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The French Simon Schaffer

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Simon Schaffer has special ties with France. During the preparation of his doctorate he stayed in Paris (spring 1980), consulted the archives of the Paris Observatory, worked at the Alexandre Koyré Centre and, every Wednesday, listened to the lecture of the philosopher Michel Foucault at the Collège de France.¹ Since then, Simon has been a regular guest in France. In June 2014, he delivered the prestigious Marc Bloch Lecture at the EHESS. His perfect fluency of French and his deep knowledge of the history of science “à la française” explains, at least in part, this Francophile tropism. But there is more. In this text, I propose to return to the various links that Simon's work has with French historical and sociological research. To the extent that his own research is tinged with a discreet, but very noticeable “French accent.”

In the first part, I will discuss the influence of Michel Foucault on Simon Schaffer's work. In a second part, I will explain how Simon responded to the theoretical proposals of the sociologist Bruno Latour. Finally, the third part will focus on the references to the *École des Annales* in his research. Drawing (among others) from these three sources (Foucault, Latour, the *Annales*), Simon has produced an original *oeuvre*, informed by the French historiographical debates

The influence of Michel Foucault

Simon Schaffer followed Michel Foucault's lectures at the Collège de France in the spring of 1980. That year, the French philosopher was working on “the government of the living.”² Foucault was exploring the regimes of truth, in particular the ancient and Christian techniques of truth-telling. Simon acknowledges that, a priori, there was no connection with the archives of the Paris Observatory, which he was examining at the same time. But he speaks of an “extraordinary brilliance.” Foucault's influence on Simon Schaffer's work is more direct in the article “Herschel in Bedlam: Natural History and Stellar Astronomy,” published in *The British Journal for the History of Science* in 1980, which is the text of the lecture given at the Bath Colloquium in 1980, bringing together the Bath and Edinburgh schools.³ Simon wanted to “juxtapose what [he] had read in *Les Mots et les Choses* [*The Order of Things*] with Herschel's natural history. The colloquium wanted to question taxonomy, classification.”⁴

Les Mots et les Choses was published in 1967. Foucault described the different *épistémè* delimiting coherent epochs in the way knowledge and its forms are considered.⁵ In his article Simon Schaffer argued that Herschel had not “founded modern sidereal astronomy” but was

¹ Simon Schaffer, “Newton, les Sex Pistols et la pompe à air (1/2),” interview by Volny Fages, Jérôme Lamy et Arnaud Saint Martin, *Carnet Zilsel* (17 mai 2014), <https://zilsel.hypotheses.org/706>.

² Michel Foucault, *Du gouvernement des vivants* (Paris: EHESS, Gallimard, Le Seuil, 2012).

³ Simon Schaffer, “Herschel in Bedlam: Natural History and Stellar Astronomy,” *The British Journal for the History of Science* 13, no. 3 (1980): 211-39.

⁴ Simon Schaffer, “Newton, les Sex Pistols et la pompe à air (1/2),” interview by Volny Fages, Jérôme Lamy et Arnaud Saint Martin, *Carnet Zilsel*, 17 mai 2014, <https://zilsel.hypotheses.org/706>.

⁵ Michel Foucault. *Les Mots et les Choses. Archéologie des sciences humaines* (Paris: Gallimard, 1967).

conducting a “work (...) of a natural historian.”⁶ Herschel had managed to isolate “a set of natural types – species – which had then to be arranged in orderly series connected by established physical law.”⁷ In particular, the astronomer “used this discourse to isolate a set of nebular species, and then connected them together in a series linked through the agency of gravity acting through time.”⁸ Simon Schaffer specified the borrowings he made from Foucault to carry out his investigation. Firstly, he adopted the idea “that classical natural history functioned as a discourse, and that therefore there may be no impropriety in characterizing as natural historical a set of practices not directed at the *normal* object of natural history;” he then “used his idea of a discourse as well-policed space of theory and practice, in describing which it is as important to discuss what could *not* be thought as merely to state what was tough.”⁹ Here, Simon confronted the formidable paradox of *epistémèi* which, for Foucault, constituted coherent systems of ideas, but they also closed in on themselves and there was not possibility of communication between them. Simon explained that “Herschel both constructed and came to break with the discourse of natural history in the heavens (...).”¹⁰ Simon thus analysed the evolution of Herschel's ideas by following Foucault's proposals on the history of science in the eighteenth century, centred on the search for “connected signifiers” and the reconstruction of an “order” of nature.¹¹ Herschel thought and reasoned in the register of natural history. His classifications and taxonomies were structured by this way of thinking. Thus, for Herschel, “the natural history of the heavens assumed the existence of a confused but continuous set of specimens, and, through an observational practice which could serve to transcribe these elements into an order, established the possibility and necessity of ordering these specimens as separate but closely connected species, and the arrangement of these species in a series.”¹²

Herschel's aim was not only to isolate single species, but to find a logic in the collection of different species discovered. Part of Herschel's work was to try to relate the “planetary” nebulae to the “milky nebulae and star clusters.”¹³ However, Simon noted, Herschel “accepted the necessity of a theory of central forces acting through time as the principle of connexion of the natural types of the series, rather than a visual similarity.”¹⁴ The introduction of gravity into Herschel's taxonomic system was indeed a “contradiction” – classification in natural history did not involve the use of dynamic forces.¹⁵ Here we can see that Simon is a demanding, precise and nuanced reader of Foucault's theses. By focusing on Herschel's work, he documents the classificatory substratum of the classical *epistémè*.

In later work, the analyses of Foucault are very much present in Simon's work. In his article “Self Evidence,” published in *Critical Inquiry* in 1992, Simon used the concepts proposed by Foucault in his 1975 book *Discipline and Punish*. The aim was to take into account the importance of the body of the scholar in experimental practice. Simon described his work

⁶ Schaffer, “Herschel in Bedlam,” 211.

⁷ Schaffer, “Herschel in Bedlam,” 211.

⁸ Schaffer, “Herschel in Bedlam,” 212.

⁹ Schaffer, “Herschel in Bedlam,” 212.

¹⁰ Schaffer, “Herschel in Bedlam,” 212-213.

¹¹ Schaffer, “Herschel in Bedlam,” 214.

¹² Schaffer, “Herschel in Bedlam,” 217.

¹³ Schaffer, “Herschel in Bedlam,” 225.

¹⁴ Schaffer, “Herschel in Bedlam,” 226.

¹⁵ Schaffer, “Herschel in Bedlam,” 229.

as a contribution to this 'political anatomy' of experimental philosophy. Here evidence is treated both as the result of certain theatrical rituals through which the person of the experimenter was integrated into public performances, and also as the result of the accreditation of experimenters' stories by the public community of natural philosophy. Bodies are treated both as the objects on which experimenters worked and as the collective to which they belonged and from which they drew authority. These links between the privacy of the experimental trial on the individual body and the public warrant of collective authority can be clarified through the concept of evidential context, the proper implications of some trial. Experimenters who used their own bodies tried to shift the evidential context from the body itself to some wider natural philosophical concern.¹⁶

Electricity experiments in the eighteenth century involved the body of the experimenters, which implied a controlled theatricality of the public demonstration.

Similarly, *Discipline and Punish* provided the backdrop for Simon's article on Babbage and his machine industry. This time it was the force of Bentham's panopticon that Simon used to explain Babbage's obsession with the "factory system."¹⁷ Simon is the most consistent historian of science when it comes to the engagement with Foucault's work. He did not merely comment on or discuss it on particular points, but actually used it to produce illuminating analyses of large-scale socio-epistemic phenomena – such as the classification of nebulae or the distribution of bodies in the space of public demonstration.

Against Latour

Simon Schaffer took part in the (many) debates that animated the Sociology of Scientific Knowledge (SSK). In particular he discussed the positions of the French sociologist and philosopher Bruno Latour. Latour published in 1984 *Les Microbes. Guerre et Paix*, translated into English in 1988 as *The Pasteurization of France*.¹⁸

The work had an international resonance. But in France, it aroused incredulity – and sometimes irritation. Let us recall Latour's general thesis: Pasteur was only able to convince the French medical profession by making microbes visible and by enlisting them in a chain of argument that extended from laboratories to ordinary health practices. The historian of medicine Jacques Léonard was not very receptive to this proposal. In the *Annales*, in 1985, he vituperated against "the seduction of the artist."¹⁹ Above all, he noted that Latour was "rigorously opposing hygienists and practitioners," whereas the two activities had long been mixed. Léonard shows that Latour neglected the already long-standing affinities between medical practices and bacteriological research, which explains, at least in part, "that Pasteurism discovered so many natural and conjunctural allies."²⁰ In a broader critique of Latour's work, the sociologist Olivier Boraz pointed out the errors of an actor-network

¹⁶ Simon Schaffer, "Self Evidence," *Critical Inquiry* 18 (1992): 329-30.

¹⁷ Simon Schaffer, "Les machines calculatrices de Babbage et le 'Factory System'," *Réseaux* 1, no. 1 (1997): 222.

¹⁸ Bruno Latour, *Les Microbes : guerre et paix* (Paris: Métaillié, 1984); Bruno Latour, *The Pasteurization of France* (Chicago: The University of Chicago Press, 1988).

¹⁹ Jacques Léonard, Review of Bruno Latour, *Les microbes. Guerre et Paix*, suivi de *Irréductions*, *Annales. Economies, Sociétés, Civilisations* 40, no. 1 (1985): 167.

²⁰ Léonard, Review of Bruno Latour, 167.

“empty of any content of its own:” its ability to cross domains of activity strips it of any specific socio-epistemic qualities.²¹

The French reception of Latour's work on Pasteur was therefore sceptical – to put it charitably. In the English-speaking world, the reviews were more complimentary. Certainly, in *Isis*, Evan M. Melhado doubted that we will ever see the “Latourization of the history, philosophy, and sociology of science,” so much so that the method used missed important data series.²² But Ian Hacking, in *Philosophy of Science*, was enthusiastic; Ann F. La Berge in *The American Historical Review* praised “an exciting and challenging greatly enhances our understanding of science and society;” and Keith Vernon assured that “Latour is impeccably reflexive.”²³

Simon's 1991 review in *Studies in History and Philosophy of Science* of the two versions (English and French) of *Microbes: Guerre et Paix* was clearly on the side of the sceptics. His text contrasted with the English-language praise. Simon did not content himself with pointing out the weaknesses of Latour's book, he systematised his criticisms and brought to light the principal aporia of the actor-network theory. Simon specified that “by suppressing the controversies which surrounded Pasteurism, Latour is able to use ‘the microbes’ as willful actors. Instead of symmetry, he tries hylozoism.”²⁴ By endowing microbes with intention (like human beings), Latour overlooked the socio-epistemic determinations of controversies and delivered a truncated account of Pasteur's argument. By pointing out the limits of the Latourian approach to science, Simon revived the critique of actor-network theory. His proposals were consistent with the scepticism of the French reception, but went further.

At the *Annales* Schools

Simon Schaffer has written two articles for the famous French history journal, the *Annales*. Founded by Marc Bloch and Lucien Febvre in 1935, the *Annales* was the mainstay of the revival of economic and social history, under the direction of Fernand Braudel, and then from the 1970s onwards, notably with Jacques Le Goff and Emmanuel Le Roy Ladurie, of cultural and anthropological history. More recently, the journal has turned to the theme of globalisation.

Simon's social history of science is indeed close to that of the *Annales*: comparatism, lability of social forces, extensive resonances of practices ... In 2005, Simon published an article in the *Annales* entitled “L'inventaire de l'astronome. Le commerce d'instruments scientifiques au XVIII^e siècle (Angleterre-Chine-Pacifique).” He explained in particular that

²¹ Olivier Borraz, “La science est-elle une sociologie ? A propos des travaux de B. Latour et M. Callon”, *Politix* 3, no. 10-11 (1990): 142.

²² Evan M. Melhado, Review of Bruno Latour, *The Pasteurization of France*, *Isis* 83, no. 2 (1992): 271.

²³ Ian Hacking, Review of Bruno Latour, *Science in Action. How to Follow Scientists and Engineers Through Society* and Bruno Latour, *The Pasteurization of France*, *Philosophy of Science* 59, no. 3 (1992): 510-1; Ann F. La Berge, Review of Bruno Latour, *The Pasteurization of France*, *The American Historical Review* 95, no. 4 (1990): 1216; Keith Vernon, Review of Bruno Latour, *The Pasteurization of France*, *The British Journal for the History of Science* 23, no. 3 (1990): 346.

²⁴ Simon Schaffer, “The Eighteenth Brumaire of Bruno Latour,” *Studies in History and Philosophy of Science* 22, no.1 (1991): 185.

in “1791-1792, the East India Company organised a mission equipped (...) with astronomical instruments in order to convince the Chinese to trade in tea.”²⁵

Chinese officials in the imperial court mocked the instruments of the British as emblematic of their weakness. Scientific instruments thus became objects capable of reproducing geopolitical differences. This way of considering the social and political depth of objects is reminiscent of the Braudelian approach. Fernand Braudel composed an immense work, first by examining the stratified life of a vast geographical space, the Mediterranean, and then by recomposing the modern matrix of capitalism.

In *Civilization and Capitalism*, the French historian tried to follow the networks of nascent capitalism: money, techniques, fairs, foodstuffs, maritime and land routes. Everything was brought into play to understand how human exchanges were structured on a global scale. In Volume 1 (*The Structures of Everyday Life*), Braudel discussed luxury objects, their trade and their importance at length. His conclusion, about their multiple uses, is strikingly consistent with Simon's proposals about the scientific instruments of the modern era. Here is what Braudel said:

If luxury is not a good way of supporting or promoting an economy, it is a means of holding, of fascinating a society. And those strange collections of commodities, symbols, illusions, fantasies and intellectual schemas that we call civilizations must also be invoked at this point. In short, at the very deepest levels of material life, there is at work a complex order, to which the assumptions, tendencies and unconscious pressures of economies, societies and civilizations all contribute.²⁶

Simon showed precisely that scientific instruments were part of a plural reading of the world. The ways in which these objects are considered and used provide information about the distant connections between very different cultures.

In 2014, Simon was invited to the Ecole des Hautes Etudes en Sciences Sociales in Paris to deliver the prestigious annual Marc Bloch Lecture. His paper was published in the *Annales* in 2015, under the title “Les cérémonies de la mesure. Repenser l’histoire mondiale des sciences.” This time, it is to Marc Bloch that Simon paid his debt as an historian.

Simon was interested in the “act of measuring” which allows the organisation of commensurabilities on a large scale.²⁷ Above all, the challenge is to understand the “ceremonies of measurement” that broke the “inevitable asymmetry between the quantitative reason of Europeans and the qualitative uses of other peoples.”²⁸

Simon asserted, “all practices of measurement are rituals”; indeed, “they require that rigorous care be given to a sequence of performative actions ...”²⁹ Simon drew from Marc Bloch's *Les rois thaumaturges* the idea that ceremonies (such as that of the healing kings) contain a certain worldview. Rituals linked knowledge with political efficacy. For Simon, Bloch “understood that the way power is represented is also a kind of power.”³⁰ In

²⁵ Simon Schaffer, “L’inventaire de l’astronome. Le commerce d’instruments scientifiques au XVIIIe siècle (Angleterre-Chine-Pacifique),” *Annales. Histoire, Sciences Sociales* 60, no. 4 (2005): 791-792.

²⁶ Fernand Braudel, *Civilization and Capitalism 15th-18th Century*, vol. I : *The Structures of Everyday Life. The Limits of the Possible* (Londres: William Collins Sons & Co, 1981): 333.

²⁷ Simon Schaffer, “Les cérémonies de la mesure. Repenser l’histoire mondiale des sciences,” *Annales. Histoire, Sciences Sociales* 70 no. 2 (2015) : 409.

²⁸ Schaffer, “Les cérémonies de la mesure, 412.

²⁹ Schaffer, “Les cérémonies de la mesure, 413.

³⁰ Schaffer, “Les cérémonies de la mesure, 413

eighteenth-century science, it was “the balance and the pendulum” that animated “the rituals of measurement” and gave a global coherence to the way the world was conceived.³¹ By reactivating Marc Bloch's thesis on the political power of rituals, Simon reinscribed metrological practice in its anthropological dimension. Commensurability is never dissociated from issues of power.

A French Accent

I have tried to show that Simon Schaffer's history of science has a slight French accent. It is, of course, much more than that. However, the Foucauldian work, the critique of Latour and the references to the *Annales* constitute original markers of a practice of social and cultural history of knowledge. This way of searching in the archives for deep coherences (as with Foucault), critical philosophical readings (as in the dialogue with Latour), or political properties inscribed in the ordinary course of the world (as with Marc Bloch) does not constitute a French specificity. But all these French references make Simon's history of science unique. It has inspired and continues to inspire young researchers. In France and elsewhere.

³¹ Schaffer, “Les cérémonies de la mesure, 429.