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DOSSIER

HISTORY OF SCIENCE: (RE)OPENING NEW PATHS

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Introduction

Over the last decades, the history of science has reinvented itself. Born out of the so-called scientific revolution of the seventeenth century, when characters such as Johannes Kepler (1571–1630) not only pushed on the limits of science but started to reflect on the history of their own scientific subject, the history of science was for long a story of major figures and accomplishments. Science had its heroes (Newton, Einstein), its martyrs (Bruno, Galileo) and its proselytizers (Voltaire, Camille Flammarion). These actors were perceived as champions responsible for a progressive succession of triumphant discoveries which led humanity towards a new rationalism, where no room for 'non-scientific' issues existed. Accordingly, in the past, the narrative of history of science often coincided with a hagiographic rehearsal of these characters and their achievements.

This traditional narrative was profoundly challenged by historians and social scientists in the last couple of decades. Scholars have demonstrated, among other issues, the strong impact that social relations and institutional framework had in the production of scientific knowledge. The scientific work of major figures such as Galileo proved incomprehensively without a detailed look at the economical, social and political conditions under which

they worked and lived. The interconnection between politics, institutions, social relations and the culture of science is today a vital issue for historians of science.

This issue of the *Portuguese Journal of Social Science*, focusing on the (re)discovery of new approaches in the history of science, aims at contributing to consolidate the history of science in the field of social sciences at an international level. It assumes that the conceptual approaches and the different methods employed in social sciences play a crucial role in the historiographical renewal of the history of science. The dialogue with the theoretical corpus of social sciences has uncovered new fields of study and new ways of approaching traditional questions in the history of science. In particular, this issue encourages historians to conceive science in motion, paying particular attention to the ways in which scientific knowledge and practices crossed continents, changed, and adapted to different environments. It focuses therefore on the circulation of knowledge, people, ideas and scientific culture in a global context (and particularly between Europe and Americas). In this complex process of change, which occurred in the interstice of states and institutions, a transnational approach emerged as crucial to understand the nature of science in the making.

Luís Miguel Carolino, in his paper on the modernization of science and scientific framework in Portugal in the late eighteenth century and early decades of the nineteenth century, defies the traditional and national-based narrative according the scientific development in Portugal was essentially promoted by a group of individual European-inspired philosophers, the so-called *estrangeirados*. According to Carolino the driving force of Portuguese scientific development was to be found in the Atlantic, or more properly in the Atlantic-based economy of the Portuguese empire. In this imperial context, a major role is assigned to state agency. State initiative was responsible for the militarization of 'Portuguese' science, the promotion of an applied science and the strong impact that a particular conception of scientist as a military and practical man had in Portuguese society.

A transnational approach is also followed by Isabel Malaquias in her study on the network of production and distribution of scientific instruments in eighteenth century Europe and regions under the European domain. The perfecting of scientific instruments was a crucial move in the rise and spreading of a new physics as well as in solving practical but still crucial problems for state-making and for the development of mercantilist economies, such as the computation of longitude. Thus a dynamic network connecting producers, scientists, civil servants and other instrument recipients emerged in eighteenth century Europe. The Portuguese J. H. de Magellan (1722–90) was key in the networks that in the last quarter of the century were mainly centred in the British instrument makers. As an internationally renowned intellectual settled in London, he actively contributed to disseminate instruments and technical news throughout Europe and, in particular, in Iberian countries and their possessions in South America.

Transcontinental exchange is further expanded in Lorelai Kury's paper on the circulation of plants between France and Brazil in the late-eighteenth century and in the early decades of the nineteenth century. Exchange of seeds and plants had a strategic scientific and economical value for the most powerful states of Europe in the eighteenth century. France with its solid colonial network was a case in point. Focusing on the circulation of plants in Brazil during the period of the Napoleon war and after 1815, Kury argues that

this process of transfer was largely indebted to the French colonial network. Furthermore she shows how crucial this process was to the emergence of a new type of botanical knowledge widely influential in subsequent attempts to identify, classify and acclimatize plants. In this process of scientific transfer, Auguste de Saint-Hilaire (1779–1853) revealed a major player. Working in the interstice of states, he took seeds, useful plants, a herbarium, animals, and statistical, geographical and historical information from Brazil to France, but he also served Brazil, by publishing and revealing Brazilian botany to the international scientific communities.

The contribution of science to the well-being of the population, to which botany ultimately collaborates, is the major topic of José Pedro Sousa Dias's paper on mineral waters, spas and therapeutics in seventeenth- and eighteenth-century Portugal. A research topic seldom covered by historians of science, the medical use and prescription of medicinal waters is a privileged way of inspecting not only the international circulation of ideas but also the social impact of science and the means by which scientific narrative contribute to change the culture of leisure and social diversion.

International relations at state level, institutionalization of science and science diplomacy are topics covered by Quintino Lopes. Focusing on the National Educational Board (JEN – Junta de Educação Nacional), an institution created in 1929, during the Military Dictatorship, with the aim of promoting scientific, pedagogical and economic policies, Lopes puts in evidence the role played by the international communication networks in Europe between wars. European countries offered not only the institutional framework that allocated Portuguese fellowship holders but also provided the model to develop scientific institutions, research agendas and scientific practices. This led the Portuguese state to delve into a complex policy of scientific diplomacy.

These are some cases of science circulation, involving scientists but also different go-betweens, institutions and states at a transnational level. Certainly, other cases could be added. Yet, by choosing these cases, we would like to draw attention to the fundamental role science has played in a world that progressively goes into globalization.

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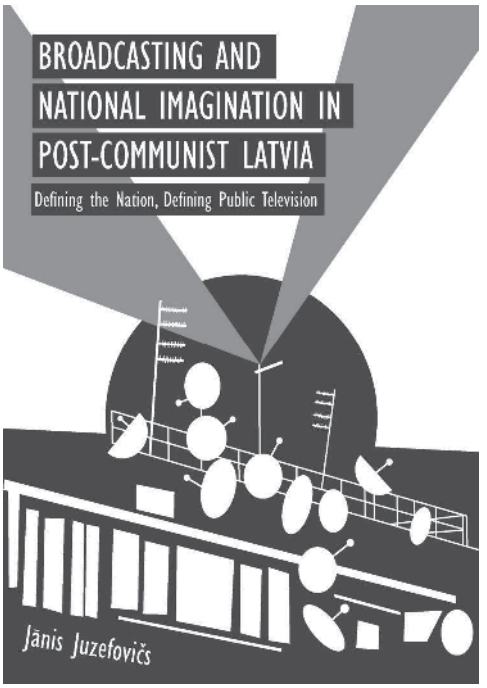

Broadcasting and National Imagination in Post-Communist Latvia

Defining the Nation, Defining Public Television

By Jānis Juzefovičs

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Jānis Juzefovičs holds a PhD in media studies from the University of Westminster.

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