Humor in a Time of Science Wars: Rereading Isabelle Stengers

Isabelle Stengers, *L'invention des sciences modernes*

Humor in a Time of Science Wars: Rereading Isabelle Stengers

Raf De Bont

L'invention des sciences modernes, by the Belgian chemist, philosopher, and all-round intellectual Isabelle Stengers, was published in 1993. Thus it is still early days for giving it a "second look." Since many of the intellectual and political battles the book was engaged in are still ongoing, a contemporary second-looker has little benefit of hindsight. This is particularly the case given that the *first* look, as published in *Isis*, came relatively late. While *L'invention des sciences modernes* caused some excitement in the French-speaking world, it remained largely unnoticed among Anglophone historians of science. Only in 2002—two years after an English translation came out—did *Isis* eventually publish a review, authored by Steve Fuller.[1]

The Invention of Modern Science—as the English title reads—is a highly ambitious book. It explores nothing less than the nature of truth and the authority of science. Through her exploration of these topics, Stengers attempts to formulate an alternative for both reductionist and relativist understandings of science. Like the relativist sociologists of science (a description she mostly uses to refer to representatives of the so-called Strong Program), Stengers accepts that the creation of scientific knowledge necessarily entails political work and social construction. Unlike them, however, she explicitly defends the singularity of the scientific enterprise and its capacity to make truthful claims about the world that surrounds us. "The king," she insists, "is not naked" (p. 16).

While the book lures Anglophone readers in with a critical discussion of the thinking of Karl Popper, Thomas Kuhn, and Imre Lakatos, Stengers's main argument clearly builds on a particular French philosophical tradition. Notably, references to the work of Gilles Deleuze, Félix Guattari, and Bruno Latour figure prominently in *The Invention of Modern Science* (which is dedicated to the latter two). This also makes for a specific idiom, which in several instances proved hard to translate. Often the English translator retained original French terms between brackets. "Meaning and signification" is, after all, not exactly the same as "*sens et signification*" (p. 44), nor

Raf De Bont is Lecturer in the Department of History at Maastricht University. His research deals with the history of science and the environment in the nineteenth and twentieth centuries. He recently published *Stations in the Field: A History of Place-Based Animal Research, 1870–1930* (Chicago, 2015). Department of History, Faculty of Arts and Social Sciences, Maastricht University, Netherlands; r.debont@maastrichtuniversity.nl.

[1] Isabelle Stengers, *L'invention des sciences modernes* (Paris: La Découverte, 1993). For the English translation see Stengers, *The Invention of Modern Science*, trans. Daniel Smith (Minneapolis: Univ. Minnesota Press, 2000) (subsequent citations of this translation appear in the text in parentheses); for the review see Steve Fuller, rev. of Isabelle Stengers, *The Invention of Modern Science*, *Isis*, 2002, 93:359–361.

Isis, volume 109, number 1. 0021-1753/2018/0109-0007$10.00.

does "differentiations" carry precisely the same meaning as "*dénivellations*" (p. 125). On a more substantial level, the book is also characterized by an intellectual style that first flourished in the Francophone world. For most historians of science, the parallels with Latour's work will be most evident. Stengers shares key ideas with Latour about the implication of both the material and the social world in the creation of scientific knowledge; moreover, her essayistic style, predilection for case studies, and love for the paradoxical are reminiscent of Latour's writings. Yet while Latour approaches science largely as an anthropologist, Stengers mostly remains on philosophical ground. Her interest—as Latour puts it in the preface to a volume of her collected essays—is ultimately in "the very classical question of distinguishing good science from bad."[2]

In her approach, Stengers steers clear of what she calls the "irony" of the sociologists of science, who in her view denounce scientific research in an attempt to unveil its "trickeries." As an alternative, she propagates an attitude of "humor." The notion of "humor," reviewers of her work have indicated, remains rather elusive throughout the pages of *The Invention of Modern Science*.[3] Stengers comes closest to defining the term when she describes the sensitivity of the eighteenth-century salon as an example of a "humorous" attitude, characterized both by a "taste to be interested in science and technology" and a "freedom to laugh at them" (p. 16). It is an attitude that involves comprehension and appreciation of science, while not taking the rhetoric and self-definitions of scientists for granted. It involves recognizing that we are part of a scientific culture but also that it is possible to reinvent this culture from within. Through "the laughter of humor" she ultimately aspires to reopen the conversation between the humanities and the natural sciences in "a shared perplexity" (p. 65). In order to enable this conversation, Stengers explicitly indicates that she has carefully chosen her words so as not to alienate practicing natural scientists: "I hope to make myself hated, but I would like to try not to be hated by those I have no desire to offend" (p. 16).

History plays a prominent role in Stengers's line of thought. Without using the term, she criticizes the antiwhiggish tendency that clearly dominated among professional historians at the time the book was written. Stengers argues that it is practically impossible for the historian to escape the idea of progress in science. Historians *themselves*, she insists, are—quietly or not—under the power of science and the "numerous social, political, ethical, affective, and aesthetic transformations" it has generated (p. 64). Her key concept of "humor" is rooted in this realization. She describes it as "the capacity to recognize oneself as the product of the history whose construction one is trying to follow" (p. 65). Even the postmoderns, Stengers believes, never escape their history; nor can they do without notions of progress. Their attempts to do so are, in her view, no more than "little academic games reserved for people of independent means who are the beneficiaries of what they are supposed to no longer believe in" (p. 146).

While *The Invention of Modern Science* delves into the past, Stengers shows little interest in history for its own sake, and her case studies primarily serve to illustrate philosophical points. This is notably the case for her discussion of Galileo's laws of motion and his experiments with the inclined plane. Stengers writes of a "Galilean event" that gave rise not only to a new world system but also to a new way of arguing, a new use of reason, and a whole new range of questions to be researched. It is in Galileo's experiments that she situates the invention of the modern sciences—with the creation of an apparatus that "*allows its author to withdraw*, to let the

---

[2] Bruno Latour, "Foreword: Stengers's Shibboleth," in Isabelle Stengers, *Power and Invention: Situating Science* (Minneapolis: Univ. Minnesota Press, 1997), pp. vii–xx, on p. ix.

[3] See, e.g., Evan Selinger, rev. of Isabelle Stengers, *The Invention of Modern Science*, *Quarterly Review of Biology*, 2002, 77:182–184.

motion *testify* in its place" (p. 83). At the same time, however, she is resolute not to reduce science to specific Galilean practices, actively challenging the "quasi-identification between science and theoretico-experimental science" (p. 131). The plural "sciences" in the French book title gives a better sense of her approach than the singular used in the English translation. In insightful passages she discusses, for instance, the very specific logics of field sciences (the style of which she compares to that of detective novels) and computer simulations (in which the phenomena studied become virtual).

Given that Stengers is ultimately concerned with the difference between "good" and "bad" scientific practice, her book can also be read as an apologia for particular *forms* of science. Echoing her earlier work with Ilya Prigogine (notably *Order Out of Chaos* [1984]), she hints at a science that looks beyond deterministic laws in order to make sense of unstable phenomena and irreversible processes in nature. She also envisions new forms of scientific expertise that are created through the active participation of citizens. Finally, she sees scientists playing a crucial role in disrupting existing "politico-economic calculuses"—for instance, with regard to the environmental issues that confront the late-capitalist world (p. 139). Not everyone was convinced by this approach. Fuller indicated that the book left him with a "sour aftertaste" because its break with radical feminism and Marxism would lead to an exclusion of social criticism from science studies.[4] Yet while Stengers distances herself from specific forms of critique, she is definitely not an apolitical author—nor is *The Invention of Modern Science* an apolitical book. At the time of its publication, Stengers was a militant activist for a small Belgian left-wing party (Verts pour une Gauche Alternative); and—more relevant in this context—her book not only promotes particular types of science but also the particular types of society that this science co-creates.

The Invention of Modern Science has been read by some as an intervention in the so-called science wars. Of course, the French original was written *before* the Sokal affair and the subsequent publication of Alan Sokal and Jean Bricmont's *Impostures intellectuels* (1997), which would set off the wars in question. Yet *The Invention of Modern Science* anticipates much of the later discussions, and, as the 1990s wore on, Stengers got caught up in the animosities. In *Impostures intellectuels* the postmodern relativists she criticized herself were lumped together with people she considered her intellectual allies (Latour, Deleuze, and Guattari). Both groups were framed by Sokal and Bricmont as exemplars of the same "fashionable nonsense." Furthermore, Prigogine and Stengers's own work on chaos and irreversibility was the object of attack—though their "abuses" were mentioned only in a footnote and believed "not even [to] come close to those analysed in this book."[5] In the edited volume *Impostures scientifiques* (1998) Stengers would bite back—revisiting several of the themes of *The Invention of Modern Science* in a slightly more "ironic" tone. She portrayed Sokal and Bricmont as representatives of an imperialist brand of theoretical physics who claim to have access to the eternal laws of nature and hope to extend their specific conception of truth to the sciences at large. In such a context, Stengers believed, one could return to "peace" only through a strategy of "division" and "demobilization." She stressed that it made no sense to speak of "two cultures," with Sokal speaking for science and the relativists for the humanities. Rather, she pointed at a multiplicity of truths that were all informed by an en-

---

[4] Ilya Prigogine and Isabelle Stengers, *Order Out of Chaos: Man's New Dialogue with Nature* (London: Heinemann, 1984); and Fuller, rev. of Stengers, *The Invention of Modern Science* (cit. n. 1), p. 360.

[5] Alan Sokal and Jean Bricmont, *Impostures intellectuels* (Paris: Éditions Odile Jacob, 1997); for the quotation see Sokal and Bricmont, *Fashionable Nonsense: Postmodern Intellectuals' Abuse of Science* (New York: Picador, 1998), p. 15. Bricmont worked out his criticism more elaborately in Bricmont, "Science of Chaos or Chaos in Science?" *Annals of the New York Academy of Sciences*, 1995, 775:131–175.

gagement with "the real world" and thus ran the risk of being challenged. As such, she once again sought to develop a standpoint that avoided the pitfalls of both relativism and reductionism.[6]

The Invention of Modern Science touched on various themes that over the past decades have become increasingly popular among historians of science. The latter have shown, for instance, a growing concern for the intricacies of science in nonlaboratory contexts and for the role nonhuman actors can play in historical narratives. Historians are reassessing the notion of "whiggishness," and there has also been considerable soul-searching about the relation historians of science should maintain with practicing scientists. Yet, unlike her intellectual fellow traveler Latour, Stengers has not proven to be a major influence on these new historical directions. Whereas Latour provided historians of science with metaphors for understanding historical reality (ranging from "immutable mobiles" to "black boxes"), *The Invention of Modern Science* particularly invested in a concept that could influence their attitude and self-understanding ("humor"). Among most historians, the former seemed more appealing than the latter.

Although *The Invention of Modern Science* originated in the intellectual climate of the 1990s, its key concerns are still relevant twenty-five years later. The rise of "post-truth politics" and the neopositivist backlash it engenders in some circles threaten a "humorous" approach to science once again. In such a context, it can be fruitful to reread *The Invention of Modern Science*. Historians of science might struggle to understand all of Stengers's philosophical subtleties (I readily admit that I was lost on more than one occasion), but they will also find a lot worth reflecting on. Or, as Latour argued: "You grind your teeth on her argument and you feel much better afterward."[7]

---

[6] Isabelle Stengers, "La guerre des sciences: Et la paix?" in *Impostures scientifiques: Les malentendus de l'affaire Sokal*, ed. Baudouin Jurdant (Paris: La Découverte, 1998), pp. 268–292.
[7] Latour, "Foreword" (cit. n. 2), p. viii.

Taking Scientists (More) Seriously

Valérie Leclercq
Joris Vandendriessche

What makes one theory stand out among others? What makes one observation more legitimate, more "scientific," than another? According to Isabelle Stengers, the element of "risk" is essential. To establish legitimacy, scientists have to present natural phenomena in such a way that they challenge established opinions, exposing themselves to (and at the same time antic-

---

Valérie Leclercq just completed her doctoral thesis, entitled "Guérir, travailler, désobéir: Une histoire des interactions hospitalières avant l'ère du 'patient autonome,' Bruxelles, 1870–1930," at the Université Libre de Bruxelles. Her areas of interest include nineteenth- and twentieth-century medicine, the history of patients, psychiatry, and medical ethics. Department of History, Art and Archaeology, Avenue Albert 24, 1190 Brussels, Belgium; Valerie.Leclercq@ulb.ac.be.
Joris Vandendriessche is a Postdoctoral Fellow of the Research Foundation–Flanders, working at the "Cultural History since 1750 Research Group" of the University of Leuven. His book *Medical Societies and Scientific Culture in Nineteenth-Century Belgium* will appear with Manchester University Press in 2018. He is now working on the twentieth-century history of the Leuven academic hospitals. Faculty of Arts—Cultural History since 1750 Research Group, Blijde Inkomststraat 21 PB 3307, 3000 Leuven, Belgium; Joris.Vandendriessche@kuleuven.be.