



Sharing European Histories

TEACHING STRATEGIES

KATRIA TOMKO
& STEVEN STEGERS
OF EUROCLIO

Executive Editors

MARJOLEIN DELVOU
& HANNA ZIELIŃSKA
OF THE EVENS FOUNDATION

Associate Editors

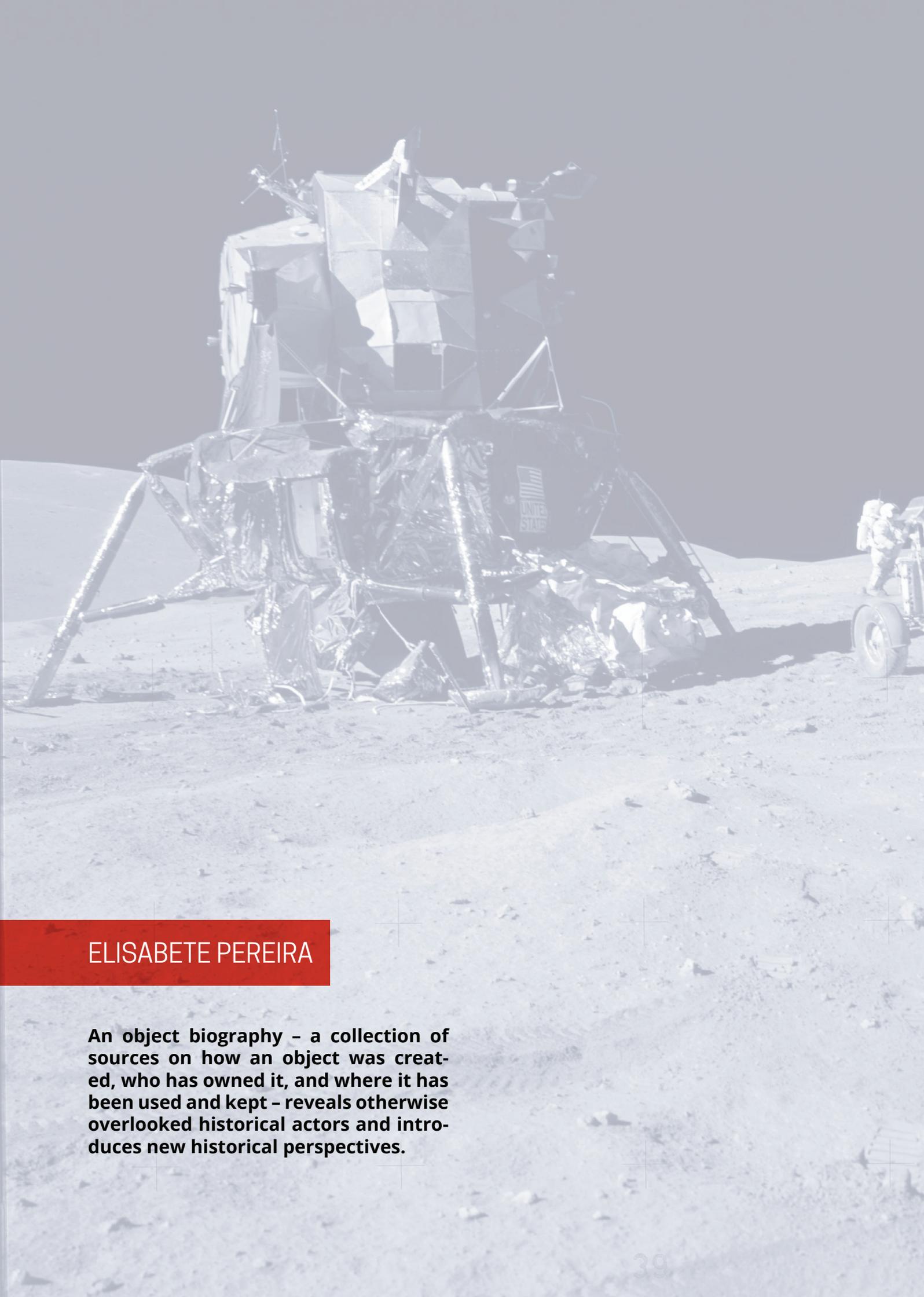
DAVID SYPNIEWSKI

Design & Creative Direction

We are grateful to the members of the international expert group, Eleni Christodoulou, Miquel Essomba, Julia Kushnereva and Chris Rowe, for helping us select these inspiring strategies.

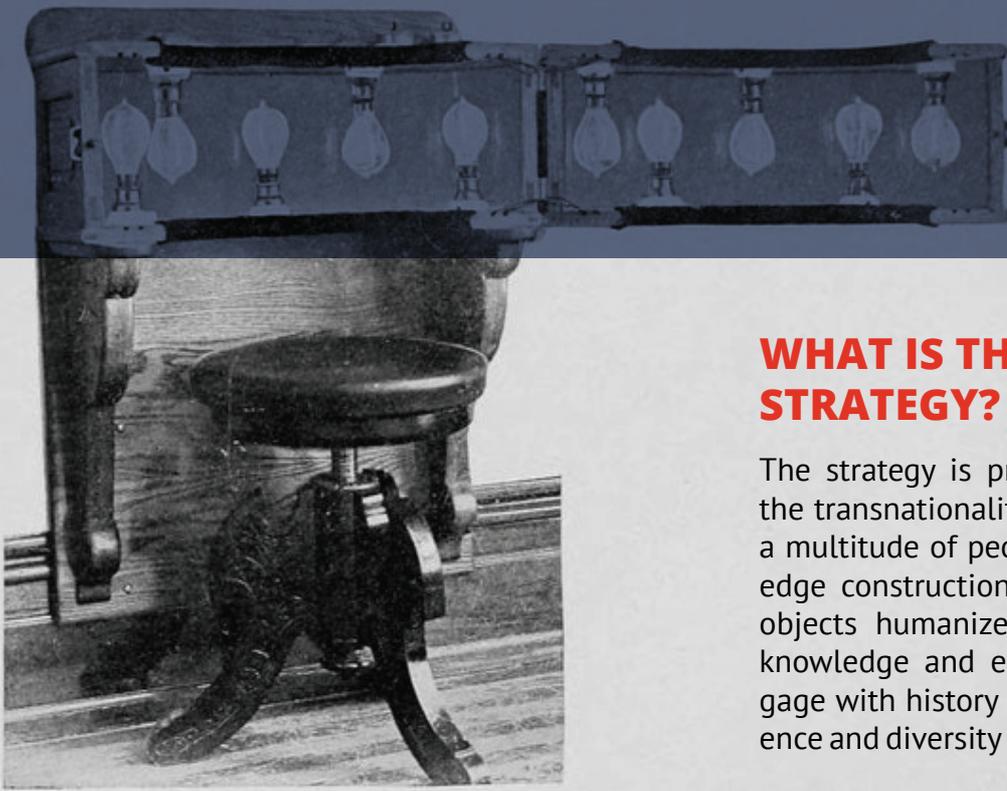
A special thank you to the authors of *Once Upon A Time...We Lived Together* – a collaborative project of history teacher associations from the countries of former Yugoslavia and beyond – for contributing primary source material to the ‘Analysing historical figures to understand how and why they are perceived differently’ strategy. We are also grateful to George Brock-Nannestad, to whom we owe our understanding of the Lacerda Polychromograph, and Quintino Lopes, whose research on Armando de Lacerda and the Laboratory of Experimental Phonetics of Coimbra¹ supported the development of the ‘Using object biographies to reveal how our pasts are interconnected’ strategy.

1 LOPES, Quintino (2021), *A Global Periphery. Armando Lacerda and the Experimental Phonetics Laboratory of Coimbra (1936-1979)*. Lisbon: Caleidoscópio.



ELISABETE PEREIRA

An object biography - a collection of sources on how an object was created, who has owned it, and where it has been used and kept - reveals otherwise overlooked historical actors and introduces new historical perspectives.



WHAT IS THE AIM OF THE STRATEGY?

The strategy is primarily aimed at teaching the transnationality of history. Revealing how a multitude of people are involved in knowledge construction and the musealisation of objects humanizes the process of building knowledge and encourages students to engage with history from perspectives of difference and diversity (e.g., political and religious).

Facilitating analysis of historical and multi-cultural roots of museum objects encourages the confrontation of dominant, state narratives of history and could help to overcome divisions between countries and cultures.

Close analysis of objects allows us to draw historical attention away from military and political events that often dominate classrooms, and toward social and cultural history instead.

OVERVIEW OF THE STRATEGY

This strategy encourages students to become familiar with “hidden” and interconnected histories through the analysis of objects showcased in museums – who created them, who owned them, and where they were used and kept. It underlines the internationality of state histories by confronting them with the transnationality of museum objects.

Students will be asked to consider questions and complete tasks related to museum objects. Chosen museum objects will have descriptions (existing or provided) able to be used in an analysis which leads to periodization, understanding of the environment in which the object functioned, and understanding of the roles of those involved with the object. Students will then consider influences, responsibilities, relations, and exchanges between actors at local, institutional, and international levels and within the continent and between the continent and other parts of the world that will contextualize the object historically and politically.



Electric Light Baths (Kellogg).



**What do you
need to do
to use this
strategy
in your
classroom?**

STEP 1: PREPARE THE MATERIALS

To carry out this activity you first need to produce an object biography' to teach. There are two options:

Option 1 – Use a ready-made object biography

Use a ready-made object biography. We have provided a biography for the Lacerda Polychromograph on historiana.eu, for example.

Option 2 – Make your own object biography

Conducting original research for an object biography could be time-consuming. However, there are rich digital resources available that could help.

1. Use digital museum resources to find the right object

Museum archives are often digitised and could provide extensive background information. You must pick an object that has a rich history and, preferably, a transnational story. Be aware that museums cannot or do not provide equal amounts of information about all of their objects – there may be many historical sources that allow researchers or museum staff to provide substantial information or there may be very few such historical sources.

The following museums have excellent online collections:

- [Google Arts & Culture](#)
- [Oxford Museums](#)
- [Musée des Arts et Métiers](#)
- [Museum of the History of Polish Jews](#)
- [Musée du Louvre Oeuvres à la Loupe](#)
- [Rijksmuseum Boerhaave](#)

2. Produce your object biography

You must use information from the museum website to write the object biography. The text should:

- Explain what the object is.
- Identify where the object is located (if applicable).
- Describe what the object is made of.

- Describe the meaning and importance of the object.
- Introduce the actors involved with the object – the scientists, technicians, craftsmen, or artists who made it; the individuals who preserved, collected, or musealised it; and their relationships to the objects in production, use, and/or reuse.

3. Collect secondary material that will support your analysis of the object

If possible, collect any documents and or images that help to contextualize the object. Many of these materials could also be collected in museums' digital archives. It could be useful to collect maps, photographs, or illustrations that could help to understand the object's path and context. These materials should be accompanied by short captions that contextualize the available historical source.

STEP 2: USE THE MATERIALS IN THE CLASSROOM

Activity 1: Hook the students' interest and introduce the object

This activity is important in getting students interested in the object you are studying.

Hooking the students into the object is fundamental to the strategy. This could be done in a variety of different ways. Here are some examples:

- Provide a photo of the object, but do not tell the students what it is. Encourage them to guess. This would work very well with an unusual object.
- Show a video clip of the object or a related film. Showing the object 'in action' would be interesting. A clip related to the object at a certain time might also be intriguing.
- Get the students to hypothesise what the object might tell us about history.

Following this, read the object information the museum has made available aloud to the students or ask them to read it to themselves. This will serve to familiarise them with the object's story.

Activity 2: Analysing the components of the object biography

This activity asks the students to assess contextual material, see the connections, and place the object in a wider narrative.

Provide the students with source material in addition to the museum's object information – photos of the object at different times, written documents, etc.

A way in which students can place the object in a wider narrative is through chronologically placing events on a timeline or in a worksheet. Provide each student with a worksheet depicting a table with rows drawn for each time an object is moved or changes ownership. In one row, ask the students to plot the object's narrative in the table, condensing the written narrative they have been provided with, and selecting key points to include or exclude. In adjacent rows, ask students to note which countries are involved at each stage – the countries where the actors are from and/or the country where the object is located – and any major events from history that are happening at the same time, e.g., wars or key turning points. This will help them contextualise history.

- What can this object tell us about influences, responsibilities, relations, and exchanges between actors at local, institutional, and international levels?
- What can this object tell us about influences, connections, responsibilities, relations, and exchanges within the continent and between the continent and other parts of the world?
- Does this object reflect the wider history of the same time?
- Does this object show a connected world or a conflicted world?
- Has this object always been displayed/part of the historical narrative or has it or its creator experienced historical erasure or omission in the past?

Discussion

This activity gets the students to analyse contextual material and wraps up the investigation.

Discuss what you have found to conclude your studies. Here are some examples of questions you could ask. Some will be more applicable or relevant than others depending on the chosen object:



WHAT OBSTACLES COULD A TEACHER WITH THIS STRATEGY FACE?

Preparing an object biography could be time-consuming

Teachers could use the information made available by museums. Several museums provide object biographies or teaching resources on their websites that could be used in conjunction with this strategy.

Be aware that museums cannot or do not provide equal amounts of information about all of their objects – there may be many historical sources that allow researchers or museum staff to provide substantial information or there may be very few such historical sources.

It could be hard to find contextual sources

Teachers could find it difficult to locate secondary sources to contextualise the object. Museum archives are, again, the best place to start with this search. Contacting the museum where the object is currently located could help.

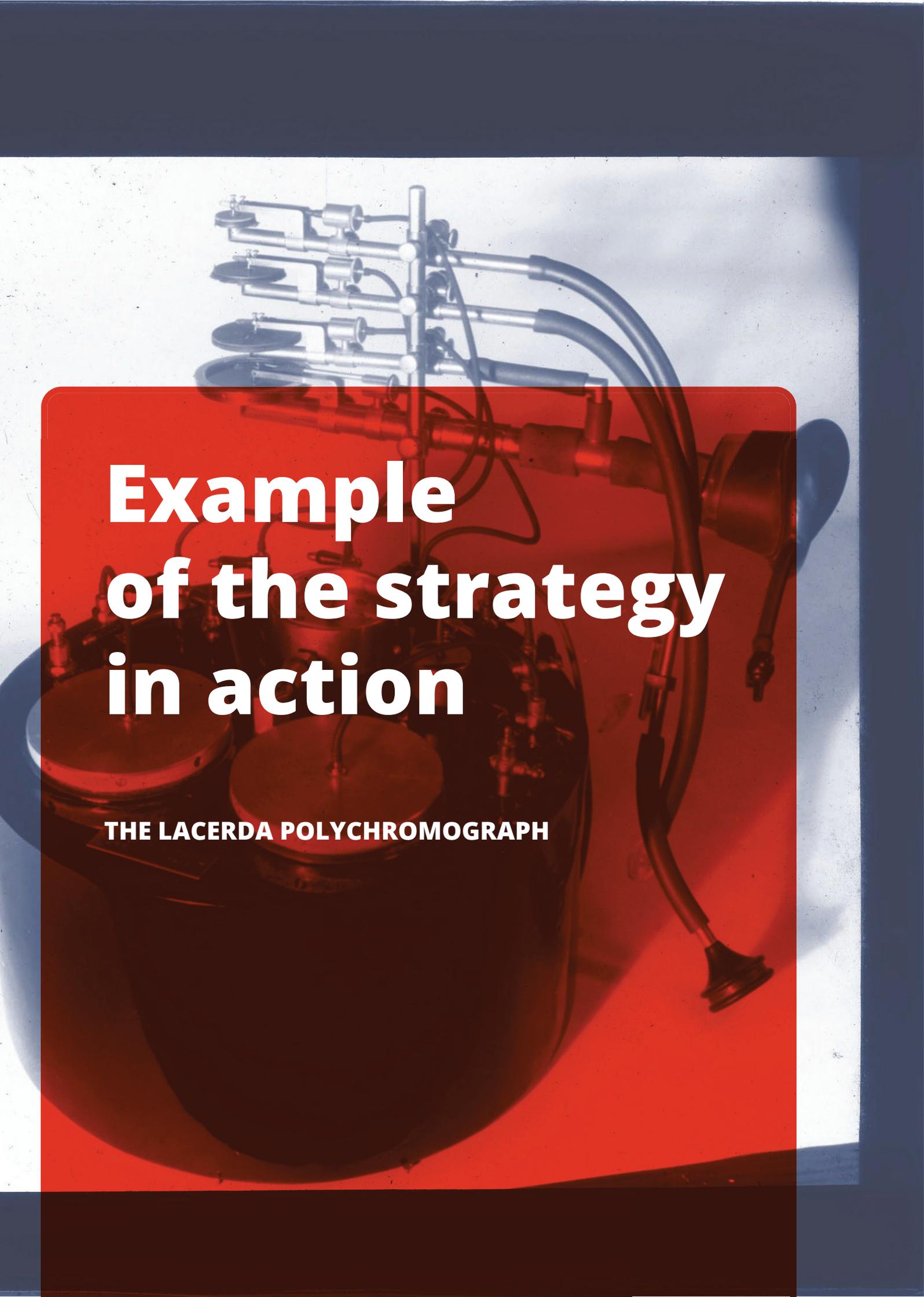
HOW COULD YOU MAKE THIS STRATEGY MORE INCLUSIVE?

Supporting lower attaining students

Providing a reduced narrative would be beneficial to reduce the amount of reading that is required. A gap-fill exercise, where the students are given guided questions about the object's narrative and asked to fill in the blanks, could also be a good alternative.

Challenging higher attaining students

Writing concisely could be a challenge. After the students have analysed the object biography, ask them to write a new information card that could sit next to the object in the museum. As these cards are often very concise, this will require the students to include as much information as they can in less than 100 words.



Example of the strategy in action

THE LACERDA POLYCHROMOGRAPH

HOOK THE STUDENTS' INTEREST AND INTRODUCE THE OBJECT

Provide a photo of the object, but do not tell the students what it is. Encourage them to guess. You can ask them the following questions:

- What do you think this instrument is for?
- When was this instrument created?
- Where was this scientific instrument created?
- By whom was this scientific instrument created?

Get the students to hypothesise what the object might tell us about history.

Following this, read the following object information the museum has made available aloud to the students or ask them to read it to themselves. This will serve to familiarise them with the object's story.

The Lacerda Polychromograph - "forerunner of the inkjet oscillograph, some 15 years previously."

The polychromograph was created in 1932 by a Portuguese scientist named Armando de Lacerda (1902-1984). The instrument was built in Bonn (Germany), while Lacerda specialized in Experimental Phonetics at the University of Bonn.

The instrument had a mouthpiece and used a thin jet of ink that was directed towards a strip of paper, where the speech sounds and mouth movements were recorded. This minimized friction found in traditional instruments.

In those days, phoneticians wanted to understand human speech, create new techniques to teach different languages, and help people with physical difficulties related to speech, such as the mute.

ANALYSING THE COMPONENTS OF THE OBJECT BIOGRAPHY

Provide the students with source material in addition to the museum's object information – photos of the object at different times, written documents, etc.

For this activity, students will need some basic knowledge of the interwar period. You may want to assign some reading about this period in preparation for this activity. Depending on your students' knowledge level, you may also want to provide them with a political map of the countries and information about the different European political regimes.

Progress and scientific networks in the context of European nationalisms

In the history of research on human speech, the work carried out by Armando de Lacerda, a 20th-century Portuguese phonetician, is of great importance. Lacerda was a specialist in Experimental Phonetics at the Phonetics Laboratory in Hamburg and the Institute of Phonetics in Bonn from 1930 to 1933. In 1936, He established the first Portuguese laboratory of Experimental Phonetics in Coimbra whose "splendid technical facilities", along with the international prestige of its founder and director, attracted countless foreign scientists.

During the Estado Novo, an authoritarian period of rule from 1933 to 1974), Portugal had been understood by historiographers to be a predominantly rural country – picturesque and essentially uninterested in issues across Europe, a place where little scientific research was carried out. However, the action of Armando de Lacerda and the Coimbra laboratory he founded complicated this understanding. The prevailing image of a scientifically backward country did not square with the existence of a Portuguese University laboratory that attracted researchers from leading universities around the world, such as Harvard.

The scientific instruments developed by Armando de Lacerda, some of which have recently been rediscovered in reserve collections at the Museu da Ciência da Universidade de Coimbra (the Science Museum at the University of Coimbra), have now become a heritage resource with the potential to have a huge impact on the field of museology and historiography (Kopytoff, 1986, 64-91). The Lacerda polychromograph can facilitate awareness and recognition of the important role played by a Portuguese scientific body in the international arena during Estado Novo. Lacerda's instruments served as a catalyst for the forging of relationships between researchers from different countries. Their influence only dimmed decades later upon the object's obsolescence – an inevitable result of the emergence of new instruments which nevertheless could not have been developed without the contributions of Lacerda.

It is important to highlight this scientific heritage by reconstituting its trajectory, identifying the different contexts and changes in the value of the objects that comprise it, and recognising the crucial links between individuals and instruments in space and time (Alberti, 2005: 559-571). In the period between the wars, this and other scientific instruments, which links Coimbra, Hamburg, Bonn, and Harvard, represents yet another “forgotten case of ‘scientific excellence on the periphery’” (Gootenberg, 2007: 202-232. Cueto, 1989), showing how science, even in the context of economic autarchy and nationalism, flourishes within the framework of international communication networks.

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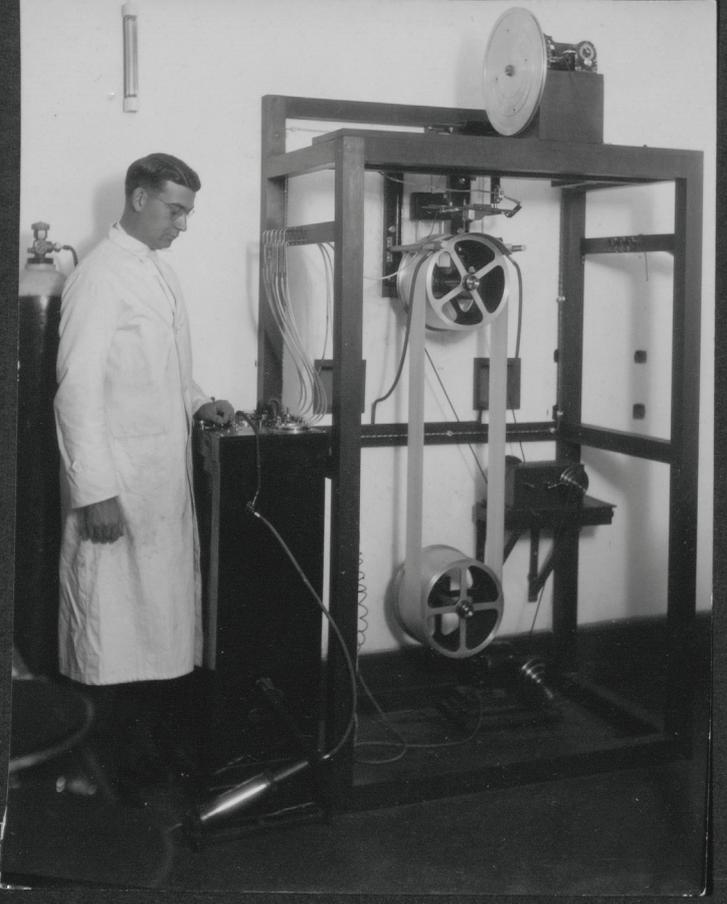
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OBJECT BIOGRAPHY TIMELINE

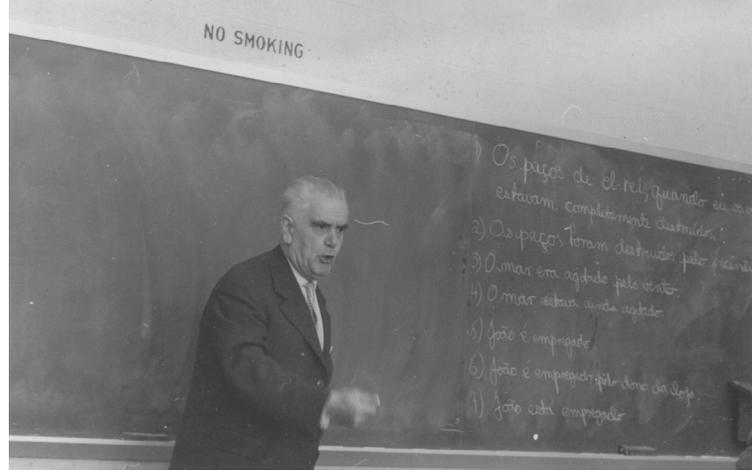
1. Invented by a Portuguese scientist, Armando de Lacerda (1902-84), in 1932..
2. Funded by the Portuguese state.
3. Built in Germany, at Bonn University – Institute of Phonetics.
4. First presented in Holland in 1932 at the first International Congress of Phonetic Sciences in Amsterdam.
5. This instrument and the techniques developed by Armando de Lacerda became world-famous and attracted scientists from all over the world to Portugal.
6. The object became obsolete between 1950 and 1960.
7. The Laboratory of Experimental Phonetics at the University of Coimbra was extinguished in the 1970s.
8. This instrument, and others, were abandoned at the University of Coimbra until recently rediscovered.
9. This instrument, and others, are now acquiring new meaning as museum objects.



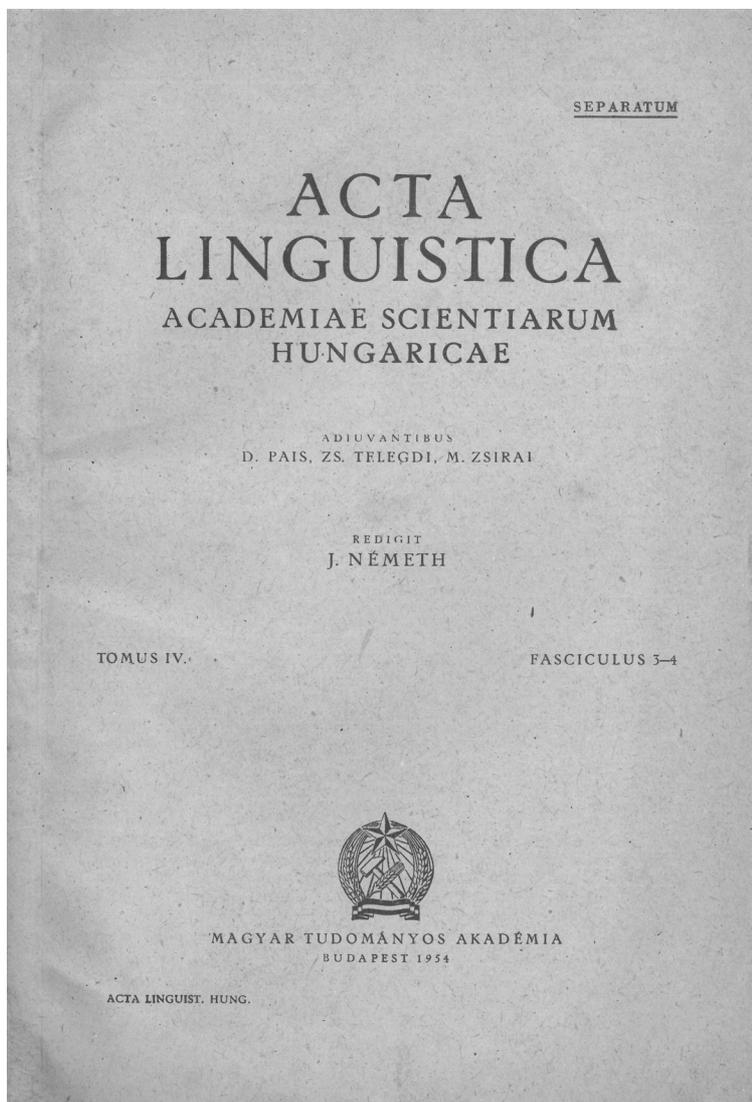
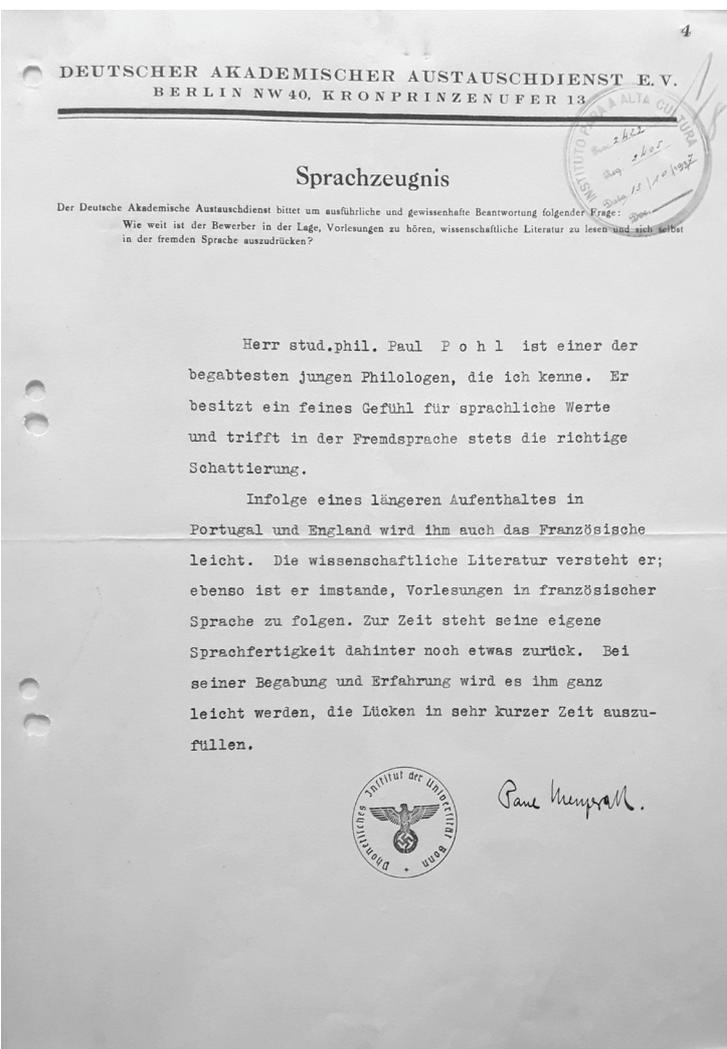
Photograph of the Bonn Institute of Phonetics (1932) showing Armando de Lacerda (right) and Paul Menzerath (left) conducting research using the Lacerda Polychromograph. (Archive: Museu da Ciência da Universidade de Coimbra)



Francis Millet Rogers (Harvard University) working with the Lacerda Polychromograph at the University of Coimbra Laboratory. (Archive: Biblioteca Alonso Zamora Vicente)



Armando de Lacerda : "International authority in Experimental Phonetics". Lacerda was invited to teach in several universities like Wisconsin-Madison or in Queens College of the City University of New York (1965). (Archive: Arquivo Familiar Paulo de Lacerda)



Documents sent by foreign phoneticists to Armando de Lacerda. (Left, archive: Arquivo do Camões, Instituto da Cooperação e da Língua, I.P.) (Top, archive: Biblioteca do Laboratório de Fonética. Faculdade de Letras de Coimbra)



Discussion

Discuss what you have found to conclude your studies. The following are questions the students could be asked to answer:

- What can the Lacerda Polychromograph tell us about influences, responsibilities, relations, and exchanges between actors at local, institutional, and international levels?
- What can it tell us about influences, connections, responsibilities, relations, and exchanges within the continent and between the continent and other parts of the world?
- Does this object reflect the wider history of the same time?
- Does this object show a connected world or a conflicted world?

The ink-jet printers we use daily have their origin in Lacerda's Polychromograph. Scientific progress on the basis of global cooperation has resulted in improved development and well-being of populations.

This object biography underscores the need for global responsibility. While the traditional, elite scientific centers from countries like the USA, France, England, and Germany were involved in the development of the polychromograph, they needed and benefited from research conducted in more peripheral institutions and countries (e.g., those in Southern Europe, Eastern Europe, and Latin America). The Lacerda Polychromograph, in the context of nationalism, is an excellent example to use when highlighting the scientific progress of the first decades of the twentieth century. Despite a supposedly closed Europe, economic autarchy, and rivalries between nations, history shows that scientific knowledge developed. These developments were possible only through the circulation of people, ideas, scientific objects, and publications. The scientific relations associated with this instrument show a Europe beyond nationalisms. Science has no frontiers and development of scientific

knowledge relies on the convergence of intellect regardless of varying nationalities and political ideologies. These international networks show cohesion in an otherwise divided Europe and are vital to post-war European unity and progress.

ADDITIONAL SUITABLE TOPICS FOR THIS STRATEGY

- Cooke and Wheatstone telegraph (House of European History)
- Idea for a future European Banknote; Netherlands 1949 (House of European History)
- Common objects, such as Kristine Keren's Green Sweater (Holocaust)
- Bendery Constitution - Pylyp Orlyk
- Buildings with differing purposes and ownership over the years
- Art history as a piece of historical evidence
- Igor Sikorsky helicopter