One Lab Coat Does Not a Scientist Make

by Sophie Houdart

The defense of science and reason is increasingly being instrumentalized by lobbyists hiding behind NGOs. This obscurantist undermining of experts benefits the industrialists these lobbyists are working for, and threatens the foundations of science.

Reviewed: Stéphane Foucart, Stéphane Horel and Sylvain Laurens, *Les gardiens de la raison. Enquête sur la désinformation scientifique*, Paris: La Découverte, 2020. 368 p., €22.

Les gardiens de la raison ("*The Guardians of Reason*") brings together a series of surveys conducted in the heart of the world of lobbying and its representatives, and analyzes the ever-denser entanglement of issues connected to knowledge and political and economic issues. Building on years of experience analyzing the public platforms and media appearances via which science content finds itself "captured"(p. 11) by industrial agents, the three authors, two of which are journalists for the *Le Monde* newspaper, and the third being a sociologist at the *École des Hautes Études en Sciences Sociales*, give a politically engaged account of what it is that now complicates and renders opaque informational worlds. The tone of the book, which is proudly indignant and aghast, gives the authors' labor of investigation and documentation a unique texture. Something must be announced, and announced clearly; and something must be *denounced* – names, networks must be exposed in order to "tell it like it is" (Boltanski 2012 : 22) and stress the significance of what is happening. Because, while this is by no means a new phenomenon, and much has already been written about the ways in which major industrial groups distort knowledge to suit

their own purposes, the authors here make a convincing argument that "we have reached a new degree in the manipulation of the authority of science for the purpose of gaining influence"(p. 11). A line has been crossed, and this is a source of concern: "the aim is no longer to merely commission studies to be published in scientific journals in order to influence public decision-makers who may be tempted to ban a particular product", but rather to "take up position" and "take possession" within the very space of scientific mediation (p. 12) in order to muddy the waters of what is known.

Knowing How to Keep Your Head

This process seems to thrive easily wherever the stabilization of a particular type of scientific knowledge is likely to promote or, on the contrary, to hinder industrial developments: glyphosate, GMOs, high-voltage power lines, vaccines, and of course climate change. It is connected to toxic environments, which we might view as the undesired effects of our progressive modernity, but for which we can imagine no other horizon than progress itself. While it now seems problematic to invoke the idea of progress as justification for the risks that we are collectively running by *fiddling* with nature, it is nevertheless on this fine line that those who the authors cynically call the "guardians of reason" are located and carry out their work. Admittedly, this is a confusing expression, since it seeks to reflect the fact that groups motivated by economic interest now find themselves aligned with rationalist movements whose history extends much further back. Sylvain Laurens recently devoted a book to the latter (Laurens 2019), in which he reconstitutes the social and intellectual conditions of the public engagement of experts in favor of science and rationalism. In this new, collective work, the three authors want to show how the defense of science and reason is invoked, used and instrumentalized by lobbyists hiding behind NGOs in order to reconcile, at any cost, industrial technologies and developments with individual and social wellbeing. With facts being cunningly turned on their head, environmentalist movements thus find themselves accused of obscurantism: they are accused of not knowing – the proof of this being, supposedly, that their claims and favored fields of contestation are loaded with emotions which, inevitably, render them blind and deaf to reason. A very ancient motif is at play here, one which associates science with neutrality, objectivity and the coldness of a mind that knows how to control its emotions and set them to one side. The distinction between reason and emotion has

ancient origins, and the history of science shows that the very space of laboratories, which came into being in the 17th century, was designed precisely to filter out the field of emotions (Shapin & Schaffer 1993; Despret 1999). And it was still the irreconcilable natures of reason, which is destined to govern and manage the world, and emotion, which makes it tremble before the joys of poetry, that would serve much later to discredit Rachel Carson when her book *Silent Spring* was published in 1962. The authors recall how the biologist's words, which highlighted the devastating impact of agrochemistry on the environment, were widely denigrated on the basis of their "emotional" charge: "the dangerous reactionary […] was going to demote modern society to a new Middle Ages gorged with parasites, vermin, devastated harvests and fatal diseases" (p. 19). But going beyond this historical reminder, the authors admirably show how disqualifications such as that of Carson have spread since then, to such a point that the "hysteria" of which she was accused has become one of the main terms resorted to by the guardians of reason to shoot down environmental studies: thus, the International Agency for Research on Cancer (IARC) is hysterical when it classifies glyphosate as "probably carcinogenic to humans" (p.22); anti-nuclear activists are hysterical and obscurantist; the conclusions of the Intergovernmental Panel on Climate Change (IPCC) are hysterical and irrational; they are all hysterical, then, these "merchants of fear" who, out of what we might call precaution, interrogate the legitimacy and unexplored consequences of a certain number of technological and industrial developments… To all of these supposed corrupters of science, the "guardians of reason" reply that there can be no obstacles to progress and to the free exercise of argued thought. Up to this point, it's all fairly easy: hearing the death knell of hysteria being rung in the press or media should be enough to switch on a warning light in each of us, and to invite us to reflect: what is going on? What is the nature, precisely, of the information that is thus being disqualified?

A Real Ecosystem

"In France, rationalist caution is a powerful lever for the propagation of ideas," write the authors, before continuing: "The longer the chains of legitimization between industry and its representatives, the more effective the PR campaign. The more the bearers of the message seem to be disinterested and full of good intentions, the truer their message sounds and the more likely it is to get spread" (p. 78). Anyone who needs convincing of this should read the particularly eloquent chain that the authors

establish when they discuss glyphosate: industrialists and the organizations that represent them (such as Monsanto), which have professional representatives (such as chambers of agriculture, or the Syrpa, the "network of agro-communicators"), their private communicators and their consultants, their experts and their think tanks, their institutions or professional associations (such as the *Académie d'agriculture* or the *Association française pour l'information scientifique – Afis*), and the platforms they use to circulate their information (such as the journal *Science & pseudo-sciences*). All of this creates "a group cemented together by deep-frozen evidence [that] defends the virile rationality of its science" (p. 40) by relentlessly posting Tweets, blogs and slanderous articles. The "ecosystem of the self-proclaimed guardians of science" (p. 99) is thus configured to tell and widely spread what the authors call "fables": thus the banning of the pesticide DDT was claimed to have led to a fatal resurgence of malaria (p. 68), and the reticence to hand out chlorinated products in the aftermath of the 2010 earthquake in Haiti supposedly led to thousands of people dying of cholera (p. 86). By distorting study results, conflating the regulatory consensus (which often arises out of a negotiation with those very industrialists whose products are being submitted for regulation) and the scientific consensus (p. 109), by calling on sophisms such as "the dose makes the poison" (which, while attractively simple, occults the fact that many substances act "without a threshold", meaning that any exposure, however small, can have deleterious effects), and making "precaution a potential crime" (p. 92), rationalists *bite into* reality and systematically disrupt it. Within the the toolkit that they now have at their disposal, the technique of ghostwriting, which involves a corporation using scientists who have no apparent relationship of subordination to it to put their names to articles in scientific journals, ultimately appears as the least subtle. As for the figure of the fact-checker, who is responsible for verifying a person's claims, it involves a certain perversity due to the very fact that everybody now uses it: in the kingdom of fake news, fact-checkers occupy all positions, and – this turns out here to be a more difficult exercise – distinguishing what is true from what is false requires a real balancing act. In the digital world, the picture is completed by trolls, "individuals who spread contradictions within social networks in a manner aimed at sparking conflict, in order to create or sustain a controversy, sometimes resorting to harassment and insults" (p. 29). And even then, all of this would be nothing without, at the end of the chain, the micro-influencers, anonymous science lovers and everymen/women, recruited to widely spread arguments whose equivocality fades the more they are posted, liked, and commented upon. Each of these relay points works, on its own level, to give consistency to a parallel reality, which soon comes to seem to be the only one that is valid.

It would probably be easy to take the sting out of this logic if it did, not ultimately, wholly draw its power from the fertile soil of our fragilities. At a time when seemingly simple questions – where are we? What direction are we going in? In what direction are we going? – are undoing the skein of our old certainties, there is room for expedient stormings of reality (Latour 2017). We lack assurance, in all senses of the word – the assurance that we are not irremediably heading straight for a brick wall, that all of this will end well – and this lack is a breach just as much for the guardians of reason as for the preachers of the apocalypse or conspiracy theorists. Through the precision of their surveys, the authors rightly encourage us not to conflate everything: every force that rushes into the breach unfolds its own value system, and its own knowledge system too, both of which require meticulous study. For rationalists, there are two types of tension at work here. The first one, as we have seen, is psychological: it has to do with hysteria, madness, the obscure kingdom of panic, of uncontrolled things. The second is political: this one, which follows ultra-liberal watchwords (no constraints on economic development) as well as libertarian ones (no restraints on freedom of thought), invokes the right to innovate, to develop, to market, to trade, to argue and cast doubt. In itself, there is nothing contentious or suspicious about this – apart from the use of what Monsanto called its freedom to operate, launched against its "hysterical" detractors, like a "Godwin point" nipping any counter-argument in the bud. By instrumentalizing free speech as it is understood in American universities (p. 254), they corrupt the noble practice of skepticism, of doubt as a spur for thought. No, in this case, skepticism – defined as the capacity to interrogate what the reactionary majority takes as read – is generalized, and crushes reality by using a one-size-fits-all approach to analyzing all aspects of reality. Like this *Institute of Ideas*, which is discussed at length by the authors, the slogan of which – "Ban Nothing, Question Everything" could have contained a certain promise if it had not served, in various *Battles of Ideas* (*Battles for Energy, Battles for Work, Battles for Reproductive choice,* etc.), to "create lines of argument in parallel to traditional, environmental leftwing discourse" (p. 183) – and in so doing, while pretending to sharpen one's critical faculties, instead blunt them. Here again, we must consider how pernicious this reasoning is: how can we call into question *this* freedom of thought and expression other than by specifying it so that it does not carry off with it this other, so precious freedom, to which researchers continue to cling in spite of the many reforms of academic research that endanger it?

Based on false foundations that imitate, in a grotesque mirroring effect, the value system that scientists hold so dear, this world of meaning should force them to anticipate the potential ways in which their arguments might be reused. It is true that the expert model, which concentrated the foundations of our collective realities in the hands of a few people deemed to be better informed and to have more authority than others, has lost some of its luster, and we should welcome the fact that an "environment of discerning connoisseurs" has progressively emerged as a result of this erosion (Stengers 2013: 14). But today, be it researchers, those who work in scientific mediation, students, or science lovers – all are struggling to recognize, in the dense and inextricable weave of information, anything that might give us a bit of assurance. We are all free, then, to grasp this discomfort in order to increase our demands for knowledge: it is up to each one of us to keep alive our attention to what is important, and to how to talk about it. This book's worth lies precisely in the way it uncompromisingly sketches out a map of the perils that will continue to face both scientists and science lovers, and encourages them to sharpen their senses of vigilance.

Further Reading:

- Luc Boltanski, *Énigmes et complots. Une enquête à propos d'enquêtes*, Paris: Gallimard, 2012.
- Vinciane Despret, *Ces émotions qui nous fabriquent - Ethnopsychologie des émotions*, Paris: Les empêcheurs de penser en rond, 1999.
- Bruno Latour, *Down to Earth: Politics in the New Climatic Regime*, Cambridge: Polity Press, 2018.
- Sylvain Laurens, *Militer pour la science. Les mouvements rationalistes en France*, Paris: Éditions de l'EHESS, 2019.
- Steven Shapin and Simon Schaffer. *Léviathan and the Air Pump – Hobbes, Boyle and the Experimental Life*. Princeton, NJ: Princeton University Press, 1985.
- Isabelle Stengers, *Une autre science est possible ! Manifeste pour un ralentissement des sciences*. Paris: Les Empêcheurs de Penser en Rond / La Découverte, 2013.

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