Drawing Bruno Together

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Abstract
This *Crossing Boundaries* stems from two events: the recent STS-Italia conference (Bologna, June 2023) and the 4S/ESOCITE conference (Cholula, December 2022). Both events dedicated a space for reflecting on Bruno Latour's intellectual legacy, inviting some of the scholars who had the chance and the privilege to work with him. The text opens with a reflection by Madeleine Akrich on her two-decade experience working alongside Latour and on the multifaceted nature of his contributions to sociology, anthropology, and philosophy. The text continues with a contribution by Huub Dijstelbloem, who explores Latour's magmatic thinking, emphasizing the transformative power of his ideas. Annalisa Pelizza traces two key associations in Bruno Latour's intellectual trajectory. The first one traces back to Latour's early engagement with the semiotics of the "École de Paris" and Greimas' theory of enunciation, emphasizing the local context of the French semiotic debate. The second association delves into Latour's connection with technofeminism and Donna Haraway's material-semiotics, highlighting a global dialogue initiated in the late 1980s. Finally, Paolo Landri underlines the transformative potential of Latour's vocabulary in the context of education, underlying the interdisciplinary connections fostered by following Latour.

Keywords
Latour; sociology; anthropology; material-semiotics; education.

The many facets of Bruno Latour

Madeleine Akrich

I had the privilege of working in the same research center as Bruno Latour for about 20 years. When it comes to looking back on what he brought us, this is also a disadvantage. This

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proximity blurs points of reference, dilutes the events in the continuous fabric of a shared daily life, and ultimately raises doubts: who was he, a sociologist, an anthropologist of science and technology, a philosopher, to use some of the labels he gave himself? Likewise, the subsequent evolution of his work questions about his project in retrospect: was his work on science, then on technology, only a first step, conceptualized as such from the outset, or has it become so as he traced his intellectual path, site after site, book after book?

My first contact with Bruno Latour took place during my final year at the École des Mines, when I decided to specialize in sociology. I had to draft a small research project, and wanted to work on the restoration of works of art. He gave me access to a fascinating case, the *Beaune polyptych*, because members of the Latour family had been on the board of the Hospices de Beaune and thus involved in the last restoration of the polyptych in the seventies. I went to Beaune, and was welcomed by his mother in the family home, one of the many examples of the hospitality of Latour and his family. I interviewed his uncle who guided me in the Hospices de Beaune, in the monument as well as in the institution. I had a glimpse of what he himself described as a bourgeois Catholic provincial family and the confidence it gave him: he never had any doubts about his place, even if the choice of an academic career was certainly not the most expected in his family.

A few months later, after graduating as an engineer, I joined the *Centre de Sociologie de l'Innovation* (CSI) to work on a research contract on energy technologies in developing countries. This may seem very strange, because I had no training in the social sciences, other than three basic courses and a dissertation, but back then, a lot of things were possible.

And this idea that many things were possible could be applied to the next ten years at the CSI. First of all, with the exception of Lucien Karpik who had been the first director of the CSI, all CSI members were under 40 years old. Michel Callon and Bruno Latour had a pioneering spirit; they shared very high ambitions, perhaps not exactly the same, but at least they both wanted to be part or even be amongst the leaders of this new STS field.

Surprisingly, like all CSI members, I only recently discovered how Callon and Latour's relationship had developed: in a long paper Callon recently published (2023a), he provides a very interesting and moving testimony on their collaboration. Their first contacts resembled an intellectual romance. They met for the first time in 1978 at Latour's initiative:

> After a few minutes, we agreed on the program to be put in place: to enter the black box of scientific practices and focus on the only thing that matters: their content. [...] Latour's visit was most welcome. He brought with him a breath of fresh air from the Anglo-Saxon world. (Callon 2023a)

After this first contact, many others took place, including regular lunches in a brasserie in the Odéon district with Latour, Callon and the philosopher Michel Serres, where I suppose they remade the world, at least the world of science and technology studies.

Four years after their first encounter, Callon managed to secure a position for Latour at the École des Mines, and so began an intense decade of collective work between these two outstanding researchers.

The intellectual momentum Callon and Latour had created through their near-secret encounters generated an extremely stimulating atmosphere: the world of possibilities seemed completely open to us. Neither did we care about academic positioning within the French

microcosm, as evidenced by the fact that temporary and permanent members of the CSI came from a wide variety of backgrounds, engineering, history, business schools, development studies, urban planning, etc., almost everything except sociology!

The prior exchanges between Latour and Callon had made it possible to build a collective project based on the solid foundations provided by each of them: inscription and actant for Latour, translation for Callon, and then notions developed jointly such as that of spokesperson (*porte-parole*). Far from being restrictive hypotheses, all these notions appeared to us as descriptive tools allowing us to explore in new ways the making of scientific facts, technologies and beyond. We were very surprised to be perceived from the outside as a kind of sect, rigidly dogmatic, while from the inside, we had a feeling of great freedom and openness, manifested itself through the variety of research topics and the liveliness of our discussions.

The general atmosphere was very joyful and collaborative. Every seminar was fascinating, owing to the brilliant ping pong between Callon and Latour, in which we all tried to participate: Antoine Hennion brought his particular touch to the table with his concept of mediation, forged in his work around music; even Karpik who was probably the only one not partaking into the CSI Callon-Latour project certainly played a useful role with his provocative remarks and questions that he punctuated with a laugh rivaling Bruno's famous one. As Callon wrote in the aforementioned article, Latour liked nothing more than being challenged on his texts before they were published: so even if Karpik and Latour were not very fond of each other, their skirmishes could be quite productive.

After about ten years of intense work together, things began to change. Not sure that any of us clearly understood what was at stake. Callon's article as well as the article by Antoine Hennion in the special issue of *Pragmata* devoted to Latour (Hennion 2023) give credence to the idea that the late Latour, the one from *An Inquiry into Modes of Existence*, had always been there. Latour himself accredited this idea in a paper he wrote on the genesis of the Inquiry (Latour 2013). But the very fact that they all need to make this point may also suggest that it was not so clear. As Hennion put it, Latour "realized" this project, in the double meaning of the verb "réaliser" in French: making something real and becoming aware of something. The first time he presented his "regimes of enunciation", which later became his "modes of existence", nobody really understood what he wanted to do.

It also marked a break in his relationships with the CSI collective. Up to that point, I believe we had all been working together, developing our own analyses, borrowing from others and vice-versa. From then on, Bruno became preoccupied with his own work and was somewhat frustrated by CSI's lack of enthusiasm for filling in the many boxes of his model, which ironically illustrates the limitations of the CSI – sect model. He was also looking for deserved recognition for his work, and while the École des Mines was a place of great academic freedom, it was not really a place where one could hope for such recognition as a philosopher or a sociologist.

Latour's contribution to the life of the CSI and beyond has been immense. If I try to characterize the specificity of this contribution, I would say that there are four facets of his personality that were decisive: Latour was a philosopher, a writer, a creative thinker – and a teacher, and it was the constant intermingling of these four aspects that produced the most innovative effects. None of this would have been possible without the tremendous vital energy that inhabited him, pushing him ever further into the exploration of the possible.

That he is a philosopher may seem obvious today. It was less so during his time at CSI: he often had trouble introducing himself, and would use the label of sociologist or anthropologist, but always half-heartedly. This wasn't a problem for the CSI, since we didn't need a well-defined disciplinary affiliation. In a recent presentation, Callon (2023b) develops the idea that Latour, who chose to practice "field philosophy" or empirical philosophy, had long considered himself an amateur philosopher, and that he was only able to assume the status of philosopher when he was convinced by the confrontation to certain philosophical books and philosophers, such as Isabelle Stengers, that he was indeed a professional philosopher.

In retrospect, it seems to me that this identity as a philosopher, as vague as it may have seemed, played an important role in his way of being and acting, and had an impact on the collective that we formed. One notable feature was his ability to detect researchers from any disciplinary background to discuss with and his capacity to formulate questions making a dialogue possible. He brought a whole intellectual world to the CSI – when he joined the CSI, he had already quite an extensive international network from which we benefited. He was also so self-confident that he could persuade anyone to come and discuss with him and us: anthropologists, historians, art historians, ethologists, prehistorians, researchers in management science, mathematicians and so on.

His vocation as a teacher was palpable in the passion he put in supervising the CSI doctoral students, as well as in his work teaching students at the École des Mines and later at Sciences Po Paris. But what undoubtedly sets him apart is his tireless drive to innovate in this area, somehow stemming from a cross-fertilization between the teacher and the creative thinker. Rather than transmitting unchanging knowledge, his aim was to lead students towards new experiences. As he used to tell his doctoral students, writing is the work by which thought emerges, and it's a work that requires practice: just as he spent his days blackening his notebooks with illegible fly-paws – he was doing his scales, he used to say – he encouraged students to practice by proposing all kinds of exercises. It was this same determination to develop new forms of teaching that led him to launch a major pedagogical program, *FORCCAST*, dedicated to exploring contemporary controversies – in a variety of pedagogical forms, from dossiers to websites, theatrical performances and simulations – which has become a flagship exercise from high school to many higher education sites in France and abroad.

I have just given a few examples in the field of pedagogy, but creativity was Latour's way of being: each time, he imagined innovative ways of bringing together fields or forms of action that were usually separate. He seemed to find some sort of youthful jubilation in this kind of experimentation. He devised theatrical forms for academic events, proposed a highly unusual book format with *Paris Ville Invisible*, embarked on the organization of exhibitions, conceived *An Inquiry into Modes of Existence* as both a classic book and a collective web platform, wrote plays, set up a master's degree in experimental political arts etc. He was a daring man, and no form of experimentation frightened him.

His ethos as a philosopher, his vocation as a teacher, his creativity – all these elements of his personality are reflected in his writings. Because he never ceased experimenting in his books with a variety of forms of writing according to each intellectual project, and was never content to mold himself into the conventional formats of academic writing, I think he can also be considered as a writer.

The first aspect that stands out is the number and variety of his productions. Many of his

early books are based on a "field work" or an archive work he carried out: *Laboratory Life*, *The Pasteurization of France*, *The Making of Law – An Ethnography of the Conseil d'Etat*, *Aramis or the Love of Technology* are examples for this. However, even if very empirical, these books are also deeply analytical in their organization. After a while, he began to write books where the argument was clearly the organizing principle, where the idea is somehow to propose a way of describing and seeing that shifts our perception of the world we live in, of modernity and of the role of science in our societies. *Science in action*, *We have never been modern*, *On the Modern Cult of the Factish Gods*, belong to this series which culminates in the *Inquiry into Modes of Existence*, a book that fully assumes its status as a philosophical work. More recently, he wrote a whole series of books aimed at the educated general public in order to raise awareness on the ecological crisis and again to shift our perception of what it is to inhabit the Earth.

But this simple classification should not obscure the fact that each book has its own particular physiognomy, linked to the author's search for an adequate form to convey the underlying project. The intention of many of his books is to share an experience with the reader: not to show an external reality, but to embark the reader on a journey that is both intellectual and sensitive, at the same time producing a way of apprehending the outside world.

The reader is constantly present as a central figure in his writing, in a variety of ways: in some cases as in *Aramis*, s/he is personified in a narrative by a fictional being whose fluid contours enable the author-investigator to communicate with a reader-investigator. In other cases, the reader is directly addressed by a "you" spoken by the author's "I", and engaged in an imagined dialogue. Elsewhere, the use of "on" – this strange French pronoun that can be indefinite or personal, designate an individual or human beings in their generality, include or exclude the speaker – leaves the reader free to choose his or her position, and even allows him or her to slide from one position to another. A more in-depth political-semiotic analysis of the use of pronouns in Latour's books would undoubtedly be necessary, and would shed light on the way in which his philosophical background, his vocation as a teacher and his creativity were in some way linked in the writing formats he has adopted.

In any case, Latour's formal work was intended to make his books accessible to a wider audience than that of his peers; he was always in search of a form of argumentative clarity: beyond his intellectual contributions, it seems to me that he is inviting STS to (re)make this concern for the reader – which can of course take other forms – their own.

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Magma for the Mind

Huub Dijstelbloem

1. Discovering Latour

Magma. If there is one word that expresses how Latour's work entered my life and affected my thoughts, reshuffled them, and changed my worldview, it must be this term. As Tommaso Venturini (2009) explains in *Diving in magma: How to explore controversies with actor-network theory*:

> As the rock in magma, the social in controversies is both liquid and solid at the same time. But there's more to this metaphor: in magma solid and liquid states exist in a ceaseless mutual transformation; while, at the margins of the flow, the lava cools down and crystallizes, some other solid rock touched by the heat of the flow melts and becomes part of the stream. The same fluctuation between different states of solidity can be observed in controversies. Through this dynamic the social is unremittingly constructed, deconstructed and reconstructed. This is the social in action and that's why we have no other choice than diving in magma. (Venturini 2009, 258)

The mutual interaction and transformation of magma and rocks resembles the famous description of Deleuze and Guattari (1987) on the orchid and the wasp in *A Thousand Plateaus*. According to them:

> The orchid deterritorializes by forming an image, a tracing of a wasp; but the wasp reterritorializes on that image. The wasp is nevertheless deterritorialized, becoming a piece in the orchid's reproductive apparatus. But it reterritorializes the orchid by transporting its pollen. Wasp and orchid, as heterogeneous elements, form a rhizome. (Deleuze and Guattari 1987, 10)

It will come as no surprise that Latour was sympathetic to the suggestion to rename actor-network theory as actant-rhizome ontology (Latour 1999, 19). The magma metaphor is significant in many ways, one of which is that it foreshadows Latour's later interest in questions of climate, earth, and critical zones. As I will explain in more detail later, Latour's magmatic thinking was not without complications. But if we follow the magma metaphor for now, to me discovering Latour was like jumping into a volcano and being overwhelmed by the magma under the surface of the earth. Everything that I thought was solid and certain melted. Meanwhile, I had the feeling my most daring, fluid, adventurous, speculative, and amorphous thoughts solidified and took shape.

When the Dutch newspaper *De Volkskrant* interviewed me in 2016 about what motivates me in my research, the headline read, "It still helps when I ask myself: what would Latour do?" That holds still true. In the interview I explained that in the early nineties I was fed up with studying philosophy. I had all kinds of jobs, as a film critic, as a radio talk-show guest, even as a band manager. But what brought me back to my studies was the discovery of Sci-

ence and Technology Studies, STS. The relationship between the Dutch STS community and international STS has always been very productive, as has the relationship between Latour and Dutch scholars. Since the 1980s, there have been close contacts and annual meetings between the Netherlands Graduate Research School of Science, Technology, and Modern Culture (WTMC) and the Center for the Sociology of Innovation (CSI) at the École Nationale Supérieure des Mines de Paris (ENSMP), and scholars such as Wiebe Bijker, Annemarie Mol, and Gerard de Vries, and later Noortje Marres and Peter-Paul Verbeek have promoted the development of STS in the Netherlands and exchanges with Latour and his colleagues. When asked about the fertile ground that the Dutch delta seems to offer for this kind of research, Latour once remarked that this should not come as a surprise, since the whole of the Netherlands, with its dikes and water boards, is socially constructed.

I took a course in science journalism at the University of Amsterdam's STS department. One day a teacher showed a video, he must have recorded it himself from television, a broadcast of the VPRO program *Noorderlicht* about the French philosopher Bruno Latour. It knocked my socks off. Latour was being interviewed at the Musée de Minéralogie, explaining that a crystal in a museum has hardly anything to do with nature. I thought it was phenomenal, and I still think it is, perhaps even more so today. The immediate effect of that one videotape was: I must study under his supervision. I took part in the Erasmus exchange program and enrolled at the École des Mines. But would they let me in? E-mail was just beginning to be used among students, so instead of writing him, I decided to take the train to Paris. I went to the reception of the École des Mines to ask for an appointment. But because of my terrible French, the receptionist thought I had an appointment with him. While I was waiting, Latour, two meters tall and impressive, suddenly approached me: "Did we have an appointment?" No, we did not, but he listened to me and said: "Send me a proposal". Half a year later I was able to go there for six months on an Erasmus scholarship.

My time there coincided with the so-called "science wars": the heated discussion about the presumed relativism of Science and Technology Studies fueled by the publication of Alan Sokal's (1996) hoax in *Social Text* and David Bloor's (1999) attack on Latour's program with an article titled "Anti-Latour". Sokal, a physicist, had written a nonsensical article based on supposed parallels between physics and postmodern thought, and peppered it with quotes from famous postmodern authors. By publishing his hoax, and passing the peer review exam, Sokal aimed to demonstrate that the quality standards of academic journals, which welcome publications in the postmodernist genre, do not meet the requirements of academic rigor. He also accused Latour of being complicit in relativism – and, according to Latour, of being French – by being unclear about his ontological and epistemological claims. The bottle of wine from the family estate that Latour later handed to Sokal to open the peace negotiations that could end the Science Wars was not subjected to a reality check by the physicist, afraid as he was of being poisoned. Independently of this, David Bloor, a sociologist of science, also accused Latour of going a step too far. It was not the first struggle between STS and the Sociology of Scientific Knowledge, SSK. The so-called Strong Program, advocated by Bloor and others, argued that both historically proven "true" and "false" scientific theories should be treated in the same way to understand their significance. This premise was christened the "principle of symmetry". In *One More Turn after the Social Turn: Easing Science Studies into*

the Non-Modern World, Latour (1992) argued that this principle should be extended because it was still captured by a modernist bias and a modernist distinction between subjects and objects. Therefore, Latour introduced a generalized principle of symmetry that should apply equally to humans and nonhumans. According to Bloor, this generalized principle was a bridge too far. By attacking this flattened ontology, he undermined virtually the entire methodological program of the Centre de Sociologie de l'Innovation. "The ship of CSI is sinking" Latour declared with much irony when his response to Bloor was discussed in a meeting. As we all know: instead of sinking to the bottom of the sea, the ship traveled around the world. Moreover, in the following decades, marked by a growing awareness of global warming and an intensification of the relationships between people, technology and knowledge, such as artificial intelligence, the world became more and more Latourian.

2. Working with Latour's work

Interpreters of Latour are already grappling with the inevitable intellectual-historical question of whether there is a strong continuity in his work or whether there are certain breaks in the development of his *oeuvre*. On the one hand, if we stick to his books, it can be argued that his work developed out of a strong engagement with science and technology studies in *Laboratory Life* (1979, with Steve Woolgar), *Science in Action* (1987), *The Pasteurization of France* (1993a) and *Aramis, or the Love of Technology* (1996) to a broader political theory perspective in *We Have Never been Modern* (1993b), *Politics of Nature* (2004) and the catalogue of the exhibition with the same name *Making Things Public: Atmospheres of Democracy* (2005, with Peter Weibel) to a philosophy of Gaia, the climate regime and the politics of the earth exemplified with *Facing Gaia: Eight Lectures on the New Climate Regime* (2017), *Down to Earth: Politics in the New Climate Regime* (2018) and the volume, again with Peter Weibel, *Critical Zones: The Science and Politics of Landing on Earth* (2020). This development coincided with his rising fame and the increased interest of scholars from other disciplines. On the other hand, it is undeniable that Latour's ontological interest shows a strong continuity and that there is a soft but steady building, strengthening, deepening, and broadening in his work from part two of *The Pasteurization of France* (1993a), "Irreductions", to *An Inquiry into Modes of Existence* (2013). At first glance, it might seem that there is a tension between descriptions in terms of networks, which relate everything to everything else and cut across different social, technical and political domains, and modes of existence, which seem to imply distinguished spheres. What these approaches have in common is a focus on becoming, on the emergent features of associations through which networks give rise to particular modes of being. As such, networks can crystallize in specific forms, shapes, modes. Notwithstanding this continuity, the intensity of global warming and climate change, and the harshness of global inequality, have left an unmistakable mark on his later work.

In my own work, I have tried to combine science and technology studies with political theory, philosophy of technology, and philosophy of science. Since I am interested in how states, power, knowledge, and technology develop and interact, I found an interesting field of research in the overlapping disciplines of international relations, security studies, and border

and migration studies. The question of what borders are and how they are created proved to be a very productive one, linking questions of state formation, sovereignty, and citizenship with research on infrastructure, geography, politics, mobility, and security.

I have used Latour's work I think in almost all my publications, but most profoundly in the book *Borders as Infrastructure* (2021). In that book I aimed to develop a morphological approach to understand borders. This approach means I attend to the shape of concepts and ideas, the form they take, technically and materially, when they are made to travel and connect. Meanwhile, I elaborate on Latour's analysis of tensions and frictions, the way connections between humans and nonhumans, between politics, technology and knowledge and nature are made and unmade. Drawing on Boltanski's and Thévenot's *On Justification* (2006), I introduced the concept of "infrastructural compromises" to explain the combinations of different technopolitical regimes, such as economic and ecological considerations in the development of wildlife crossings or, in this specific field, the development of "humanitarian borders" in which security and humanitarian imperatives are combined.

Attending to the study of borders also implies a methodological perspective and this is where the idea of magma returns. Rather than focusing on the two outer poles, two or more countries in this case, and on how a border cuts through them, demarcates and divides them, I want to start "in medias res", seeing borders as entities that generate territories and categories, such as those who can and cannot enter a state. In this sense, I understand borders as a boundary concept, but in a very material and morphological way. Like magma, they have an effect on what encounters them, and they are transformed as a result of all the traffic that does and does not take place. Meanwhile, as I developed this perspective by working closely with colleagues in international relations, migration, and security studies, with whom I shared the goal of advancing STS concepts and approaches, I realized that the relationship between ontology and political theory should be made more explicit. The violence as expressed in Europe's border politics, the geopolitical positioning of the EU, and the colonial roots of many international infrastructures require a more intense engagement with political theory. But what kind of political theory?

3. Latour and Europe: everything may be allied to everything else

Working with Latour's theories means trying to understand his thoughts, making them your own, applying them, modifying them, and at a certain point also questioning them. These questions concern in particular Latour's discussion of "Europe". I think this discussion is instructive, because it shows how Latours thinking can develop in interesting ways and inspire scholars in different field – international relations, political theory, geography, migration studies, security studies. Witness the impact he had on the work of Andrew Barry (2001), Marieke de Goede (2018), Timothy Mitchell (2011), Mark Salter (2015; 2016) and William Walters (2016; 2017), and on historians of technology interested in international relations such as Paul Edwards (2013) and Gabrielle Hecht (2011) – and vice versa. It is also instructive because of the manifest complications: when it comes to Europe and his discussion of geopolitics, Latour's work was still "under construction", looking for its ultimate direction.

Latour tried to unravel the relationship between the earth, territory, sovereignty, and ju-

risdiction and to re-imagine Europe in a time of climate change. Judging him by his own standards, I think it took him a while to find the right settlement. It is of course impossible to summarize Latour's philosophy in one sentence, but if there is one motto that captures most of his work, I think it is this one from *Irreductions*:

> Nothing can be reduced to anything else, nothing can be deduced from anything else, everything may be allied to everything else. (Latour 1993a, 163)

In the case of "Europe", he struggled with this (see Latour 2020; 2021; 2022). He aimed at connecting a geological political philosophy interested in the earth, the soil, the terrain, and the resources below the surface to a geographical political theory engaged with authority, power, territory, and borders. That is an intriguing thought. The idea behind the creation of the European Coal and Steel Community (ECSC) after World War II in 1951 was that if we link the resources and raw materials that are underground – coal and steel – to the political order that connects above ground – sovereign but highly dependent nation-states – a lasting peace might emerge or at least an immediate eruption of intense conflict could be avoided. French Foreign Minister and long-term builder of post-war Europe Robert Schuman once declared he aimed to "make war not only unthinkable but materially impossible". What France and Germany had failed to achieve several times above ground had to be established by a route underground. The ECSC became a blueprint for the supranational and institutional structure of the European Community and the later European Union.

The basic idea that there is a relationship between the political economy of raw materials, resources and commodities, on the one hand, and the development of political systems and state forms, on the other, is fundamental in Timothy Mitchell's work, especially his *Carbon Democracy* (2011). Mitchell shows that the monopolistic power relationship over oil, wells and refineries in the Arab world and the Middle East produces a certain technological and economic infrastructure that relates extremely poorly to democracy and is better suited to autocratic and authoritarian regimes. That line of thinking was inspired by Latour's methodological principle of symmetry between politics and technology and, conversely, inspired Latour's thinking on international relations. At the same time, Latour never delved into international relations, political economy, and the world of commodities or the infrastructural history of Europe as much as he did into the Salk laboratory, the scientist Louis Pasteur, the transport system Aramis, or the infrastructure of Paris.

So how did Latour try to – using his own terminology – unscrew the big European Leviathan? When he discussed a possible European constitution or considered Europe's geopolitical role, one of the complications of Latour's analysis is that he does not seem to make a distinction – or deliberately refused to do so – between Europe as a continent and Europe as a political entity. On the one hand he studied the relation between sovereignty, jurisdiction, and territory by exploring the works of the conservative and controversial thinker Carl Schmitt (Latour 2021) and political philosopher Eric Voegelin (Latour 2017, *Lecture Six*). On the other hand, he aimed at exploring Europe's position confronted with the climate regime, international migration, and nationalist and populist threats. In a Guest Editorial for the *Common Market Law Review* entitled "Europe is a soil – not a machine", Latour (2020) wrote:

> Fortunately, Europe as a thing, as a material reality, as a soil, possesses the right size and the right history for this landing, away from the two abstractions of globalization, on the one hand, and a return to the imaginary protection of isolated nation States, on the other. If so many people dream of their Heimat, it might be a good moment to reclaim Europe as our Heimat. (Latour 2020, 2-3)

And in "Is Europe's soil changing beneath our feet?" from 2022 he wrote:

> I am interested in Europe not only as an institution, but also as Europe as a territory, as a soil, as a turf, as a land, or, to borrow the German expression, as *Heimat*, with all the difficulties of that term. (Latour 2022)

Soil, Heimat, land? What happened to "Nothing can be reduced to anything else, nothing can be deduced from anything else, everything may be allied to everything else"? Although Latour was of course far too knowledgeable to use these words in a naïve sense, and redefined them to suit his purposes, he nevertheless made firm but also controversial statements about Europe. He had to navigate between the Scylla of land-related politics and the Charybdis of a Eurocentric worldview. But he found a way out, or, to put it less disrespectfully, he created the famous Latourian middle position again. Latour explained he was interested in questions of "attachment" and aimed to explore notions of land, to see "Europe as a thing, as a material reality" (2020, 2). In his last book *On the Emergence of an Ecological Class: A Memo* (2022), written together with Nikolaj Schultz, in one of the lemmas Europe pops up again. He describes Europe as a "kind of experimentation", a test lab – a "thing" – that relates the inside to the outside. With the notion of "Thing" he returns to the etymology explained in *Making Things Public* (2005), in which a "Ding" is not just a material object that is politicized, but an issue, a matter of concern that becomes a matter of politics and gathers an emergent public that is not confined to state borders or sociological classifications. In this way, he links the physical and geographical properties of Europe as land with the political issues of inclusion and exclusion, and of attachment in times of climate change. Finally, Europe seems to have landed. Not on land, it seems, but in the overarching atmosphere of the climate regime. In the end, he did arrive at the conclusion that no soil can show us the way. Just as Latour made his theory about the new climate regime and about Gaia "land" with the notion of the "critical zone", in the end Latour found a way to express his attachment to Europe with a less historically affected notion than Heimat and soil. At the end of the day, Latour replaces one discussion with another and renders the initial debate obsolete by introducing his own conceptualization of an issue. And that, in a nutshell, is the main didactic lesson I hope to take from Latour.

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Geo-politics of the Global- and Local-plus: Latour's Associations with Semiotics and Technofeminism[1]

Annalisa Pelizza

1. Introduction

> There, I've finished. Now, if you wish, it's your turn to present yourself, tell us a little about where you would like to land and with whom you agree to share a dwelling place. (Latour 2018)

Since the passing away of Bruno Latour in October 2022, several contributions in memoriam have tried to recall personal memories, academic events, lines of thought and the provocative style that characterized his writings. In no way is this contribution different in its effort to address the dilemma of choosing some aspects of Latour's work. And yet it might set itself apart thanks to its focus on two aspects – he would say "associations" – that might not be the most representative, but the most geo-politically (the dash makes all the difference, as Latour taught us) antithetical: one is local, the other one has marked the global development of our discipline. Taken together, they constitute my answer to the invitation in the quotation above.

The first association, with the semiotics of the "École de Paris" and Greimas' theory of enunciation, goes back to Latour's early writings in the late 1970s and 1980s. It is local in that it flourished in the neighboring context of the French semiotic debate of those years, characterized by a reflection on textuality and enunciation as the act mediating between an abstract linguistic system (*langue*) and discursive acts of actualization (*parole*). The second association, with technofeminism and especially Donna Haraway's material-semiotics, reveals a dialogue across the Atlantic initiated in the late 1980s. It is global in that Haraway and Latour drew on different philosophical genealogies, political goals and citation cultures. Reaching overlapping concerns and akin theorizations in the 1990s and 2000s required to align several movements of translation. While this short contribution does not aim to reconstruct the whole alignment process, it stresses the key role of textuality in the process.

Before proceeding, a caveat. In no way do the expressions "local" and "global" imply a transition from provincialism to globalism, as if the association with French semiotics linearly

evolved into more international associations. Leaving alone the truism that "North American" does not per se imply "global", these expressions rather follow Latour's own reflection on the end of modernization. After the *Inquiry Into Modes of Existence* (Latour 2013), Latour's oeuvres have tried to move the compass of the public discourse to overcome the local vs. global modernist dichotomy, to embrace the terrestrial. In *Down to Earth* (2018) he voiced the need to abandon the local vs. global binary distinction brough about by modernization and to urgently embrace a political trajectory that leads toward the Earth. He posited two specular understandings of the global and the local as "plus" and "minus". Just as globalization used to be "plus" – oriented to discovery, cosmopolitanism and standardization – and turned "minus" – characterized by insecurity, domination and extractivism, so the local-minus of return to the past, resurrected traditions and nostalgia could leave room to a sense of belonging and a hospital, open and inclusive dwelling place.

There is no doubt that the two associations discussed in this essay are both "plus". The first one is less internationally explored, anchored as it is on a debate that has struggled to reach English-speaking journals; and still, it explains much of Latour's peculiar "flat" ontology while expanding in several directions. The second association is more internationally renowned, having been accompanied by public debates and attempts at mutual recognition between to science studies stars, and having marked important moments of alignment for the STS community dispersed in different locales. Both have constituted associations in which mediators have far exceeded intermediaries: the outcome could not be predicted from the input. As a result of these associations, STS have hit the ground in new territories, entanglements and overtures. What follows tries to briefly describe the two associations, and their ongoing implications for the STS field.

In line with STS's attention to multiplicity, this essay resorts to texts, conference proceedings, and conversations with witnesses, as well as to personal memories of encounters with Latour. While such a movement of subjectification is not usually apt to the folds of a scientific journals, the readers will hopefully exert mercy in the case of a short contribution written in memoriam of a scholar who has revealed the social nature of scientific objectivity[2].

2. Association #1: With semiotics and the theory of enunciation

I have encountered Bruno Latour when I was a PhD student at the University of Milan Bicocca. At that time, I was torn between an influent male supervisor in sociology and my background training in semiotics at the school of Umberto Eco. The classic earthenware among metal pots. In my distressed attempt to conduct a meaningful PhD research in the sociology of internet cultures using the semiotic analytical toolkit, I read a book that in the title claimed to be oriented to sociologists *and* at the same time moved arguments familiar to semioticians, such as that "the text is the social scientist's lab". With this expression, in *Reassembling the Social*, Bruno Latour (2005a) meant two things, in my early understanding. First, that testing the consistency of a text is a way for sociologists to assess the truth value of their research, as much as laboratory experiments assess the truth value of scientists' research. Second, that "texts" where not only those I had learned to analyze as part of my semiotic training. Texts were something broader.

Texts were the outcomes of enunciation (utterance, *énoncé*), but what if "enunciation" was to be understood in the broader meaning of enactment, practice, translation that brings something into existence? Then what is regarded as "text" could be made of many materialities. The empowering consequence for that torn PhD student was that, as she started thinking at enactments as "enunciation", then practices, artefacts, interfaces, databases suddenly appeared as potential "texts" she could link together in flat, heterogeneous networks. Thanks, Bruno, for having liberated that PhD student from the Scylla and Charybdis of semioticians and sociologists![3]

In other words, I had just discovered the semiotic roots of Bruno Latour's metaphysics. What he, together with Madeline Akrich, Michell Callon, John Law, Antoine Hennion and others named "translation", "delegation", "displacement" or "shifting" was in fact what Greimas' theory of enunciation called "*débrayage*": the jump from the I/here/now of the enunciation to a different subject/space/time of the utterance. With the major difference that in actor-network theory the jump could take place across different materialities. Years later, Maria Giulia Dondero would summarize my early discovery with a sharp expression: "a movement from uttered enunciation to practical enunciation" (Dondero 2018, 22, *my translation*). With this, she meant the shift from the discursive marks of enunciation (the I/here/now of the enunciator as simulacrum) to enunciation as an actualized interaction in presence, mediated by diverse materialities and artifacts.

It is this semiotic genealogy focused on the mechanisms of textuality that, I suggest, contributes to the exotism that is often attributed to Latour's writing style. John Searle once famously argued that Latour's "extreme social constructivist" position was seriously flawed on several points, and had inadvertently comical results (Searle 2009). This alleged comicality can only be understood in light of a theory of practical enunciation, where mediation can be exerted by anyone or anything endowed with agency.

Latour's intuition to export the mechanisms of textuality beyond text narrowly understood was crucial for STS, in that it allowed accounting for material affordances ("scripts" in Akrich and Latour 1992) without falling into technological determinism. This intuition was indebted to the above-mentioned difference between Latour's and Greimas' understanding of enunciation. While the latter postulated the "nesting" of the utterance in the act of enunciation, Latour borrowed a "flat" pragmatist ontology. As Dondero (2018) has pointed out, such a flat conceptualization of enunciation differs from Greimas' model, characterized by an "original rupture, a fall marking the passage between enunciation and utterance" (p. 38, *my translation*). Differently, as Paolucci (2020) has remarked, Latour's translation draws on Peirce's illimited semiosis made of chains of interpretants lying on the same ontological level. It is this flatness that allows following translation across different materialities. Or more precisely: every outcome of a step of translation can be deemed a text, be it materialized in an oral statement, a hotel key, a road bump, a car seatbelt, or a spreadsheet counting scallops.

Although usually overlooked, Latour's early association with semiotics and the theory of enunciation has steered STS' "rhetorical turn" after Kuhn (Sismondo 2010) in specific ways, constituting one of the field's multiple genealogies. An example is provided by two foundational STS conceptualizations like situatedness and multiplicity. The first concept was introduced by STS feminist authors like Haraway (1988) and Suchman (1987) to indicate the methodological and political need to avoid detached perspectives. The second concept

achieved wide recognition as one of the STS tenets with Annemarie Mol's "body multiple" (2002). As we will see below in the case of technofeminism, these authors had different genealogies than Latour's. And yet his attention to the mechanisms of textuality might have been crucial to ground his sensitivity on situatedness and multiplicity.

As Fontanille writing about Latour has pointed out:

> Enunciation does not know the generic singular: it is declined only in the specific singular, on a case-by-case basis, or, in general, in the plural. There are therefore as many existences as there are possible sendings, effective enunciations. (Fontanille 2017)

The comparison of the "specific singular", the case-by-case actualization prompted by enunciation with Haraway's and Suchman's call for situatedness is almost inevitable. STS' methodological humility might be indebted to feminist skepticism towards god's visions, but also, through a different genealogy, to the theory of enunciation. Similarly, the reference to the "many existences" enabled by multiple enunciations resounds with Annemarie Mol's multiple enactments of body parts and illnesses. For Latour, situatedness and multiplicity had an alternative genealogy in the theory of enunciation, and still these concepts feature among STS tenets. It was probably this genealogy that in *Reassembling the Social* brought him to state that: "semiotics does not survive sea travels. Attention to text qua text remains a continental obsession" (2005a, 122).

3. Association #2: With technofeminism and material-semiotics

This citation brings about the second association that for years has literally taken place across the Atlantic: the one with technofeminism and Donna Haraway's material-semiotics. While drawing on different philosophical genealogies, political goals and citation cultures, over the years this association came to address overlapping concerns about inter-species relations and akin theorizations about the need to move away from the representational paradigm. While it is not among the goals of this short contribution to map theoretical and methodological overlaps between the two scholars, I suggest that a common interest in the performative role of texts could have grounded this association by aligning several movements of translation.

Despite his association with textual mechanisms and the theory of enunciation, Latour was imprecise – or provocative – in stating that semiotics does not survive sea travels. The framing of "material-semiotics" was introduced in late 1980s by Donna Haraway and others in feminist STS to account for the enactment of objects and subjects of knowing. Latour's provocative remark might however go hand in hand with Haraway's claim of her distinct genealogy in women's science studies. As Haraway has clarified in an interview with Lykke, Markussen and Olesen in Aarhus:

> People like Susan Leigh Star, and Bruno Latour, and Andy Pickering, and I, and many others, we read each other. So, we end up being both deliberately and unconsciously in conversation. But this conversation and reading of each other's texts do not refer to a kind

of shared origin story or genealogy. I have a very different genealogy in science studies than, say, Andy Pickering or Bruno Latour do. People like Susan Leigh Star and I share more of a genealogy in science studies that roots it, for example, in the women's health movement and in technoscientific issues, related to women's labor in the office or to Lucy Suchman's work. (Lykke, Markussen and Olesen 2000, 58)

This genealogical difference was accompanied by a different weight given to political issues, according to Haraway:

The asymmetry is a historical, structural problem. It is almost impossible for folks in those locations [i.e., like Latour] to get it, and feminist technoscience work always feels like trouble, like "now you are getting political again". (Lykke, Markussen and Olesen 2000, 60)

For Latour, the political distance between them was more a matter of conflict and scale. In a 2005 chapter written for a book in homage of Donna but then rejected by the editor (Latour 2005b)[4], Latour staged a dialogue between the two of them at the margin of a conference. The dialogue aimed to figure out what divides them and what brings them closer. In Latour's own interpretation, what divides them is Haraway's need to see the big picture by adopting a post-Marxian critical approach, while Latour is depicted as a late Habermasian (by himself, note the self-irony!). On the other hand, what brings them close is the acknowledgement that science studies are in the middle of a difficult search for political relevance. They diverge on the methods (conflict and big picture on one side, assemblies and details on the other), but agree on the goal of changing irreversible power relations.

Whatever the interpretation, diversity in genealogies and political goals was reinforced by different citation cultures. Facing Latour's conservative citation style, Haraway used to point out an asymmetry in reciprocal acknowledgement:

So after I was already doing, what I now call feminist techno-science studies, I read people like, for example, Bruno Latour. So Latour and other authors, which figure prominently in the canonized version of the history of STS, were not the origin in my story; they came after other events. And they do not get this! That there is a whole other serious genealogy of techno-science studies. So I remain irritated! (Laughter) Because we do know their genealogies, very well. And they do not know ours, even though they exist in writing. (Lykke, Markussen and Olesen 2000, 59)

Despite these distances, eventually Haraway's and Latour's works converged on a more-than-human, terrestrial, non-representational research agenda. A shared understanding in the performative agency of texts could have grounded this association. For Haraway, texts are never innocent, but performative, in a similar way as for Latour texts can act as litmus tests of truth value. In the same interview with Nina Lykke and others in Aarhus, Haraway recalls that texts are never only texts, but rhetorical devices and political tools (Lykke, Markussen and Olesen 2000). As a matter of fact, Haraway recurred to semiotics in the same period as Akrich and Latour (1992) formalized their semiotic genealogy. In her 1992 article *The Prom-*

ises of Monsters, she used the semiotic square as a sort of divertissement, in her own words "an artificial device that generates meanings very noisily" (Haraway 1992, 304). It was a serious joke, but it also shows the closeness of Haraway and Latour in taking the text seriously, acknowledging their performativity and addressing prejudices against texts as mere fiction.

In that same 2000 interview Haraway reclaims the performativity of her texts ("Writing does things", p. 53), that are nevertheless literary texts. While transgressing the boundaries between theory and literature is a long-term feminist practice, the same ambivalence of texts was advocated by Latour, according to whom texts are the outcome of translation across different materialities. Latour's imaginary dialogue with Haraway above mentioned (Latour 2005b) is in itself a literary and political text paying tribute to their association. The work of alignment of their contributions in the STS field – I suggest – may have well passed through a common interest in the mechanisms of textuality, and texts themselves!

Eventually, Haraway acknowledged that Latour took on some insights from technofeminism. Indeed, while traces of Latour's opening to technofeminism are scattered in his early works, they can be more systematically found since 1999, with the dedication of *Pandora's Hope* "To Shirley Strum, Donna Haraway, Steve Glickman, and their baboons, cyborgs, and hyenas". In the second move of *Reassembling the Social*, Latour even attributes to Haraway the most outspoken version of the multiple layering of enactment (Latour 2005a, 208, note 276), while mutual citations are recurrent from the 2000s.

4. To conclude: where would we like to land, and with whom?

The associations here discussed constitute two of the countless connections that Latour was able to establish during his intellectual trajectory. It's not my intention to claim they are the most representative, but to suggest that they somehow illustrate Latour's geo-politics, at the same time local and global. After the Inquiry Into Modes of Existence (Latour 2013), Latour's oeuvres have tried to move the compass of the public discourse to embrace the terrestrial. In Down to Earth (2018) he theorized two specular understandings of the global and the local as "plus" (i.e., both global and local can be open, welcoming, prone to create new associations beyond the modernist divide) and "minus" (i.e., both global and local can be insecure, nostalgic, anchored to modernist categorizations). As the citation opening this contribution makes explicit, with these specular understandings of the global and the local Latour invites us to open the black-box of modernists associations, look at what is inside, and start a new associating endeavor.

My selection of the two associations discussed in this contribution constitutes a first attempt to answer his invitation. Although it was local, the first association did not resolve into a nostalgic, purely inward-looking exercise, but revealed many further associations that contributed to weave what today we call STS. Similarly, the second association did not resolve into a global, standardized exercise, but revealed alternative, local and situated genealogies that over the years have contributed to build the STS field in its multiplicity. As a result of these associations, STS have hit the ground in new territories, entanglements and overtures. In this sense, following the two associations has allowed accounting for a geo-politics that is at

the same time local and global. The invitation suggests to continue this exercise of wondering where we would like to land and with whom we would agree to share a dwelling place.

Notes

¹ An early version of this paper was presented at the 4S/ESOCITE conference in Cholula (Mexico) on December 8, 2022. The panel "Bruno Latour: In Memoriam" was chaired by Emma Kowal and Leandro Rodriguez Medina, and featured Christopher Kelty, Sergio Sismondo, Wen-Ling Tu, Léa Maria Leme Velho, Dominique Vinck and the author. The author wishes to thank the chairs for the opportunity to process and publicly discuss Latour's legacy in her work. "Drawing Bruno Together" was instead the title of a panel in memoriam of Bruno Latour held at the IX STS Italia conference. The panel's title was suggested by Claudio Coletta. The panel was organized by the author and featured Madeleine Akrich, Huub Dijstelbloem, Paul Edwards, Noortje Marres, Alvise Mattozzi, Tommaso Venturini.

² I wish to thank Sarah De Rijke for having pointed out that the personal intake could work as an educational learning experience to be shared with contemporary students.

³ Four years later I owed once again my thanks to Bruno Latour, but this time for a different reason. Upon my request, he accepted to host my Marie Curie Action application and made sure that the aptest colleagues supported its design and writing.

⁴ I thank Assunta Vitteritti for pointing out this text to me. The rejection might not come as a surprise, given that the paper staged an imaginary dialogue between Latour and Haraway.

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Following Bruno Latour in Post–Critical Pedagogy[1]

Paolo Landri

1. Introduction

In the attempt to write this article, I have started by trying to address the following question: how can I add to what countless people have already said about Bruno Latour? The work of Bruno Latour will be, for long, a source of inspiration for many. During his career, he crossed many disciplinary boundaries, and it is thus not easy to define his work. Is it anthropology, sociology, or philosophy? Is he an ecological thinker, as some have underlined after his death? His scientific identity is indeed somewhat elusive. His biographical notes and institutional affiliations too, show his scholarship's complexity. I concur with De Vries (2016) to consider his research a conceptual and methodological repertoire for re-describing modernity, revisiting its Constitution, and elaborating a path for its radical reform or a way out. His work is, therefore, an essential reference in social science and, above all, a must-read for those interested in developing a nuanced understanding of contemporary societal challenges.

In order to enrich the current literature remembering Latour, in this article I will briefly describe what have meant for me following Latour. I will do this from the perspective of a sociologist who has contributed to circulating his work in education studies. Latour was not an educationalist; nevertheless, his work fostered and supported the development of new research networks between STS and education. Moreover, he was a highly appreciated teacher and developed a pedagogy to teach science and technology based on the de-scription of controversies. The goal of this article is to locate his contribution to education studies in his broad project of de/recomposing modern institutions. Latour was interested in revisiting

modernity, not in destroying it, thus offering a space where its institutions (including educa-
tion) could be rethought.

In the following, I will briefly illustrate 1) how, as a sociologist, I initially gained interest
and started to follow Bruno Latour's work, 2) how following Bruno Latour has led to the
establishment of an STS-oriented area in studies of education.

2. Being interested in Bruno Latour

Bruno Latour's work first attracted me during my PhD in 1995. Departing from my soci-
ology of organisation background, I was searching for a way to study schools without neces-
sarily drawing on managerial or rationalist approaches. At that time, winds of reform were
blowing over the world, leading to an expansion of the neo-liberal agenda and the new public
management vocabularies and policy instrumentations (Lascoumes and Le Gales 2007). In
this context, my research was a classical ethnography about the implementation of a reform
within Italian primary education. However, my research was not strictly an educational eth-
nography. In fact, it probably could have been considered as a research-case at the crossroads
of political and organization studies. During that time, I was in Naples, where I was working
with Roberto Serpieri, through whom I started to become acquainted with Silvia Gherardi and
Antonio Strati – and more in general with the Research Unit on Communication, Or-
ganizational Learning and Aesthetics (RUCOLA) at the University of Trento.

As a scholar operating at the intersection of political and organization studies, I also start-
ed to be curious about Scandinavian neo-institutionalism, and particularly, about Barbara
Czarniaskwa's work (1997). Indeed, her discussions about the concept of "translation"
seemed to be a promising direction to follow when rethinking the public administration re-
form in the context organization of primary schools in Italy. As she explains in her book, the
idea of "translation" was borrowed from Bruno Latour. Drawing on this notion, it was possi-
ble to go beyond the idea of "diffusion" in the Neo-institutionalist reading of the reforms that
ended to underestimate, or to negatively assess the frictions, the conflicts in the analysis of the
implementation processes. A quick exploration of Latour's chain of references displaced my
work in considering the sociology of translation and Actor-Network Theory.

First of all, as a sociologist trained with the idea of "actors" being implicitly and exclusively
humans, I was shocked by the idea that non-humans could have an agency in social reality.
However, it was also an invitation to see and study the world differently. At that time, there
was dissatisfaction with the overemphasis on language in organization studies brought by
post-modernism. Discourses, talks, languages, and other exquisitely "cultural" elements oc-
cupied the center stage of this kind of research, both theoretically and empirically.

This attitude quickly spread within organization studies, sociology, anthropology, and psy-
chology. Many articles focused on language, identities, and subjectivities by privileging the
implementation of case studies and qualitative research. In this context, the vocabulary of
ANT appeared deeply transformative, inflating social science again with a wave of new ma-
terialism. Since then, the work of Bruno Latour, and more generally ANT, became the foci
of my attention. I started experimenting with these vocabularies and participated in many re-

search projects, through which I was hoping to foster a wider circulation of his work in Italy.

It was with this aim that I published my book *L'innovazione nella scuola* (2000). In following this path, I also participated in the design and realization of *Tradurre le riforme in pratica*, edited by Silvia Gherardi and Andrea Lippi (2000), for which I wrote a chapter and which later on became an essential reference for the Italian debate on ANT.

At that time, it was not easy to be a Latourian or an ANT-ish researcher. First, there was a widespread misunderstanding of the acronym ANT in Italian academia. Not many scholars could see the differences between ANT and network analysis. To some sociologists it was only a new "French fashion": just a way to play the academic game of distinguishing oneself in the field. Also, a tendency for conservatism in the Italian scientific community pushed against newcomers bearing strange vocabularies and challenging basic assumptions in social science.

On the other hand, the use of semiotics and the tune-up of the ethnographic method of Bruno Latour surely helped to reconsider the limitations of current investigation in the field and disclosed many new possibilities for research. The chance of experimenting with a new vocabulary was appealing, although this would have led to inevitable clashes with more established paradigms in social sciences and to the risk of being marginalized within the academic field. I remember how some academics openly discouraged me from following the destiny of Mr. Latour! Even the scholars willing to explore new concepts and methodologies accused ANT of not being critical enough, of not understanding the role of power, and of being just another road leading to technological/material determinism (Gorur 2021).

Initially, Latour was exclusively associated with ANT and science and technology studies. As a reader, however, to me it was also clear that his work overwhelmed these boundaries. Even if he is rightly considered one of ANT's key authors and "fathers", his later publications clarified that his work assumed a much broader perspective. His critical appraisal suggested that his research interest was much broader. Books like *We Have Never Been Modern* (1993), and *The Politics of Nature* (2004a) showed that his project was in fact that of an anthropology of modernity. By drawing on several empirical studies on key institutions of modernity, he documented how the current dominant account of the modern condition was wrong. There was a persistent gap between how Moderns represent what they do and what they actually do in practice. This line of thought would later also have led to a new project (and book) called *An Inquiry Into the Mode of Existence* (2013), where Latour positively tries to answer the question: if we have never been modern, what have we been?

These shifts have sometimes dismayed even in his most passionate readers. As one of the results, the translation of his work in Italy has only been fragmentary. Since those interested in his work had heterogeneous backgrounds, the translations of his books were not always mindful of his trajectory. These limitations in the circulation of his work in Italy pushed me to edit an Italian translation of some of his books. I initially thought about translating *Aramis, or the Love of Technology* (1996), but then I was surprised when I stumbled upon a copy of *La Fabrique du Droit* (2002) in Paris, which I bought and immediately read. This book disclosed a very diverse view of his work. I was struggling to give the appropriate place for this work within the list of his publications. With the support of Domenico Lipari, I personally contacted Bruno Latour, who was happy to know that his book about law would appear in Italian. He also welcomed the idea of having an interview with him as an afterword.

At that time, the book had already been widely debated in France, and Latour sent me articles discussing and interpreting it from different perspectives. Eventually, thanks to Pasquale Gagliardi, who invited Latour in Italy for a seminar in 2006, we were able to realize the interview at the Fondazione Cini in Venice[2].

The Interview illustrates how the empirical work on law was part of a broader project comparing truth conditions in the European tradition (Landri and Latour 2011, 56). In the interview, he underlined how his earlier work on science and technology was just a necessary step within the broader endeavor of comparing modernity's key institutions. Whereas in his ANT phase, he was eager to follow "networks", now, in the After-ANT period, he was more interested in selecting network's "felicity conditions". As such law was a specific connector to "reassembling the social", similarly it was technology, religion, politics, and economics. In practice, he was anticipating *An Inquiry Into the Modes of Existence*.

After *Fabrique du Droit* (2002), other Latour's books and articles were translated into Italian. His ecological turn was in line with a renewed sensibility toward environmental issues pervading scholarly environments. Similarly to what already happened previously, many scholars pertaining to various disciplines were involved in projects of translation, inducing some inevitable heterogeneity. In this regard, I also engaged in some unsuccessful attempts to translate *Reassembling the Social*. Not many Italian sociologists were keen to support this project: for some, he was not a sociologist. Latour was and still is troublesome for the sociological community. Unsurprisingly, the Italian translation of *Reassembling the Social* was not edited by sociologists. This is unfortunate, since it could have helped to foster and revive an intense discussion about the future of sociology. By taking modernity as his central focus, indeed, Latour's work is a bench test for contemporary sociology.

Nevertheless, the aim of his research program was not going beyond modernity but to reinvent it. His work is not critical in the canonical sense. "Critics is always right!", he said many times, while in a well-known article he also underlined how "critique is running out of steam" (Latour 2004b). His program is rather post-critical since its intention is not to unveil, but to recompose a common world by leaving the issue of what a common world is permanently open. It is a way to abandon the modernist parenthesis and its dichotomic constitution (nature/culture; facts/value; human/nonhuman) without destroying modernity.

3. Latour and Education Studies

Following Latour means to be eager to embrace boundary-crossing and the development of unexpected associations, even in those fields of investigation he did not often attend. For me, this is the case of education. Bruno Latour was not an educationalist, and indeed he is more well-known as a sociologist, philosopher, and anthropologist. Apart from a small parenthesis at the beginning of his career, when he realized a sociological study of education, he never explicitly focused on the classical subjects of education, such as school, curriculum, or assessment.

In 1974, he published a research report about the ideology behind the concept of competence in the industrial context of the Ivory Coast (Latour 1974). He documented that the accusation of incompetence towards the local executive managers, when they substituted white

French managers in a colonial environment, could not be attributed to the "African mind" but to the failing school system of the Ivory Coast. Since Ivory Coast's schooling system was a copy of the French one, it only imported engineering discourse and not practices associated to it.

Latour concluded that competence is not something that resides in people's minds, but rather in a network. Here, he shared the idea of "situated learning", which would have been later further developed by anthropologists, social psychologists, and educationalists.

After that work, he moved to the study of the "laboratory life" and only indirectly touched on educational issues. Nevertheless, it would be a mistake to say Latour's work is irrelevant to education studies.

The extensive quotation of his work in education, not limited to STS scholars, confirmed its usefulness as a resource for thinking about the complexities of the contemporary landscape of education: a time when modern education displays its limitations. The role of ANT in creating a transnational network of scholars in education that actively promotes STS in education is undeniable. In Italy, after my initial work, a small ANT-STS community in education studies arose, also thanks to the effort and dedication of Assunta Viteritti. Together, we edited a Scuola Democratica special issue titled *Sociomaterialità in educazione* (2016)³. Before that, we also worked in previous research projects drawing on ANT vocabulary to describe the policy of school autonomy, where we paid attention to the agency of nonhumans in education. The attention to materiality led us to connect with researchers in the education field who can be considered antecedents of the approach, like Riccardo Massa, whose community of scholars develops post-humanistic accounts in education. Following Latour we reinforced connections between the sociology of education and education studies.

Internationally, following Latour was conducive to meeting other colleagues, like Jan Nespor, who was the first to develop a fully ANT study in education (1994), and Tara Fenwick and Richard Edwards, who were preparing a book on *Actor-Network Theory and Education* (2010). Attending the European Conference of Educational Research, I also met with Romuald Normand and Jean Louis Derouet (2000). Derouet knew Latour and his approach very well and already tried to lean on sociology of translation to study education policy and practice. Yet, Latour was more popular outside than inside France, where he had been severely criticized. Only on the international level was there some chance to create a space that could support the development of a favorable place for an ANT community. That was the case for the Network 28 "Sociologies of Education", where many ANT scholars have found an arena to present and discuss their works (see, for example, the EERJ Special Issue *Mobile Sociologies of Education*, Landri and Neumann 2014). Meeting Radhika Gorur was particularly important: she contributed internationally to the circulation of ANT and Bruno Latour's work in education policy (Gorur 2015).

Latour's contribution to education extended well beyond just ANT. In this case, however, his contribution is still waiting to be recognized. We can summarize the relevance of his work through the concept of *post-criticality*. In the after-ANT period, he was interested in a compositionist agenda. It provided some ideas, like the Parliament of Things, the focus on controversies and "An inquiry into the modes of existence" (AIME), that have stimulated the investigation of educational scholars on how to rethink education.

The Parliament of Things was a metaphor proposed by Latour (1996) to give a name to

the development of common worlds made up of hybrids, that is, the association of humans and nonhumans. Here, he reprised an old meaning of "thing" in English and other European languages, using it to point out to a meeting, a gathering, where something is made public.

By extending the analogy, schools too, are like a Parliament of Things. Desks, blackboards, seats, rooms, documents, circulars, teachers, headteachers, students and digital platforms are all "school things" defining complex associations of humans and nonhumans.

Further, the idea of "thing" allows the articulation of a thing-centred pedagogy (Vlieghe and Zamojski 2019) that goes beyond a teacher-centred pedagogy (where knowledge is imposed on students) and a student-centred pedagogy (where student's needs are at the centre). In a thing-centered pedagogy, the essential teaching gesture is making everyone attentive in the room toward subjects that become "subject matters". It clarifies that education is an intergenerational gathering between generations. As Hanna Arendt would say, it concerns the world's transmission and possibly its renewal. It is always about a thing, that is, something that has materiality on its own, that deserves to be given attention and to be passed on to the new generation. At the same time, a thing-centered pedagogy discloses the possibility of renewing the world or some aspects of the world when passing it on to the new generation.

The idea of the Parliament of Things suggests that the re-composition of a common world involves dealing with controversies. A focus on controversies is educationally fruitful and has led to developing a specific kind of pedagogy that Latour describes in *Cogitamus* (2010).

Except for a chapter in *Reassembling the Social* (2005), *Cogitamus* is the only book with an explicit educational goal. Here, Latour designs a course at a distance for an imaginary German female student. In doing so, he writes six letters to help the student to attend the course and develop her expertise in science, technology and society. This epistolary course is builds upon the physically attended course that Latour previously delivered at Science Po under the title "Humanités Scientifiques". Moreover, and not by chance, the six letters mirror the six chapters of Descarte' foundational book of modernity.

In *Cogitamus* (2010), Latour suggests an inquiry-based method of learning. An inquiry complemented by dialogue. Knowing is not an individual affair (*cogitos*, according to Descartes), rather it is a collective endeavor (*cogitamus*). The proposed inquiry method envisages the student's participation in the knowing process mediated by a notebook that collects many materials (articles, documents, etc.). Latour's letters contain the theoretical and methodological guidelines to give a sense of the exploration and boundary crossing between science and society. The tone of the letters is informative, but also ironic. The teacher draws on maps, illustrative schemes, and examples. Pedagogy, here, is equivalent to the cartography of controversies presented in academic articles and developed by Latour together with his team collaborating in an EU-funded project (MACOSPOL[4]) (Venturini et al. 2015). An important aspect of the cartography of controversies is "making things in public" that Latour carried out by drawing on alliances with arts and digital devices. The underlying logic is to counter the reductionist and limited account of science and technology in modernity. The goal is not to deconstruct but rather to recompose science, technology, and society differently.

Regardless of the importance of this latter goal, it is somewhat surprising that education is not fully included in "An inquiry on the modes of existence". In AIME, Latour affirms that:

humanoids become humans – thinking, speaking humans, by dint of association with the beings of technology, fiction, and reference. They become skillful, imaginative, capable of objective knowledge by dint of grappling with these modes of existence. (Latour 2013, 372)

However, it took the work of Jonathan Tummons (2021) to argue that "Education" should be on the list of the modes of existence. With Tummons's article, education passes the test of AIME cosmology, but what counts as "educational" in education in this inquiry is vague.

The "educational" aspect in Latour emerges more clearly in the latest production, in books like *Down to Earth* (2018) or *Facing Gaia* (2017), when he brings ecological materialism as an antidote to counter the nature-culture dualism (Landri 2023). In those works, and in line with his pedagogy of controversies and his love for science and technology, he seems to orient toward a thing-centered pedagogy as a felicity condition for the institution of education in the new climate regime: an educational approach dealing with the permanently open question of renewing our common world.

Is Latour arguing that education is inherently political, as argued in critical pedagogy? It is unlikely, by considering his criticism of the critical approach. Why is he convinced that education is not a specific way of reassembling the social with a proper felicity condition, like law, technology, and religion? These questions open new lines of investigation and would need additional analysis for his work to be properly addressed.

4. To conclude

In sum: follow an actor, and you will find a network! Isn't it one of Latour's well-known teachings?

Following Latour has been generative of new relations and associations across disciplinary boundaries and countries. It has solicited a detailed redescription of education through the emergence of the studies of STS in education that are promising resources in revisiting modern education. Educationally, ANT and Latour invite the development of a thing-centered pedagogy that challenges human exceptionalism and suggests acknowledging the mutual constitution of humans and nonhumans. Further work with and near Latour is needed to grapple with the complexity of the current educational scenarios and develop perspectives to reinforce educational institutions and cope with emerging subjectivities in the new climate regime.

Notes

[1] I would like to thank Radhika Gorur for her comments. Thanks also to Fabio Maria Esposito for his help on a previous draft of this article.

[2] A transcription of the interview was also published in *Tecnoscienza* (Landri and Latour 2011).

[3] In English: "Sociomaterialities in education".

[4] See https://medialab.sciencespo.fr/en/activities/macospol/.

Tummons, Johnathan (2021) *On the Educational Mode of Existence: Latour, Meta-Ethnography, and the Social Institution of Education*, in "Social Anthropology", 29(3), pp. 570-585.

Venturini, Tommaso, Ricci, Donato, Mauri, Michele, Kimbell, Lucy and Meunier, Axel (2015) *Designing Controversies and Their Publics*, in "Design Issues", 31(3), pp. 74-87.

Vlieghe, Joris and Zamojski, Piotr (2019) *Towards an Ontology of Teaching: Thing-centred Pedagogy, Affirmation and Love for the World*, Berlin, Springer Verlag.