogan directed at the market against the obtrusion of the State, but to the freedom of the State against all of the obtrusions of other modes of organization. The state, the new state of the Left should be freed so as to concentrate itself on the only task no one else will do, that is to follow, document, debrief, induces, organizes the collective experiment in which we are all, wittingly or unwittingly, engaged. This is a much better source of strength than the dinosaurian tasks of the past to replace the whole civil society by shortcutting description and calculation. Only a strong state can make sure that the two Rights, the ultra Left, the Greens, do not accaparate the

collective calculations of the optimum, by their a priori Science of what binds all of us, things and people, together. Only a strong state could make sure that the collective experimentation is not aborted or bypassed.

I have said enough to show what should have become visible after the Fall of the Wall: never there was so much difference between the Left and the Right, contrary to what those who regret the “good time” of the Class Wars say. In spite of the Cold civil Wars that took up so much energy, there has always been a deep agreement between the various Rights and the various Lefts on the urge for modernization, on the inevitability of Progress, on the thrust forward of the arrow of time, on the call for emancipation in matter of personal mores, on the role of Science capital S to bypass due process, and, above all, on the infrastructural role of economy and on the continuous revolutions that would take place by irreversibly annihilating the past. For the first time, the Right and the Left can now part company on each of those items. I know that such a difference is not to be observed, it has to be produced, offered, experimented, elicited. In this brief paper, I proposed to induce a new distinction between the Left and Right, a much more radical one than simply vying for modernizing the modernization and pushing younger leaders to dismantle the welfare state faster. It can be summarized in a few words although none, I agree, have any popular appeal: something else than modernization is now at work in the world, that offers a unique occasion for Europe and for the Left to reestablish themselves with a new pride. There is an arrow of time, there is energy to be unleashed, but it leads to coexistence rather than revolutions; emancipation, even in matter of personal life, might no longer be the order of the day; there is no way to shortcut political process any more, especially not Science, especially not social science, especially not economics.

One last word on the author. I represent nobody and have no authority whatsoever to present this ten-plank platform for a party. I am simply a practitioner of the social sciences and I simply think that they have always been associated in the past with a political project. The question is to decide if this association is productive or not. In the expression “social science”, there are two words that do not work: the word science and the word social! Social scientists, in psychology, sociology and economics, have taken upon themselves, after the three English, American and French revolutions, to represent through their emerging sciences, the whole Society as one already organized Whole. This is what has given them the authority to speak in the name of the people who were manipulated, without them knowing it, by unseen forces only the social scientists could detect and document. As Zigmun Bauman has argued, they took upon themselves to act as legislators. I don't believe that the task of social scientists is to substitute for the people by inventing an already existing Whole which would act as the hidden infrastructure of all their actions. I believe that people know pretty much what they do and that I, as a sociologist, have to learn from them

what they do, and above all, what they say they do, not the other way around. A new association of the social sciences with politics would be possible if another definition of science and society was experimented, and that is what I called above, collective experiment. Neither the sciences nor the collective production of what binds people and things together can be shortcut by a Science and by a Society capital S. Instead of the social sciences may be something like “political research” is in order, or better what Isabelle Stengers called “cosmopolitics”. Before we invent the right mix of science and politics, my slogan will simply be: let us shortcut the shorcutters and see what happens.

ANNEX

## From the World of Science to that of Research?\*

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to be published in *Science*

10th of April 1998

special symposium for the 150th Anniversary of the AAAS

Looking for an expression that could capture the change that has occurred in the last century and a half in the relation between science and society, I can find no better way than to say that we have shifted from Science to Research. Science is certainty; Research is uncertainty. Science is supposed to be cold, straight and detached; Research is warm, involving and risky. Science puts an end to the vagaries of human disputes; Research fuels controversies by more controversies. Science produces objectivity by escaping as much as possible from the shackles of ideology, passions and emotions; Research feeds on all of those as so many handles to render familiar new objects of enquiry.

Unfortunately, there is a philosophy of Science, but there is no philosophy of Research yet. There exist in the public spirit many representations, many clichés, for grasping Science and its myths; very little has yet been done to make Research a part of common sense. If an Association was created 150 years ago for the Advancement of Science, it might be appropriate to probe what an Association for the Advancement of Research would look like, and what changes it would entail in the nature of society.

Science and society cannot be defined in disjunction, they depend on the same foundation: they are like two branches of power defined by the same “Constitution”(1). If you change this “separation of powers”, you immediately alter both the view of what science is and of what society can do.

This is probably what has changed most since the beginning of the AAAS. Science and Research have completely different ways to relate to the rest of culture. In the first model, society was like the flesh of a peach, and Science its hard stone. Science was surrounded by a society, that, in its essence, remained foreign to the inner workings of the scientific method: society could reject or accept the results of Science, it could be inimical or friendly towards its practical consequences, but there was no direct connection between the core of scientific results on the one hand, and the context — which could do no more than slow down or speed up the advancement of an autonomous Science. One cliché says it all: in one palace, Galileo deals with the fate of falling bodies while, in another palace, princes, cardinals and philosophers deal with the fate of human souls.

The only way for Science to disseminate its results, its ethics, its methods, was to transform, through education, as many members as possible of the general public. It is because the young America was, at the time, unfriendly towards science that this great Association was created in the first place. How different are the connections established nowadays between Research and what we should hesitate to call a 'society'.

One example will be enough. In early December 1997, a group of patients assembled in the AFM (the French association for the treatment of muscular dystrophy) raised, through a television campaign (the Telethon) \$80m for their charity. Since the disease that triggers the handicap has a genetic origin, for fifteen years now, AFM has invested massively in molecular biology. To the great surprise of the French scientific institutions, for a while this charity funded more basic research on the human genome than the French State! And they developed original ways to map chromosomes that went so far and so fast that they published in *Nature* some of the first maps of the genome — beating, they boast, even the Americans (2) (3)! Then, once this was done, they disbanded the laboratories they had built for mapping chromosomes, and turned all their efforts to exploring genetic therapy, even though it might be a very long and risky shot.

The very building of the AFM (at Ivry, south of Paris) illustrates the limit of a metaphor that would disconnect a Science from a society left outside: on the first floor, patients in wheelchairs; on the next floor, laboratories; on the third, administration; everywhere, posters for the next Telethon and donators visiting the premises. Where is the science? Where is the society? They are now entangled to the point where they cannot be taken apart any longer. More extraordinary, patients turned genetic determinism (which, in many domains, is used as a way to render nature even more deterministic) into an instrument of unexpected freedom.

As has recently been shown for other diseases (4), many decisions are now taken by the patients, their families and their representatives, in close connection with a scientific community put in a new position: patients now routinely generates their own science policy. In these examples, the nature of society becomes clearly different from what it was in the traditional model. The patients are not waiting for results to trickle down from Science into their daily life, with no other option than to be open- or close-minded to the advancement of the scientific progress. They are not expecting genes, viruses or vaccines to transform their subjective suffering into an objective determination. They took over what it was to have a disease and tailored a science policy adjusted to what they perceived as their needs; far from expecting certainty from Science, they accepted that they must share risk in Research. Surely the word "patient" never meant so much action and so little patience!

How best to express this New Deal between Research and society? The notion of 'collective experiment', in my eyes at least, could help capture the new spirit of the time (5).

When the AAAS was founded, there was no doubt in the mind of the scientists — still a new word, then — that Science could resolve, bit by bit, most of the ills of society. The advancement of science was thus seen as the retreat of poverty, superstition and other human follies. At the very least, the more science advanced the better. The zeal for modernity, the juvenile ardor with which people embraced the cause of science, was due to this absolute certainty: there is a time's arrow that distinguishes clearly a more obscure past, where passions and objectivity were mixed, from a brighter future in which humanity will no longer confuse facts and values, objectivity and subjectivity. The formidable energy of most scientists came from this conviction to march forward over a large front of modernization (not unlike the mythical Frontier itself) that clearly set the archaic past apart from the enlightened future.

It is no use minimizing the distance that separates our glorious forefathers and ourselves. How different things look a century and a half later! Who believes anymore in this unalloyed calling for Science — and, for that matter, where is the endless Frontier? The scientization of society has produced, to be sure, many beautiful ruins, but not a better society.

We should however be careful not to misinterpret the yawning gap between expectations and fulfillments. There are many people who say that the dreams of Science have failed, that modernization has exhausted itself, that ills have irrupted where goods were expected, and that time's arrow no longer thrusts forward to progress: it resembles rather a dish of spaghetti than a straight route to the next century. “No future” for Science, one could say. Science should be exposed and fiercely debunked as one of the many illusions destroyed by this most corrosive of all centuries. After the death of God, the flight from Reason.

My interpretation of the sea change is entirely different, and I take my cues from the fieldwork we all do in our tiny field called “science studies”. Science might be dead, but then long live Research! I believe that there is a ‘time's arrow’, but it has a new way to distinguish past from future. In the past things and people were entangled; in the future, they will be even more entangled than ever before!

No one for instance believes that ecological controversies will die away to reach a point where we will no longer have to take care of the environment (6). Activists as well as scientists and politicians don't expect Science to decrease the complex web of their life — on the contrary, they expect Research to multiply the number of entities with which they have to deal in their collective life.

It is at this juncture that the notion of ‘collective experiment’ acquires all its weight. Europe has lived, for several years now, entangled in the so-called ‘mad cow disease’. Progress is expected in all the scientific matters connected with epidemiology, non-conventional proteins, veterinary surveillance, traceability of meat, trade legislation, but no one expects to disentangle for good a core of ‘scientific facts’ from a social context of ‘ideologies’, ‘tastes’ and ‘values’. On the contrary, everyone expects

unexpected consequences to arise, whatever is done to the complex web of meat, ministers, bones, proteins, virus and befeaters (7) !

That is what has changed most. Science does not enter a chaotic society to put order into it anymore, to simplify its composition and to put an end to its controversies. It does enter it, but to add new uncertain ingredients (such as the beautiful and unexpected prions which earned Pruziner a Nobel Prize last year) to all the other ingredients that make-up the collective experiments. When scientists add their grains of salt, they do not put an end to politics: they add new entities to the make-up of the collective process. To the many spokespersons that already represent humans and their needs, they add more spokespersons that represent — how should I say? — non-humans and their needs.

This entanglement is even tighter when the size of the entities to be taken into account compete with the Sovereign Good. In a recent review article in *Science* (8), scientists are speaking in the name of the Gulf Stream which threatens, they claim, to disappear because of changes in the salinity of the Atlantic Ocean. Such an article is typical of the New Deal between Research and society I am trying to define: a new entity, of gigantic proportion, enters the collective experiment and has to be added to the list of those which constitute the society of humans and non-humans together. In addition to the prions, the Gulf Stream! Who can expect any longer to disentangle us from the mass of new entities journals like this magazine bring every week to bear on the commerce of humans? Only one thing is surer now than death and taxation: there will be more of these strange beasts in the future than in the past.

With the benefit of hindsight, we now understand that the very definition of ‘society’ that had been used until now as a foil for Science, was ill-conceived from the start. The adjective ‘social’ has been used all along, to weaken Science’s claim to truth and certainty — and if you add that a result is ‘socially constructed’ then it means, in the eyes of Science at least, that it is wrong. This tug-of-war between Science and society, where one gains what the other loses, is no longer the only game in town. There is now an alternative. To the old slogan of Science — the more disconnected a discipline the better — now resonates a more realistic call for action: the more connected a scientific discipline, the better.

Yes, this might mean that we have to modify our epistemology, to adjust our political institutions, to subvert our definition of the social sciences. If we compare Galileo muttering alone in his cell “and yet it moves!” with the recent meeting at Kyoto where heads of states, lobbyists and scientists were assembled together in the same room of the same palace to discuss how the Earth should move, we measure the difference between Science and Research (9).

Scientists have now the choice: either to maintain an ideal of Science that was adjusted to the mid-nineteenth century, or to elaborate with all of us, *hoi polloi*, an ideal of Research better adjusted to the collective experiment in which we are all embarked.

In 150 years, all the ills had plenty of time to flee from the wide-opened Pandora's box. Only one thing has been left inside: hope. It might be just the right time to fetch it.

\* Research under grant n°56.0354 from the French Ministry of Environment.

1. B. Latour, *We Have Never Been Modern* (Harvard University Press, Cambridge, Mass, 1993).
2. J. Weissenbach, et al., *Nature* **359** (1992).
3. D. Cohen, I. Chumakov, J. Weissenbach, *Nature* **366** (1993).
4. S. Epstein, S. *Impure Science. Aids, Activism and the Politics of Knowledge.*, (University of California Press, Berkeley, 1996)..
5. Callon, M. . *Science, Technology and Human Value* **19**(4): 395-424 (1994).
6. D. Western, et al., Eds. *Natural Connections. Perspectives in Community-based Conservation.* (Island Press, Washington DC, 1994).
7. U. Beck, *Risk Society. Towards a New Modernity* (Sage, London, 1992).
- 8 W.S Broecker, *Science*, **278**, 1582-1588.
9. M. Biagioli, *Galileo Courtier. The Practice of Science in the Culture of Absolutism* (Chicago University Press, Chicago, 1993).