Waiting for Gaia. Composing the common world through arts and politics*

A lecture at the French Institute, London, November 2011 for the launching of SPEAP (the Sciences Po program in arts & politics) Bruno Latour, Science Po.

Abstract: There is no single institution able to cover, oversee, dominate, manage, handle, or simply trace ecological issues of large shape and scope. Many issues are too intractable and too enmeshed in contradictory interests. We have problems, but we don't have the publics that go with them. How could we imagine agreements amid so many entangled interests? We will review several attempts to tackle ecological problems by connecting the tools of scientific representation with those of arts and politics and present the program of Experimentation on Arts and Politics which has been running at Sciences Po since September 2010.

What are we supposed to do when faced with an ecological crisis that does not resemble any of the crises of war and economies, the scale of which is formidable, to be sure, but to which we are in a way habituated since it is of human, all too human, origin? What to do when told, day after day, and in increasingly strident ways, that our present civilization is doomed; that the Earth itself has been so tampered with that there is no way it will ever come back to any of the various steady states of the past? What do you do when reading, for instance, a book such as Clive Hamilton titled Requiem for a species: Why We Resist the Truth about Climate Change—and that the species is not the dodo or the whale but us, that is, you and me? Or Harald Welzer's Climate Wars: What People Will Be Killed For in the 21st Century, a book that is nicely divided in three parts: how to kill yesterday, how to kill today, and how to kill tomorrow! In every chapter, to tally the dead, you have to add several orders of magnitude to your calculator!

The time of great narratives has past, I know, and it could seem ridiculous to tackle a question so big from so small a point of entry. But that's just the reason

^{*} I thank Michael Flower for many suggestions and for kindly correcting my English.

I wish to do so: what do we do when questions are too big for everybody, and especially when they are much too grand for the writer, that is, for myself?

One of the reasons why we feel so powerless when asked to be concerned by ecological crisis, the reason why I, to begin with, feel so powerless, is because of the total *disconnect* between the range, nature, and scale of the phenomena and the set of emotions, habits of thoughts, and feelings that would be necessary to handle those crises—not even to act in response to them, but simply to give them more than a passing ear. So this essay will largely be about this disconnect and what to do about it.

Is there a way to bridge the distance between the scale of the phenomena we hear about and the tiny *Umwelt* inside which we witness, as if we were a fish inside its bowl, an ocean of catastrophes that are supposed to unfold? How are we to behave sensibly when there is no ground control station anywhere to which we could send the help message, "Houston, we have a problem"?

What is so strange about this abysmal distance between our little selfish human worries and the great questions of ecology is that it's exactly what has been so *valorised* for so long in so many poems, sermons and edifying lectures about the *wonders of nature*. If those displays were so wonderful, it was just because of this disconnect: to feel powerless, overwhelmed, and totally dominated by the spectacle of "nature" is a large part of what we have come to appreciate, since at least the 19th century, as the *sublime*.

Remember Shelley:

"In the wild woods, among the mountains lone,

Where waterfalls around it leap forever,

Where woods and winds contend, and a vast river

Over its rocks ceaselessly bursts and raves."

How we loved to feel small when encompassed by the magnificent forces of the Niagara Falls or the stunning immensity of the Arctic glaciers or the desolate and desiccated landscape of the Sahara. What a delicious thrill to set our size alongside that of galaxies! Small compared to Nature but, as far as morality is concerned, so much bigger than even Her grandest display of power! So many poems, so many meditations about the lack of commensurability between the everlasting forces of nature and the puny little humans claiming to know or to dominate Her.

So one could say, after all, that the disconnect has always been there and that it is the inner spring of the feeling for the sublime.

"The everlasting universe of things

Flows through the mind, and rolls its rapid waves,

Now dark--now glittering--now, reflecting gloom--

Now lending splendor, where from secret springs

The source of human thought its tribute brings"

But what has become of the sublime lately, now that we are invited to consider another disconnect, this time between, on one side, our *gigantic* actions as humans, I mean as collected humans, and, on the other side, our complete lack of a grasp on what we have collectively done?

Let us ponder a minute what is meant by the notion of "anthropocene", this amazing lexical invention proposed by geologists to put a label on our present period. We realise that the sublime has evaporated as soon as we are no longer taken as those puny humans overpowered by "nature" but, on the contrary, as a collective *giant* that, in terms of terawatts, has scaled up so much that it has become the main geological force shaping the Earth.

What is so ironic with this anthropocene argument is that it comes just when vanguard philosophers were speaking of our time as that of the "posthuman"; and just at the time when other thinkers were proposing to call this same moment the "end of history". It seems that history as well as nature have more than one trick in their bag, since we are now witnessing the speeding up and scaling up of history not with a posthuman but rather with what should be called a *post-natural* twist! If it is true that the "anthropos" is able to shape the Earth literally (and not only metaphorically through its symbols), what we are now witnessing is anthropomorphism on steroids.

In his magnificent book *Eating the Sun* Oliver Morton provides us with an interesting energy scale. Our global civilization is powered by around thirteen terawatts (TW) while the flux of energy from the centre of the Earth is around forty TW. Yes, we now measure up with plate tectonics. Of course this energy expenditure is nothing compared to the 170,000 TW we receive from the sun, but it is already quite immense when compared with the primary production of the biosphere (130 TW). And if all humans were to be powered at the level of North Americans, we would operate at a hundred TW, that is, with twice the muscle of plate tectonics. That's quite a feat. "Is it a plane? Is it nature? No, it's Superman!". We have become Superman without even noticing that inside the telephone booth we have not only changed clothes but grown enormously! Can we be proud of it? Well, not quite, and that's the problem.

The disconnect has shifted so completely that it no longer generates any feeling of the sublime any more since we are now summoned to feel *responsible* for the quick and irreversible changes of the Earth's face occasioned in part as a result of the tremendous power we are expending: we are asked to look again at the same Niagara Falls but now with the nagging feeling that they might stop falling flowing (too bad for Shelley's *waterfalls around it leap forever*); we are asked to look again at the same everlasting ice, except that we are led to the sinking feeling that they might not last long after all; we are mobilized to look again at the same parched desert, except that we come to feel that it expands inexorably *because* of our disastrous use of the soil! Only galaxies and the Milky Way might still be available for the old humbling game of wonder, because they are beyond the Earth (and thus beyond our reach since they reside in the part of nature that the Ancients called supralunar (more of this later).

How to feel the sublime when guilt is gnawing at your guts? And gnawing in a new unexpected way because of course *I* am not responsible, and neither are *you*, you, nor you. No one in isolation is responsible.

Everything happens as if the old balance between the contemplation of the moral law *in us* and that of the innocent forces of nature *outside of us* has been entirely subverted. It is as if all the feelings of wonder, together with morality, have

changed sides. The real wonder today is how I could be accused of being so guilty without *feeling* any guilt, without having done anything bad? The human collective actor who is said to have committed the deed is not a character that can be thought, sized up, or measured. You never meet him or her. It is not even the human race taken *in toto*, since the perpetrator is only a part of the human race, the rich and the wealthy, a group that have no definite shape, nor limit and certainly no political representation. How could it be "us" who did "all this" since there is no political, no moral, no thinking, no feeling body able to say "we" —and no one to proudly say "the buck stops here"? Remember the rather pitiful meetings in Copenhagen 2009 of all the heads of state negotiating in secret a non-binding treaty, calling names and haggling like kids around a bag of marbles.

But the other reason why the sublime has disappeared, why we feel so guilty about having committed crimes for which we feel no responsibility, is the added complication brought about by the climate "sceptics" or rather, to avoid using this positive and venerable term, the climate *deniers*.

Should we give those characters equal time to balance the position of the climatologists —in which case we risk rejecting our responsibility and associating ourselves with creationists fighting Darwin and the whole of biology? Or do we take sides and refuse to offer to deniers a platform to pollute what is probably the best certainty we will ever have as to how we wreaked havoc on our own ecosystem —in which case we risk having been enlisted in an ideological crusade to once again moralize our connections with nature and to replay the Galileo trial as though we were ignoring the lone voice of reason fighting against the crowd of experts?

No wonder that, facing this new disconnect, so many of us move from admiration in front of the innocent forces of nature to complete despondency — and even lend an ear to the climate deniers.

As Clive Hamilton argued in *Requiem for a Species*, in a sense we are all climate deniers, since we have no grasp of the collective character —the *anthropos* of the anthropocene, the "human" of the "human made" catastrophe. It is through our own built-in indifference that we come to deny the knowledge of our science. Think of it: it would be so nice to return to the past when nature could be sublime and us, the puny little humans, simply irrelevant, delighting in the inner feeling of our moral superiority over the pure violence of nature. In a way, the disconnect is the real source of the denial itself.

What does it mean to be morally responsible in the time of the anthropocene, when the Earth is shaped by us, by our lack of morality —except there is no acceptably recognizable "we" to be burdened by the weight of such a responsibility —and that even the loop connecting our collective action to its consequence is thrown into doubt?

To sum up my first point, how could you still want to feel the sublime while watching the "everlasting" waterfalls sung by Shelley when, one, you simultaneously feel that they might disappear; when, two, you might be responsible for their disappearance; while, three, you feel doubly guilty for not feeling responsible; and given that you sense a fourth level of responsibility for not

having dug deeply enough into what is called the "climate controversy". Not read enough, not thought enough, not felt enough.

Apparently, there is no solution except to explore the disconnect and expect that human consciousness will raise our sense of moral commitment to the level required by this globe of all globes, the Earth. But if we judge by recent news, to bet on consciousness-raising is a bit risky since the number of American and Chinese and even British citizens denying the anthropic origin of climate change is actually waxing instead of waning (even in "rationalistic" France, a former minister of research, with a nice uplifting name, Professor Cheerful, has managed to convince a large part of our most enlightened publics that there is so much controversy about the climate that we don't have to worry about it after all).

It seems that, as in Lars von Triers movie *Melancholia*, we might rather all be quietly enjoying the solitary spectacle of the planet crashing into our Earth from the derisory protection of a children's hut made out of a few branches by Aunt Steelbreaker. As if the West, just when the cultural activity of giving a shape to the Earth is finally taking a *literal* and not a symbolic meaning, resorted to a totally outmoded idea of magic as a way to forget the world entirely. In the amazing final scene of a most amazing film the hyper-rational people fall back onto what old primitive rituals are supposed to do—protecting childish minds against the impact of reality. Von Triers might have grasped just what happens after the sublime has disappeared. Did you think Doomsday would bring the dead to life? Not at all. When the trumpets of judgment resonate in your ear, you fall into melancholia! No new ritual will save you. Let's just sit in a magic hut, and keep denying, denying, denying, until the bitter end.

So what do we do when we are tackling a question that is simply too big for us? If not denial, then what? One of the solutions is to become attentive to the *techniques* through which scale is obtained and to the instruments that make *commensurability* possible. After all, the very notion of anthropocene implies such a common measure. If it is true that "man is a measure of all things" it could work also at this juncture.

It is a tenet of science studies and actor network theory that one should never suppose that differences of scale already exist but instead always look for how scale is produced. Fortunately, this tenet is ideally suited to ecological crisis: there is nothing about the Earth as Earth that we don't know through the disciplines, instruments, mediations, and expansion of scientific networks: its size, its composition, its long history and so on. Even farmers depend on the special knowledge of agronomists, soil scientists and others. And this is even truer of the global climate: the globe by definition is not global but is, quite literally, a *scale model* that is connected through reliably safe networks to stations where data points are collected and sent back to the modellers. This is not a relativist point that could throw doubt on such science but a *relationist* tenet that explains the sturdiness of the disciplines that are to *establish*, multiply and do the upkeep of those connections.

I am sorry to insist on what looks like splitting hairs, but there is no way to explore a way out of the disconnect if we don't clarify the scaling instrument that

generates the global locally. My argument (actually science studies' argument) is that there is no zoom effect: things are not ordered by size as if they were boxes inside boxes. Rather they are ordered by connectedness as if they were nodes connected to other nodes.

Nobody has shown this better than Paul Edwards in his beautiful book on climate science, *A Vast Machine*. If meteorologists and later climate scientists have been able to obtain a "global" view, it is because they managed to build more and more powerful models able to recalibrate data points elicited from more and more stations or documents —satellites, tree rings, logbooks of navigators dead long ago, ice cores, and so on.

Interestingly enough, this is exactly what leads the climate-deniers to their denials: they find this knowledge too indirect, too mediated, too far from immediate access (yes, those epistemological doubting Thomases apparently believe only in *unmediated* knowledge). They are incensed to see that no data point in itself has any sense, that those data all need to be recalculated and reformatted. Exactly as the negationists do about the crimes of the past, climate deniers use, for future crimes, a positivistic touchstone to poke holes into what is an extraordinary puzzle of crisscrossing interpretations of data. Not a house of cards, but a tapestry, probably one of the most beautiful, sturdy and complex ever assembled. Of course there are a lot of holes in it, having holes is what weaving knots and nodes is about. But this tapestry is amazingly resilient because of the way it is woven-allowing data to be recalibrated by models and vice versa. It appears that the history of the anthropocene (climate sciences are by definition a set of historical disciplines) is the best documented event we have ever had. Paul Edwards even argues at the end of his book that we will never know more about the present global warming trend since our action modifies the baseline so much, year after year, that we will no longer have any baseline to calculate the deviation from the mean... What a perversity: to witness the human race erasing its deeds by deviating so much that its further deviations can no longer be traced.

The reason it is so important to stress this slow, tapestry-weaving process of calibration, modelling and reinterpretation is because it shows that even for the climate scientists there is no way to measure up *directly* with the Earth. Thanks to the slow calibrating processes of many standardizing institutions, what they do is to carefully watch a local model from the tiny locus of a laboratory. So there is one disconnect we don't have to share: we don't have on one side the scientists benefitting from a globally *complete* view of the globe and, on the other, the poor ordinary citizen with a "limited local" view. There are *only local* views. However, some of us look at *connected* scale models based on data that has been reformatted by more and more powerful programs run through more and more respected institutions.

For those who wish to bridge the gap and fathom the new disconnect, this foregrounding of the instruments of measurement may offer a crucial resource—this time for politics. It is useless for the ecologically motivated activist to try shaming the ordinary citizen for *not* thinking globally enough, for not having a feel for the Earth as such. No one sees the Earth globally and no one sees an ecological system from Nowhere, the scientist no more than the citizen, the farmer or the

ecologist —or, lest we forget, the earthworm. Nature is no longer what is embraced from a far away point of view where the observer could ideally jump to see things "as a whole", but the assemblage of contradictory entities that have to be composed together.

This work of assembly is especially necessary if we now are to imagine the "we" that humans are supposed to feel part of in taking responsibility for the anthropocene. Right now there is no path leading from my changing the light bulbs in my home straight to the Earth's destiny: such a stair has no step; such a ladder has no rung. I would have to jump, and this would be quite a *salto mortale!* All assemblages need intermediaries: satellites, sensors, mathematical formulae, and climate models, to be sure, but also nation states, NGOs, consciousness, morality and responsibility. Can this lesson of assembly be followed?

One tiny way toward such an assemblage is provided by the work done by several scholars of my persuasion around what we call "the mapping of scientific controversies". Controversies are not what we should escape from but what should be composed, actor after actor, exactly as those who model the climate ad, actor after actor--the role of air turbulences, then the clouds, then the role of agriculture, then the role of plankton, every time gaining a more and more realistic rendering of this true *theatre of the globe*.

Such an attempt at mapping controversies is one example of the instruments that bridge in part the disconnect between the size of the problems we face and our limited grasp and attention span. Especially if we seize the opportunity offered by digital information to bring together in the same optical space documents coming from science and documents coming from public arenas.

At first, the confusion is horrible as if facts and opinions were mixed up. But that's just the point: facts and opinions are already mixed up and they will be even more mixed up in the future. What we need is not to try isolating once again the world of science and the world of politics —how can we even imagine keeping such a program in operation in the time of the anthropocene, that mix up of all mix ups?— but deciphering with a new metrology the relative weight of the entangled cosmologies. Since it is now the worlds that are in question, let's compare cosmologies with one another. Instead of trying to distinguish what can no longer be distinguished, ask these key questions: what world is it that you are assembling, with which people do you align yourselves, with what entities are you proposing to live?

After all, this is just what has recently allowed scholars to follow how the anthropic origin of "climate weirding", a fact which was taken as well established fifteen or twenty years ago, and that has been reduced in the eyes of millions of people to the level of a mere opinion. Very quickly it became possible for scholars to follow with the same instruments that allow us to trace the production of science (search engines, scientometrics and bibliometric tools, maps of the blogospheres), the people, lobbies, credentials, and money flows of those who insisted on making it a controversy. I am thinking here of the work of Naomi Oreskes or of James Hoggan. How interesting to see the connections made between big oil, cigarette manufacturing, antiabortionists, creationists,

Republicans and a worldview made of very few humans and very few natural entities. If it is cosmograms against cosmograms, then let's compare cosmograms with one another. That's what politics has become. Let's pit the worlds against one another since it is a war of worlds.

I tried to introduce in philosophy the word composition and "compositionism" just for that reason. Not only because it has a nice connection with *compost*, but also because it describes exactly what sort of politics could follow the path of climate science. The task might not be to "liberate climatology" from the undue weight of political influence (this is what Texas governor Rick Perry claims: scientists are in it for grant money and the opportunity to advance a socialist agenda that even Lenin failed to impose on the courageous Yankees). On the contrary, the task is to follow the threads with which climatologists have built the models needed to bring the whole Earth on stage. With this lesson in hand we begin to imagine how to do the same in our efforts to assemble a *political body* able to claim its part of responsibility for the Earth's changing state.

After all, this mix up of science and politics is exactly what is embodied in the very notion of anthropocene: why would we go on trying to *separate* what geologists, earnest people if any, have themselves intermingled? Actually, the spirit of our tongue has said that all along, having already connected *humus*, *humane* and *humanity*. We the Earthlings are born from the soil and from the dust to which we will return, and this is why what we used to call "the humanities" are also, from now on, our sciences.

So far I have insisted on one side of the disconnect, the one that led us toward the helpless human race unwillingly changing its clothes into those of Superman. It is time now to turn our attention toward the other side, what used to be called "nature". The tricky notion of the anthropocene modifies both sides of what has to be bridged: the human side for sure, as we are deprived of the possibility of any longer feeling the sublime, but also the side of the geological forces to which we humans are now aligned and compared. At the same moment when humans have been changing the shape of the Earth without being used to their new Gargantuan clothes, the Earth has metamorphosed of late into something that James Lovelock has proposed to name Gaia. Gaia is the great Trickster of our present history.

In the remainder of this essay, I'd like to explore how different Gaia is from Nature of olden days. When we put together the two mutations, the one on the side of the Earthlings and the one of the side of the Earth, we might find ourselves in a slightly better position to bridge the gap.

First, Gaia is not a synonym of Nature because it is highly and terribly *local*. During the period studied by Peter Sloterdijk as the time of the Globe, that is, from the 17th to the end of the 20th century, there was some continuity between all elements of what could be called the "universe" because it was indeed unified — but unified too fast. As Alexandre Koyré had said, we were supposed to have moved once and for all from a restricted *cosmos* to an infinite *universe*. Once we crossed the narrow boundary of the human polity, everything *else* was made of *same* material stuff: the land, the air, the moon, the planets, the Milky Way and all

the way to the Big Bang. Such has been the revolution implied by the adjectives "Copernican" or "Galilean": no longer any difference between the sublunar and the supralunar world.

How surprising then to be told, quite suddenly, that there is after all a difference between the sublunar and the supralunar world. Also to be told that only robots and maybe a handful of cyborgian astronauts might go further and beyond but that the rest of the race, nine billion of us, will remain stuck down here in what has become once again, just as in the old cosmos, a "cesspool of corruption and decay", or at least, a crowded place of risk and unwanted consequences. No beyond. No away. No escape. As I said earlier, we can still feel the sublime, but only for what is left of nature *beyond* the Moon and only when we occupy the View from Nowhere. Down below, no longer any sublime. Here is a rough periodization: after the cosmos, the universe, but after the universe, the cosmos once again. We are not postmodern but, yes, we are postnatural.

Second, Gaia is not like Nature, indifferent to our plight. Not exactly that She "cares for us" like a Goddess or like Mother Nature of so much ecological New Age pamphlets; not even like the Pachacama of Inca mythology recently resurrected as a new object of Latin America politics. Although James Lovelock has often flirted with metaphors of the divine, I find his exploration of Gaia's indifference much more troubling: because She is at once extraordinarily sensitive to our action and at the same time She follows goals which do not aim for our wellbeing in the least. If Gaia is a goddess, She is one that we can easily put out of whack while She in turn may exact the strangest sort of "revenge" (to borrow from the title of Lovelock's most strident book) by getting rid of us, "shivering us" out of existence, so to speak. So in the end, She is too fragile to play the calming role of old nature, too unconcerned by our destiny to be a Mother, too unable to be propitiated by deals and sacrifices to be a Goddess.

Remember the energy spent in the past by so many scholars to weed out the difference between "nature" and "nurture"? What happens now when we turn to "nature" and realize that we are the ones that should be "nurturing" Her so as not to be reduced to irrelevance by Her sudden change of steady state. She will last. Don't worry about Her. We are the ones who are in trouble. Or rather with this enigma of the anthropocene there is some sort of Moebius strip at work here, as if we were simultaneously what encompasses her —since we are able to threaten Her—while She is encompassing us —since we have nowhere else to go. Quite a trickster, this Gaia.

Although in this essay I cannot go through all the features that make up the originality of Gaia, I nonetheless need to conclude with two more.

The third trait and probably the most important is that Gaia is a *scientific* concept. It would be of no interest if it were associated in your mind with some vague mystical entity such as Aywa, the networky Gaia of the planet Pandora in Cameron's *Avatar*. Even though Lovelock has long been a heterodox scientist and remains largely a maverick, the real interest of the concept he assembled from bits and pieces, is that *it is* assembled from bits and pieces, most of them coming from scientific disciplines —apart from the name suggested to him by William Golding. Developing a concept that was not made mainly of scientific content would be a

waste of time since the requirement of our period is to pursue the anthropocene along lines dictated by its hybrid character. What we mean by spirituality has been too weakened by wrong ideas of science to offer any alternative. The supernatural, in that sense, is much worse than the natural from which it comes. So, in spite of the name, as far as we know from the comparative study of religion, Gaia does not really play the older role of a goddess. As far as I can figure, Gaia is just a set of contingent positive and negative cybernetic loops —as demonstrated in the wellknown "Daisy world" model. It just happens that those loops have had the completely unexpected effect, one after the other, of furthering the conditions for new positive and negative loops of ever more entangled complexity. There is no teleology, no Providence, in such an argument.

Of course, we should be careful with the label: when I say that Gaia is a "scientific" concept, I don't use the adjective in the *epistemological* sense of what introduces a radical and traceable difference between true and false, rational and irrational, natural and political. I take it in the new, and in a way much older sense of "scientific", as a cosmological (or rather a *cosmopolitical*) term designating the search for, as well as the domestication and accommodation of new entities that try to find their place in the collective *in addition* to those of humans, most often by displacing the latter. The great thing about Lovelock's Gaia is that it reacts, feels and might get rid of us, without being ontologically unified. It is not a superorganism endowed with any sort of unified agency.

It is actually this total lack of unity that makes Gaia *politically* interesting. She is not a sovereign power lording it over us. Actually, in keeping with what I see as a healthy anthropocene philosophy, She is no more unified an agency than is the human race that is supposed to occupy the other side of the bridge. The symmetry is perfect since we don't know more what *She* is made of than we know what *we* are made of. This is why Gaia-in-us or us-in-Gaia, that is, this strange Moebius strip, is so well suited to the task of composition. It has to be composed piece by piece, and so do we. What has disappeared from the universe —at least the sublunar portion of it— is continuity. Yes, She is the perfect trickster.

The fourth and last trick I want to review is of course quite depressing. The whole disconnect I have reviewed here is built upon the very idea of an immense threat to which we would be slow to react and unable to adjust. Such is the spring with which the trap has been set. Of course, confronted with such a threatening trap, the most reasonable of us react with the perfectly plausible argument that apocalyptic pronouncements are just as ancient as humans. And it is true, for instance, that my generation has lived through the nuclear holocaust threat, beautifully analysed by Gunther Anders in terms very similar to those used today by doomsday prophets —and yet we are still here. In the same way, historians of environment could argue that the warning against the dying Earth is as old as the so-called Industrial Revolution. Indeed, a further dose of healthy scepticism seems warranted when reading, for instance, that Durer, the great Durer himself, was simultaneously preparing his soul for the end of the world expected for the year 1500 while investing a bundle of hard money on printing his beautiful and expensive prints of the Apocalypse in the hope of a hefty profit. So with these

comforting thoughts, we could reassure ourselves about the folly of prophesying Doomsday.

Yes, yes, yes. Unless, that is, it's just the other way around and that we are now witnessing another case of having cried wolf too long. What if we had shifted from a symbolic and metaphoric definition of human action to a *literal* one? After all, this is just what is meant by the anthropocene concept: everything that was symbolic is now to be taken literally. Cultures used to "shape the Earth" symbolically; now they do it for good. Furthermore, the very notion of culture went away along with that of nature. Post natural, yes, but also post cultural.

Referring to the famous study at the origin of the very notion of "cognitive dissonance (Festiger, Riecken and Schachter's Why Prophecy Fails), Clive Hamilton argues that we should heed again the study of Mrs. Keech and her prediction of the end of the world. Our disconnect might not reside in expecting the end and then having to reorganize our belief system to account for why it's not coming (as the early Christians had to do when they realized that the End was not that of Christ crashing through the sky in a display of Apocalyptic pyrotechnics but rather the slow earthly expansion of Constantine's empire). But for us today the disconnect could be in believing that Doomsday is not coming once and for all. It would be a nice and terrifying case of When Prophecy Succeeds! And denial, this time, would mean that we are rearranging our belief system so as not to see the Great Coming.

It is for this reason that Clive Hamilton offers the strange and terrifying assertion that it's *hope* that we should abandon if we wish to enter into any transaction with Gaia. Hope, unremitting hope, is for him the source of our melancholia and the cause of our cognitive dissonance.

I hope (ah, hope again!) to have shown why it might be important, even urgent, to bring together all the possible resources to close the gap between the size and scale of the problems we have to face and the set of emotional and cognitive states that we associate with the tasks of answering the call to responsibility without falling into melancholia or denial. It is largely for this reason that we have resurrected this rather out of fashion term of "political arts" for the new program we created in Sciences Po to train professional artists and scientists —social and natural—to the triple task of scientific, political and artistic representation.



The idea, at once daring and modest, is that we might convince Gaia that since we now weigh so much upon Her shoulders —and Her on ours— we might entertain some sort of a deal —or a ritual. Like the megabanks we too might have become "too big to fail". Our destinies are so connected that there might be an issue in the end as illustrated by this fascinating print by the Master of Messkirke in Basel where you see St Christopher holding the young Christ himself embedded into a closed cosmos. St Christopher seems to me a slightly more hopeful icon than that of the overburdened Atlas —only, that is, if hope could still be a blessing.