Artistically expressing the oppressed: Framing Contemporary Printmaking and for its technological past

David Lopes[1,a] , Graciela Machado[1]

[1]| i2ADS/FBAUP, University of Porto, Portugal

[a]| Author to whom any correspondence should be addressed: n.david.c.lopes@gmail.com

Abstract. This paper aims to demonstrate how art-based research can propose alternative readings in History through the study of the technological past of printmaking. Our focus scope will be lithography, the art of printing from stone, as we'll be highlighting how the technique developed parallel with power structures from the 19th-century, serving Europe's interests in colonisation by increasing the number of printed maps. In a very practical sense, map-printing depended on many participants: those who drew, those who prepared the printing matrixes and those who printed. What if we gave a voice to the people who were producing such maps? What would these say of the conditions of their labour? What would their stories be, and what would be their opinions on the application of maps to warfare? Our reflection is based upon concrete case studies of historical cartography produced in 19th-century Portugal, which are stored in the archives of the University of Porto.

Keywords: Printmaking; Cartography; Art-based research; Labour; University of Porto; Archive.

1. Introduction

In regard to printing technology much was accomplished in the 19th-century thanks to the combination of photography and lithography. The industries in which print could be applied were numerous but many new developments were prompted by military departments and government surveys in the context of territorial defence, warfare and colonisation. One of the aspects that took interest in the military was lithography application to map-printing, as these new processes enable it to be produced cheaper and faster [1].

In his thesis of *historical materialism*, Walter Benjamin framed his time and his contemporary for a wrongful perception of history as progress, blind to a fever of technological developments [2]. For Benjamin, *historical materialism* is heavily concerned with the impact of changes in the economic and political system in the working class. His view of the oppressed is reflected in the "Arcades Project" [3], and in his critical writing on historian Edouard Fuchs, as he describes the poor and the oppressed as "lumpensammler", or the ragpicker.

With our discussion stetted purely on early applications of lithography, the proposed communication wishes to demonstrate how a research methodology based on technological know-how[1] can make visible the labour conditions of these people who work on map-printing. Applied within the context of Fine Arts, art-based research is developed following a methodology which encompasses the analysis of historical maps from the University of Porto, and later pursuits a practical reconstruction of the drawing and the printing of that cartography. In the selected examples, we'll be discussing obsolete processes, which from printmakers perspectives are now more inaccessible or incomprehensible to common practitioners. Such is the foundation to justify the need for a practical reconstruction of printmaking processes. The art projects can make use of the knowledge gathered around this technological field, in a more direct or indirect sense, but it's also our intention to show how historical cartography can be poetically and critically reinterpreted today.

2. Framing map-printing

2.1 Scientific cartography disguises as imperialism

Geographer J. Brian Harley spent most of his academic career explaining how cartography has been always associated with power: kings, emperors, military or the wealthy. We know that European atlases favoured Europe as the center of its composition [4] and such showcases how maps also demonstrate the point of view of those who made them. The mercator projection is a picture we all have inherited which proves how our collective imaginary is manipulated by maps, placing Europe as the center with the rest of the world surrounding it.

Harley showed specifically that it was in the 19th-century that cartography became institutionalised. Indeed, European countries in the 19th-century were trying to establish hegemony over the world's territory: the industrial revolution had increased the need for raw materials, and with the demographics growing, wealthy countries thrive to grow economically through innovative industry and technology. Scientific discoveries were on demand at Universal or International Exhibitions which were held in several cities in Europe and in the United States. All of these factors influenced the need to spread the population in Europe's colonies and to build railroads in their countries. Thus, how maps became a necessary endeavour [5].

To possess the map was to possess the land, as Harley would put it. Making a map in the 19th-century was a laborious and time-consuming task. It needed a lot of funding that only the elite, the rich, the kings or the military could afford. Maps were luxurious and rare documents, only to be seen in the hands of the most powerful. The close relationship between maps and power is not much of a fresh perspective, however and due the map's accessibility today, we are perhaps keener to perceive those as neutral documents. John Harley argues that it is today difficult to dissociate maps from a scientific image, but we should try to extract from it its hidden power relationships [4].

2.2 Lithography and the military

Metal printing dominated most map-printing from the 15th-century to the beginning of the 19th-century. From the 19th-century on the combination of lithography and photography had taken over industrial and commercial printing.

For practitioners of lithography today, it might seem inconceivable, but the military had their own lithography workshops, their materials and printmakers for them in their own facilities. Because

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[1] "Technological Archeology" is currently being applied by Graciela Machado (Printmaking Teacher of the Faculty of Fine Arts of the University of Porto), who was also responsible for introducing and developing its current expanse in the University of Porto, as research methodology focused on obsolete printing techniques with the aim of recovering their know-how.

lithography was the cutting technology of its time, it eventually became of interest to the military. Due to its feasibility, the process enabled printing to be faster and cheaper [6].

Arguably, it seems that the technological development of printing allowed for scientific expeditions to happen with more support and confidence, since map-making was now expected to be a simpler task. In the city of Porto, in Portugal, we know lithography was first introduced by João Baptista Ribeiro (1790-1868). There's a printed map stored in the City's Library, the Biblioteca Municipal do Porto (BMP), depicting the arrival of royal boats to the shore of Portugal from D. Pedro V, who was at war with his brother in the 19th-century for the right to be King (*vide* Figure 1). The map seems to have been in the city of Porto, the first specimen of printed lithography. We know that lithography was introduced in Lisbon in 1824, and government military facilities started to shift printing from metal to printing from stone with Filipe Folque. Many of the new processes used to print were first developed to print maps in Portugal in government facilities under the supervision of Folque.

In England, for example, the Ordnance Survey owns the credit for inventing photozincography. The connection between lithography and power structures is often not a point of reflection for those who practise lithography in art, and nowadays topics that concern political issues, such as oppression, decolonizing practices are often of interest to artists. Reflections on how the technique came to be what it is now, requires a study of historical sources, connecting the participants and those responsible for its dissemination. The life of those who printed, their participation or intentions are also rarely a topic of concern or of research.
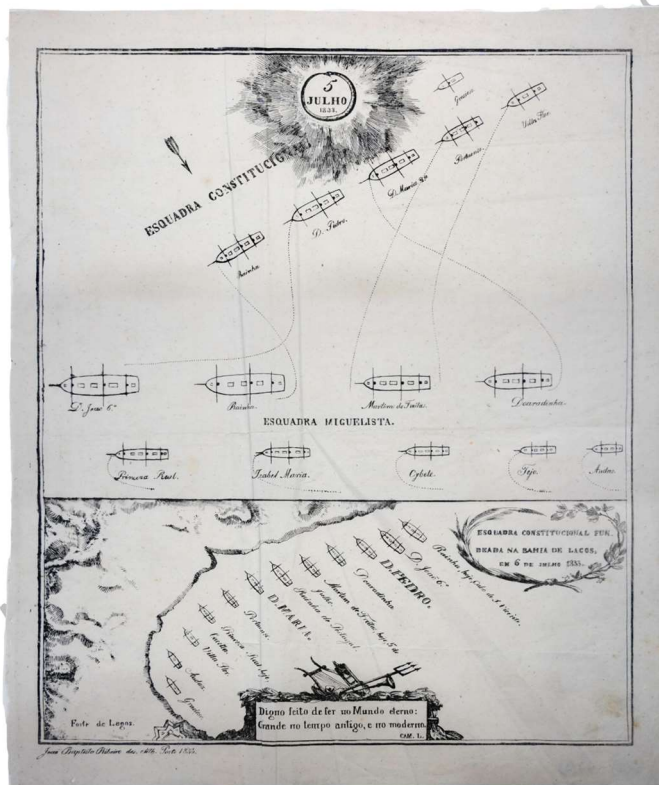
Figure 1. Esquadra constitucional fundada na Bahia de Lagos em 5 de Julho 1833 [Material cartográfico] / João Baptista Ribeiro des. e lith. G[I]-77[2]. Location: Casa-Forte, Biblioteca Municipal do Porto.

3. Giving a Voice to the Printmaker

In general, we know little of the lives of people who engraved or etched the maps. They appear as footnote printed material. Inscriptions such as "gr.; engrav;" often refer to the people who drew the maps "delin", des.", with also the name of the place where maps were printed (*vide* Figure 2).
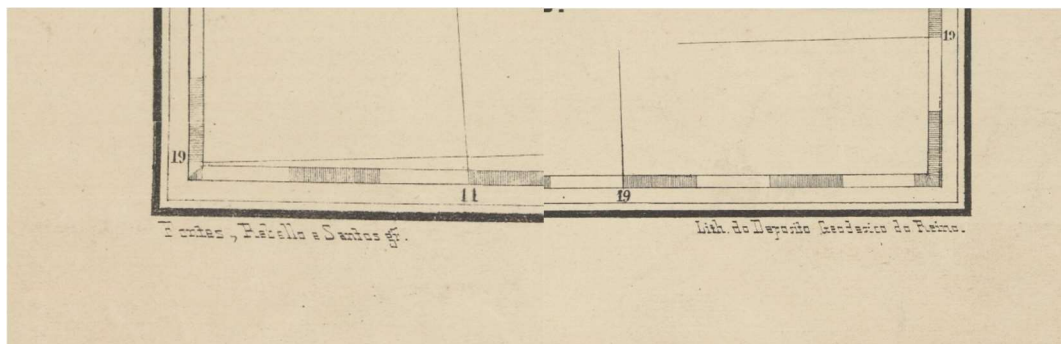
Figure 2. Close-ups from the map of "Angola", coordinated by military man Visconde Sá da Bandeira, in 1863, and made possible with the help of tenant Fernando da Costa Leal, who was the governor of Mossamedes. This map was etched or engraved by three disciples of Jan Lewicki, Fontes, Rebello and Santos. Lewicki was a polish printmaker and he had been hired by the Portuguese government to teach new generations of printmakers how to print maps from stone. Source: gallica.bnf.fr / BnF[2] .

In order to narrow our research scope, only the maps produced in Portugal in the XIX century were considered in our studies. From the maps we are analysing from the University of Porto, we have not yet come to access testimonies of the printmakers lives but we can figure that their lives could've been similar to others. The reality is that most printmakers would not themselves have a voice in the public forum. They did not write for big papers and were not considered as intellectual individuals but as mere operators. Most of what is on record is from their superiors. With the lack of information how can we experience how their working conditions were?

3.1 Technological Archaeology — Research to experience others

At the Printmaking Workshop of the University of Porto, we applied a methodology we call "technological archaeology". Proposed and designed by Graciela Machado[3], "technological archaeology" bases its research on practical reconstruction of obsolete techniques and material from past centuries in today's workshop settings. With this, it does not require a full historical reconstruction but an adaptation. How would certain objects be produced today in our print workshop if we were to follow their instructions?

In practice, we take our information as closely as possible from historical sources — manuals describing the process, testimonies, law statements, letter correspondence, historical prints, historical drawings, even fiction or poetry from the time. We go through every step of the map-printing: the drawing or transferring on stone, to etching or engraving the matrix, to inking, and printing (*vide* Figure 3). We are excluding from this scenario the map-drawing process and survey on the field.

With respect to map-making, the active role of the printmaker was unavoidable, but very different from the general experience of the printmaker of today. With it, it grows an understanding of how

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the people lived. A somehow intense reconstruction of historical objects allows for a profound connection with those people.

Research results allow for the artists to apply to their practices and personal projects in the role of researchers. This methodology needs to be differentiated from the one applied by conservation researchers, who also undergo practical research verification. The kind of conclusions we arrive at, within fine arts contexts, belong to a more subjective interpretation. Because we are researchers in the field of fine arts, our emphasis is the "**embodied experience**". We believe that in order to communicate a process, one cannot only approach it instructively but poetically.
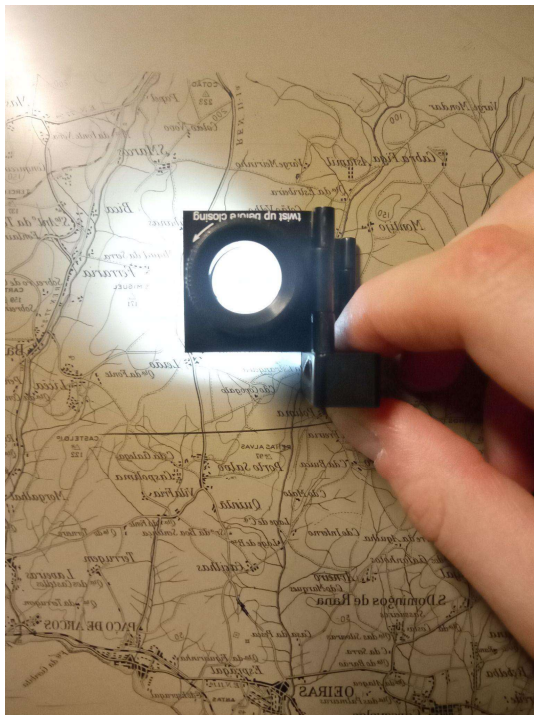
Figure 3. Analysis of the stone lithograph. Archive of Direção-Geral do Território. Lisbon. Photo by David Lopes 2022. Pure Print Archeology. (i2ADS/FBAUP).

3.2 Why printmaking?

Before digital imagery, everything was reproduced with printmaking techniques. Even though most of these processes are no longer in use for commercial purposes they still exist in fine arts schools. The machinery, the protocols and the tools of the 19th-century still resemble today's setting of a typical Printmaking Workshop. Enough differences however account for some obscurity and lack of knowledge on how certain documents were printed in the past. Such can confuse contemporary practitioners of printmaking.

This is the main reason why our methodology specifically targets printmaking. Even in today's practice, printmaking is regarded as niche. The processes that emerged in past centuries in industrial settings are even further to public knowledge. In historical collections and archives, prints are often presented as depictions of the past: in the form of images or the written word but the technical aspects are not usually understandable. Also, the physical existence of printmaking is often regarded as instrumental, a mere field whose only purpose is reproduction. But this is not the perception of artists who use printmaking in a Fine Arts Printmaking Studio.

It was the technological part of the processes that allowed history to be recorded in the first place, and its evolution also followed the marking points of changes over the past five centuries. The

materiality and the time-consuming tasks take over a sense of negotiation. Creative choices which will later appear in the final pieces of work take place in between this task, often because these tasks originated it. Printmaking's materiality, the process and its communication or critical reflection seems to have always been delegated to secondary levels of understanding the field [7].

We later apply what we learn from technological research to art practice. Such can entail different approaches: using the same protocol is often the common approach, but art-practice can refer to the studied technique by simply addressing the materials used in it, by using the tools in other settings or with different intentions.

3.3 Practical aspects of map-printing

Maps were never neutral documents, and such becomes much more apparent knowing how they were produced and printed. Making a map included creating a team to survey the field: hours of data collection and drawing would be revised by superiors and combined in one document. Corrections would then be made and prepared to reproduce. Reproduction alone would require an entire team of specialists. In Portugal for instance, one map would have the one who draws, either by tracing the drawings of cartographers or by transferring it stone, a specialist or several to engrave it on stone, and the lithographers or the printers, the one who would manipulate the ink and the roller.

We know for example that Lithographia Nacional for several years held service for an artist called Calheiros (1820-1890), with most of his work being associated with the etching or the engraving of the cartographic drawing on the stone lithograph [8]. Here we won't be discussing the preparation of the drawing as it is the printmaker that is of interest to this paper.

Preparing the lithograph stone required a time of sanding the stone, a regular procedure that hasn't changed much as it's repeated nowadays. However, thinking of the large size stone needed to print large sized maps, one is left to imagine the trouble people would have to go through just to move the stone around the workshop. The sanding of the stone would just be a station, then the stone would have to be moved to the printing press of other tables for drawing the maps.

Since the drawing of the map would be collaborative work between engineers and printmakers, most likely, — also due the rigorous manner the drawing had to be made — the entire map would've been traced. In the 19th-century, it could have been transferred as well, using prepared papers which upon a starch-like surface sometimes could be drawn and then transferred using water or heat, and pressure. Maps were always traced or transferred from original drawings and not freely drawn on top of the printing matrix (*vide* Figure 4).

Figure 4. Process of making the etching manner in lithography. Motifs of cartography from the 19th-century copied from maps stored at the University of Porto. Photo by David Lopes 2022.

The capacity of drawing such incredible information with precision was outstanding. What we can see from the printed maps from the 19th-century are hours and hours of incredible patience, intricate detail made in precise manner. The shape of buildings, roads, trees, stations, rivers or oceans had rigorous rules, needed to be followed at all times.

Before photography, all maps were drawn manually, such was undertaken by us at the Faculty of Fine Arts of Porto, reproducing small sections of the map of Angola from 1863, stored at the University of Porto archives (*vide* Figure 5).
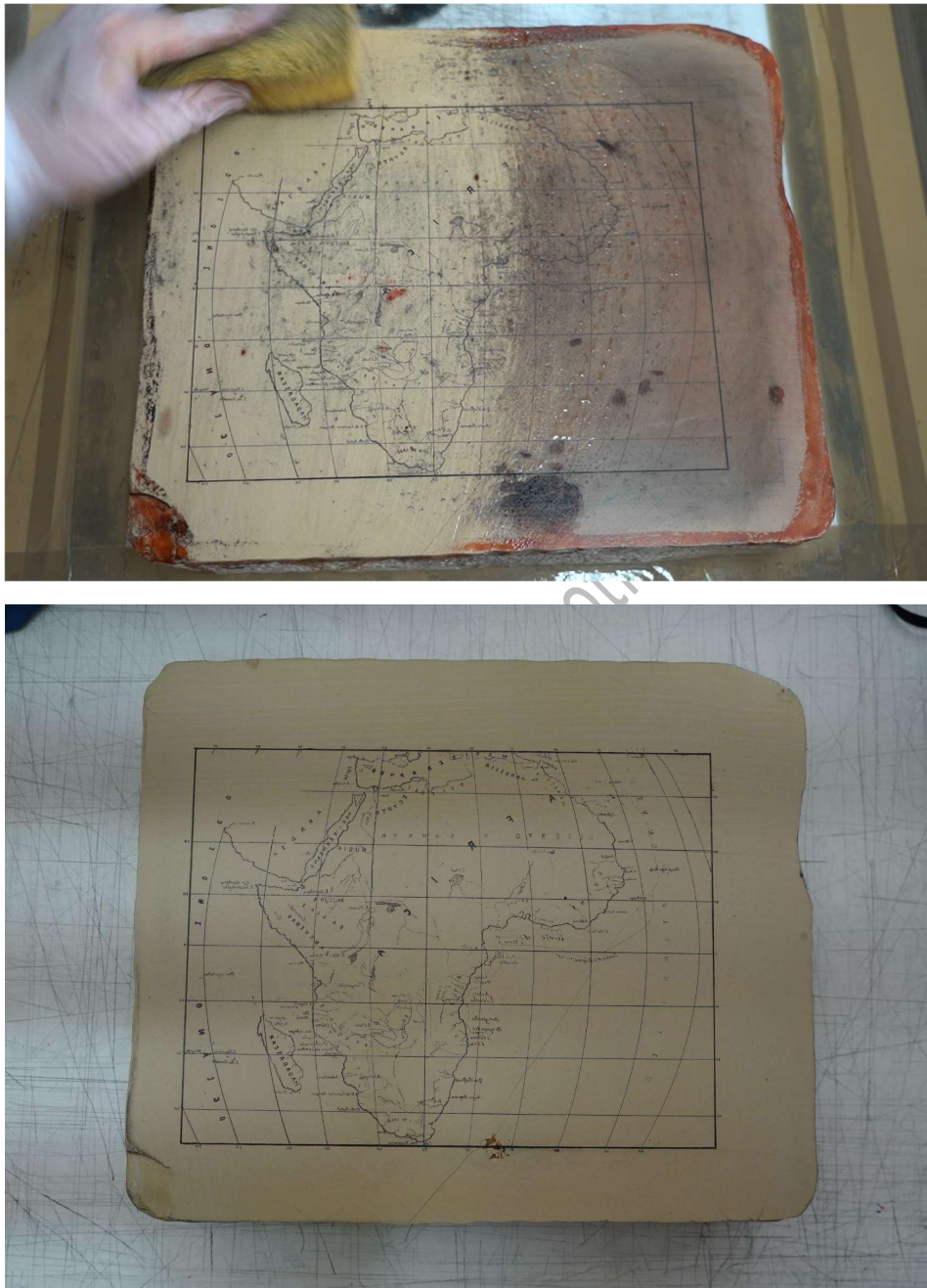
Figure 5. Sequence process of clearing the stone. Drawing of the continent of Africa copied from the map coordinated by Visconde Sá da Bandeira 1863. Screenshots of video by David Lopes 2024. Pure Print Archeology (i2ADS/FBAUP).

The engraving manner in lithography was one of the initial forms of lithography, applied specifically to map printing and technical drawings. It was a dominant technique in a transitional time for lithography, when it was gaining preference over metal printing. After preparing the

stone, it'd be covered either with a wax-based substance, called the etching ground, or covered with gum-arabic diluted with water and pigment, usually red. The forms of coating the stone bifurcate two methods of making the engraved manner in lithography, even though we find results to be quite similar.

The drawings on "etching on stone" and "engraving manner" in lithography were made with needles. Specific and different needles or burins were used in making technical drawings. The variety of tools to make cartography is diminished today to a smaller set of burins and needles (*vide* Figure 6).

Figure 6. Burins used in engraving copper. Tools belong to the Printmaking Workshop from the Faculty of Fine Arts of the University of Porto. Photo by: David Lopes. 2022. Pure Print Archeology. (i2ADS/FBAUP).

When working with what we have today we can understand the difficult positions one would have to stay over the large areas of stones to make the intricate drawings we see printed on the historical collections.

Several people would've worked on map-printing. The one that draws the roads, another one for natural elements: such as flora, grass or cultivated fields, houses or small properties, and then the ones to draw the letters. Another printmaker could be asked to make the etching of the stone or the copper plate, and another technician would be responsible just for printing. The overall tasks however, could and would take several months, one can only figure that one would take years to make (*vide* Figure 6).

Figure 6. Photos taken from the historical map of Angola, coordinated by Visconde de Sá da Bandeira in 1863. All of the close-up details have a 1 cm^2. Photos by David Lopes (i2ADS/FBAUP).

The printing from stone was much more efficient in time than printing from metal, however, the amount of work needed to move the stone and to roll up the inks would've made the work of the printmaker very tiring and harsh. In a writing of 1939, Pedro Vitorino describes the following: "the artists who worked on the first lithography house in Porto of Ribeiro, the boys would "wine soap" made with bread that the house would bake every day in its woven to even what he describes the violence of the work" they endured [9]. The introduction of steamed printing presses, also invented in the 19th-century, would eventually make life easier for the working class of printmakers.

One should be cautious to be willing to admire such detailed drawings. What we are seeing here is hours and hours of incredible patience, large areas of stones would require several workers to stand crouching for hours. Small and detailed information on topographical images was scrutinised and revised over and over. People would have crouched for large amounts of time. One can only assume, back pain problems would pill over years and years (*vide* Figures 7 and 8).
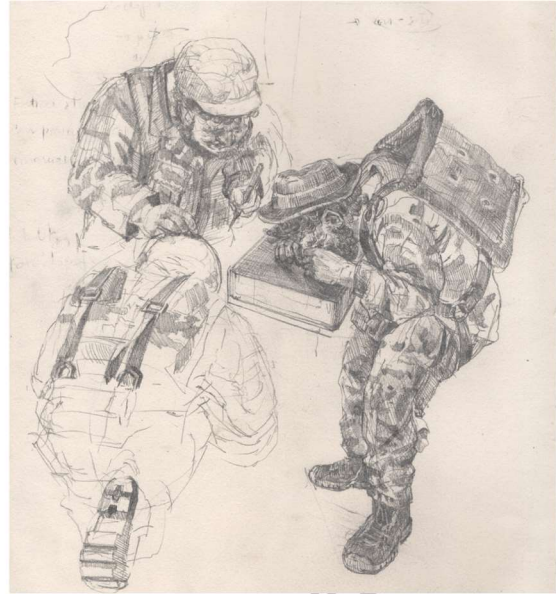
Figure 7. (*Left*) Working on stone lithography. (*Right*) Drawing of "Lumpenstein", 2023. Photo by David Lopes 2023.

Can we fully understand pain-staking shores of repetitive drawings? Can we blindly admire the work of drawing small and detailed roads and mountains ignoring the effort implied in developing this skill set in a manual manner? Can we find with dignity in it, or can we possibly see any sort of perversion, in a disciplinary manner, the way humans are made to act like machines?

Technological archaeology allows for an artist, such as myself, to make my own perception of labour, and even to cultivate a manner to poetically tackle how I could relate to the people who were working on making these technical drawings.
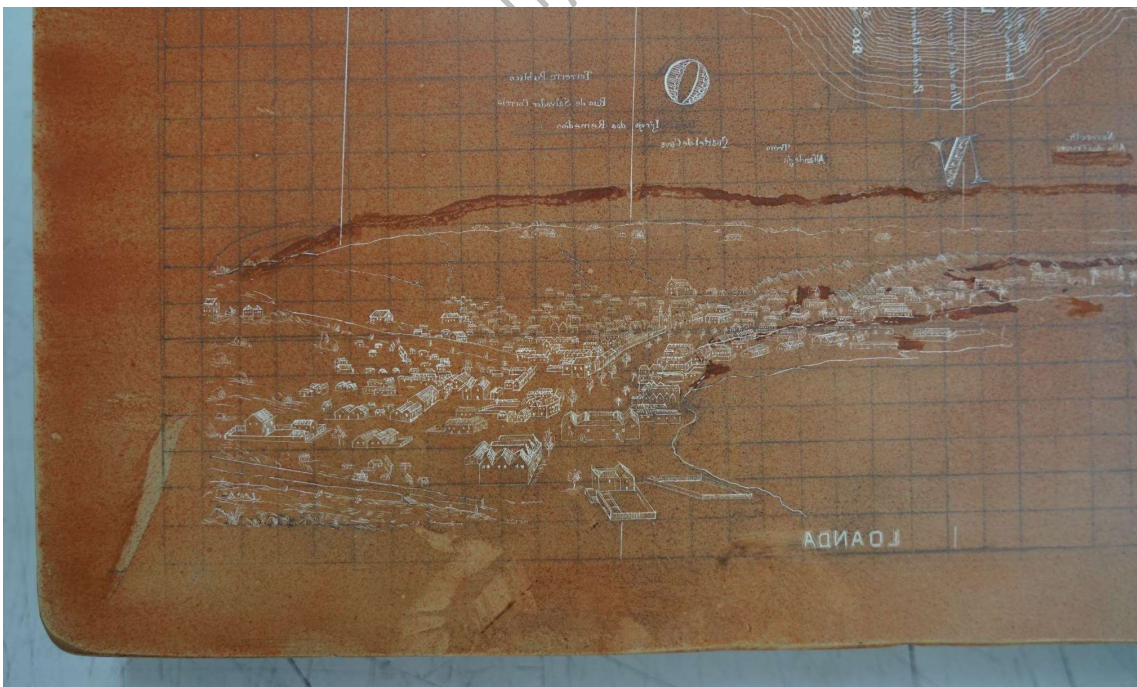
Figure 8. Reconstruction of "Loanda" fragment of map coordinated by Visconde Sá da Bandeira. [Above] Photo and detail of stone lithograph before inking. [Below] Screenshot of video cleaning the stone, by David Lopes 2024. Pure Print Archeology (i2ADS/FBAUP).

4. *LUMPEN*, to be a rag

Framing map-printing as a tool of the powerful calls to question: What is the power of maps? Who are they controlling? And who are they protecting? How can maps be tools of oppression? Harley argued that the European countries were very aware of the power of maps, both in the defence of their territory as to its potential to take over others territory. To make a map was to legitimise a forceful law [4].

In Benjamin's "Arcades Project", there is a figure symbolising human misery. Misery here could be a close synonym to oppressed, oppressed by power, oppressed by economic structures, oppressed by poverty and societal expectations. "Lumpensammler" is what Benjamin calls it, "lumpen" meaning rag, "sammler" meaning collector.``

> *The ragpicker is the most provocative figure of human misery. "Ragtag" <Lumpemproletarien> in a double sense: clothed in rags and occupied with rags. "Here we have a man whose job it is to pick up the day's rubbish in the capital. He collects and catalogues everything that the great city has cast off, everything it has lost, and discarded, and broken. He goes through the archives of debauchery, and the jumbled array of refuse. He makes a selection, an intelligent choice; like a miser hoarding treasure, he collects the garbage that will become objects of utility or pleasure when refurbished by Industrial magic* [3 pp.249-250].

The printmaker working for government facilities or printing houses was not a rag picker of Paris, as they were paid and could expect to have a stable financial life.

But if we are to understand map-making as a tool of oppression, shouldn't we consider what are the working conditions of those who printed maps?

There is an interesting report from 1876 which stated the release of the workers because of health issues, being affected by the work of printmaking in Nova Goa. The causes for their health status were not detailed but the author mentions 7 operators had died and 3 had to quit due to bad conditions of their labour [10]. Henry and Leight Slater stated that labour conditions for the

lithographers at the National Printing House of France were bad; as according to the authors the workers were not paid extra hours and their wages were low, and difficult to pay rents in the city [11]. *Could the printmakers be also considered to be an oppressed class?*

In regard to the practice of drawing on stone, and printing this delicate and laborious undertaking of a project, can we still consider how "power structures' ' of technological developments — discussed by Walter Benjamin — were silently introduced in these people's lives through hard-working spine bending tasks? Can we draw parallels between Benjamin's "lumpensammler", a rag picker, who bends to carry waste they collected, to the printmaker who bends over the stone to draw maps for the powerful? Michel Foucault intellectual work aimed to show how hidden oppressions of society are harmful to the individual.

With a Marxist heritage, Walter Benjamin argued that "historical materialism" could shed the notion of progress on history and on technology as a form of oppression. Walter Benjamin lived to see the wrath of the Two Great Wars taking place in Europe. Born in 1892, in Germany and being Jewish, Benjamin committed suicide in 1940 with 48 years old, a year after the striking of the 2nd World War. He saw, of course, the massacre of Jewish people, and the rise of the Nazis.

In Benjamin's perspective, affecting his time was the fever of technological progress, taking over people's lives in factories and industries, driving people away from the fields into the big cities. Progress is a "windstorm", he said, "it blows out or crumples the wings of the angel of history", in such a force-gale that the angel is unable to close them off." We can also understand History as a form of power, as Benjamin also states "(...) the holders of power are the heirs of all those who were victorious before" [2 VII pp.12].

4.1 Fictional "what if" questions

According to a paper from 1986, the oppressed share certain characteristics in different groups, oppressed by different reasons. One way to react against oppression is to perform "horizontal violence", in which the oppressed group reacts against each other. Self-hatred and self-deprecating is another way to express the oppression, while the opposite reaction is to love oneself in ways their different identity is valued. There also are ways in which the oppressed want to become the oppressor. Baker-Shenk does not reflect on the possibility of revolution. The author mainly attests the possibility of the oppressed fantasies the possibility of revenge. Revolution is the way that the oppressed self-organise in order to dethrone power [12].

Since our realm of thinking in these papers are the "what ifs' questions and alternatives paths to History, let's consider how printmakers understood their contribution to power and how they would have disagreed with it. Let us consider printmakers that maybe they sought to understand their identity as proletariat, — as they are aware of their identity, they want to fight against the injustices that imperialism power reflects upon natives. What could they do?

Would they change the coordinates of maps, weakening the changes of the Portuguese military to make land in the future? What if they had written in maps "free Angola"? Would they question the purpose of the maps we are making for our superiors? Are the maps harmless, neutral, purely scientific descriptions of territories? Are they accurate? Are we making the world a better place? Are we moral?

Could these people link their labour to the symbolic oppression maps empowered indirectly or directly? Would they find solidarity and use their actions as resistance? What would it be in their power to do to stop colonising agendas?

4.2 Art projects as "what if" questions

Against the idea of progress, Walter Benjamin developed a critical philosophy on the notion of History. For him, history could not present itself as linear, but as "dialectic". For Benjamin, the work of art poses also as something that breaks down this conventional understanding of history, — something he refers to as the dialectic image.

> (...) *it is capable of surviving its creator and of leaving behind its intentions; (...) the latter is based on the encounter, not only with the work but also with history* [2 pp. 109].

From this abstract framework, Didi-Huberman defended Benjamin's "dialectical image" as a possible reflection of history as an "anachronism". The anachronism in History, felt as a sin to the historian, is rather, in the philosopher and art historian Didi-Huberman views, a real understanding of History. Instead of avoiding bringing the present to discuss the past, one should follow it, as for him History is relative to the time we live in [13].

My 'what if' questions bring that sense of anachronism, but it's not my intention to speculate answers grounded on factual history but rather on exoteric speculation.

I am presenting here, three art projects which feed alternative interpretations of History in what I believe is a dialectic dialogue with our time.

5. "What if" Art Projects

5.1 Map-poems, 2023-24

Map-poems is a project designed to be presented in digital form. The animations were created while I was drawing on lithograph stone using a magnifying glass. As an artist, the long hours spent crouched over the stone, replacing information so minuscule, and wondering if anyone would ever read it, felt pointless and ironic. Why spend so much time drawing something so easily overlooked?

While researching cartography printing, I had to understand the hachure method of drawing territory, especially the mountains and fields, the very common visual mark of drawing cartography in the 19th-century (*vide* Figure 9) [14].
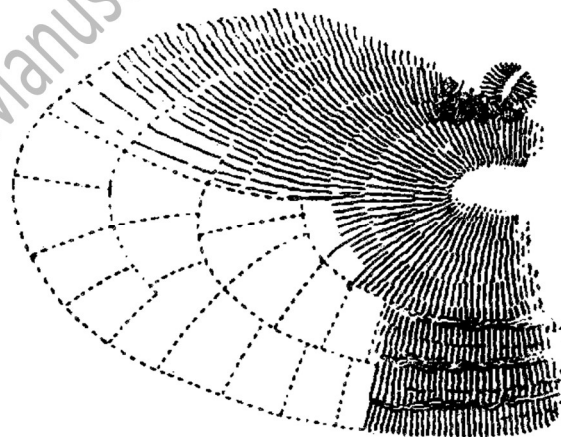
Figure 9. M.S.E, George G. André, C.E., (1891) The Draughtsman's Handbook of Plan and Map Drawing. Londres: E. & F. N. Soon, 125, Strand [14].

In the form of mountains, or in small elements of drawings, I've phrased important lines of my theoretical research — philosophy of Walter Benjamin, and fictional writing regarding what these printmakers would've said. Poems, and philosophical texts walk hand to hand with the line drawing, creating both a message and an image (*vide* Figure 10). Voicing fictional moments of

working on map-making, complaining about the hours and the tedious and painstaking position one required to be. Their purpose is to engage the public with cartographic drawing made for scientific purposes in a more human way.

Figure 10. Map-poems #4. vídeo ''00:01:31, David Lopes 2023.

5.2 LumpenStein, or "pedra-trapo". 2023-24

If printmakers are instruments of power and are forced by structure to help perform violence upon others, even if symbolic, they are as responsible as they are submissive. I recall the iconic caricature drawn by artist Bordalo Pinheiro, "Zé Povinho", which is the Portuguese representation of class struggle, carrying the elite on its back (*vide* Figure 11) [15]. In a series of drawings within my own practice, I kept most of his physiognomy and kept some of the elements that he's associated with, such as the "saddle" people place on the back of animals to carry raw materials and food [16]. I reinterpreted the figure as a modern soldier, keeping its saddle but also using burins we have in printmaking workshops, the same burins people used in creating maps on stone lithographs.
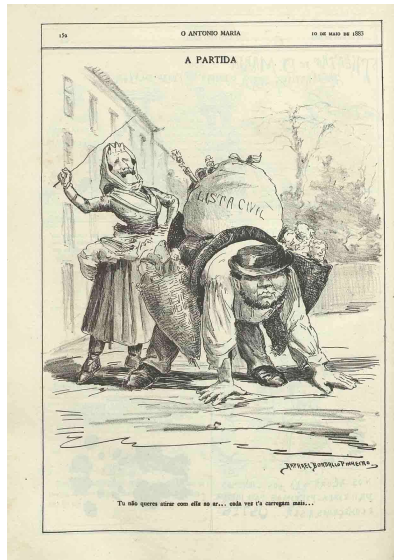
Figure 11. Bordalo Pinheiro. O Antonio Maria. 10 de maio de 1883 [15].

The correlation between this project and Walter Benjamin's writings is also linked to the fact that he initially wrote the essay on Thesis on Philosophy of History and then used fragments of it to write about the collection of caricatures of Honoré Daumier by Eduard Fuchs. Caricature is often associated with forms of resistance to political oppression. The figures of the ragpicker, Zé Povinho, the modern soldier and the printmaker have all merged into one. With the drawings I explore visual scenarios next to printing presses to showcase how all of them are oppressed by the same force (*vide* Figure 12). I named the project "lumpenstein", following the tendency of my theoretical references, keeping the rag (lumpen" and adding "stone" (stein), with some of the drawings displaying the presence of the lithograph stone.

Figure 12. Two drawings from the series "LumpenStein" by David Lopes, 2023-24. 21 x 29 cm. Courtesy of the artist.

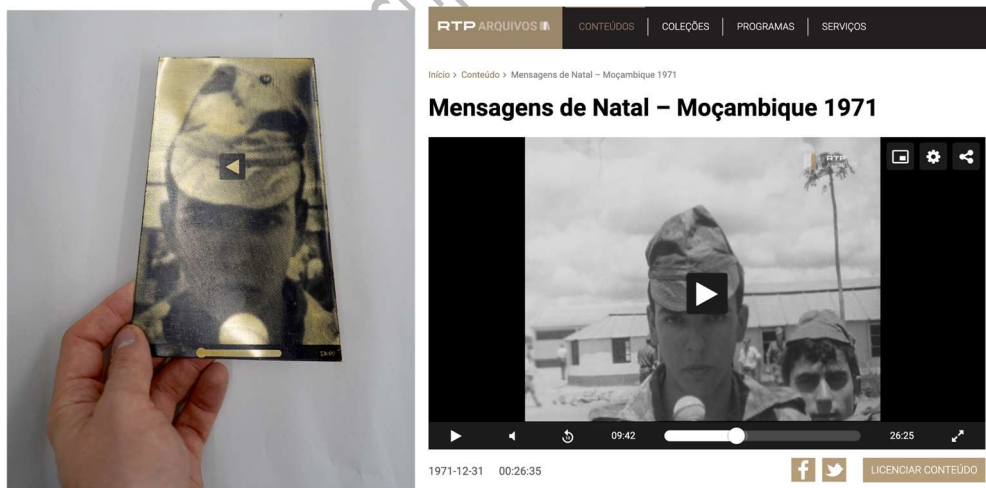**5.3 To carry the world on its back (or the atlas of war), 2023**

Like many young men back in 1971, my father was sent to fight in the Colonial Wars between Portugal and its colonies, during Estado Novo's political era of dictatorship. The war had started when he was 11 years old. The story of map father is a little complicated, as he was born in Luanda, Angola to a white family, he took part of the generation of Portuguese people who had to leave Africa as refugees back in 1974, when Portugal lost the war to its colonies, Angola, Mozambique and Guiné.

My father's family lived in Angola until the mid-1950s, when my grandparents decided to move to Porto, Bonfim, where they had a grocery store. My father spent his teenage years living in Portugal, up until he was sent to war when he was 22 years old. It's most likely that the military administration decided to send them to Mueda, Mozambique, since he had been born in Angola.

Exposing this complicated and intricate narrative to say what? Well, to question how we should position ourselves as a society to the collective trauma of Portuguese veterans. There are complicated nuances of power, since soldiers were forced to fight in war. Are the forced soldiers the oppressors in wars?

While looking for more information on the Colonial War, I've come across a digital archive of the national television RTP. The station had made a series of reports back in 71 and 72 on African colonies, asking the soldiers to send his greetings to their families and loved ones, during the Christmas holidays. In "Mensagens de Natal " 1971, I found a short clip of my father, as a 21 year old man (*vide* Figure 13).

It's difficult to express how this experience felt. I'm seeing a younger version of me in my father. His skin, his forehead without wrinkles, the youthful expression on his face, and his voice weigh on the fact that I'm seeing a young man talking to me from the past. A version of something that resembles my father but also resembles me. I am thinking to myself, "He's just a kid in the theatre of war. Knows nothing of life, probably doesn't know what to agree on. Probably scared and just following orders. It's not possible to talk about guilt to those who are oppressed in the system that forces them to fight in war".

Figure 13. (*Left*) "Atlas of War", Nelson Pinto Lopes. (the artist's father);
(*Right*) See the video archives of RTP, Mensagens de Natal - Moçambique 1971. (00:09:41)
https://arquivos.rtp.pt/conteudos/mensagens-de-natal-mocambique-1971-4/

Screenshots of this small video made it into an artwork I called "To carry the World on Its Back (or the atlas of war)". It's an installation planned in the same scale of an existing globe stored in

the University of Porto's collection[4]. The map of the world is the atlas-mundis, the Atlas is also the mythological figure that was forced to carry the weight of the skies on its back for all times. The ultimate punishment to carry the unbearable.

This metaphor was unpacked very well by philosopher Didi-Huberman in his analysis of Aby Warburg "Mnemosyne". An atlas of images, complex, ambiguous and mysterious [17]. The atlas of every image in history, the weight of history is also parallel to the figure of the "lumpensammler", the proletariat who carries the rags. "Lumpensammler" could also be compared to the figure of the soldier under society's oppression to risk their life in war, the soldier is also a figure of someone who's forced to carry the weight of the unbearable on its back (*vide* Figure 14).

Figure 14. To Carry the World on Its Back (Installation of brass with photosensitive emulsion on top), David Lopes 2023.

6. Conclusion

It's fair to acknowledge that maps today belong to everyone's life. In a sense, they have been democratised. However, it sets into oblivion their purpose and power in History. Maps have never been mere neutral documents and probably never will.

Maps in collections and museums are not just tools to understand the past but also to foresee the cyclical nature of history, often leading again to oppression of the vulnerable.

In her book "Radical Museology", Claire Bishop [18] argued that contemporary art can help us understand history through objects in museums. We can also follow Walter Benjamin's concept of the "dialectical image" which has highlighted the role of the work of art in its capacity to open History to new meanings. Our methodology of research within contemporary art, technological archaeology can also contribute to this proposal, essentially bridging the gap between theory and experience, providing deeper insights into past labour conditions. With this set of research, artists

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[4] Addison Globes at Reitoria University of Porto. Portugal. Cooper engraving and wooden structure. 150 x 112 cm

can expect not only to rediscover print practices which are lost, but critically repurpose these techniques in art-based research. Ultimately, art-based research, resisting market demands, can focus on overcoming oppression through artistic expression, helping us avoid repeating past mistakes.

7. Oral Presentation Round Table Insight

Moments of presentation of research[5] always allow for the self to revise their work. After presenting "Artistically expressing the oppressed: Framing contemporary printmaking for its technological past", one thing became clear to the authors.

There is still a lot of research to do regarding the life of the printmakers in Portugal and abroad. Little is known but much more can be differed from the published material found in archives. Our methodology should be revised in order to grasp more accurate and pertinent information regarding their working conditions. The exchange of ideas with other contributors during the conference has shown the potential for collaboration with different specialists in the field of physiology, anthropology or history. We believe that a revised methodology should still center "technological archaeology" as the foundation to understand the labour conditions of people in past centuries. As the work of printing from stone can only be understood if researchers are willing to experience technological know-how, ultimately creating the necessary "embodied experience".

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