



REPORT ON THE ACTIVITY OF THE CENTRO INTERUNIVERSITARIO DE HISTÓRIA DAS CIENCIAS E DA TECNOLOGIA (CIUHCT)

In its 10 years of existence, the Interuniversity Center of History of Science and Technology (CIUHCT) has gone from being a promising initiative to becoming a consolidated and internationally recognized research center. It is the result of the joint and coordinated effort of a team of people who have been able to capture and take advantage of available resources to put them at the service of a project whose results in research and teaching of the history of science and technology are, from all points of view, extraordinary.

Despite the difficulties in consolidating stable jobs in public universities in many European countries and especially in the context of the Iberian Peninsula, the CIUHCT has managed to promote a large number of researchers and university teachers that guarantees the continuity of the project. But above all, it has succeeded in attracting and integrating a large group of pre and postdoctoral researchers who have made CIUHCT a benchmark for the careers of the new generation of historians of science and technology in Europe. The growing number of postdoctoral researchers, the plurality of their geographic origins and the variety of research topics developed show the success that the CIUHCT has achieved from the point of view of attracting young researchers and the consolidation of professional careers.

The reorganization of the center into two thematically defined groups formed by researchers from the two participating universities represents a particularly valuable strategic change to deepen the group's cohesion and define lines of research that allow the confluence of the individual trajectories of researchers associated with each university. This change will help to blur possible institutional barriers, but above all, it will allow defining priority lines of research that avoid the risk of research topics dispersion, which could result from the arrival in the center of an increasing number of independent researchers with their own work topics. The two general topics chosen (Experts, Institutions and Globalization and Instruments and Practices, Visual and Material Cultures) are consistent with the research trajectories of the center and very much in line with current trends in the discipline.

The data provided in the annual reports do not require a quantitative assessment of scientific production. The number of publications in the form of books, articles or book chapters and publication rates by people linked to the center show the extraordinary and increasing productivity of the center and all its components. It should be noted, however, that in addition to the global figures, it is worth highlighting the projection reached by the center, both nationally and internationally. The members of the CIUHCT have been able to place their publications in the leading international journals of the history of science and technology, as well as in the most prestigious academic publishers, which has contributed to placing the CIUHCT in a prominent place within the international map of the discipline. And also the history of Portuguese science as an object of study, since a prominent feature of these publications has been to get local issues to reach an international projection, as they are approached within the most current historiographic frameworks contributing to enrich the international debate on the history of science and technology. Along with this international projection, the effort made by the CIUHCT to offer the Portuguese-speaking public works that allow them to know and take an interest in the role of Portuguese

Evaluation Report

CIUHCT report

By Prof. Dr. Marianne Klemun (Department of History, Head of the Group History of Science and Secretary General of the INHIGEO, University of Vienna)

Preamble:

The letter of invitation from June 2017 asked me to review the “Centro Interuniversitário de História des Ciências e da Tecnologia” at Lisbon (CIUHCT).

My evaluation report is based on the materials which have been sent to me and on my understanding of how the history of sciences and technology has gained international relevance in other parts of the world during the last years. I am interested in the question whether the Centro (CIUHCT) has developed a strategy of its own. In my evaluation I will focus on how the well-articulated and meticulously thought-out strategy from 2015 and the goals of the CIUHCT were realised in these two years.

Overall assessment within the landscape of humanities and in the European context

The Centro is concerned with one of the fundamental, defining and framing principles of any European society and its history: science. In organisational terms, it includes two different but complementary working groups that focus on fundamental dimensions of sciences: visual and material cultures, experts, institutions and globalisation. Culture, instruments and practices are analysed as overlapping categories and with methods that underline circulation, appropriation and innovation.

Both focusing and broadening views are implicated, generating an integrating value regarding topics, themes and methods and opens the view towards two different but intertwined aspects: it gives Portugal’s historical research activities a place in Europe both in the past and in the future. Portugal’s science is addressed as a subject and, from a historical perspective, as an object and this works on different spatial levels.

The main objectives chosen by the CIUHCT are viable and sustainable and give the Centro relevance. The CIUHCT takes national frames into consideration and makes them accessible to international audiences in a well-considered fashion. The interdependency between politics and science, political regimes and knowledge-based activities are examined as resources for

each other in a *longue durée* analysis ranging from the middle ages until the twentieth century.

The CIUHCT is an exceptionally interesting and productive centre within the international landscape of the history of science and technology that clearly has suffered a general decline between 2015 and 2017. The endeavour undertaken by the Centro (CIUHCT) appears to have been especially successful in integrating their members into various projects and keeping in touch with historians of science traditions of inter- and transdisciplinarity as well as with those pursuing exclusive innovative concepts.

Research activities; publications

The research activities of the Centro between 2015 and 2017 covered an impressive range of topics, some of which are often ignored as part of the history of science by many other institutes (such as the history of cartography and gardening). There is a great range of thematic, geographically and methodological specialisations.

Measured by the amount of publications, the research productivity of the Centro is very high, the increase of publications is obvious. The number of papers published in peer-reviewed journals has doubled since 2014 and proceedings have become fewer. The table of indexed publications also shows an increase, which results in a higher visibility at an academic level. The majority of papers is published in international journals or by international publishers. The output of valuable and seminal publications of the Centro is impressive.

Meetings – networking – internationalisation

The members of the Centro draw on and contribute to multiple institutions throughout Portugal and have networked with numerous academic national and international organisations, interdisciplinary PhD-programmes (summer school) and scientific institutions across Europe - indeed often taking a leading role. The amount of 221 communications at national and international meetings indicates the high intensity of mobility and circulation. The members of the Centro developed strong interpersonal and networking skills to establish contacts within a wide range of the international scientific community. The goal to “increase the presence of Portuguese studies on the international map of the history and material culture of STM” seem to be guaranteed according to the dense cooperation even established.

Projects and relevance of topics approached

Of all specialisations of historiography, the history of science and technology is most perfectly suited for public engagement that goes beyond a mere “outreach” and offers a genuine collaboration for the production of new knowledge. The planned five volumes on the “History of Science, Technology and Medicine in Portugal” will be part of an integrated and “public engagement”. The planned dictionary and bibliography will underline the visibility of the history of science and technology and of the centre in Portugal. Due to the periodical of the Centro (HoSt), a major scholarly journal, and the ongoing collection of biographies, the centre is more than a group of scholars and teachers. It also fosters cultural heritage and scholarly production space. These projects ensure an advanced multidisciplinary approach. National projects such as “Visions of Lisbon” (second cities, citizen science), “Anthropolands”, “The history of Bakelite”, “Field Scientists” attract public interest. Public engagement should not become an additional task on top of all others – but it is an effective way of disseminating research findings and concepts of the history of science and technology. These topics are perfectly suited for inscribing Portuguese historical activities in a broader view of the history of science, to mention but one of the goals of the centre (CIUHCT). The project about “Nautical charts” (European Research Council) underlines the potential of interdisciplinary cooperation.

Capacity to attract foreign researchers and young scholars and training of students

The Centro is extremely well anchored in a variety of different fields within the history of science and technology and holds a large number of very attractive projects. Moreover, the history of science and technology it is a major teaching field. It is very likely that it will attract even more foreign researchers and students. This, however, might result in an administrative problem. Increasing the group of members also increases the administrative workload, and this will be at the expense of research. In order to maintain the routine organisational functions more staff has to be employed to relieve the strong researcher and the leadership.

Marianne Klemun, mp.

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REPORT ON THE 2015-2017 ACTIVITY OF THE CENTRO INTERUNIVERSITARIO DE HISTÓRIA DAS CIENCIAS E DA TECNOLOGIA (CIUHCT)

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The CIUHCT is a well-known Portuguese centre of research based on the two universities of Lisbon (University of Lisbon, New University of Lisbon). The CIUHCT paves the way for the study of a variety of subjects in the history of science, the history of medicine and the history of technology from the Middle Ages, and from the XVIth century to the XXth century. The CIUHCT was created in 2007 and is able to promote research in these fields and periods and to organize activities of their application, either for educational purposes or for the public understanding of science. It is worth pointing out that few units in the world are able to be active in such a number of fields. In the ESF evaluation in 2015 the CIUHCT was evaluated 25/25, one of the 11 units among the 322 evaluated ones.

The main objective of the CIUHCT is to study the specific role of the Portuguese people in the development of science and technology, not only in Portugal but also in Europe and the world. This includes the comparative studies of science and technology in different countries. As already stated, in the last decade, the CIUHCT has managed to introduce Portuguese subjects in the current historiography of science and technology. In addition, the group is able to contribute to new fields of research of international exposure, such as the Anthropocene. In the research of the CIUHCT, there are projects of “pure” research and projects to promote the public understanding of science and the science museums. This represents a wish to have a relevant social impact among young people, teachers, researchers, and general audience.

The CIUHCT is organised in two big research groups composed of members of the two universities and defined mainly for the periods of interest –early modern sciences, and contemporary sciences and technology-, supervised by Henrique Leitao and Ana Simoes. The organisation is functional, that means that some researchers could be active in both groups. Some subjects, such as Far East studies or Arabic studies, are included at present in the first group, without discarding that they also deal with recent studies. In fact, each big group coordinates a number of more specific groups dealing with a variety of subjects. The group I is titled: “Instruments and Practices, Visual and Material Cultures”; the group II: “Experts, Institutions and Globalization”.

We present now some comments on different aspects of the activity of the CIUHCT in the recent years.

1) Publications

The CIUHCT has a very good result in publications, both at national and international level. There are relevant papers in indexed journals and some books published under the peer review system in outstanding editorial companies. At the same time, the CIUHCT publish an international journal, *HOST*, which standards are very high.

2) Meetings

The CIUHCT has organised a number of international meetings in Lisboa and other Portuguese cities, collaborating with international networks of research and associations such as the international research group “Science and Technology in European Periphery” (STEP), the International Committee of History of Technology (ICOTECH), and the European Society for History of Science (ESHS).

4) Networking

The members of the CIUHCT, according to the different lines of research, are involved in several international networks of research, such as INES (International Network of Engineering Studies), of which one of its founders was M. Paula Diogo. This group is responsible for the edition of *Engineering Studies*, an indexed journal covering fields of sociology and history of technology.

The collaboration of the members of CIUHCT is mainly with European countries (Great Britain, Germany, France, Greece, Spain) but also with the Portuguese world, such as the Brazil and other countries of Portuguese culture. In some cases, such as ICOHTEC, SHOT or INES, the network includes the USA and many other countries.

5) National and H2020 Projects (accepted and proposed)

The national projects accepted or proposed are the following:

*Visions of Lisbon 2016-9 – 98.199,00 € <http://ciuhct.org/pt/visoes-de-lisboa>

*Anthropolands 2016-9 – 96.088,00 € <http://ciuhct.org/pt/anthropolands-construir-o-antropoceno>

- *The history of Bakelite 2016-19 - 167.953,00 € <http://ciuhct.org/pt/o-triunfo-da-baquelite>
- *Sustainable Beauty for Algarvean Gardens: Old Knowledge to a Better Future 2015-20 – 50.000,00 € <http://ciuhct.org/pt/beleza-sustentavel-para-os-jardins-algarvios>
- *Field Scientists in the ‘Luso-Tropical Setting’: Knowledge, Ideology and Governance in Late Portuguese Empire 2014-18 – 50.000,00 € <http://ciuhct.org/pt/cientistas-de-campo-no-terreno-luso-tropical>
- *PRISC – Portuguese Research Infra-structure of Scientific Collection
- *The earliest known chart with isogonic lines: earth magnetism and navigation in the 16th century in Portugal, Calouste Gulbenkian, 2015-16 - 7.500,00 €

The International projects in which the CIUHCT is involved:

- *ERC – Medea Chart 2017-22 - 1.231.319, 00 € <http://ciuhct.org/pt/medieval-and-early-modern-nautical-charts>
- *H2020 MARINA 2016-8 – Marine Knowledge Sharing Platform for Federating Responsible Research and Innovation Communities (CIUHCT members belong to Ethical Advisory Board) <http://www.marinaproject.eu/>
- *H2020 Heracles 2016-8 – Resilience against Events on Site (CIUHCT members belong to EAB and WP2 Social Sciences) <http://www.heracles-project.eu/>
- *H2020 InsSciDe 2017?-20 – Inventing a Shared European Scientific Diplomacy (CIUHCT members belong to WP3 Social Sciences)
- *H2020 HoNESt 2015-7 – History of Nuclear Energy and Society (CIUHCT member belonged to WP2 Portugal)
- *H2020 –EU.1.3.5 Specific Support and Policy Actions Researchers Night 2014-15 – Citizen Science: Bridging the Gap between Research and Society in Portugal
- *Participation in Anthropocene Campus 2014, 2016 and organization of the Anthropocene Campus Philadelphia 2017

This list demonstrates the wide landscape of the lines of research. This is a result of gathering the researchers working in both universities and, at the same time, it shows the great ambition and dynamism of the groups.

6) Internationalization

The members of the group are fully involved in international networks and societies. Just to give few examples: M. Paula Diogo has been member the board of the Society of History of Technology (SHOT), Ana Simoes was

one of the promoters of the research group STEP and she is elected to serve as president of ESHS for 2018-2020.

7) Capacity to attract foreign researchers

Despite the general economic crisis during the last decade, the CIUHCT has been able to receive international researchers to collaborate with different groups. This is relevant in the case of the programme of post-doc contracts, in which several foreign PhD (mainly from Spain) have been incorporated. At the same time, some senior researchers have taken advantage of the facilities of CIUHCT.

8) Capacity renovate the team with young scholars

In 2016, the CIUHCT had 77 members, 14 of which were post-doc. At the same year, there were more than 20 doctoral students. This means a priority for the renewal of the generations of research.

9) Interest and relevance of topics approached by CIUHCT

The CIUHCT promotes Portuguese investigations that are able to offer a modern and renewed view of the scientific and technological heritage of the country. For example, one of the projects, the *Dictionary of HSTM in Portugal*, is ready to gather all the research done in the last decade. In addition, the CIUHCT develops research in “international” subjects, such as cartography, the origins of Bakelite (with a Portuguese branch), the challenges of Anthropocene or subjects on history of modern physics. The group is less active in history of medicine, but this field is clearly included in the objectives of the research. The CIUHCT has a strong group of science museum studies thanks to the links with the Science Museum of Lisbon. Museums and heritage are central issues of present research for its implications of cultural history, for science education, and also for the public understanding of science and technology.

10) Training: PhD students

The evolution of the number of PhD in the CIUHCT indicates the capacity of training doctoral students: in 2014, 22 of the 57 members were PhD; in 2015, 32 of 63 members; and in 2016, 37 of 77 members. Most of this increase is due to students having their doctoral thesis in the Centre.

11) Overall assessment: within humanities and in the European context, how is my "rate" of CIUHCT.

The CIUHCT is composed of young and senior researchers with a proportion that is a guarantee for its future. The centre of Lisbon is one of the best centres of research in history of science and technology in Europe. At present, History of science and technology play a very relevant role in the development of humanities, offering a highly academic orientation and a significant impact on culture and society.