

Editorial Note

Launching HoST and 'The Circulation of Science and Technology'

*By Tiago Saraiva**

The publication of the first number of HoST is the direct result of a joint effort by a group of Portuguese scholars¹ aiming to strengthen the field of History of Science and Technology in a small country of the European periphery. The big challenge was how to do it avoiding the traps both of Portuguese centrism and of excessive internationalism. We did not want to limit ourselves to an autistic dialogue around Portuguese issues, but we were well aware of the existence of an extended number of excellent international journals both on history of science and history of technology. We decided that a valuable way of nurturing a sustainable community in the field was to promote a journal where local scholars would have to face subjects of international relevance and dialogue with internationally

* Institute of Social Sciences, University of Lisbon, tiago.saraiva@ics.ul.pt

¹ The editorial board of HoST is formed by Ana Carneiro, Maria Paula Diogo, Henrique Leitão, Ana Cardoso de Matos, Tiago Saraiva and Ana Simões. We also want to acknowledge the generous funding of our common endeavour by our own institutions: Institute of Social Sciences – University of Lisbon; Interuniversity Centre for the History of Science and Technology – Faculty of Sciences (University of Lisbon) and Faculty of Sciences and Technology (New University of Lisbon); Interdisciplinary Centre for History, Cultures and Society (CIDEHUS) – University of Évora.



recognized historians. In order to promote such a confrontation, the editors also launched an annual workshop (typically in June) acting as the main supplier of a thematic summer issue.

Although HoST thrives to include Portuguese contributions in every issue, it is totally open to original research on the cultural and social dimensions of science and technology in history across the world. More than that, we wish to make the global geography of HoST papers a distinctive feature of the journal. The constitution of the editorial advisory board is also a declaration of intentions concerning the importance of having an active collaboration from different regions of the planet and distinguishes HoST from most of the journals of the field.

Such mix of global and local ambitions could only be attained by committing ourselves to a publication in English, the only language able to guarantee a cross-cultural dialogue, even when the level of the written English of our journal will not probably reach the high standards of the best publications in the field. The option of publishing online on a totally open access basis goes in the same direction of enlarging the potential community of HoST readers and contributors. One must recognize the opening up of perspectives to scholars outside the usual central countries offered by the use of the internet, and it would be a shame to throw away such advantages by following the bad habits of too many academic publishers who contribute to the growing costs of access to knowledge.

The will to expand the hosting capacity of the journal is also asserted by the decision of placing together history of

science with history of technology. In conjunction with its worldwide scope, this will be another distinctive mark of HoST, an almost natural decision for a group of historians living in a peripheral region where such distinctions have always been blurred. But what was commonly seen through the lens of scientific and technological backwardness, with poorer countries not having the resources to pursue more fundamental science, is now perceived as a highly artificial separation of fields, as confirmed by the growing use and acceptance of the concept of technoscience. There are many examples of the benefits of leaving behind such distinctions but few are as convincing as Peter Galison's book on two of the most cherished symbols of high theoretical Science, Einstein and Poincaré.² As Antonio Lafuente writes in his essay review for this first issue of HoST on Galison's "Einstein's Clocks, Poincaré's Maps", "to separate our ideas from the machines with which we produce them and realize them is tantamount to refusing to understand how the world in which we live was created". Such words are a very good justification to bring together in the same journal the history of science and the history of technology despite the venerable traditions of both disciplines.

It is also no coincidence that the first workshop organized by the HoST editors was meant to deal with "The Circulation of Science and Technology: Places, Travels and Landscapes". After all, HoST itself was forcing us to a reflective exercise on how to come to terms with problems around

² Peter Galison, *Einstein's Clocks, Poincaré's Maps. Empires of Time* (New York / London: Norton, 2003).

peripheral histories, international communities and *glocal* agendas³. It seemed an obvious choice to take Circulation as the major topic of HoST first issue. But perhaps more important than our own concerns (obsessions?) was the shared conviction that historians of science and technology have been dealing with circulation issues for quite a long time, and that their narratives have offered an image that does not fit in the majority of general accounts on globalization. If on the one hand globalization gurus sustain the flatness of the world and the endless expansion of international networks⁴, on the other historians of science and technology have stressed the crucial role of the local dimension of knowledge production. Instead of considering circulation as an automatic phenomenon following the universal character of science (or the market, the new gurus would say), they have suggested that there is much effort in making knowledge and technology which are locally produced into suitable things for circulation.⁵ Without standards, protocols and communities of experts, scientific objects and technical devices would have many difficulties in

³ A similar intellectual agenda dealing with the same kind of problems animates the research network STEP (Science and Technology in the European Periphery). See www.ca.uoa.gr/step.

⁴ A good example of such literature is Thomas L. Friedman, *The World is Flat: a Brief History of the Twenty-first Century* (New York: Farrar, Starus and Giroux, 2005).

⁵ Good accounts of such historiography may be found in David N. Livingstone, *Putting Science in its Place. Geographies of Scientific Knowledge* (London / Chicago: Chicago University Press, 2003); Roy Macleod ed., "Nature and Empire. Science and the Colonial Enterprise", *Osiris*, 2000, 15. Also important for the argument are Kapil Raj, *Relocating Modern Science: Circulation and the Construction of Knowledge in South Asia and Europe, 1650-1900* (Hampshire: Palgrave Macmillan, 2007); M. Norton Wise ed., *The Values of Precision* (Princeton, NJ: Princeton University Press, 1995).

flying away from their local context. Natural History Museums, Botanical Gardens or National Bureaus of Standards may be profitably studied as places for enhancing circulation, central nodes of extended networks through which flow instruments, materials, people and practices.

Circulation has been an instrumental concept for replacing old theories of diffusion by richer accounts where local contexts play a prominent role. The opening article of HoST by M. Norton Wise on “What can local circulation explain?” makes a strong case about the importance of the cultural resources at Helmholtz disposal in Berlin’s urban context for the building of his frog-drawing-machine. In spite of declarations of good will, most of the history of science devoted to the local nature of science practices has difficulties in demonstrating the usefulness of knowing local contexts for understanding science production. The article not only fully accomplishes this aim, but also goes a step further concerning the political economy of laboratories. By dealing with cultural resources as if they were material ones, it makes the Dürer Renaissance as material to Helmholtz as the prisms of the Cambridge fairs were to Newton. The concept of cultural resource is a very attractive one for replacing, or at least remaking, the now common approach to the material culture of science production, without falling in the old trap of a cultural context that one ever understands how it articulates with the core of science.

Fuzzy ideas about influence have lost their appeal in favor of thicker descriptions that follow the actual trajectories of things in circulation. Ana Cardoso de Matos and Paula Diogo’s article, “Bringing it all back home”, is a good exam-

ple of the benefits of putting flesh into general ideas such as the French influence on Portuguese engineering practices in the second half of the nineteenth century. By following Portuguese engineers in action they are able to put forward a topology of centers of circulation that include engineering schools, industrial sites and world exhibitions. Instead of a mere center/periphery (Paris/Lisbon) relation, the authors place the engineer's travels to those centers in relation to local agendas of professional identity and state modernization.

The stress on the creative role of the appropriators of technology is also a key concept of David Edgerton's contribution on "Creole Technologies and Global Histories". While the previous article was centered on technological experts, Edgerton aims at extending the number of actors in the history of technology. His main goal is to make technology a crucial component of any narrative dealing with poor countries as well as making low-tech devices central to the understanding of the rich world. Perhaps more traditional historians of technology will be shocked by his provocative prose where rickshaws and corrugated iron take the place of dams and the green revolution to properly assert the local relevance of technology. It seems that what Edgerton is doing is to bring into the realm of the history of technology large plots of the population largely ignored by the scholars of the discipline. There are, for example, numerous books on the role of technology in the building of the network city in Europe and the United States, but till now we had no account of the technological nature of expanding bidonvilles in the megacities of the poor world.

Circulation attaches new identities to things. This is very obvious for the different historical uses of corrugate iron or the new identity experienced by Portuguese engineers as they travel across Europe. It also stands for Helmholtz's frog-drawing-machine growing from the use of Berlin's cultural resources related to curves. What is striking in the case presented by Ricardo Roque in "Wordless Skulls" is that what could be seen as a typical example of how museums put objects in circulation by the production of collecting and exhibiting protocols is instead a narrative of how some objects may get stuck in museums without being able to circulate. His collection of Timor skulls, useless to the commoditization project of the Portuguese colonial possessions, became wordless objects with no attached significant discourse. Roque evokes Star's and Bowker's argument about how classifications can 'break, twist, or torque' the biographies and bodies of persons, to make an analogy of how classification and description systems can also twist the lives of objects like his collection of skulls. But from his text one cannot avoid the conclusion that without the ability to apply such classifications, things may just die in the oblivion of Museum's deposits. We are thus faced with a magnificent counterfactual of how things not circulating become irrelevant. It is then no surprise that we make every effort to maximize the circulation of HoST as much as possible.