



UvA-DARE (Digital Academic Repository)

Magma for the Mind

Dijstelbloem, H.

DOI

[10.6092/issn.2038-3460/18893](https://doi.org/10.6092/issn.2038-3460/18893)

Publication date

2023

Document Version

Final published version

Published in

Tecnoscienza

License

CC BY

[Link to publication](#)

Citation for published version (APA):

Dijstelbloem, H. (2023). Magma for the Mind. *Tecnoscienza*, 14(2 (28)), 78-85.
<https://doi.org/10.6092/issn.2038-3460/18893>

General rights

It is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), other than for strictly personal, individual use, unless the work is under an open content license (like Creative Commons).

Disclaimer/Complaints regulations

If you believe that digital publication of certain material infringes any of your rights or (privacy) interests, please let the Library know, stating your reasons. In case of a legitimate complaint, the Library will make the material inaccessible and/or remove it from the website. Please Ask the Library: <https://uba.uva.nl/en/contact>, or a letter to: Library of the University of Amsterdam, Secretariat, Singel 425, 1012 WP Amsterdam, The Netherlands. You will be contacted as soon as possible.

Drawing Bruno Together

Madeleine Akrich ^{id}

*Centre de Sociologie de
l'Innovation-Mines Paris PSL*

Huub Dijkstra ^{id}

*Institute for Advanced Study of
the University of Amsterdam*

Annalisa Pelizza ^{id}

*University of Bologna and
University of Aarhus*

Paolo Landri ^{id}

*Consiglio Nazionale delle Ricerche
CNR-IRPPS*

Corresponding author

Annalisa Pelizza
Department of Philosophy and
Communication Studies,
University of Bologna
Via Zamboni 38, 40126
Bologna, Italy
✉ annalisa.pelizza2@unibo.it

Submitted: September 15, 2023

Accepted: November 27, 2023

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 Dijkstra, 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.

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 Latour's 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.

References

- Barry, Andrew (2001) *Political Machines: Governing a Technological Society*, London, Athlone Press.
- Bloor, David (1999) *Anti-Latour*, in “Studies in History and Philosophy of Science Part A”, 30(1), pp. 81-112.
- Boltanski, Luc and Thévenot, Laurent (2006) *On Justification. Economies of Worth*, Princeton (NJ), Princeton University Press.

- De Goede, Marieke (2018) *The Chain of Security*, in "Review of International Studies", 44(1), pp. 24-42.
- Deleuze, Gilles and Guattari, Felix (1987) *A Thousand Plateaus: Capitalism and Schizophrenia*, Minneapolis, University of Minnesota Press.
- Dijstelbloem, Huub (2021) *Borders as Infrastructure: The Technopolitics of Border Control*, Cambridge (MA), The MIT Press.
- Edwards, Paul (2013) *A Vast Machine: Computer Models, Climate Data, and the Politics of Global Warming*, Cambridge (MA), The MIT Press.
- Hecht, Gabrielle (2011) *Entangled Geographies: Empire and Technopolitics in the Global Cold War*, Cambridge (MA), The MIT Press.
- Latour, Bruno (1987) *Science in Action*, Cambridge (MA), Harvard University Press.
- Latour, Bruno (1992) *One More Turn after the Social Turn: Easing Science Studies into the Non-Modern World*, in Ernan McMullin (ed.), *The Social Dimensions of Science*, Notre Dame (IN), Notre Dame University Press, pp. 272-292.
- Latour, Bruno (1993a) *The Pasteurization of France*, Cambridge (MA), Harvard University Press.
- Latour, Bruno (1993b) *We Have Never Been Modern*, Cambridge (MA), Harvard University Press.
- Latour, Bruno (1996) *Aramis or the Love of Technology*, Cambridge (MA), Harvard University Press.
- Latour, Bruno (1999) *On Recalling Ant*, in "The Sociological Review", 47(1), pp. 15-25.
- Latour, Bruno (2004) *Politics of Nature: How to Bring the Sciences into Democracy*, Cambridge (MA), Harvard University Press.
- Latour, Bruno (2013) *An Inquiry into Modes of Existence*, Cambridge (MA), Harvard University Press.
- Latour, Bruno (2017) *Facing Gaia: Eight Lectures on the New Climate Regime*, Oxford, Wiley-Blackwell.
- Latour, Bruno (2018) *Down to Earth: Politics in the New Climate Regime*, London, Polity Press.
- Latour, Bruno (2020) *Europe is a soil – not a machine*, in "Common Market Law Review", 57, pp. 1-6.
- Latour, Bruno (2021) *How to Remain Human in the Wrong Space? A Comment on a Dialogue by Carl Schmitt*, in "Critical Inquiry", 47(4), pp. 699-718.
- Latour, Bruno (2022) *Is Europe's soil changing beneath our feet?*, in "Green: Géopolitique, réseaux, énergie, environnement, nature", 2(2), pp. 85-89.
- Latour, Bruno and Schultz, Nikolaj (2022) *On the Emergence of an Ecological Class: A Memo*, London, Polity Press.
- Latour, Bruno and Weibel, Peter (eds.) (2005) *Making Things Public: Atmospheres of Democracy*, Cambridge (MA), The MIT Press.
- Latour, Bruno and Weibel, Peter (eds.) (2020) *Critical Zones: The Science and Politics of Landing on Earth*, Cambridge (MA), The MIT Press.
- Latour, Bruno and Woolgar, Steve (1979) *Laboratory life: The social construction of scientific facts*, London, Sage.
- Mitchell, Timothy (2011) *Carbon Democracy: Political Power in the Age of Oil*, London and New York, Verso Books.
- Salter, Mark (ed.) (2015) *Making Things International 1: Circuits and Motion*, Minneapolis and London, University of Minnesota Press.
- Salter, Mark (ed.) (2016) *Making Things International 2: Catalysts and Reactions*, Minneapolis and London, University of Minnesota Press.
- Salter, Mark and Walters, William (2016) *Bruno Latour Encounters International Relations: An Interview*, in "Millennium: Journal of International Studies", 44(3), pp. 534-546.

-
- Sokal, Alan D. (1996) *Transgressing the Boundaries: Toward a Transformative Hermeneutics of Quantum Gravity*, in “Social Text”, 46/47, pp. 217-252.
- Venturini, Tommaso (2009) *Diving in magma: How to explore controversies with actor-network theory*, in “Public Understanding of Science”, 19(3), pp. 258-273.
- Walters, William (2017) *Live governance, borders, and the time-space of the situation: EUROSUR and the genealogy of bordering in Europe*, in “Comparative European Politics”, 15(5), pp. 794-817.

