Revista Lusófona de Estudos Culturais, vol. 3, n. 2, 2015/2016, pp. 339 – 344

Rodrigues, M. L. & Heitor, M. (Eds.) (2015). *40 anos de políticas de ciência e de ensino superior*. Coimbra: Almedina.

Madalena Oliveira

Although the first Portuguese university, the University of Coimbra, was founded in the thirteenth century, the history of science and higher education policies in Portugal can be narrated in relatively brief pages up until the 1974 Revolution[1]. It is, indeed, in the last four decades – which have coincided with the democratic experience – that the most intense chronology of the development of science and university education in the country lies. Split up in chapters focused on the need for internal organisation and international expansion, this recent path of Portugal is the central subject of *40 anos de políticas de ciência e de ensino superior [40 years of science and higher education policies)*, a volume of almost 1200 pages organised by Maria de Lurdes Rodrigues and Manuel Heitor (Rodrigues & Hector, 2015), with the contribution of 41 authors and 23 Portuguese scientists and politicians. Proportional to the level the transformations registered in the sector in the post-Revolution period, the extent of this book reflects the complexity of the scientific field, particularly with regard to the resource management, the definition of priorities and growth strategies, regulation and evaluation models, as well as the interaction with society.

Described as "an anthology work" (p. 19), this publication is, according to the editors, meant to constitute "a basis to inform the formulation and implementation of new science and higher education policies" (p. 22). Despite this orientation to the future, what makes this book – dedicated to the memory of José Mariano Gago – a necessary and inescapable work to understanding the space of knowledge production in Portugal is the reading of the recent past proposed by the 58 texts integrating it. Published 25 years after the *Manifesto para a ciência em Portugal* (Gago, 2008 [1990]), the work coordinated by Maria de Lurdes Rodrigues and Manuel Heitor is not indifferent to the legacy of the Minister of Science between 1995 and 2002 and Minister of Science and Higher Education between 2005 and 2011, whose reference is unavoidable in the several chapters and testimonies stating that Mariano Gago's name and action "are indelibly associated with the evolution of science in Portugal" (p. 23).

In the introduction to *40 anos de políticas de ciência e de ensino superior,* the reader is invited to a double analysis. On the one hand, a chronological analysis of public policies,

[1] In a brief book on *Science in Portugal*, Carlos Fiolhais explains that "the twentieth century in Portugal was, at the educational level, in its first three quarters, the continuation of the nineteenth century", which was translated, according to the author, by the maintenance of a "low schooling of the population, particularly in higher education, and therefore the impossibility of a substantial investment in science" (Fiolhais, 2011, p. 25).

written by Maria de Lurdes Rodrigues, who goes back to the First Republic to start an examination of the history of the definition of the scientific system and of the national higher education development that, according to the author, happened in five phases from the last years of the Estado Novo onwards. On the other, an analysis of impacts, proposed by Susana da Cruz Martins and Cristina Palma Conceição, for whom "a positive evolution of the vectors under consideration" in the field of science and education does not prevent "hard-treating challenges and dilemmas" (p. 76). Despite the "interdependence and symbiosis of the development of higher education and science" (p. 51), after the introductory chapters, two major parts (only apparently separable) organise the content of the book. The first focuses on the construction and development of the scientific system and brings together a set of contributions on science policy, institutions, financial resources, and infrastructure, and on the links of science to society. The latter examines the expansion and diversification of higher education expressed in its organisation and institutional development, widespread access, the issue of the autonomy of universities and the management models and funding instruments, regulation and assessment.

From a historical point of view, whatever the analysed indicator, it is common to acknowledge that until 1974 the country suffered a brutal backwardness when compared with the levels of other countries. The work of organisations devoted to research activities (such as the Junta Nacional de Educação [National Board of Education], established in 1929 and transformed into the Instituto para a Alta Cultura [Institute for Advanced Culture], from 1936 on) has, indeed, had little impact. It was the creation in 1967 of the Junta Nacional de Investigação Científica e Tecnológica (JNICT) [National Board of Scientific and Technological Research], which "mark[ed] the beginning of scientific planning in Portugal", as noted by Manuel Heitor (p. 92). To Maria Fernanda Rollo, this body "represented, at the time of the Revolution, the boldest manifestation of ambition seeking to inform a scientific and technology policy" (p. 147). It was still during the existence of this institution that Portugal started to benefit from the European funds, "being the JNICT redesigned", explains Tiago Brandão, "in the transition to the 1990s as an authentic funding agency due to the diversification of funding sources for the 'S&T [Science & Technology] system', a direct result of the incorporation into the European Community" (p. 215).

The integration into the European political and economic space was, after April 25 [the Portuguese Revolution], the main factor in the development of the Portuguese academic and scientific field, representing the orientation of actions towards parameters such as the internationalisation of research units and researchers themselves. Maria Teresa Patrício and Tiago Santos Pereira refer to "the importance of mobility and advanced training abroad" as well as "a new capacity to attract doctoral and foreign research students to Portugal" (p. 287) and "the participation of Portugal in international organisations and institutions of science" (p. 288), aspects which are reflected in "the high standards of scientific publications in international co-authorship of the Portuguese scientific community" (p. 287).

The most sensitive variables of scientific policy matters are the funding and funds are assigned to the research units. Associated Laboratories are, in this context, a kind

of *premium* structure of science in Portugal, absorbing a significant part of the available funding for research institutions, with a "budget for the recruitment of researchers" (p. 327). This is practically impossible for any other unit, whose human resources are limited to the hiring of research or science and technology management grant holders. Despite the unequal distribution of resources, both between institutions and between scientific areas, there is a consensus among the authors of this work that after the integration into the European Union and until the economic crisis that began in 2009 there was increasing investment in science. This effort resulted in a significant increase in the number of researchers holding a PhD, in scientific employment, and in the number of publications and projects both for research and for technical management and scientific calculus.

In addition to the mathematics of financial resources and productivity indicators, the institutions of science today also face the challenge of being directly relevant to the society. They are meant to "promote scientific culture" which implies, explains Cristina Palma Conceição, the "improvement of scientific literacy levels of the population" and "the incorporation of knowledge and science orientations in individual practices" (p. 465). This demands the emergence of science communication as something that is fundamental for research actions, although "in Portugal, it remains precarious". Science communication is seen by many, says Catarina Amorim and Júlio Borlido Santos, "as little more than an instrument of public relations for the institutions" (p. 468). According to the authors, "the set of science communicators is disorganised, growing randomly and largely without a national vision to support" (p. 468). The same idea is shared by Marta Entradas, who believes that "public communication of science is still an infrequent activity for many research units" (p. 515), due to the lack of human and financial resources, the lack of professionalism and the lack of researchers' engagement in public communication activities.

The history of higher education in the four decades following the Revolution of 1974 is not much different from the historical framework of the scientific field in general. From an education point of view, also, there was an increase in both the number of institutions offering training and the number of students. Nevertheless, Alberto Amaral and Orlanda Tavares emphasise that "Portugal still presents a population with low qualifications, compared with the European average" (p. 558). In addition to the democratisation of access and the expansion in the number of students, which for Augusto Santos Silva and Ana Serrano is not "a Portuguese exclusive" (p. 648), the policies in this sector have also targeted two other goals: the modernisation and specialisation of higher education, on the one hand, and internationalisation and mobility, on the other.

From a political point of view, the so-called Bologna Process, initiated in 1999 and implemented from 2006 onwards, was perhaps the key vector of higher education reform in the 40-year period of democracy. Presented as an "instrument for achieving the European Higher Education Area", the Bologna Process is presented as a more or less failed dream. Amélia Veiga explains that the purpose of "creating a solid building for the European higher education" became weak because "Bologna focused on means (tools and procedures) to the detriment of the purpose of greater social cohesion, through mobility and employability provided by higher education" (p. 606).

By demonstrating that the mobility of students in the European educational space has increased exponentially, Susana da Cruz Martins and Alexandra Duarte conclude that "the students' socio-economic conditions seem to flagrantly impact mobility plans and their effective implementation" (p. 642). In what concerns the incoming movements, hosting foreign students seem to have a "pressing effect on the quality of the Portuguese system and (...) on the opening and modernisation of its tertiary education organisations" (p. 643).

If the discourses on growth are more or less unanimous, as they reflect the demonstrative character of the numbers, for the models of management, consensus is fixed on the principle of self-government and autonomy. In a chapter dedicated to the evolution of the governance systems of Portuguese universities, Vital Moreira states that "the university self-government is not incompatible with the effectiveness and efficiency of administrative management" (p. 812). Júlio Pedrosa, on the other hand, suggests that "the autonomy understood as the right to self-government cannot be confused with academic freedom, that is, with the freedom to explore, to create knowledge, to teach and to learn" (p. 822). However, as pointed out by António M. Magalhães, "the attribution of autonomy generates tension in the relations between the political leadership of the system carried out by the State and governance activities performed by higher education institutions" (p. 827).

In terms of funding, higher education has been especially challenged by market logic. Pedro Nuno Teixeira confirms "the growing importance of market mechanisms has had a growing influence on the type of policies adopted in this sector" (p. 859). This is perhaps the unique proximity that the author has to an idea advocated by Moisés de Lemos Martins in an article published in *Comunicação & Sociedade* journal about "the academic freedom and its enemies", where he argues that

> what makes the nature of the university today is the commercial ideology: universities are enterprises; education means services; teaching and research are business opportunities; teachers are professionals performing services or as consultants; students are customers. (Martins, 2015, p. 409)

Besides the funding issues, the assessment of quality in higher education, which is now in charge of the Agency for Assessment and Accreditation of Higher Education (A3ES), is the latest obsession of universities, since, as stated by Claudia S. Sarrico and Maria J. Rosa, "which is relevant to the job market for graduates is less *to hold* a diploma, and more the *perceived quality* of that diploma" (p. 881). The relationship between employment and the quality is, in point of fact, not disguisable, since, notes Mariana Gaio Alves, "information on employment is part of quality evaluation criteria", and employers are "involved in quality assessment processes" (p. 889).

Although it points some difficulties and challenges, the tone of *40 anos de políticas de ciência e de ensino superior* is positive , more centred on the confirmation that "the chronic backwardness of Portugal in science and technology was defeated after 40 years of democracy and 30 years of European integration" (p. 1069) than on the discussion of

the values which today define educational and research institutions. Despite the physical thickness of the book, the thousand pages that comprise it do not sufficiently cover the question formulated by Zara Pinto Coelho and Anabela Carvalho at the introduction to the book *Academics responding to discourses of crisis in higher education and research*: "how are we dealing with these challenges that are both obstructive, destructive and creating opportunities?" (Coelho & Carvalho, 2013, p. 5). Instead of addressing this question, the epilogue, signed by Manuel Heitor, who in early 2016 was appointed Minister of Science, Technology and Higher Education, indicates that this anthology could be read as an anticipation of the 21st Constitutional Government's policy for science and higher education. An anticipation given expression, for example, in the overall coincidence between the policy agenda set out on pages 1083 and 1084 and the summary of the letter of guiding principles for the Foundation for Science and Technology[2], signed on February 10, 2016 by precisely Manuel Heitor and Maria Fernanda Rollo (respectively Minister and Secretary for Science, Technology and Higher Education).

Bibliographic references

Fiolhais, C. (2011). *A ciência em Portugal.* Lisboa: Fundação Francisco Manuel dos Santos.

Gago, J. M. (2008). *Manifesto para a ciência em Portugal.* Lisboa: Gradiva.

Martins, M. L. (2015). A liberdade académica e os seus inimigos. *Comunicação & Sociedade, 27*, 405-420.

Pinto-Coelho, Z. & Carvalho, A. (Eds.) (2013). *Academics responding to discourses of crisis in higher education and research.* Braga: CECS.

Rodrigues, M. L. & Heitor, M. (Eds.) (2015). *40 anos de políticas de ciência e de ensino superior.* Coimbra: Almedina.

Biographical note

Madalena Oliveira is Assistant Professor at the Institute of Social Sciences, University of Minho, and member of the Communication and Society Research Centre. She teaches Semiotics, History of Communication, Communication and Languages, and Journalism and Sound. She coordinates the Working Group on Radio and Audio Media of Sopcom – the Portuguese Association of Communication Sciences, which she is vice-president of. She chairs the ECREA Radio Research Section and is the director of *Radio, Sound & Society* journal, launched by this group in 2016. She integrates the Ibero-American Forum of Post-Graduation, an advising commission of Confibercom – the Ibero-American Confederation of Scientific and Academic Associations and coordinates with Helena Sousa the Observatory of Public Policies on Communication, within the Communication and Society Research Centre.

E-mail: madalena.oliveira@ics.uminho.pt

2 Retrieved from http://www.portugal.gov.pt/media/18501895/20160210-mctes-principios-fct.pdf

University of Minho, Communication & Society Research Center, Gualtar - Braga-4710-057, Braga, Portugal.

*** Submitted: 14-10-2015**
*** Accepted: 23-10-2015**