

On Mural Painting —

Almada Negreiros, Spain and dictatorships

Conservation and art historical approaches

Ed. Mariana Pinto dos Santos, Milene Gil, Simão Palmeirim

TABLE OF CONTENTS

7 EDITORIAL

9 TESTIMONY

11 ORIGIN AND HISTORY OF THE JOSÉ DE FIGUEIREDO INSTITUTE AND WORK BRIGADES: THE CASE OF THE WORKS BY ALMADA NEGREIROS – Gabriela Carvalho and Irene Frazão

31 ESSAYS

- 33 WHAT ABOUT SPANISH TWENTIETH-CENTURY MURALS? NEEDS AND OPPORTUNITIES
 - Mercedes Sánchez Pons, Universitat Politècnica de València,
- 53 THE MURAL ART BY ALMADA NEGREIROS IN MADRID: THE POLYCHROME GYPSUM BAS-RELIEF FROM THE CINE SAN CARLOS

 Michèle Portela, Inês Cardoso, Elsa Murta
- 71 SCIENCE APPLIED TO MODERN MURAL PAINTING STUDIES.
 TRADITIONAL PIGMENTS AND INNOVATIONS IN ALMADA NEGREIROS'
 WORKING PALETTES AT THE DN BUILDING IN LISBON (PHASE 2)
 - Milene Gil, HERCULES Laboratory and IN2PAST, Institute for Advanced Studies and Research, City University of Macau Chair in Sustainable Heritage, School of Sciences and Technology, University of Évora

Mafalda Costa, HERCULES Laboratory and IN2PAST, Institute for Advanced Studies and Research, University of Évora

Sara Valadas, HERCULES Laboratory and IN2PAST, Institute for Advanced Studies and Research, City University of Macau Chair in Sustainable Heritage, University of Évora Ana Margarida Cardoso, Museus e Monumentos de Portugal E. P. E. – Laboratório José de Figueiredo

Yigit Zafer Helvaci, HERCULES Laboratory and IN2PAST, Institute for Advanced Studies and Research, University of Évora

Sriradha Bhattacharya, HERCULES Laboratory and IN2PAST, Institute for Advanced Studies and Research. University of Évora

António Candeias, HERCULES Laboratory and IN2PAST, Institute for Advanced Studies and Research, City University of Macau Chair in Sustainable Heritage, Chemistry Department, School of Sciences and Technology, University of Évora

95 MATERIALISATION AND MATERIALITY IN ALMADA'S GEOMETRY. THREE CASE STUDIES IN MURAL WORKS

– Simão Palmeirim, Instituto de Estudos de Literatura e Tradição, NOVA FCSH Pedro Jorge Santos Freitas, Centro Interuniversitário de História e Filosofia das Ciências e Faculdade de Ciências. Universidade de Lisboa

113 ALMADA NEGREIROS' DECORATION FOR THE UNIVERSITY CAMPUS IN LISBON

- Ana Mehnert Pascoal Centro de Estudos sobre a Mudança Socioeconómica e o Território, Iscte - Instituto Universitário de Lisboa
- 133 DEFYING THE DICTATORPSHIP: THE MURAL PAINTINGS OF ALMADA NEGREIROS AT THE MARITIME STATION ROCHA DO CONDE DE ÓBIDOS. NEW ART HISTORICAL READINGS
 - Mariana Pinto dos Santos, Art History Institute NOVA FCSH / IN2PAST

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Editorial

This book gathers seven distinct chapters from art historians and scientists who work in conservation science. Although it departs from a set of online conferences that took place at the beginning of the project PTDC/ART-HIS/1370/2020: *Unveiling the Mural Painting Art of Almada Negreiros (1938-1956)*, led by Milene Gil, it has developed differently from that first intention, with the invitation to new contributors or with the presenters of the conferences proposing another theme in order to share new research, which the editors embraced enthusiastically. The book proposes a crossing between art history, technical art history and conservation approaches, bridging subjects that are often parted in specific fields and independent publishing platforms.

Gabriela Carvalho and Irene Frazão offer a precious testimony of their work at the "conservation brigades" at José de Figueiredo Institute, and beyond that, giving an account of the work and challenges that Almada's mural paintings have faced over the years.

Although Mercedes Sanchéz Pons' chapter departs from her online conference, she developed it extensively, mapping the 20th-century Spanish murals, mostly made under Francisco Franco's dictatorship and therefore offering ethical challenges due to their political context of execution. The author proposes to create an unprecedented inventory of these often-forgotten murals and to develop a cataloguing model to help decide which should be preserved and how.

Michele Portela, Elsa Murta and Inês Cardoso focus their chapter on the restoration works of the bas-reliefs that Almada executed for a cinema in Madrid in 1929, Cine San Carlos. Ernesto de Sousa found the bas-reliefs in Cine San Carlos in 1972 and brought them to Portugal, where they were sent to Instituto José de Figueiredo for restoration in 1973. The authors focus their chapter on the works done on two of those panels, sharing previously unknown information about it. Milene Gil, Mafalda Costa, Sara Valadas, Ana Cardoso, Yigit Helvaci, Sriradha Bhattacharya, António Candeias, members of the project team, author a chapter where the results of the analysis of Almada's working palettes discovered in 1991 behind wood cabinets and used in the Diário de Notícias building in 1939/40 are shared. They provide new information about the pigments and techniques used by the artist onsite, and the comparison with the pigments in powder from the commercial brand Pigments pour la Fresque-Le Franc-Paris found in the artist's studio.

Simão Palmeirim and Pedro Freitas' chapter presents the results of studying new data from Almada's estate that contributes to further understanding of the geometric basis of the artist's murals. They focus on how Almada materialised geometrical ideas at the façades at *Cidade Universitária* in Lisbon, at the *Edificio das Matemáticas* in Coimbra, and at the panel *Começar* at the Gulbenkian Foundation in Lisbon.

Ana Pascoal's chapter draws from her MA thesis on the buildings of the University campus in Lisbon. It focuses on Almada's pictorial themes for the façades and adds new research that includes previously unavailable sources from Almada Negreiros' archive, namely his drawings and written notes.

Mariana Pinto dos Santos' chapter focuses on the mural paintings by Almada Negreiros at Rocha do Conde de Óbidos, historically contextualising their defying character to the Portuguese dictatorship. She revisits previous art historical accounts and her own published research, adding new insights and findings from different sources — such as the artist's manuscripts and drawings or Sarah Affonso's testimony — as well as benefitting from the close-up observation made possible by the scaffolding erected for its restoration work.

Many of the chapters have benefited from the research done at the documentary archive CEDANSA - Centro de Estudos e Documentação Almada Negreiros-Sarah Affonso, located at NOVA FCSH, analysing for the first time some of the draft drawings and manuscripts in the archive.

This book is one of the outputs of the project PTDC/ART-HIS/1370/2020: *Unveiling the Mural Painting Art of Almada Negreiros (1938-1956)*, bringing together two research units from two different Universities, the Art History Institute from NOVA FCSH, and Lab HERCULES from Évora University, cross-referencing art history and science for the study of mural art.

The Editors.

TESTIMONY



ORIGIN AND HISTORY OF THE JOSÉ DE FIGUEIREDO INSTITUTE AND WORK BRIGADES — THE CASE OF THE WORKS BY ALMADA NEGREIROS

Maria Gabriela de Carvalho

Irene Frazão

ABSTRACT

The Instituto José de Figueiredo (IJF) was founded in 1940. The building was an original project designed specifically by architect Guilherme Rebelo de Andrade to promote the interdisciplinary approach to the study and conservation of works of art.

IJF became the first institute dedicated to studying and conserving movable cultural heritage. Part of this work was carried out in situ by the inspection and work "brigades," who surveyed the state of conservation of altarpieces, paintings integrated into ceilings, mural painting, sculptural groups, choir stalls, furniture, and textiles to analyse the environmental conditions and suggest measures of prevention and intervention.

Over more than four decades, the State Institute of Restoration's work on Almada's mural paintings reflects the evolution of conservation and restoration work and displays the technical skills of this talented and multifaceted artist.

Regarding the study of Almada Negreiros' pictorial /mural work, we present the result of the investigation and conservation work developed by the Instituto/Laboratório José de Figueiredo in this field. (José de Figueiredo Institute/Laboratory)

KEYWORDS

restoration, conservation, Almada Negreiros, mural painting, technique.

Maria Gabriela de Carvalho

Conservator-restorer and responsible, since 2012, for the Instituto José de Figueiredo (DGPC-IJF), has regularly represented the institution in various meetings, conferences and congresses, both in Portugal and abroad, within the scope of conservation issues and principles of preventive conservation awareness. She participated as a trainer and speaker in various actions, lectures and communications in schools, universities, associations and bodies responsible for safeguarding cultural assets, coordinating, in the Portuguese Museum Network, training actions in the area of Conservation.

Irene Frazão

Since 1985, Irene Frazão has been a Wall-Painting conservator, and has been working in that capacity until today, mainly at Instituto José de Figueiredo (1985-1997) and later at Direção Geral do Património Cultural/Património Cultural, I.P.. She currently works at Unidade de Cultura da CCDR -Alentejo.

The authors were trained by and carried out their conservation and restoration work at the current Laboratório José de Figueiredo since 1982. Some of the statements in the text are not referenced as they derive from direct testimony.

I – Brief History – Assignments and action of the Instituto/Laboratório José de Figueiredo¹

The preservation of Heritage represents one of the noblest missions consigned to contemporary society. Through the conservation of legacy and the manifestations of the creative mind developed over truly diverse epochs and relying on the most distinctive supports, communities keep the bond with the past alive and continuously elaborate their collective identity.

The IJF was a pioneer and a reference in our country. Acting as a public body, its calling was investigation and study, as well as conservation and restoration work of designated movable cultural heritage.

We owe to Dr. José de Figueiredo, the first president of the Academia de Belas Artes (Academy of Fine Arts) and director of the Museu Nacional de Arte Antiga (MNAA) (National Ancient Art Museum), the carrying out of measures related to the study and recovery of works of art. The purpose was to recover art objects from the collections of former convents claimed by the State, such as paintings on canvas and wood. In 1911, José de Figueiredo set up a restoration workshop at the MNAA, inviting Luciano Freire to take on the work of improvement and restoration of the objects of art belonging to the museum.

In 1936, Dr. João Couto (appointed director of the MNAA a year later) had the initiative, with the support of Professor of Physics Manuel Valadares, to supply the restoration workshop with laboratory equipment, namely an X-ray tube, providing essential conditions towards improved quality of material analysis of works of art. From then on, the workshop went under the name "Laboratório para o Exame das Obras de Arte" (Laboratory for the Examination of Works of Art).

In the meantime, the restoration workshop for antique painting led for many years by painter Luciano Freire, whose work would be continued by Fernando Mardel, was functioning in the annexes of the Convento de S. Francisco in Largo da Biblioteca. João Couto understood that the physical distance, the need for adequate spaces for study and intervention, and the training of future collaborators, demanded the construction of a building exclusively dedicated to workshops and restoration laboratories.

Based on the plans and ideas of José de Figueiredo, Manuel Valadares, João Couto and Fernando Mardel, architect Guilherme Rebelo de Andrade designed what would be the home of the "Instituto para Exame e Restauro de Obras de Arte" (Institute for the Examination and Restoration of Works of Art) (fig.1), later known as *Instituto José de Figueiredo*. The construction began in 1938 and was concluded in 1940.

Since becoming official this body has held the following designations: Instituto José de Figueiredo (IJF) 1965-2000 Instituto Português de Conservação e Restauro (IPCR) 2000 -2007 Departamento de Conservação e Restauro (DCR) 2007-2012 Laboratório José de Figueiredo (LJF) 2012 -



Fig. 1 - José de Figueiredo Institute Building (photograph 1940?), ©LJF-MMP, E.P.E

According to João Couto, an Institute for Restoration had gained a home of its own, a unique case worldwide.²

The building was originally meant to accommodate only the laboratory and the painting workshops. Still, the development of conservation and restoration work and the investigation of the respective materials eventually led to the inclusion of areas for furniture, textiles, archives, and documentation.

The Instituto José de Figueiredo was created by Ordinance, *Decreto-Lei* 46 758, of 18 December 1965, as pertains to the "Regulamento Geral dos Museus de Arte, História e Arqueologia" (General Statutes of Museums of Art, History and Archaeology), recognising in its preamble that "it is necessary to create a legal framework for the Institute (former workshop) as 'there is no previous legal order regulating its organisation and functioning or establishing conditions for the execution of its work'".

Thus, the Instituto José de Figueiredo was created in recognition of the remarkable role of this figure in the History of Art, eventually answering to the Direcção-Geral do Ensino Superior e das Belas Artes (Department for Higher Education and Fine Arts of the Ministry of National Education) that was created in 1932.

Noteworthy assignments of the IJF are to:3

- conduct the conservation and restoration of movable cultural assets, whether the owner is the State, local councils and entities subsidised by the State, or private owners;
- ensure the investigation and application of conservation and restoration techniques;

https://www.patrimoniocultural.gov.pt/pt/patrimonio/conservacao-e-restau-ro-laboratorio-jose-de-figueiredo/apontamentos-para-historia-da-conservacao-e-restauro-em-portugal/

Decreto-lei n.383/80 of 19 September, Diário da República, I série, n. 217.

promote, foment and ensure the teaching and diffusion of conservation and restoration techniques, assuming responsibility for the professional training in this field.

After the IJF became official and following an idea submitted by João Couto at the time to the Junta Nacional de Educação (National Committee for Education), the "Brigadas de restauradores" (Restoration brigades) were created (Fig. 2). The aim was to conserve mural painting, sculpture, altarpieces and carvings in situ. This was to become "one of the most important undertakings of the institute", according to Abel de Moura.⁴ The impact of this forerunner attitude was such that it met with the recommendations of the Venice Charter of May 1964, namely the appeal for the effective preservation of constructed heritage, including all of its elements and with particular attention to historical context.



Fig. 2 – Publication from "Restoration Brigades", 1960 ©LJF-MMP, E.P.E. Reference: COUTO, João, 1892-1968, Brigadas de Restauradores / João Rodrigues da Silva Couto. - Viseu: [s.n.], 1960. - 3 p.; 24 cm. - Separata de: Viariatis, IV, 1960. BCM/1319 (BCM) (Fundo: Fundo Abel de Moura) - REG1319

The mobile work brigades were created with the following premise: "...travelling throughout the country and proceeding locally with the consolidation and first interventions needed for restoration of the paintings, seems to be the swiftest, more economical and efficient way to attack this sensitive issue...".5

From an early stage, the IJF activated dialogue with entities such as city councils, parishes, or charities, among multiple bodies, communities, and

⁴ Painter Abel de Moura (1911-2003), director of IJF from 1965 to 1981. He wrote a brief historical note about the Instituto José de Figueiredo.

⁵ Alexandra Curvelo "O IJF entre 1956-1999", 40 Anos do Instituto José de Figueiredo, Ministério da Cultura, p. 120.

individuals, who constantly called for prompt specialised intervention in urgent need. This was, in fact, a work of indisputable significance, not only, due to the effective recovery of invaluable heritage through the work performed but also because it led to the posterior classification of some nuclei.

As the sole State institution specialising in the conservation and restoration of movable and integrated heritage, the IJF has led and participated in work campaigns throughout the country, carrying out in-depth surveys of the state of altarpieces, paintings integrated into ceilings, mural paintings, sculptural groupings and choir stalls, furniture and textiles, analysing the environmental conditions and suggesting measures towards preventive conservation, as well as intervening in situations evidencing greater risk of deterioration.

By developing international contacts with other institutes of conservation and restoration within UNESCO and the ICOM the exchange of experiences with other countries was encouraged. It opened new working horizons, establishing Portuguese professionals among their European peers.

In 1980, the IJF assignment was updated, and the staff status was defined.⁶ The main assignments of the IJF are to:

- a) Proceed to the conservation and restoration of movable cultural assets whether owned by the State, city councils and state subsidised bodies, or privately owned;
- b) Ensure the investigation and application of conservation and restoration techniques:
- c) Promote, foment, and ensure the teaching and diffusion of conservation and restoration techniques, and be responsible for training professionals for careers in conservation and restoration work in this country.

During the last quarter of the 20th century, the work of the IJF towards conservation and restoration grew in intensity and impact on a national level, structuring distinct fields of intervention, diversifying work methodologies and creating closer relationships with different areas of Human Science. It became evident that in order to respond to these challenges, improvement was required: a distinct structure, new and greater skills and increased administrative and financial autonomy.

II - The Mobile Brigades of Mural Painting and the Mural Paintings by Almada Negreiros

Mural paintings, being an integral part of buildings (excluding the rare cases of detached works), must be examined and treated in situ. Therefore, they belong to a type of work that systematically relies on the logistics of brigades for inspections or interventions.

⁶ Decreto-lei n. 383/80 of 19 September, Diário da República, I série, n. 217.

The *inspection brigades* were mobilised in the wake of contacts and requests from private and official organisations, some of which forwarded requests from other external organisations. During these visits, the works were examined, and the technique, the state of conservation, and other aspects were observed, such as monitoring painting or providing technical support. Advice regarding the most adequate conditions for proper maintenance and preservation was also frequently given. The outcome of the information and reports provided by these brigades served to substantiate the need for a conservation and restoration intervention, and thus, once authorised, the *work brigade* would be prepared.

As the name implies, the *work brigades* involved transporting a team of conservator-restorers to perform the intervention *in situ*. Both the work and inspection brigades are documented in the "processos de capa preta" ("black cover files"). This term also became an informal internal expression that directly identified the documentation pertaining to an inspection or work brigade. These files contain a series of documents that, according to each case and date, could appear very diverse, assembling examination and work reports, notes and technical information, internal requests, newspaper clippings, and graphic and photographic documentation. This highlights the intention of the Institute not only to compile all the information related to the artworks subjected to inspection and intervention by the State Restoration Institute.

Table 1 - Work Brigades

Gare Marítima de Alcântara	Date of execution	Work Brigades	Examination Concise, focused on the alterations	Examinations Yes	Photographic Documentation Photographer	Survey Drawings/ Mapping	Intervention team Responsible restorer +technicians
Gare Marítima Conde de Óbidos	1947-1949	1971	Concise, focused on the alterations	Yes	Photographer	No	Responsible restorer +technicians
Igreja de Fátima	1938	1984	Extensive and systematic (model 'Mora')	No	Photographer	Yes	Conservator - restorers
Diário de Notícias	1939-1940	1985-	Extensive and systematic (model 'Mora')	No	Photographer + Conservator- restorers	Yes	Conservator - restorers

The process of a work of art before, during and after restoration is made more apparent by consulting the Administrative files, the nature of which is more formal and official. The reports can be quite explanatory, not only concerning procedures and diverse vicissitudes from the moment of the request for intervention to its implementation but also because they contain information of greater technical interest, such as references to the poor conservation state of buildings and the existence of current or planned interventions.

Several mural paintings by Almada Negreiros were the objects of these mobile inspection and work brigades (Table 1). As they do not belong within the technical scope of the present context, the monumental panels in incised and polychrome stone of the buildings of the Cidade Universitária de Lisboa (Lisbon University Campus) have been excluded.

The records documenting the brigades contain information gathered and produced following a visit or on-site stay. They contain reports, work files, photographs (taken almost exclusively by expert photographers at different moments, and for a long time), historical documentation, newspaper clippings, surveys, graphic diagrams, and documentation.

Furthermore, they are also testimony of an evolution in the conservation and restoration practice at the IJF and the later department workshop on mural painting.

The monumental paintings of the two Gares Marítimas do Porto de Lisboa (Maritime Stations of the Lisbon Port) (Fig. 3a and 3b) were the first documented *in situ* intervention cases.





Fig. 3a – Alcântara Maritime Station ©LJF-MMP, E.P.E. MMP/Restoration and Conservation Archive/ (Mural Painting Brigade - folder 413, photo 73)/José de Figueiredo Laboratory

Fig. 3b – Rocha do Conde de Óbidos Maritime Station @LJF-MMP, E.P.E. MMP/Restoration and Conservation Archive/ (Mural Painting Brigade - folder 414, photo 75.025)/José de Figueiredo Laboratory

In 1971, the approach to examination and diagnosis focused mostly on solving previously detected problems, while only briefly referencing aspects considered non-essential in the choice of the methodology for repair treatment and its ensuing application. Hence, this vast and significant work focuses on the detected alterations and their possible causes and solutions, as prescribed by the scientific laboratory report.⁷

In the brigade file, we only find three written documents. Before the intervention, there is a printed A4 worksheet of the *Mobile Brigades*, dentifying the location (Fig. 4a) and work to be done. The following description is found under *Informação Técnica* (Technical Information): "Due to the seepage of humidity in the walls, several parts of the painting suffered deterioration", attributed to the salts, and the location of the deteriorated areas was linked to the shape of the building, and "coincides with the junction of roofs and waterspouts". The file also refers to the chromatic layer as "very powdery and sometimes scaled according to the quality of the pigments". A single paragraph, signed by the restorer responsible, incorporates and diagnoses the main problems.



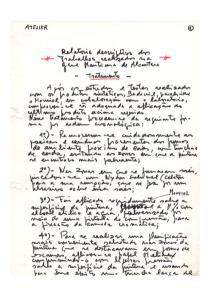


Fig. 4a – Brigade report from Alcântara Maritime Station ©LJF-MMP, E.P.E. MMP/Restoration and Conservation Archive/ (Mural Painting Brigade - folder 410)/José de Figueiredo Laboratory.

Fig. 4b – Descriptive report of the Brigade works at Alcântara Maritime Station @LJF-MMP, E.P.E. MMP/Restoration and Conservation Archive/ (Mural Painting Brigade - folder 410)/José de Figueiredo Laboratory

⁷ P→PM 13/71, pasta (folder) 410.

⁸ Pasta Brigada Móvel Pintura Mural (BMPM)- (Folder: Mural Painting Mobile Brigade)-410.

The Parecer do Instituto (Institute Memorandum),° signed by the Directorate, states that: "given the artistic value and state of deterioration, the study of treatments towards conservation is suggested". Under Observações (Comments), we read that: "the adequate solutions to treat the mural paintings will be proposed by the Laboratory of the Institute". This was entirely implemented, and the document elaborated by the laboratory, as well as the Relatório Descriptivo dos Tratamentos realizados na Gare Marítima de Alcântara (Field Report of Treatments executed at the Gare Marítima de Alcântara) (Fig. 4b), are also included in the file and folder.

There is an abundance of black-and-white photographic documentation, ¹⁰ which includes images from the initial stage, during the work and of the final stage, as well as of details from the paintings, exposing alterations or technical aspects (e.g. textures). ¹¹ These photographs and their respective dates tell us that interventions at the Gare Marítima da Rocha de Conde de Óbidos were also performed, ¹² despite the limited written documentation — a single *Mobile Brigade* worksheet referring to the similar situation of the Gare Marítima de Alcântara and five croquis with *adhesive testing*. ¹³

We can also confirm that although a team carried out the work in situ, the reports were made by the heads of the workshops of easel painting and of the scientific laboratory, and all the photographs were taken exclusively by the photographers of the photographic laboratory. In the documentation of later cases, such as that of the Igreja da Nossa Senhora do Rosário de Fátima (Our lady of Fátima Church, Lisbon) in 1984 and that of the Diário de Notícias building, from 1985 to 1987 (Table 2), one can notice that there is interest in producing a more systematic and generalised technical observation. This observation focuses on examination in situ, in the survey and mapping of execution technique, as well as detecting alterations and the treatments performed. This way, the written and graphic documentation became much more detailed. The conservation and restoration technicians, conservator-restorers (a title used from then on) who carried out the work on-site, were by then playing a direct part in the written, sketched and photographic documentation. However, the photographers still had a role, ensuring images of greater quality and precision.

This evolution is closely linked to the creation of the *mural painting work-shop* or *fresco workshop*, inspired by the then-director painter Abel de Moura, a true enthusiast of mural painting. This workshop materialised thanks to the dedicated action of painter Teresa Sarsfield Cabral, who, in 1972, received

⁹ Pasta Brigada Móvel Pintura Mural (BMPM)-410.

¹⁰ At this time photographic documentation was almost exclusively in black and white, with rare colour slides. Besides the high cost, colour photography was considered unreliable in reproducing colour and, above all, very unstable.

Pastas BMPM 410 to 416.

Pastas BMPM 414 to 416.

Folder BMPM 414.

training in the conservation and restoration of mural painting at specialised official institutes and organisations for conservation and restoration in Italy (ICR, ¹⁴ OPD, ¹⁵ ICCROM) and Romania (assignment by ICCROM). The methodology of intervention and documentation model that Teresa Sarsfield Cabral introduced, put into practice, and conveyed to her students, followed the examination and treatment report recommended by Laura and Paolo Mora. This model ¹⁷ was an appendix to the book *La Conservation des Peintures Murales*, ¹⁸ written by the Moras and Paul Philippot, a work of absolute reference in the subject that all those collaborating in the *workshop*, later to become the *mural painting department*, almost end up knowing by heart.

Table 2

	Date	Inspection Brigade	Work Brigades	Technique
Gare Marítima de Alcântara	1943- 1945	1971;1990;1992;1993;1995;1998;2004;2013;2014	1971	Fresco
	1943			
Gare Marítima Conde de Óbidos	1947-	1971;1990;1991;1992;1993;1995;1998;2013;2014	1971	Fresco
de Obldos	1949			
Igreja de Fátima	1938	1973;1976;	1984	Tempera
Diário de Notícias	1939-	1977;1985	1985-1987	Fresco
	1940			
Escola Patrício	1956	1984;1993		Fresco
Prazeres				
Faculdade de Direito	1957-	1992		Stone with
Lisboa /Lisbon Law College	1961			polychrome incisions
Faculdade de Letras Lisboa/Lisbon	1957-	1984;1995		Stone with polychrome
Humanities College	1961			incisions

Particularly significant was the pioneering work developed by the workshop, later formally recognised as a Department by the "decreto-lei" (ordinance) 383/80 of 19 September, in the conception of the extensive *Inventário de Pintura Mural* (Inventory of Mural Painting) which registered the discovery of a series of

¹⁴ Istituto Centrale per il Restauro, Roma.

¹⁵ Opificio delle Pietre Dure, Florença.

 $^{^{\}rm 16}$ $\,$ International Centre for the Study of the Preservation and Restoration of Cultural Property, Roma

¹⁷ The recommended report model, systematically coordinating all the information regarding materials, techniques, alterations, organising a course that starts from the structure (constructed or not) to the superficial layers of the mural painting. Lastly, following the same order, treatment is applied.

¹⁸ Editrice Compositore, Bologna, 1977; English edition: 1983. *Conservation of Wall Paintings* (Butterworths, London) and italian edition, 1999. *La Conservazione delle Pitture Murale* (Editrice Compositore, Bologna.

fresco paintings in different regions of the country. The existence of a typology of pictorial works in Portugal was verified, but until then, it was thought to be of little importance, and the few known examples were believed to be lost.

Just as verified by the other IJF workshops and departments, in addition to greater emphasis on training, autonomy and responsibilities of the Conservator-Restorers, many recently trained in the 1980s, there was the introduction of new methodologies which comprised a way of working where everyone became increasingly present in the different stages of study and documentation of the artworks and interventions conducted.

This evolution was also reflected in the brigades' documentation of almost four decades of interventions and inspections of the mural paintings by Almada Negreiros. We will briefly examine the documentation of the Almada mural paintings that underwent inspection and restoration.

The Maritime Stations of Alcântara and Rocha do Conde de Óbidos

Interventions at the maritime stations only began once a problem of infiltrations, previously mentioned in the technical information, was solved.

The intervention took place in 1971 with a team from the workshop or *painting atelier* (because the mural painting workshop did not yet exist), led by the extraordinary restorer Manuel Reys Santos.²⁰ He was accompanied by an experienced team of specially trained technicians portrayed in the photographs, their names mentioned as "participants" or "collaborators in the work".

There is photographic documentation, with some predominance regarding the intervention carried out at the Gare Marítima de Alcântara, as well as written documents, which are quite scarce in the case of the Maritime Station of Rocha do Conde de Óbidos.

In the 1971 intervention, there was mention of the alterations in some areas of the chromatic layer, which appeared scaled and powdery. Infiltrations and the quality of some pigments were identified as the cause. In addition to the general, initial and final photographic documentation (which also shows the precariousness of scaffolding in those days), the file contains a report by the scientific laboratory indicating products and methods to perform the intervention and another by the restorer in charge, Reys Santos. The latter report described the work carried out, including the tests using the products recommended by the laboratory and the work of stabilising and reducing salts, as

This Inventory was created and developed exclusively for internal use, as a work instrument, not to be shared outside the Institute. Faced with an unknown heritage that was being discovered or researched, it was necessary to have an idea of, and to survey, the existing patrimony. Thus, as a state institute of restoration, it was possible to establish priorities in order to recognise, study and compare different cases.

Manuel Reys Santos (1921-2012) Painter and restorer, led the Workshop and, later, the Divisão de Pintura de Cavalete (Dept.of Easel Painting) of the Instituto de José de Figueiredo from 1969 to 1984.

well as the cleansing of the surface and the chromatic reintegration. The reports are handwritten and signed by the heads of the respective departments, Oficina de Pintura e Laboratório (Painting Workshop and Laboratory), and participants in the intervention and photographers are identified.

During the years that followed, several inspection visits were made in order to monitor the areas with alterations. During one of the last visits, ²¹ access to the paintings using scaffolding allowed for a close-up examination of the surface and gathering of samples. This documentation now exists only in digital form.

Igreja de Nossa Senhora do Rosário de Fátima

Almada's most renowned work in the Church of Nossa Senhora do Rosário de Fátima in Lisbon are the stained-glass windows that, for many years, were severely neglected and even at serious risk of being lost. The poor conservation of the stained-glass windows, window frames, and concrete, allowing for water seepage, caused the deterioration of the mural paintings. The paintings, depicting the Evangelists, also by Almada Negreiros and placed above the stained-glass windows, suffered damage from water leaks and infiltrations for years due to the broken window panes, as shown in the correspondence and different reports and notes in the brigade and Secretariat files (Fig. 5a and 5b). At the time, the IJF didn't specialise in the restoration of stained-glass windows, and this situation lasted for more than a decade, from 1973 to 1984.





Fig. 5a Image before treatment ©LJF-MMP, E.P.E. MMP/Arquivo de Conservação e Restauro (Brigada Pintura Mural - folder 422)/ Laboratório José de Figueiredo

Fig. 5b Image after treatment @LJF-MMP, E.P.E. MMP/Arquivo de Conservação e Restauro (Brigada Pintura Mural - folder 422, phot0 170/85)/ Laboratório José de Figueiredo

Joint visit by DGPC - DEPOF/LJF in 2014.

Only after the stained-glass windows had been repaired could the work on the paintings begin in 1984. These paintings were referred to as tempera paintings (visual observation) and had withstood substantial change, mostly in the upper area.

The intervention was carried out using various procedures: cleaning using dry methods as well as water; consolidating the pockets and detached areas of the support by injecting lime-casein; securing the surface with acrylic resin in some spots; and finally, chromatic reintegration using lime-casein tempera. Although not always signed, the documentation of the work was obviously done by participants in the intervention, and it includes, besides the report model proposed by the Moras, some records (Fig. 5c) and a few drawings.

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RELATÓRIO DE EXAME E TRATAMENTO DA
PRIVIERA MURAL

Data de axame: 3/4/33
26/2/36

Data de tatamento: Distribuíno a Degentro 1984

1. INFORMAÇõES GERAIS DE INVESTÁRIO
1. 1. Accalidada: Licilina
1.2. Monumento: Igraja do Nº S.º de Fotima
1.3. Freguesa: "U S.º Tol Fotima
Concelho: Licilopa
1.3. Freguesa: "U S.º Tol Fotima
Concelho: Licilopa
1.4. Atribuíção. "Desé de Almado Migreinos
Data - 1938

1.5. Araunto. Simbolos dos quatio
avangelistas: S. João; "S. Mancos "S.
Lucas « S. Matino.

1.6. Dimensión den con
S. João 180 x.
S. Macco 181 à 132
S. Lucas 180 x 142
S. Hatous 181 à 142

1.9. Entidoda Asapanachael: Monumentos
Nocionado
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Fig. 5c Examination report and mural painting treatment @LJF-MMP, E.P.E. MMP/Restoration and Conservation Archive/ (Mural Painting Brigade - folder 422)/José de Figueiredo Laboratory

Edifício Diário de Notícias

The fresco paintings to be found at the head office of the Diário de Notícias building in Avenida de Liberdade in Lisbon were visited in 1977 by the brigades, and after that, alterations were reported. One of the referred problems was caused by infiltrations that had to be resolved before treatment could begin (Fig. 6a).

²² Casein tempera was used, mainly on extensive areas of intervention of mural paintings, in dry form with matte finish. There is a possibility this choice was made due to the resemblance to a dry mural technique thought to be quite common.



Fig. 6a Diário de Notícias building – documentation example (1985) ©LJF-MMP, E.P.E.

MMP/Restoration and Conservation Archive/ (Mural Painting Brigade - folder

1023a)/José de Figueiredo Laboratory

The IJF intervention took place between 1985 and 1987. The panels "Alegoria à Imprensa", "Mapa de Portugal", and "Quem não sabe Arte..." were treated and documented. A private company later treated the panel "Planisfério".

For the first time, a cleaning method using compresses was employed here; in this case, the support was Japanese paper and paper pulp. This allowed for the removal of deposits of fine particles of smoke and dirt without penetrating or damaging the surface, some of which were very porous and fragile.

In addition, to consolidate the pockets and areas stripped of plaster, the new liquid plaster with hydraulic characteristics, recently developed by ICCROM24, was injected.²³

Extensive and arduous graphic documentation (Fig. 6b, 6c and 6d)) was also done by tracing the drawings, reducing them with a grid and mapping the technique, state of conservation and treatments.

²³ ICCROM, together with other institutions, promoted the study of plasters for interventions in historical buildings and works, namely injectable liquid plasters (grouts) containing hydraulic lime. Initial mixtures were a great progress, compared to prior ones, but had to be made in the moment, according to needs, demanded some equipment and were quite time-consuming. Soon after, based on this work several commercial products were developed, pre-dosaged, much easier to apply and now commonly used in interventions. These studies can be consulted in Peroni et al.. 1981. "Lime Based Mortars for the repair of Ancient Masonry and Possible Substitutes" in *Mortars Cements and Grouts used in the Conservation of Historic Buildings*, ICCROM, Rome, pp. 63-99.





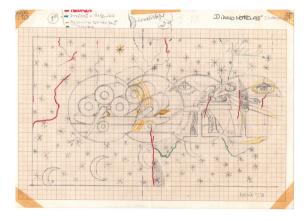


Fig. 6b Diário de Notícias building - documentation example (1985) ©LJF-MMP,

Fig. 6c Diário de Notícias building – documentation example (1985) @LJF-MMP, E.P.E.

MMP/Arquivo de Conservação e Restauro (Brigada Pintura Mural - folder 1023a)/ Laboratório José de Figueiredo

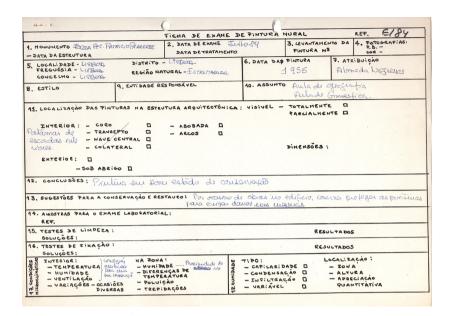
Fig. 6d Diário de Notícias building – documentation example (1985) @LJF-MMP,

MMP/Arquivo de Conservação e Restauro (Brigada Pintura Mural - folder 396)/ Laboratório José de Figueiredo

Escola Básica Patrício Prazeres

The mural paintings of the Escola Básica Patrício Prazeres school in Lisbon were visited by two *inspection brigades* (Fig 7a). No significant conservation alterations were detected during either inspection. There's no reference to any execution technique.

Considering construction work and repairs close to the paintings, these visits advised those responsible concerning materials, impact, and the installation of adequate protection (Fig. 7b and 7c).



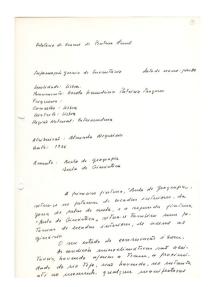




Fig. 7a Patrício Prazeres school – documentation (1984-1995) ©LJF-MMP, E.P.E. Fig. 7b Patrício Prazeres school – documentation (1984-1995) ©LJF-MMP, E.P.E. MMP/Restoration and Conservation Archive/ (Mural Painting Brigade - folder 398)/José de Figueiredo Laboratory

Fig. 7c Patrício Prazeres school – documentation (1984-1995) ©LJF-MMP, E.P.E. MMP/Restoration and Conservation Archive/ (Mural Painting Brigade - folder 398, photo 46)/José de Figueiredo Laborator

Final Comments

The gathering of data and the analysis of the work carried out by IJF/LJF on the mural paintings by Almada Negreiros reveal technical aspects, changes and the treatments performed. Simultaneously, due to the period during which they occurred, from 1971 almost until today, we have access to the evolution in the methodologies of examination, documentation and intervention, allowing for the contextualisation of the practice and development of conservation and restoration work. We have observed changes in work organisation and the training of technicians, in procedures and the use of materials.

This research is included in the Projeto Almada/Almada Project, dedicated to the scientific knowledge of pictorial techniques, materials, and diagnosis of this artist's mural paintings.

Considering the technology used in producing these works, one cannot but admire how Almada Negreiros, apparently self-taught, manages to produce paintings with fresco technique. The technology of fresco painting poses some challenges as it demands extensive knowledge of various materials and meticulous control of procedures, keeping in mind the threat of rapid disintegration of the whole artwork due to technical failure. In this process, many steps and factors could fail: you need to know how to prepare the plasters, from the choice of lime to the sands, how to mix using proportions correctly, when and how to apply the plaster, perceive the right moment to transfer the drawing onto the plaster; when to apply the paint; how to select adequate pigments. It was also necessary to master the proper painting technique on wet plaster, which is less stable than paper, wood, canvas or even dry plaster.

Approximately four decades after the conclusion of these works, when the IJF was brought in, the most serious and relevant causes of the alterations were identified as due to the deficient maintenance of the buildings (mainly concerning infiltrations). However, possible specific technical problems, such as the quality of some of the pigments, are referred to in the cases of the Maritime Stations and the Diário de Notícias building.

It's important to stress the increasing evolution of the *inspection* and *work brigades*, which have been documented over the five decades of their activity. These brigades have made a valuable contribution to the development of conservation and restoration in Portugal. Almada Negreiros' work is a testimony and part of this contribution.

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Direção Geral do Património Cultural, Biblioteca de Conservação e Museus, (Directorate-General for Cultural Heritage, Conservation Library and Museums) Laboratório José de Figueiredo

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Pasta BMPM 396 - Empresa Pública Diário de Notícias

Pasta BMPM 397- Empresa Pública Diário de Notícias

Pasta BMPM 398 - Escola Secundária Patrício Prazeres

Pasta BMPM 410 - Gare Marítima de Alcântara

Pasta BMPM 411 - Gare Marítima de Alcântara

Pasta BMPM 412 - Gare Marítima de Alcântara

Pasta BMPM 413 - Gare Marítima de Alcântara

Pasta BMPM 414 - Gare Marítima de Rocha do Conde de Óbidos

Pasta BMPM 415 - Gare Marítima de Rocha do Conde de Óbidos

Pasta BMPM 416 - Gare Marítima de Rocha do Conde de Óbidos

Pasta BMPM 422 - Igreja de Nossa Senhora do Rosário de Fátima

Pasta BMPM 1023 - Empresa Pública Diário de Notícias

Pasta BMPM 1308 - Gare Marítima de Alcântara

- Laboratório Processos (Laboratory Files):

15-86 - Gare Marítima de Alcântara

30-00 - Empresa Pública Diário de Notícias

Processos de Secretaria de Pintura Mural (PMO) (Desk Report files)

ESSAYS



WHAT ABOUT TWENTIETH-CENTURY SPANISH MURALS? NEEDS AND OPPORTUNITIES

Mercedes Sánchez Pons Universitat Politècnica de València ORCID 0000-0003-4653-7885

ABSTRACT

Due to various factors, the general public still lacks a significant understanding of mural production in the Iberian Peninsula during the twentieth century. Few academic studies have addressed this issue with an interdisciplinary perspective, resulting in many of these murals being forgotten or lost without proper assessment of their historical or artistic interest.

This chapter presents an overview of Spanish murals from this period, connecting the type of works created with the political and socio-economic events that conditioned their characteristics and durability. We also show how artists in this area reinterpreted traditional mural techniques and introduced new industrial materials.

Considering the lack of a general inventory of these murals and the interest shown by the artists of this period in experimentation, it seems necessary to define a cataloguing model that addresses their knowledge in a comprehensive way, facilitating decisions about which murals should be preserved and how best to do it.

KEYWORDS

Mural painting, twentieth-century Spanish art, Spanish dictatorial art, pictorial mural technique, conservation of mural painting

Mercedes Sánchez Pons

PhD in Conservation and Restoration of Cultural Heritage from the Universidad Politécnica de Valencia (UPV), is a researcher at the Instituto Universitario de Restauración del Patrimonio (IRP) de la UPV, and a permanent professor in the Conservation and Restoration Department at the UPV, teaching in the Bachelor and Master program in subjects of conservation of mural paintings and new techniques and materials in modern and contemporary murals.

INTRODUCTION AND OBJECTIVES

Any artistic manifestation reflects the society of a certain time and place but is also a tool for social transformation in a broad sense. This is particularly important in mural painting due to its enormous power of communication, which has been used in several ways throughout centuries, as much as during the twentieth century. Sometimes, specific links to political events have delayed recognition of the value and interest, artistic or historical, of some works, which has held up studies and actions to safeguard them.

This chapter will provide a panoramic view, with examples of mural production in Spain during the twentieth century and the problems encountered in their conservation. There are not many specific studies, either historical or technical, but we must highlight some examples from Zaragoza (Grau 2012), Madrid (Montoya 2006; Tusell 2015), Canarias (Jáudenes 1999), Andalucía (López et al 2021) and Valencia (Collado 1998; Sánchez-Pons 2011). These studies could be an example of the number of unknown murals from this period with different points of interest.

Therefore, the aim is to demonstrate the need to focus on this cultural heritage to promote awareness of its existence to the general public. In this sense, the paper stresses the importance of carrying out the necessary studies to understand its historical significance and the techniques and materials that were applied, with the intention of better comprehending its role in the history of Spanish twentieth-century art and the evolution of the technical procedures used by the artists.

I - RELEVANCE OF THE CHANGING POLITICAL SITUATION IN MURAL PRODUCTION

The twentieth century was a turbulent time in Spain, greatly conditioned by changes in the form of government, the disaster of the civil war, its social impact and the subsequent dictatorship. Mural production was different in each period, and observing these murals makes it possible to recognise the particularities of those moments.

1.1 - MURALS FROM THE EARLY YEARS: PARLIAMENTARY MONARCHY

At the turn of the century, Spain was a parliamentary monarchy with strong Catholic religious roots. The production of religious murals continues the tradition of the nineteenth century, although with fewer relevant examples. This type of work is also represented in the decorations of institutional buildings, most of which were made a secco or in marouflage, like the ones by Emilio Sala (1850-1910) and Cecilio Pla (1860-1934) in the Casino Real in Madrid and

newly-built private bourgeois mansions, such as the *Nerva Palace* (Tusell 2015, 508-511).

Coexisting with this, in Catalonia, the *Noucentista* movement also arose, contrasting with modernist and romanticist trends, bringing mural paintings closer to classical models, but with new languages in which the analysis of form and line are of great importance, maintaining the two-dimensionality of the wall. This can be seen, for example, in the early works of Joaquín Torres-García (1874-1949), most of which were made in fresco technique, such as the unfinished set for the St. George Hall in the Palace of the *Generalitat de Catalunya* from 1913, in Barcelona, or the decoration for the *Badiella* private house (Giner 2002, 166 and 224).

During the first third of the century, the Spanish economy was based on a production directed towards national consumption, based mainly on agricultural exploitation and with an incipient peripheral industry. Social movements were making their way into the collective consciousness. Between 1921 and 1923, the relevant set of 12 murals by Aurelio Arteta (1879-1940) were made for the then headquarters of the *Bank of Bilbao* in Madrid. Collectively known as *The Effort*, the set represents various work allegories, giving visibility to the working classes in economic development. This mural set is one of this period's most significant examples of social realism murals but is still unknown to many people (Llano et al. 1973). Some of the scenes, for example, *The riveters in the shipyard*, bear a remarkable similarity to Mexican murals, such as the miners represented in the mural by Diego Rivera (1886-1957) in National Chapingo University made a little later, yet before Arteta's Mexican exile.



Fig. 1. Aurelio Arteta's mural (1921-1923), The Mine in The Effort set, Bank of Bilbao, Madrid. ⊚ Jesús Calleja Vicente, 2017

1.2 - GENERAL PRIMO DE RIVERA'S DICTATORSHIP: HOMELAND, RELIGION AND MONARCHY

A *coup d'état* by General Primo de Rivera in 1923 would lead Spain to a brief dictatorship in which the values to be extolled were Homeland, Religion and Monarchy. The commissioning of murals is adapted to these requirements, as reflected in the murals by the same artist, Arteta, in 1929, for the Logroño Seminary, symbolising Jesus' command to his apostles to preach the Gospel, or in the set by Vázquez Díaz in *La Rábida* Monastery, also in fresco, made to extol patriotic values. In the latter case, the theme also reflects the expansion policy reoriented towards lbero-America after the failed attempts to make European alliances in African territories.

Another example is the controversial commissioning, by Mila i Camps, of the new decoration for St. George Hall in the Palace of the *Generalitat*, made between 1925 and 1927, by twenty-seven artists. The commission included different representations of the history of Spain related to Catalonia, portraits of illustrious figures from the arts and sciences, literature, jurisprudence and war, and allegorical scenes. They were executed in an academic manner, mostly in oil, on canvas attached to the wall. They covered the previous unfinished set made by Torres-García a few years earlier in a very different style and concept (Laborda 2017).

Also from this period are the *San Telmo* murals, one of the most important works of monumentalism made by José Ma Sert (1874-1945) in Spain with his special technique, a sort of marouflage in monochrome with oil glazes on a golden background. This type of decoration was widely copied by various artists in the following years, its success allowing Sert to carry out other large-scale commissions outside of Spain some years later, such as the decoration of the *Waldorf Astoria* and the *Rockefeller Center* in New York, replacing the controversial fresco by Rivera.

1.3 - THE BRIEF SECOND REPUBLIC

In 1930, the monarchical dictatorship was abolished, and the second Spanish Republic was proclaimed. To accommodate new ideals, some decorations, such as the marouflage of the *Moreneta* in the set that we saw before in St. George Hall, were removed.¹

During this period, because of the growing activity in poster design and production, we can also find private murals, mostly with a decorative purpose and a heavy influence of Art Deco. Among these are the one made by Alfonso Ponce de León (1906-1936) at the *Figaro* Theatre in Madrid, probably an oil on panel attached to the wall, combined with a gold background (Tusell

¹ https://ajuntament.barcelona.cat/arxiumunicipal/arxiufotografic/ca/actualitat/desmuntatge-duna-pintura-del-salo-de-sant-jordi-del-palau-de-la-generalitat

2015: 80-83), and the mural attributed to Josep Renau (1907-1982) by Manuel García, located in the Santangel Palace, in Valencia.

1.4 - THE HORROR OF THE WAR

With the onset of the Civil War in 1936, many murals from different periods were unfortunately lost; however, even during those years, very significant works were created precisely portraying the war. The last mural commission of the Republican Government was the one made by Luis Quintanilla (1893-1978) for the New York World's Fair in 1939. The artist painted five panels that ultimately, once General Franco came to power, were never exhibited in the location for which they were conceived (López 2007, 13).



Fig. 2. Luís Quintanilla (1939), Love Peace Hate War, murals for the Spanish Pavilion of the 1939 Worlds Fair in New York. Pain mural panel. © Juan Valcárcel Andrés, 2007

1.5 - THE LONG DICTATORSHIP OF GENERAL FRANCO

With the end of the war, a dictatorship was established in Spain that lasted until 1975. It went through different stages: isolation and poverty from 1939 to 1953; opening up to the outside world with a slight economic recovery from 1954 to 1959; economic development from 1960 to 1969; and the agony of Francoism from 1969 to 1975.

² https://www.levante-emv.com/cultura/2008/01/05/hallan-mural-atribuido-renau-valencia-13490158.html

³ Some images of these murals are available at https://www.flickr.com/photos/valenciabonita/albums/72157712216546126/with/49223244323/

During this period, many artists were forced to emigrate, and those who remained had to adapt their discourse in accordance with the political regime and far from any social demands. Among those in exile were Luis Seoane (1910-1979), who travelled to Argentina, where he generated a vast mural production with a new distinctive style; Renau, who went to Mexico, where he worked as part of a team with Siqueiros (1896-1974) and other Mexican painters on some murals. One of these was the well-known mural for the headquarters of the Electrician's Union, made in pyroxylin, where it is possible to see Renau's contribution to the materialisation of the innovative concept of the polyangular perspective and the influence of his photomontages (Pérez 2019: 130-169). Likewise, Vela Zanetti (1913-1999) travelled to the Dominican Republic, where he made several murals. He also had the opportunity to create a mural for the United Nations headquarters in New York, which was done in 1953, with casein on silk attached to the wall.

Meanwhile, with the beginning of the dictatorship in Spain, there was great interest in reinforcing the idea of General Franco as the saviour and defender of the values of the Spanish people, using examples such as the marouflage by Arturo Reque Meruvia (1906-1969) for the Military Historical Archive in Madrid. Influenced by Italian fascism, the Franco regime tried to use this medium as propaganda for its ideals. However, as some authors stated, it was not structured in an organised way in order to achieve a significant impact (Grau 2012: 41-43).

At the same time, and in the context of material scarcity, the focus was also on repositioning lost heritage, especially in churches and civil buildings. Many of the lost altarpieces were replaced by mural paintings, such as the murals with silicate paint by José Bellver Delmás (1896-1970), made in the early forties in the church of the *Holy Cross* in Valencia, where we can see the union of both objectives: reposition of lost heritage and exaltation of Franco, who is portrayed along with saints and the most important historical figures of the nation.

With this purpose, in the 1940s, the National Institute of Colonisation was founded. One of its missions was the rebuilding of villages, providing them with basic infrastructure and always including a church, in many cases decorated with murals; some of these were by artists who would later have a major predominance in the assimilation of the artistic avant-garde in the country, such as Manuel Rivera (1927-1995), founder of the *El Paso* group, among many others. Many murals were painted throughout Spain due to this institution, especially during the 50s and 60s, mostly a secco, with cheap materials (Alagón 2011; Centellas et al. 2012 and 2014; Cordero 2014; Bazán de Huerta 2016, 2017 and 2021).

In the 50s, Franco's regime tried to keep the country isolated from international politics and focused on the regime's main values: the Catholic religion and the idea of homeland, bringing in more human themes and, again, references to Spanish history, with commissions for institutional and other social buildings. Among these were the murals by Alejandro Cañada (1908-1999), done in 1950 in Zaragoza's airport, depicting the three caravels of Colón

leaving for America (Grau 2013), or *El consulat del mar* by José Vento (1940-2013), in 1951, at the Valencia provincial council.⁴

From the mid-fifties onwards, with the dictatorship firmly established and the post-war repression slightly easing, artists began to form groups with specific concerns in an attempt to promote a different plastic language, such as *El Paso* in Madrid, *Parpalló* in Valencia or *Dau al Set* in Barcelona, that approached *Informalism* language. With this relative economic recovery, banks, religious schools, private clubs, and small businesses were also commissioning works for their premises, where artists tried out new plastic currents with apparently innocuous themes. Some examples are *Agriculture and Fisheries*, by Manolo Gil (1925-1957), founder of *Parpalló* group, in the *Ateneo Mercantil* in 1952, and *Valencia Soccer Club* by Joaquín Michavila (1926-2016), also for this institution, in 1955, both in Valencia. Many restaurants and cafés are also examples of this, like the set made by Manolo Gil in *Casa Pedro* or at *Cafetería Monterrey* in Valencia, the work by Urbano Lugrís (1908-1973) in the old tavern *O Forno* in A Coruña, or the mural by Mª Antonia Dans (1922-1988) at *Cafetería Las Vegas* in Zaragoza.

Other examples can be found in bank premises, such as the murals commissioned by *Bank of Bilbao*, in Barcelona in 1952, by Miquel Farré (1901-1978), and in Valencia, in 1956, by Michavila; or by the *Hispano Suizo Bank*, in A Coruña, in 1952, by Lugrís. They were also commonly found in the doorways of private buildings where recognised artists left their murals, as did Michavila in three different buildings in *Gabriel Miró* Street in Valencia and Josep Guinovart (1927-2007) in the *Sant Gervasi* district in Barcelona. In addition, many newly built religious schools commissioned artists to paint murals depicting educational themes or religious representations, such as the examples catalogued in Valencia (Sánchez-Pons, 2011).

This type of religious-themed painting continued throughout the dictatorship, with remarkable sets such as those made by José Aguiar (1895-1976) in Canarias or Jaume Minguell (1922-1991) in Catalonia (Minguell 2011).

Throughout those years, some exiled artists returned to Spain, such as Zanetti, who resumed his muralist activity. He focused not on controversial themes but on social and patriotic ones, displaying the great imprint of Latin American muralism, as seen in the set made in 1965 in *La Robla*, León.

Large institutional buildings were built with the slow recovery of the economy, particularly in the 1960s. The concept of integration of the arts had been present in the minds of many architects and artists since the 1930s. Although in the previous decades, some murals had also been created through this prism, it was during these years that some of the most interesting collaborations between architects and artists were developed. A clear example is the one between architect Fernando Moreno Barberá (1913-1998) and artist Javier Clavo (1918-1994), which we can see in the buildings and murals of the Blasco Ibañez University Campus in Valencia. The urban project for this wide

⁴ https://www.youtube.com/watch?v=VklJok3k6jM

tree-lined avenue was from 1931, but most buildings were not commissioned until the 1960s (Muñoz 2018). In each building, the architect experimented with different materials and construction systems. At the same time, the artist tried to transfer them to each of the proposed murals, using different techniques and compositional models. For the Faculty of Geography and History, with its glazed façade, the artist conceived The Three Skulls mural at the entrance of the assembly hall on the first floor. This mural has a clear dialogue with the construction materials and the original furniture used, both in the chromatism and the play of strokes and reflections, especially at night, when it is visible from the outside, maintaining a great harmony with the facade. The technique is still unknown, but it seems to combine some parts of the fresco with a synthetic binder, which could be polyvinyl acetate. For the next building, when the Faculty of Law was built in the same year, the artist proposed a different interior from the previous one to represent an Allegory of Justice. It is possible to distinguish giornate but both the chromatism and the appearance of the surface lead us to think that there must be another binder. Outside, the artist completed the set with a mosaic embedded in the stone cladding of the facade, which again kept an outstanding chromatic harmony with the building and the environment in which it is inserted. The few selective golden tesserae generate a similar effect to the sun's reflection on the leaves of the trees on the avenue



Fig. 3. Murals by Javier Clavo in the Faculties of Blasco Ibañez in Valencia (1960's): a) Faculty of Geography and History; Former Faculty of Law, b) access hall, c) exterior walls; d) Former School of Agricultural Experts; e) Former School of Agricultural Engineers.

Mercedes Sánchez-Pons, 2022

On the opposite pavement stands the former school of agricultural engineering, built in exposed concrete. Its entrance hall houses a mural panel where, once more, Javier Clavo adapts his mural technique to the proposed architectural project, reproducing the material and scheme of the concrete formwork of the exterior, combining it with some parts in relief and integrating an iron sculpture. In addition, the next mural had a different exterior layer, with a tiled

composition in a green, black and white palette. The hall entrance had a ceramic mural in terracotta pieces with some parts in smalt: the same materials and palette. In this last panel, we find Andrés Cillero's (1934-1953) signature on one of the pieces. Still, both the type of composition and how it is resolved are very similar to the panel done by Clavo in 1954 at the *Hostal de los Reyes Católicos* in Santiago de Compostela.

1.6 - LAST YEARS OF DICTATORSHIP AND SLOW TRANSITION TO A DEMOCRATIC SYSTEM

In the last years of the dictatorship, more overt opposition to the political regime pushed society to move in new directions, and social movements began to revive, giving rise to other forms of expression using intervention on walls, especially in public spaces, with painted words or murals, in very different ways and with a new meaning. A singular example of this is the decoration, in a sort of pop art style, made by Eduardo Arranz-Bravo (1941) and Rafael Bartolozzi (1943-2009), with decorative paint, in the exterior of the *Tipel Factory*, in 1968, reminiscent of contemporary projects of various tendencies in urban art.

Other examples from the final years of the dictatorship, and with a very different purpose, were the interventions made in Madrid and Zaragoza in 1975, in two different collaborations between artists and people from two sites, Portugalete, in Madrid, to protest against future urban development project and Torreros, in Zaragoza, bringing artistic events closer to the neighbourhoods and their inhabitants in a participatory manner (Grau 2012: 207-209). With the slow transition to democracy, this kind of socially engaged and collaborative intervention on urban walls was resumed and is still alive in some examples of contemporary street art, like the recent interventions of *Recuperem la Punta*, in Valencia, by the collective of artists *Sensemurs*.⁵

Murals in public spaces have gained increasing prominence, not only as a means to protest but also as a way of beautifying the city and solving urban problems on visible building walls. From the 1980s, there have been proposals for the Castellón Open Air Museum or the call for tenders of the Mayor of Madrid, Tierno Galván, for the decoration of walls in Puerta Cerrada, most of which are made with silicate dispersion paint or latex paint from the construction market. This type of mural is very distant from the kind of community murals that were so popular at the same time in other countries like the UK or USA., and much closer to many current council projects, like Vigo Ciudad de Color.⁶

⁵ <u>https://recuperemlapunta.info/trobada-sense-murs/</u>

⁶ https://ciudaddecolor.vigo.org/?lang=en

2 - THE GREAT FORGOTTEN: LOSS, MUTILATION AND DECONTEXTUALIZATION

It is surprising to see how diversely many of these works have been treated. While canvases by the same artists can be found in some of the most important national museums, their murals do not have the same recognition or protection. In some cases, this is due to political reasons, as we have seen in the frescoes of St. George Hall; in others, to changes of usage and renovations in the private buildings in which the murals were located. And, still in others, to chance factors which influenced their permanence. But there is no doubt that ignorance of their historical or artistic interest has also largely conditioned their fate.

Unfortunately, many of the murals created during this century have been forgotten, mutilated and lost, as were most of those made by Quintanilla, Sert or Torres-García in the first half of the century. This was also the case with many of the mural decorations of private and commercial buildings made in the 50s and 60s, and, of course, many of the last public murals from the 1980s were made outdoors without weather-resistant materials.

New ones replaced some, and others were forgotten for years. Such was the case of the panel frescoes that Quintanilla made for the 1939 World's Fair in New York, which the artist claimed had been lost in a flood but, several decades later, in 1990, were found in the storerooms of a pornographic cinema in New York (López 2007, 13-31). Fortunately, in this case, the paintings were rescued and restored and are currently on display at the Assembly Hall of the University of Cantabria, protected by law and accessible in a virtual museum online where it is also possible to view a documentary about the rescue.⁷



Fig. 4. Luís Quintanilla (1939), Love Peace Hate War, detail of a graffiti painted on the mural Destruction. © Juan Valcárcel Andrés, 2007

⁷ https://web.unican.es/campuscultural/Paginas/Museo-virtual.-Luis-Quintanilla-Arte-y-Memoria.aspx

Almost all the murals made by Manolo Gil in Valencian commercial premises have been lost, and we can only get to know them thanks to a collection of photographs published in the catalogue of a retrospective exhibition on the artist held at the *Instituto Valenciano de Arte Moderno* (Ramírez 1995: 152-161). Only two complete murals remain in the *Ateneo Mercantil*, and two fragments, totally decontextualised, of the splendid decoration of the old *Tasca Casa Pedro*.

Many murals from entrances of private buildings are still disregarded, and each has had a very different fate. Such was the case of the three Michavila murals in *Calle Gabriel Miró* in Valencia, where in each building, the owners' community had a different decision: one of them has been restored and remains in its original place; another was donated to the Valencian government, which decided to make a *stacco* by sections, and the third one, after the last renovation carried out, was covered and remained below a wood panel. A similar situation occurred with the mural by Guinovart in the *Sant Gervasi* district, Barcelona, which, during the recent rehabilitation of the building, was covered with grey paint to *'unify stylistically'*, which has ended in a legal complaint by the foundation that manages the artist's work.⁸



⁸ https://www.lavanguardia.com/local/barcelona/20220128/8017756/investigan-comunidad-vecinos-destruir-obras-mural-quinovart.html

Another example is the aforementioned set of murals by Lugrís for the Banco Hispano Suizo in La Coruña. Due to changes of use and alterations in the building, the entire upper part was lost, as were the other murals that decorated the room. The remaining part was kept for years in the commercial premises that housed the Café Vecchio but was about to disappear when the café closed. Thanks to the efforts of a cultural association, O Mural, and the funding of Fundación Abanca, it was preserved. However, as in other cases, it had to be detached in sections and moved to its main headquarters, where it is currently on display, finally enjoying legal protection since 2017. However, just across the street, the old tavern O Forno (now Brasa y Vino), remains the only complete set, with ten murals and also by Lugrís, which maintains its original function: to decorate a restaurant, although it has suffered the consequences of the renovations carried out every time the business changes. The building is currently for sale and after the offer of private purchase of the paintings and the social mobilisation to prevent it, the Xunta de Galicia has declared their legal protection, but it is still to be decided if the set will be kept in situ, as O Mural and many experts defend, or if they will be detached and transferred to the city's Fine Arts Museum, which would mean the loss of essential values in these murals.



Fig. 6. José Bellver (1941), Triumph of the Holy Cross, detail of the portrait of Franco that had to be covered to comply with the Spanish law of Historical Memory.

© Mercedes Sánchez-Pons, 2005, 2018

As we have said, there are several reasons for these situations. Private owners could prefer to hide the murals' existence because their recognition might entail obligations, which may hinder the commercial exploitation of the property and potential alterations to the building. In other cases, the issue might be the political connotation or the reference to a difficult period, of which there are still open wounds; in some cases, an intervention may even contravene a law, such as the Spanish law of *memoria histórica*. But, above all, lack of knowledge of existing murals and lack of recognition of their value are the main causes for this type of heritage's loss, transformation and decontextualisation.

The interest many of these murals hold leads us to consider the need to systematically inventory and catalogue these works in order to collect information and decide which ones should be preserved. This is not always easy due to the characteristics of their execution.

3 - IMPORTANCE OF THE TECHNICAL PROCEDURES AND REPERCUSSION FOR MURAL CONSERVATION

The twentieth century was a time of great technical and procedural changes and experimentation in many ways, giving these works special worth. The introduction of industrial paints and materials changed the way artists work forever. All these murals help us better understand how this change takes place. Each country has its own evolution in the use of synthetic materials, and, as conservator restorers, this is a very interesting point.

The technique and the materials employed by each artist of this period rely on different factors, such as their training, preferences and interest in experimentation, the local market and the particular resources to access it. Considering all these issues in relation to each other can help us hypothesise about the technique used. For example, in the postwar period, with a very complicated economic situation, many secco murals were made with organic glue (from rabbit or casein). However, we can also find other kinds of experiments linked to opportunity, like some murals by Bellver, who used alkaline silicates in the forties.

For the same reason, there are many marouflage paintings, some of them attached to the wall in a simple way (commercial oil on canvas), but others in a more sophisticated manner, as can be seen in the studies carried out on Sert's paintings in the *San Telmo* Museum, ¹⁰ or on the paintings made by José Aguiar, most of them with encaustic, but also in linen and wood.

While some artists became experts in the use of the fresco technique, such as Stolz or Miquel Farré, who also disseminated his knowledge through the Escola Internacional de Pintura Mural in San Cugat (Gómez, 1973), many

⁹ https://www.boe.es/buscar/act.php?id=BOE-A-2007-22296

https://www.santelmomuseoa.eus/index.php?option=com_flexicontent&view=items&id=8315&cid=0&Itemid=179&lang=es

others did not master it. Some of them experimented with fresco, especially at the beginning of their professional lives, then abandoned it to opt for materials with fewer requirements or that allowed for greater experimentation. Consequently, they are not experts in this kind of technique, using mostly mixed techniques, and therefore, we must be prepared for unusual material behaviour, either due to the use of mortars containing cement and inadequate pigments, binders in combination, or due to the lack of control in the technique itself. For example, according to the restorer Antonio Sánchez Barriga, Arteta used the fresco technique combined with casein tempera. The same applies to Rafael Cardells (1899-1980), who also used an unusual palette for a fresco technique. The paintings about the Spanish Civil War we previously saw by Quintanilla were made with fresco. Still, on free-standing support and during the restoration process, it was found that some figures added a secco, probably with lime (Gárate et al. 2007).



Fig. 7. Bellver's handwritten notes on the experiments carried out on the *Holy Cross murals*; cross-section and FTIR-ATR spectrum of a sample taken from the paintings.

Only a few artists continued practising fresco, including Jaume Minguell, who also taught it to his son, Josep Minguell. The latter continues painting today almost exclusively in fresco, with a personal plastic language and investigates this medium (Minguell 2008).

In Spain, during the twentieth century, especially in the second half, the training and practice of artists were strongly linked to experimentation. It was common to work with several techniques, as we have seen in the case of Javier Clavo's murals in the Blasco Ibañez Campus. The artist, also a renowned engraver and sculptor, put into practice the knowledge he had acquired shortly before, during his stay in Italy, about different mural techniques.

Most of these murals have not yet been studied scientifically. New materials available to artists were in large numbers, which, together with their eagerness to experiment, could lead to complicated works regarding conservation procedures. It is important to contrast the documentation generated by artists, and that which we can find in their environment, with what can be observed and with the physical-chemical analysis, but also to take into consideration the exact year in which they were made, the artists' habits at the time and the existing materials available to them in the nearby market at that particular moment. For example, we know that Bellver used potassium silicate as a fixative on a lime mortar. Still, in his handwritten notes we see how he had been trying different ways of fixation and combining with other light binders, like beer. Another work, Vista de A Coruña 1669 by Lugrís, due to its appearance is catalogued by the Ministry as an acrylic painting: however, other evidence leads us to believe that he could have used a commercial oil or decorative alkyd paint. Evidence such as the date it was painted, the oil identified in the studies made during the conservation process and a handwritten note by the artist where he proposes the use of commercial oil paint from the English house Reeves for another mural project.¹²



Fig. 8. Luís Quintanilla (1939), Love Peace Hate War, detail of the layers of the original support of the fresco technique in the Soldiers panel. © Juan Valcárcel Andrés, 2007

CONCLUSIONS AND OPPORTUNITIES

Mural production in Spain during the twentieth century was more significant than a priori might have been expected. Some previous partial studies had inventoried a large number of murals from a few regions of Spain. Thanks to them, we can have a partial view of the type of murals made and check some of their historical or artistic importance.

https://www.boe.es/diario boe/txt.php?id=BOE-A-2017-15278

https://www.afundacion.org/es/agenda/evento/exposicion_lugris

The ignorance, forgetfulness and neglect of some of these murals leads us to consider the need for a suitable inventory and cataloguing model based on the above-mentioned partial experiences. This inventory would have to consider all aspects contributing to their understanding and assessment, as was the case of the one that addressed outdoor contemporary murals in the USA (Rainer 2003, Shank 2008). This model must contemplate the compilation of the necessary data for the implementation of both targets: the specific study of the role of mural painting over the twentieth century and the work's technical and material aspects.

When we observe these works closely, many doubts arise in relation to the technique and materials used. There are many options, and getting it right with a single methodology is impossible. The paintings are complex formulas that require the combination of different analysis techniques to correctly interpret the results obtained. These works require an interdisciplinary approach that combines different methodologies of study, considering both the collection of testimonies and documents from the artist's environment and the interpretation of diverse analytical results of the direct study of the paints. More in-depth studies are also needed on the local market for industrial materials to which artists had access, especially those intended for wall decoration, such as the studies carried out regarding market conditions in the US, the United Kingdom and Portugal (Standeven 2011; Ferreira 2011).

With this type of approach, we will have the tools for properly disseminating knowledge regarding the murals and for drafting intervention plans that will ensure the best possible conditions for their conservation. Understanding these murals helps us to understand our more recent history and, therefore, to better understand the society to which we belong.

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THE MURAL ART BY ALMADA NEGREIROS IN MADRID: THE POLYCHROME GYPSUM BAS-RELIEF FROM THE CINE SAN CARLOS

Michèle Portela

Laboratório José de Figueiredo - MMP, E.P.E. (Museus e Monumentos de Portugal, E.P.E.

Inês Cardoso

Laboratório José de Figueiredo - MMP, E.P.E. (Museus e Monumentos de Portugal, E.P.E.

Elsa Murta

Laboratório José de Figueiredo - MMP, E.P.E. (Museus e Monumentos de Portugal, E.P.E.

ORCID 0000-0002-5779-2630

ABSTRACT

This text presents the stages of the study and interventions carried out on the polychromed gypsum bas-reliefs created by Almada Negreiros in 1929 for the façade and hall of the Cine San Carlos in Madrid. Produced during his stay in the Spanish capital between 1927 and 1932, these works mark the beginning of his collaboration with architects in the decoration of public buildings and now stand as unique examples of the artist's extensive mural art collection.

The bas-reliefs were acquired by Manuel de Brito and brought to Lisbon by Ernesto de Sousa. Due to their delicate state of conservation, the panels were admitted to the Instituto José de Figueiredo (IJF), where they underwent an intervention. The two panels, *Commedia dell'arte* and *Namorados*, remain in the sculpture department and are the focus of this article, which briefly outlines their history at the institution, production techniques, original materials, repaints, condition, and the conservation and restoration efforts.

KEYWORDS

Almada Negreiros, gypsum, production technique, polychrome, conservation and restoration.

Michèle Portela

Holds a Postgraduate degree in Museology and Museography from FBAL in 2010. Graduated in Mural Painting Conservation Course, ICCROM, Rome in 1992. Graduated in Conservation and Restoration of Mural Painting, from the José Figueiredo Institute, in 1986. Conservator-Restorer of Mural Painting at the José de Figueiredo Laboratory in Lisbon since 1987. Conservator-Restorer of polychrome sculpture at the José de Figueiredo Laboratory since 2009 till the present day.

Inês Cardoso

Graduated in Conservation and Restoration (2006) and holds a Master's degree (2011) from the Faculty of Science and Technology, NOVA University of Lisbon. Collaborates on conservation projects and conservation and restoration interventions in stone materials and mortars, working with multidisciplinary teams and conducting archival research on past interventions. In 2022, she was a research fellow for the project 'Unveiling the Mural Painting Art of Almada Negreiros (1938-1956): Technical, material and diagnostic scientific study as a guide for its future conservation and enjoyment' [PTDC/ART-HIS/1370/2020]. Stone sculpture and polychrome stone conservator-restorer at the José de Figueiredo Laboratory (since January 2024).

Elsa Murta

Holds a Master's degree in Decorative Arts with a specialization in Gilded Wood Carving from the Catholic University of Portugal, completed in 2010. Graduated in Conservation and Restoration of polychrome sculpture from the José Figueiredo Institute in 1986. Certificate of the International Course on Wood Conservation Technology, ICCROM/NTH, Trondheim, Norway. Conservator-Restorer of polychrome sculpture at the José de Figueiredo Laboratory in Lisbon since 1987 till the present day.

1. INTRODUCTION

José Sobral de Almada Negreiros (1893-1970) was a central figure in Portuguese Modernism, a versatile and multidisciplinary artist active during the first half of the 20th century (Vieira, 2010).

During his stay in Madrid from 1927 to 1932, Almada collaborated with architects and artists on various mural and decorative art projects for buildings linked to culture (Sousa, 1983). Among these works are the bas-relief panels for the Ciudad Universitaria de Madrid, the Teatro Muñoz Seca, the Cine Barceló, and the Cine San Carlos. These are the only works Almada created outside of Portugal and among the first architectural decorative pieces he produced. This is particularly significant considering that, upon his return to Portugal, Almada began a series of collaborations with Portuguese architects, most notably with Porfírio Pardal Monteiro, for mural paintings in buildings across Lisbon (Vieira, 2005).

In the Cine San Carlos building, designed by architect Eduardo Lozano Lardet (1897-1968), Almada created a set of 14 polychrome gypsum bas-reliefs in 1929, representing various cinematographic genres and marking the inauguration of the theatre's new sound system. Eight of the bas-reliefs were placed on the exterior façade, forming a long decorative strip interrupted by five window openings. Their titles were *Chase*, *Cowboys*, *Hands Up*, *Police*, *Cabaret*, *Dancing*, *Charlie*, and *Kiss* (Fig. 1). Six others were placed on the interior hall walls, including two diptychs—*Jazz* and *Bar de Marinheiros* (Sailor's Bar)—and two individual pieces—*Gato Félix* (Felix the Cat) and *Circo* (Circus) (Fig. 2) (Sousa, 1983, 33).



Fig. 1 – Bas-reliefs on the façade of the Cine San Carlos in Madrid (duplicate of a photograph from Ernesto de Sousa's estate, c. 1930, ⊚ LJF-MMP, E.P.E.); a) Perseguição (unknown dimensions); b) Hands up (Western II) (162, 5 x 102 x 6 cm); c) Variedades (167 x 190 cm); d) Policial (unknown dimensions); e) Dancing (Music Hall) (167,5 x 93 cm); f) Vaqueiros (Western II) (unknown dimensions); g) Charlie (Charlot) (unknown dimensions); h) Beijo (Namorados) (60 x 165 cm) (Dimensions mentioned in SOUSA, 1983, 50-51) (⊚ LJF-MMP, E.P.E.).

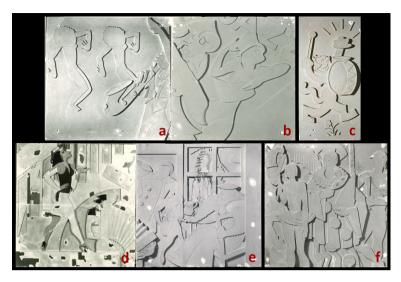


Fig. 2 – Bas-reliefs in the hall walls of the Cine San Carlos – a) b) Jazz (120 x 120 cm) (1974, © LJF-MMP, E.P.E.); c) Gato Félix (120,2 x 60,2 cm) (1974, © LJF-MMP, E.P.E.); d) e) Bar de Marinheiros (1994, © LJF-MMP, E.P.E. / Cabaré); f) (120 x 120 cm), Circo (1979, © LJF-MMP, E.P.E. / Commedia dell'arte) (120 x 120 cm) (Dimensions mentioned in SOUSA, 1983, 51-52).

For over 30 years, the exterior panels were exposed to outdoor environmental conditions. At an unknown date, the eight panels were removed from their original location and stored in the cinema's basement, where they remained without any maintenance. (Sousa, 1983, 44).

In the early 1970s, art critic José Ernesto de Sousa made several attempts to recover the panels. With his collaboration, they were acquired by Manuel de Brito, a Portuguese gallerist and art collector, and brought to Lisbon. Due to their fragile state of conservation, in 1973 the panels were transferred to the Instituto José de Figueiredo (IJF)¹, a public institution dedicated to the preservation of cultural heritage, where they were assessed for their authenticity and condition (Sousa, 1983, 41-44).

The panels on the interior hall walls remained in their original locations. Although better protected from environmental conditions, they were still exposed to tobacco smoke and, at an uncertain date, were repainted with a monochromatic layer of paint. The panels from the façade showed extensive damage and, at an early stage of the assessment, were even considered beyond repair. However, after more careful examination, the decision was made to proceed with an intervention, which would be carried out by the conservators-restorers at the IJF.

The hall bas-reliefs were less affected compared to those on the façade. In 1974, analytical studies of the constituent materials were conducted by the

¹ Currently named Laboratório José de Figueiredo (LJF).

Division of the Central Laboratory of the IJF. The results obtained were crucial in defining the intervention methodology, particularly for the removal of the repolychrome that completely covered them. In 1986, the inventory and classification process for this group of bas-reliefs was completed and published in the Diário da República, No. 156, III Série, on July 10th, 1986 (INCM, 1986). Due to the complexity of both panel groups (façade and hall) and to address the technical and material issues, further analytical campaigns were carried out in 1993², 2010, and 2013³.

The hall bas-reliefs underwent a conservation and restoration intervention. The façade bas-reliefs were subject to preventive conservation. This process was documented through graphic and photographic records of the existing fragments, along with their identification and packaging into individual boxes for each panel. Both sets were then returned to their owners. The exceptions are the hall and façade panels titled Circo and Beijo (or Commedia dell'arte and Namorados, according to the IJF entry forms), which are still undergoing restoration at the IJF. This article focuses on these specific panels as representatives of the original grouping and highlights their significance within the context of Almada Negreiros' mural art. The Commedia dell'arte bas-relief from the hall depicts a parade of circus characters (Sousa 1983, 51) (Fig. 2 f). In the foreground, we see Columbine, leading a horse by the reins; in the center is Pierrot, and on the right is Harlequin. In the background, behind Columbine, the horse's head and an incomplete figure mounted on its back are visible. This panel is signed ALMADA and dated 1929.

In the Namorados panel (façade), two figures are depicted in profile, one masculine and the other feminine, engaged in a tender kiss under the moonlight (Fig. 1 h) (Sousa 1983, 50).

In this article, we will outline the various stages of the conservation and restoration process for both panels, from the study of materials and production techniques to diagnostic assessments and the conservation and restoration interventions.

2. CHARACTERISATION OF THE PRODUCTION TECHNIQUES USED IN THE CREATION OF THE BAS-RELIEFS

SUPPORT

In the absence of any description from the artist regarding the technique used for the bas-reliefs of the façade and hall, their characterisation was based on direct observation of both the front and back of the works. In 1983, this study was complemented by an exercise led by Lagoa Henriques and Carlos Amado,

² In 1993 and 2010, further studies were conducted on the Commedia dell'Arte panel, continuing the research initiated in 1974.

³ In 2013, the study of materials focused on the Namorados panel.

professors of Sculpture and Drawing at the Escola Superior de Belas Artes de Lisboa (ESBAL). This exercise allowed for the conclusion that the hall panels (with Commedia dell'arte as an example) consist of a first layer, approximately 15mm thick, created by superimposing gypsum plaques, likely manufactured by the artist himself. It is at this level that the insertion of vegetable-fibre canvas can be observed. Over this layer, additional gypsum plaques, varying in thickness from 5 to 16mm, were cut and glued in place to confer three-dimensionality to the figures depicted in each panel. (Fig. 3).

Composition lines are visible on the surface of the bas-reliefs (Fig. 4 a/b), either incised or drawn in graphite. These lines may have been used to align the plaques, but they also highlight decorative details that were subsequently cut, finalized, and sculpted.



Fig. 3 – Commedia dell'arte, overlapping plaster panels with variable thickness to confer three-dimensionality (2023, Portela, M., @ LJF-MMP, E.P.E.)

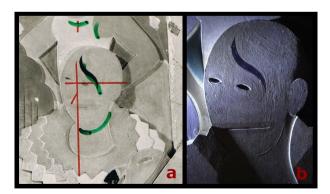


Fig. 4 – Examples of incised composition lines: a) Commedia dell'arte, detail of Pierrot, with red and green indication of the incised composition marking lines on the support (2009, Portela, M., © LJF-MMP, E.P.E.); b) In the same figure, composition lines visible under ranking light (2013, Portela, M., ©LJF-MMP, E.P.E.).

For the Commedia dell'arte bas-relief, and as part of the characterisation of the support materials, micro-samples were collected from areas of lacunae and subjected to tests for colouration, solubility, and microchemical analysis, in conjunction with stratigraphic observation (Picciochi Alves 1974). The results of these analyses identified gypsum (CaSO₄.2H₂O) as the main compound of the support plaques, which appears to have been impregnated with a protein binder, as described in Table 1.

	Year	Examination and analysis methods	Support	Pigment	Binder	1st repolychrome		2nd repolychrome	
\vdash		Total for a landar	0			Pigment	Binder	Pigment	Binder
Commediadell.arttee/haall	1974	Tests for colouring, solubility and chemical reactions on a micro scale together with stratigraphic	Gypsum (CaSO ₄ .2H ₂ O) impregnated with protein binder, animal	Prussian blue Calcium sulphate Ochre Chromium green	resin based oil	calcium carbonate + lead carbonate	resin based oil	unidentified nature	aqueous based
	2010	Optical microscopy, microtherian analysis, jac-DRX	glue Gypsum CaSO4.2HzO	Lithopone (Barium sulfate + Lead white Ochre Umber Prussian blue Indigo Animal charcoal Vegetable charcoal Red dye/ Vermillion Green (Prussian blue + ochre + white)	oil	baryte	oil	noa	n identified
N a m o r a d o s / f a c c a d e	2013	Optical microscopy, microchemical analysis, µS-FITIR, µ-ONX, MEV- EDX	Gypsum dihydrate (CaSO4_2H;O)	Crocote (Pb chromate) Ultramarine blue Brussian blue Baryte - animal charcoal - Animal charcoal Animal charcoal Lithopone, Prussian blue Kaolinite	Oil (alkyd resin modified with oil)	non existent			

Table 1 - Methods of examinations and analysis and summary of the material characterization done on the bas-reliefs Commedia dell'arte (hall) in the years 1974, 2010 and Namorados (façade) in 2013

Regarding the façade bas-reliefs, of which Namorados is an example, it was determined that they were made using gypsum, reinforced with the insertion of natural-fibre canvases. Additionally, H-shaped wooden elements were observed on the back of the panels as part of a stabilization grid. The canvases are arranged in one or more layers, depending on the depth of the support, which is visible in the fracture zones (Fig. 5). These observations were corroborated in 2011 by an X-ray⁴ taken of a fragment of the male figure in the Namorados bas-relief (Fig. 6a). In the digital X-ray image shown in Fig. 6b, the

 $^{^4~}$ X-rays were generated using a YXLON Andrex Smart 160 E X-ray generator, with exposures captured on Kodak AA400 film at settings of 35 kW and 5 mA.

warp and weft of the canvas, a taffeta structure with a low thread density per square cm, can be clearly distinguished.



Fig. 5 – Bas-relief Namorados, canvases embedded into the plaster support visible in the fracture of the polychrome plaster (2023, Portela, M., © LJF-MMP, E.P.E.).

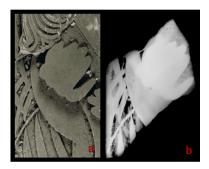


Fig. 6 – Bas-relief Namorados: a) X-ray detail examination (1973, © LJF-MMP, E.P.E.); b) X-ray of the foreground (support), verifying the presence of the canvas (2013, Piorro, L., © LJF-MMP, E.P.E.).

POLYCHROME

Hall bas-reliefs (Commedia dell'arte).

Covering the entire surface of the hall panels was a layer of repolychrome in a greyish shade, which was analyzed in 1974 by Picchiochi Alves (Table 1). Although the chromophore was not identified, the results revealed that this layer had an aqueous base, and beneath it was another repolychrome of light brown color, composed of calcium carbonate and lead carbonate.

The removal process of the repolychrome eventually revealed the original materials as well as the pictorial techniques used by the artist. It was determined that the painting was created through the superimposition of layers of color, thick brushstrokes, and impasto, which also added texture and relief to the work [(Fig. 7a, b, c)]. In the hall grouping, as seen in the *Commedia dell'arte* panel, shades of blue, green, red, brown, black, and white are predominant.

According to the 1974 study, the same panel also revealed the presence of Prussian blue, chromium-based green, ochre-based browns, and calcium sulfate as white, all bound with a resin-based oil, as referenced in Table 1.

In 2010, during the removal of the repolychromes from the Commedia dell'arte panel, it became necessary to study both the original materials and subsequent layers in greater depth to optimize the intervention process (Ribeiro 2010). As part of this, 21 micro-samples were collected, covering all the different chromatic tonalities. These samples were analyzed using optical microscopy, microchemical analysis⁵, Fourier transform infrared microspectroscopy (μ-FTIR)⁶, X-ray fluorescence spectroscopy (μ-XRF⁷, and micro X-Ray diffraction (μ-XRD)⁸.



Fig. 7 – Bas-relief Commedia dell'arte, pictorial techniques: a) Detail of the horse's leg with overlapping layers of colour (2013, Portela, M., © LJF-MMP, E.P.E.); b) Pierrot's chin area, highlighted by impasto (2013, Portela, M., © LJF-MMP, E.P.E.); c) Detail of Harlequin: volume obtained by impasto and colour overlap (2013, Portela, M. © LJF-MMP, E.P.E.).

Table 2 presents the results of the characterization of samples 1 and 9 from the Commedia dell'arte panel, including their location, stratigraphic cross-sections, and the composition of materials in each layer.

⁵ The observations carried out by optical microscopy were done with a Leitz-Wetzlar optical microscope, coupled to a Leitz-Orthoplan photographic camera.

The microsamples were analyzed using a Thermo Nicolet® Nexus[™] 670 μ-FT-IR system, equipped with a Thermo Nicolet® Continuum[™] infrared microscope and a mercury cadmium telluride (MCT-A) detector cooled by liquid nitrogen. Analyses were performed in transmission mode, with the microsamples compressed in a Spectra Tech mSample Plan diamond micro-compression cell. Spectra were acquired by averaging 256 scans at a spectral resolution of 4 cm $^{-1}$, covering the range from 4000 to 650 cm $^{-1}$, and processed using OMNIC 6.0 software from Thermo Nicolet®.

 $^{^7\,}$ Sporadic elemental analyses were performed using a $\mu\text{-XRF}$ device, E.I.S. Srl system, model XRS38, with a tungsten anode (0.40 μA , 30 kV). Spectra processing and result quantification were carried out using the QXAS 3.6 software, developed by the International Atomic Energy Agency.

⁸ Analyses using µ-XRD were conducted with a Bruker AXS micro-diffractometer, model D8 Discover, featuring an area detection system (GADDS). The setup included a Cu-K tube, Göbel mirror, HiStar detector, and a 1 mm diameter collimator. The angular range analyzed was between 8° and 70°, with an acquisition time of 600 seconds and a step interval of 0.02°. The tube was operated at 40 kV and 40 mA. Phase identification was performed using the PDF-ICDD international database with Bruker EVA software (Version 5).

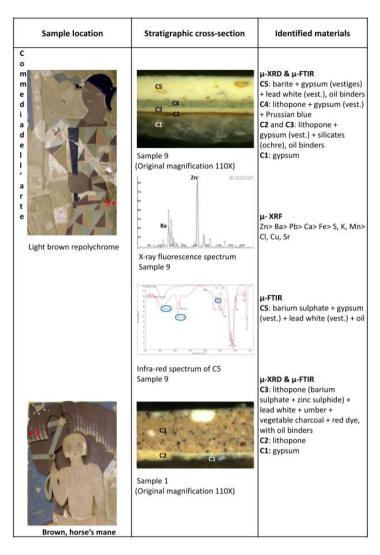


Table 2

Sample 9:

Layer C1: Micro-X-ray diffraction (μ -XRD confirmed the presence of dihydrate gypsum (CaSO₄·2H₂O) as a major constituent of the support plaques in both samples. Fourier transform infrared microspectroscopy (μ -FTIR) also detected a protein binder (likely animal glue) impregnated within the gypsum, possibly serving an insulating function.

Layer C2: Above the support layer, a second layer was identified, composed of barium, sulfur, and zinc, corresponding to barium sulfate ($BaSO_4$)

and zinc sulfide (ZnS) as detected by μ -XRD The combined presence of these compounds indicates that the layer is lithopone, an synthetic white pigment known for its opacity and high covering power. Given its position (between the support/glue layer and the polychrome), this layer is likely a preparatory layer, used to even out and/or insulate the surface.

Layer C3: In addition to lithopone, trace amounts of ochre and umber pigments were also detected.

Layer C4: The original blue polychrome is primarily composed of a mixture of lithopone and an iron-based pigment, identified by $\mu\text{-XRF}$ Given that this is a blue layer, the presence of iron likely indicates the use of ferric ferrocyanide, commonly known as Prussian blue.

Regarding the original polychromy, oil was identified as the binder for the pigments in both the C3 and C4 layers, as determined by μ -FTIR.

Layer C5: This layer corresponds to the first repaint, characterized by a yellowish-cream hue. μ -FTIR analysis identified baryte, gypsum, and lead white in its composition, with oil as the binder.

Acrylic resin and proteins were identified by μ -FTIR 10 as components of the restoration intervention applied to the support, while wax was likely introduced as a result of contamination.

Regarding the *Commedia dell'arte* panel, vermilion, bound with oil, was also detected in the reds of the flesh tones and the pink of Harlequin's costume.

Façade bas-reliefs (Namorados)

The façade grouping, exemplified by Namorados, featured a color palette limited to white, blue, yellow, and black. In 2013, an analytical study was conducted to characterize the pigments and binders (Oliveira 2013). Sixteen micro-samples were collected and analyzed using optical microscopy, microchemical analysis, $\mu\text{-FTIR}$ for identifying inorganic and organic compounds, and $\mu\text{-XRD-for mineralogical}$ characterization. The location and morphology of the particles, as well as the distribution of chemical elements, were observed through scanning electron microscopy with energy-dispersive X-ray spectrometry (SEM-EDS). 11

Studies by Müller, Weise, and Rünzler (2008) focused on modern paintings from the first half of the 20th century, analyzing their materials, techniques, and degradation phenomena.

¹⁰ Ribeiro, I. 2010. Baixo-relevo Circo/Personagens da Commedia dell'arte, 06-09. Laboratório de Conservação e Restauro José de Figueiredo.

¹¹ Chemical analysis using scanning electron microscopy with energy-dispersive X-ray spectrometry (SEM-EDS) was conducted with a Hitachi S-3700N variable pressure environmental scanning electron microscope, equipped with a Bruker XFlash 5010 SDD EDS detector.

Table 3 shows the location of sample 2, collected from the blue color of the sky, along with the results of its stratigraphy and the corresponding constituents. The stratigraphic section of this sample aligns with the original polychrome, showing no traces of repolychrome.

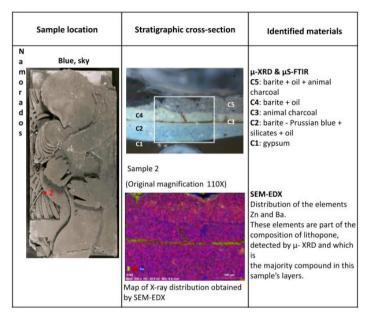


Table 3

As observed in the *Commedia dell'arte* hall panel, the first stratum (Layer C1) corresponds to the gypsum dihydrate support.

Analysis by SEM-EDS of this sample identifies zinc and barium, indicating the presence of lithopone, which is uniformly distributed throughout the polychrome layers C2, C4, and C5. This compound was also identified in the polychrome layers overlying the gypsum support of the hall panel, as previously described.

Still in layer C2, alongside lithopone, we find Prussian blue and silicates, with oil or oil-modified alkyd resin serving as binders.

The composition of layer C3 differs from the others, as it is composed of animal charcoal.

In layers C4 and C5, lithopone and oil as a binder are detected again, with animal charcoal present in C5.

The dark shade of the circles decorating the dress of the female figure was achieved by mixing lithopone and animal charcoal. In the bracelet and hair of the female figure, chromium-based pigments, specifically crocoite (Lead Chromate, PbCrO4), and lithopone were identified. For the flesh tones and hair of the male figure, ivory black and Prussian blue pigments were found.

3. DIAGNOSIS

Hall bas-reliefs (Commedia dell'arte).

All the hall panels, at the level of the gypsum support, exhibited occasional adhesion losses. At the edges of the panels, lacunae and fractures were observed, caused by the method of securing the panels to the wall with screws (Fig. 8a). The fissures were transversal across the entire support (Fig. 8b).



Fig. 8 – State of preservation of Commedia dell'arte: a) Lack of adhesion between the plates that make up the support (1984, @ LJF-MMP, E.P.E.); b) Lacunae of original polychrome (2013, Portela, M., @ LJF-MMP, E.P.E.). State of conservation of Namorados: c) Plaster degradation due to phenomena of alveolization (2013, Portela, M., @ LJF-MMP, E.P.E.); d) Support lacunae, erosion and detachment of polychrome plaster (2013, Portela, M., @ LJF-MMP, E.P.E.).

As previously described in the characterization of the materials, these panels were entirely covered by two layers of repolychromy. The first layer, a yellowish hue, exhibited stronger adhesion to the original polychrome. The binder, identified in 1974 as oil-based (Table 1), had a composition similar to that of the original polychrome. The second layer, with a greyish tint, showed weaker adhesion to the underlying layer. As the repolychromy was removed, a brownish layer became visible, presumed to be either the result of aging paint or a product of exposure to tobacco smoke, a common environmental factor in cinema lobbies at the time when indoor smoking was permitted.

Façade bas-reliefs (Namorados).

These panels were highly fragmented and had extensive lacunae, having been exposed for several decades to external conditions such as pollution, sun radiation, rainfall, and humidity and temperature fluctuations. Furthermore, they were later stored in the cinema's basement under inadequate conditions

and without proper maintenance. Based on the diagnostic of the eight façade bas-reliefs, Namorados, although significantly fractured, showed less deterioration and was considered to have a higher potential for restoration.

Throughout its entire length, the gypsum support exhibited numerous fissures and fractures. In more advanced stages of deterioration, significant lacunae were observed, as noted by Ernesto de Sousa, who reported that "the upper area and the lower right corner were missing" (Sousa 1983, 50).

The interior of the support and the gypsum plaques were examined through the fractures and lacunae, revealing pronounced alveolization of the gypsum (Fig. 8c). The porous nature of the gypsum contributed to the accelerated deterioration process. The original polychrome was highly eroded, showing significant adhesion loss to the support, with scales flaking off and considerable powder chalking observed (Fig. 8d).

On top of the original polychrome, several types of deposits were identified, including cement residues, paint, probable oily stains, and the presence of salts. The general greyish appearance of the work was attributed to leaching phenomena and subsequent runoff markings, but could also be linked to biological colonization. Notably, in the material study conducted on this panel in 2013, calcium oxalates were identified in several samples. These compounds, considered a biosignature of pre-existing life (Gadd et al. 2014), are products of the chemical activity of certain algae, fungi, and bacteria. These organisms produce oxalic acid, which reacts with gypsum or calcium-based pigments to form calcium oxalates—Weddellite/Whewellite. Thus, their detection may be related to the panel's prolonged exposure to external environmental conditions.

4. CONSERVATION AND RESTORATION INTERVENTION

The intervention and restoration options were based on an assessment of both the execution technique and the state of conservation of the support and polychrome of the bas-reliefs. The following outlines the general guidelines for the different stages of intervention on the hall and façade bas-reliefs, with Commedia dell'arte and Namorados serving as representative examples.

Commedia dell'arte

The methodology adopted for the restoration of all the hall bas-reliefs included the following steps: surface cleaning, construction of a new rigid support to reinforce and stabilize the bas-reliefs while maintaining compatibility with the original material, filling of lacunae and fissures, mechanical removal of the first and second layers of repolychromy, and, finally, chromatic reintegration of the lacunae.

The stabilization of the bas-reliefs' original support involved securing the unattached gypsum plaques with an injection of an acrylic copolymer

emulsion diluted to 50% in $\rm H_2O$ (w/w) (Primal AC 33). For the construction of a new support and the protection of the bas-relief, a counter-mold (Fig. 9a) was created using expanded polystyrene slabs, which conformed to and filled the cutouts of the different levels of the panel (Fig. 9b). The construction of a rigid, sandwich-shaped support on the back of the panel reinforced the stability of the work. The preparation of the new support included consolidating the back by applying the same acrylic copolymer Primal AC 33 at a 10% concentration in $\rm H_2O$ (w/w).

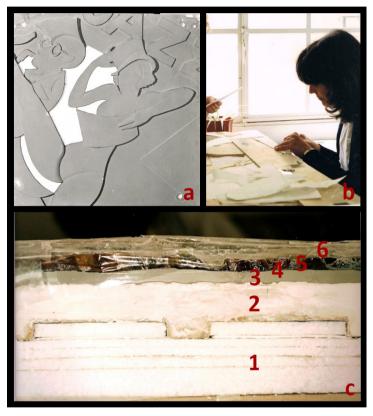


Fig. 9 – Rigid support construction – a) Counter shape (1974, © LJF-MMP, E.P.E.); b) Application of cut polystyrene sheets to the front of the bas-relief (1993, © LJF-MMP, E.P.E.); c) Construction of a new support: 1) Expanded polystyrene boards.; 2) Bas-relief.; 3) Plasticine.; 4) Glass fibre impregnated with epoxy resin.; 5) Honeycomb cardboard.; 6) Glass fibre impregnated with epoxy resin (1993, © LJF-MMP, E.P.E.).

Lacunae in the support were filled with a cellulose bitumen (Perfax), and a slab of expanded polystyrene was applied. The process was completed with a honeycomb-shaped cardboard structure, which was then surrounded by

fiberglass blankets impregnated with epoxy resin (Araldite® L Y 554) and hardener (HY 554, CIBA GEIGY) (Fig. 9c).

In the Commedia dell'arte bas-relief, the second repolychrome, which was water-soluble, was removed using cotton swabs and deionized water. As for the first repolychrome, and as previously mentioned, the solubility tests¹² indicated it had an oil binder with a composition similar to that of the original polychrome. This made the removal of this layer a complex and lengthy operation, requiring the use of a binocular microscope magnifier, fine cotton swabs, and a minimal amount of solvent to avoid damaging the original polychrome.

As described in a 1996 report¹³ by Zafiropolus, a test was carried out on a detached fragment of the Commedia dell'arte bas-relief using a laser method with controlled parameters, to remove the repolychrome without damaging the light brown layer or the original brushstrokes.

Initially, an aromatic solvent of commercial use was employed, but Initially, an aromatic solvent of commercial use was employed, but it was later replaced by enzymes found in natural and synthetic saliva (triammonium citrate). This change yielded better results in removing the polychrome layer and also reduced the toxicity of the methodology. it was later replaced by enzymes found in natural and synthetic saliva (triammonium citrate). This change yielded better results in removing the polychrome layer and also reduced the toxicity of the methodology.

The technical difficulty in removing the repolychrome was intensified by the morphology of the original surface, the resistance of the repolychrome to mechanical action, and the chemical reactions between the solvents and the original polychrome, which could further compromise the fragility of the surface.

The intervention on the *Commedia dell'arte* bas-relief is still ongoing at the LJF.

Namorados

As for the Namorados bas-relief, after identifying the constituent materials, the polychrome was pre-fixed using Klucel G@, a non-ionic cellulose ether, dissolved in a 3% ethanol solution. Occasionally, vinyl acetate (Mowilith DS 5/2) was also used in a 30% water solution (w/w). Given the fragmentation of the work, a critical interpretation of the forms requiring reconstruction will be necessary to fill the lacunae in the support and reinforce its material integrity. The evaluation of the typology for a new support, which is still to be constructed, is also ongoing. Additionally, the reintegration of lacunae and the tonalities of the rebuilt areas are still under discussion, particularly concerning the polychrome.

Solubility tests carried out in 1993 by Liliane Masschelein-Kleiner.

 $^{\,^{\}mbox{\tiny 13}}\,\,$ Zafiropulos, V. 1996. InteRacTT, Institute of electronic structure and laser – Hellas (FO.R.T.H).

5. FINAL CONSIDERATIONS

The two groupings of bas-reliefs at the Cine San Carlos in Madrid hold significant importance in the artist's career. Despite their troubled journey, they have survived to the present day. These works served as precursors to the large-scale projects the artist would later create in Portugal, including mural paintings, incised works, tile patterns for building façades, and more. Although both groupings were executed at the same time, they exhibited different states of conservation due to their exposure to distinct environments the façade and the hall of the *Cine San Carlos*.

The materials identified in the structures of both hall and façade bas-reliefs were found to be identical in the composition of the support, gypsum and canvas. The three-dimensionality of the works, although produced using different techniques—either through the overlaying of gypsum plaques or by moulding, was accentuated by the chiaroscuro effect created by the polychrome.

The characterization of the support materials, along with the different pigments, dyes, binders, and repolychrome, played a decisive role in defining the conservation and restoration methodology.

In the *Commedia dell'art*e bas-relief, the technical difficulty in removing the first repolychrome was due to: i) the composition of the binder, which was similar to that of the original polychrome; ii) the mechanical resistance of the layers to the removal process; iii) the morphology of the surface of the bas-relief; and iv) the need to safeguard the brownish layer.

The Namorados bas-relief also requires reassembling the fragments and adhering them in their correct positions. A study is currently underway to design a support that will restore its stability. At a later stage, the reconstitution of the support lacunae and the reintegration of the polychrome will be considered, in terms of the bas-reliefs' aesthetic appearance.

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SCIENCE APPLIED TO MODERN MURAL PAINTING STUDIES. TRADITIONAL PIGMENTS AND INNOVATIONS IN ALMADA NEGREIROS' WORKING PALETTES AT THE DN BUILDING IN LISBON (PHASE 2).

Milene Gil

HERCULES Laboratory and IN2PAST, Institute for Advanced Studies and Research, City University of Macau Chair in Sustainable Heritage, University of Évora. ORCID 0000-0002-5779-2630

Mafalda Costa

HERCULES Laboratory and IN2PAST, Institute for Advanced Studies and Research, University of Évora. ORCID 0000-0001-8764-2310

Sara Valadas

HERCULES Laboratory and IN2PAST, Institute for Advanced Studies and Research, City University of Macau Chair in Sustainable Heritage, University of Évora. ORCID 0000-0003-2146-7024

Ana Margarida Cardoso

Museus e Monumentos de Portugal E.P.E-Laboratório José de Figueiredo. ORCID 0000-0002-4935-3398

Yigit Zafer Helvaci

HERCULES Laboratory and IN2PAST, Institute for Advanced Studies and Research, University of Évora. ORCID 0000-0002-7946-3010

Sriradha Bhattacharva

HERCULES Laboratory and IN2PAST, Institute for Advanced Studies and Research, University of Évora

António Candeias

HERCULES Laboratory and IN2PAST, Institute for Advanced Studies and Research, City University of Macau Chair in Sustainable Heritage, Chemistry Department, School of Sciences and Technology, University of Évora, ORCID 0000-0002-4912-5061

ABSTRACT

This chapter reports the analytical study carried out on Almada Negreiros' two working palettes in the public hall of the DN Building in 1939. Both palettes were hidden behind wooden cabinets and discovered in 1991 during conservation works. The first study carried out in 2021 focused on the identification of cadmium pigments. In phase 2, the goal was to extend the research to other colour materials to ascertain the different types of pigments employed by the artist.

The analytical setup comprised in loco colorimetry and spectrophotometry in the visible range, h-OM and h-EDXRF, complemented by OM-Vis and $\mu\text{-FTIR}$ of micro samples collected from the paint layers. The data obtained were compared with the results of the analyses carried out in the pigments found in powder form at Almada's studio from the commercial brand Pigments pour la Fresque-LeFranc-Paris, as they are the most likely source of the colour materials used in the production of the working palettes.

This research highlights not only the use of traditional pigments commonly found in fresco palettes, such as earth pigments, but also the introduction of modern colourants produced in the 19th century onwards. These are the case of the Cd pigments, Cr green pigments, cobalt and ultramarine blues and, most likely, Mars colours.

KEYWORDS

Modern Art, Almada Negreiros, Mural paintings, Technical Art history, Heritage Science

Milene Gil

is a researcher at the HERCULES Laboratory, the IN2PAST Associated Lab and the CityUMacau Chair at the University of Évora. She has a degree in Conservation and Restoration, a PhD in Theory, History and Techniques of Artistic Production and a postgraduate degree and post-doctorate in Heritage Sciences. She has more than 20 years' experience in the field of mural painting in Portugal and abroad, in the areas of conservation and restoration, scientific research and teaching. She is currently the Pl of ALMADA project and the author of more than 30 publications on the topic of mural paintings.

Mafalda Costa

is a geologist and a researcher in the HERCULES Laboratory (University of Évora) working in the field of Heritage Science. She completed her joint PhD degree in Archaeology and Earth and Space Sciences in 2021. Mafalda's knowledge in a wide range of analytical techniques - XRF, SEM-EDS, micro-Raman spectroscopy, XRD and LA-ICP-MS - has enabled the determination of composition, provenance and manufacturing technology of historical artifacts and painting materials.

Sara Valadas

has a PhD in Chemistry from the University of Évora and has been a member of the HERCULES Laboratory team since 2010, currently as a researcher and integrated member, participating in various national and international projects, being Co-Pl of the Old Goa Revelations Project and Pl of the IN2PAST exploratory project on Van Goyen. She was also a member of the scientific team at the José de Figueiredo Laboratory when she completed her degree in 2007, taking part in various projects in the area of 15th-17th century painting. As a result of her various scientific activities, she has more than three dozen scientific articles in the field.

Ana Margarida Cardoso

has a Master's degree in Materials Engineering from FCT NOVA and a PhD student in Chemistry at the University of Évora. She completed a professional internship at the Portuguese Institute of Conservation and Restoration in 2007, were she worked until 2012, before joining the HERCULES Laboratory until 2024. She is currently a Technician at the José de Figueiredo Laboratory - Museums and Monuments of Portugal, EPE. Her career focuses on the study of Cultural Heritage materials, namely art objects and built heritage, using various analytical techniques and she has participated in research projects and co-authored scientific publications.

Yiğit Zafer Helvacı

is a heritage scientist with a background in classics, archaeology and archaeometry. He obtained his B.A. in Istanbul University, and M.Sc. in Archaeological Materials Sciences from the Erasmus – Mundus ArchMat program. He worked in various projects in Greece, in collaboration with TEl-Athens, Global Heritage Fund and the Archaeological Institute of America. He was a junior researcher at the HERCULES Laboratory in Évora. As Marie Curie PhD Fellow in the Department of Earth Sciences of the University of Torino, he specialized on Byzantine mural paintings and collaborated with institutions such a CCR – La Venaria Reale and ICCROM. He also works on broader topics such as medieval and renaissance art history, heritage studies, and methodology development for conducting research in remote locations and small-scale institutions.

Sriradha Bhattacharya

Graduated with a Masters in Archaeology and Archaeological Material Science and a PhD in Biochemistry and Archaeometry (EJD Marie Skłodowska-Curie Innovative Training Networks). Specialised in analysing the contribution of microorganisms to the degradation in limestone (ornated and non-ornated) caves. Additional campaign work has included work on conservation and restoration of an ancient Roman site in Pisões, studying the colour palette of Almada Negreiros at Diário de Notícias former headquarters in Lisbon, and working with calcitic mortars from south of Alentejo.

António Candeias

is specialised in Surface Chemistry and Heritage Sciences and is currently Full Professor in the Department of Chemistry and Biochemistry at the School of Science and Technology at the University of Évora, researcher at the HERCULES Laboratory and Director of the Associated Laboratory for Research and Innovation in Heritage, Arts, Sustainability and Territory (IN2PAST).

1. INTRODUCTION

In the past, it was common practice among painters to prepare and test colour materials before starting to paint. Analytical studies of pigments and working palettes of easel painters retrieved from their studios have been reported over the years, bringing valuable insights into the pigment choices and the working methods of artists (Townsend 1993, 231-254; Cove 1998, 211-216; Izzo et al. 2017, 547-567). In regards to mural paintings, material and technical recommendations are well set up in historical and modern painting treatises and manuals (e.g., Vitruvius 1874, 151-177; Cennini 2003, 88-129; Nunes 1615, 112-114; Macedo 1886: 34-38; Rochetti 1937). However, finding and being able to examine the working palettes of a mural painter is very rare as they are made on-site, and they were not meant to endure being destroyed after serving their purpose. To the best of the authors' knowledge, this is the first time that such an opportunity has presented itself and, therefore, constitutes a unique case study of valuable importance.

The two mural working palettes done by Almada Negreiros were covered by a wooden cupboard directly after the completion of the mural decoration at the former public hall of the renowned Portuguese newspaper *Diário de Notícias* (Fig. 1). The painting commission for the walls of this entire space was given to Almada Negreiros, who carried it out between 1939 and 1940 (França 198, 349). The two working palettes are located beneath the monumental mural painting known as the Planisphere (or *Mapa-mundi*), and both were most likely done to test colour materials before Almada started this painting in 1939.



Fig. 1a. Overview of DN building main public hall in 1940. Photo: a) Postcard from the first Diário de Notícias Congress, 28 November 1964. Author unknown. Made in Portugal by EXECUCÃO.

After being covered, the presence of both working palettes fell into oblivion until 1991, when the wood cabinets were removed for restoration works. From that date onwards, the palettes were left in place, uncovered, and are now the object of study within the framework of project ALMADA. The first analytical approach to the painting materials and techniques used in both working palettes was carried out in 2021 and focused on the cadmium pigments found (Gil et al. 2021, 4578–4595). In the present study, the goal was to extend the analysis to the other colours to provide a global understanding of the different types of pigments used in terms of composition and historical context, serving as a reference for future studies of the mural paintings at the DN building.



Fig. 1b. Overview of DN building and of the main public hall in 2017. The arrows indicate the location of the two working palettes A and B, respectively with 55x68 cm and 50x94 cm. Photos: M. Ribeiro 2017. All rights reserved.

2. EXPERIMENTAL CONDITIONS

The results reported in the next section are based on the spectra-colorimetric analysis and handheld X-ray fluorescence (h-EDXRF) carried out on both working palettes and on 14 pigments in powder form used as a reference from: a) Kremer manufacturer (recent purchase), b) Pigments pour la fresque-LeFranc-Paris and c) from OSAKA-Japan manufacturer. The 13 pigments from a) and b) were found in Almada's studio in rusty tins. Given the high number of tins found, these are most likely the source of the painting materials used

in Almada's working palettes and his mural painting commissions from 1939 onwards. The green earth pigment from Kremer was added due to its absence in the collection retrieved from Almada's studio.

2.1. COLORIMETRY AND SPECTROPHOTOMETRY

Colorimetry and spectrophotometry analysis comprised 70 colour measurements in the paint layers of both working palettes and 14 in the pigments in powder. The goal was to carry out with a spectrophotometer a first objective colour evaluation with the trichromatic coordinates CIE L*a*b* and a first spectral characterisation of the pigments. The colorimetric data were collected with a *Datacolor CheckPlusII*, equipped with an integrating sphere, in the following conditions: diffuse illumination 8° viewing (in agreement with the CIE publication No.15.2. Colorimetry), SCE and standard illuminant/observer D65/10°. The aperture size used was USAV (Ø5mm).

The results obtained in the CIE L*a*b* colour space, defined by the International Commission on Illumination (CIE) in 1976, correspond to the average of three measurements taken on the surface of the paint layer and powdered pigments. The chromatic coordinates measured were L*, which represents lightness (0-100), a*, which stands for the red/green axes, and b*, which stands for the yellow/blue hue axes (0-100).

The diffuse reflectance spectral curve of the paint layers and pigments in powder was also measured in the visible range (360-750 nm). It was compared with spectra from literature and previous studies (Fiedler 1986; Helias et al. 2006; Barnes 1939; Gil et al. 2009; Plasters 1997; Ashok 2007; Grissom 1986; Newman 1997).

2.2. HANDHELD ENERGY DISPERSIVE X-RAY FLUORESCENCE (h-EDXRF)

h-EDXRF allowed a preliminary in situ non-invasive identification of the elemental composition of the paint layers of both working palettes and the powder pigments included in this study. A <code>Bruker Tracer III SD</code> handheld instrument, equipped with an X-ray tube with a rhodium target and a silicon drift detector, was used to analyse all samples. Spectra were recorded using a voltage and a current intensity of 40 kV and 30 μ A, respectively, during 30s (real time) for the paint layers and 60s (real time) for the pigments in powder form. The instrument was controlled using the S1PXRF software (Bruker $^{\text{TM}}$). The spectra were later processed using the Artax (Bruker $^{\text{TM}}$) software to obtain semi-quantitative data.

2.2. COMPLEMENTARY TECHNIQUES

Both spectra-colorimetric data and h-EDXRF analyses were complemented by optical microscopy in the visible range carried out:

in loco on the paint layers with a handle digital microscope *Dinolite Premier*, with 430x magnification.

in the laboratory on the micro fragments of paint layers collected in 1991 and in 2017, and on cross-sections prepared for a deeper insight into the pigment's optic and physical properties and paint stratigraphy. The imaging analyses were made with a dark field optical microscope, *Leica DM2500M* and a petrographic microscope, *Leica DM2700P* in PLM mode, equipped with a *Leica DFC290HD* and *MC170HD* digital cameras, respectively. Photographic documentation was acquired in reflected and transmitted visible light mode, with 500x magnifications. For cross sections, one fraction of the paint sample was embedded in an epoxy resin (*Epofix Fix*) and polished with 1200 and 4000 sand-papers *SIC papers Grif* in a *Drehzahlregle* rotation disc.

In addition, the powder pigments retrieved from Almada's studio were also characterised by XRD diffraction to ascertain their mineralogical composition. A *Bruker D8 Discover*® diffractometer using Cu K radiation was used for this purpose. The measurements were performed over a 2 range between 3° and 75°, using a step size of 0.05°/s and step time of 1 s. Identification of crystalline phases was performed using the DIFFRAC.SUITE EVA® software and the International Centre for Diffraction Data PDF-2 database.

Table I. – Summary of the results of colorimetry in the Vis, h-EDXRF and XRD analysis carried out in the pigments in powder from LeFranc-Paris, OSAKA-Japan manufacturers. * Exact match with the cadmium selenide sulfide phases present in the PDF-2 database was not achieved suggesting a distinct S-Se proportion. ** Colorant in the pigment could not be identified by XRD indicating the potential use of a non-crystalline material.

Sample ref.	Colour	Manufacturer	CIE chromatic coordinates			Elemental composition	Mineralogical composition (XRD)
			L*	a* b*		(XRF)	
LF25	jaune de cadmium orangé	Le-Franc	69.72	40.85	73.37	Cd, Cr, Cu, Fe, S, Se, Ti	Otavite
LF3	jaune de cadmium citron	Le-Franc	89.71	-0.96	95.82	Cd, Fe, Pb, S	Otavite
LF5	jaune de mars	Le-Franc	56.92	27.26	51.65	Al, Ba, Ca, Fe , S, Si, Zn	Calcite; goethite; quartz (traces); clay/mica (traces)
LF6	ocre jaune	Le-Franc	81.79	16.05	50.98	Al, Ca, Fe , K, Mn, Pb, S, Si, Sr, Ti	Quartz; hydroxylapatite
LF19	terre de sienne naturelle	Le-Franc	60.30	18.29	48.49	Al, Ca, Fe , K, Mn, Se, Si, Ti	Quartz; calcite; goethite clays/micas
LF32	terre de sienne naturelle foncé	Le-Franc	47.75	19.93	39.55	Al, As, Ca, Fe , K, Mn, Ti, Si	Quartz; calcite; goethite clays/micas
LF20	terre de sienne brulée clair	Le-Franc	38.29	39.28	52.22	Al, Ca, Fe , K, Mn, S, Si, Ti	Quartz; calcite; ankerite hematite; clays/micas
LF15	brun de mars	Le-Franc	37.78	19.50	27.41	Al, Ca, Fe , K, Mn, Pb, Si, Ti	Hematite; goethite; quartz; clays/micas

LF33	terre de sombre brulée	Le-Franc	31.32	9.83	13.84	Al, As, Ca, Fe , K, Mn, S, Si, Ti, Zn	Quartz; alkali feldspar; gypsum; hematite; clays/micas
LF8	rouge de cadmium clair	Le-Franc	52.77	57.08	47.86	Cd, Fe, S, Se, Ti	Cadmium selenide sulfide *
LF24	rouge de cadmium foncé	Le-Franc	47.32	56.93	38.16	Cd, Fe, S, Se, Ti	Cadmium selenide sulfide *
LF10	ocre rouge	Le-Franc	59.63	35.41	38.24	Al, Ca, Fe , K, Mn, Si, Ti	Quartz; hematite; clays/micas
LF13	rouge de pouzzoles	Le-Franc	57.50	29.76	29.82	Al, Ca, Fe, Mn, S, Si, Ti, Zn	Quartz; calcite; aragonite; hematite; clays/micas
LF12	rouge de Mars	Le-Franc	40.38	27.87	21.67	Al, Ca, Fe , Mn, Pb, S, Si, Ti, Zn	Gypsum; hematite
LF14	brun rouge	Le-Franc	43.28	27.35	20.28	Al, Ba, Ca, Fe , K, Mn, S, Si, Ti, Zn	Quartz; anhydrite; hematite; clays/micas
LF30	vert à la chaux	Le-Franc	65.61	-33.79	2.29	Ba, Ca, Cr , Fe, K, S, Si, Sr	Barite **
01	viridian	OSAKA	45.69	-34.23	12.35	Ba, Ca, Cr , Fe, K, Pb, S, Si, Sr	Barite; quartz **
LF16	outremer	Le-Franc	31.79	30.09	-67.36	Al, Ca, Fe, K, Mn, Pb, Rb, S, Si, Sr, Ti	Quartz; calcite; clays/micas
LF29	bleu de pompei	Le-Franc	73.13	-5.54	-29.22	Al, As, Ca, Co , Fe, Mn, Si, Ti, Zn	Zincite; cobalt aluminum oxide

3. RESULTS AND DISCUSSION

In this section, the data obtained are represented by colours. Table I summarises the analysis results carried out by colorimetry, h-EDXRF and XRD on the powder pigments found in Almada's studio. Tables II to IV report the summary results of the analytical setup used on the 35 paint layers selected for discussion due to their representativity in both working palettes. Figures 2 to 7 give an overview of the spectral and colorimetry results, as well as optical microscopy of the surface of paint layers and the respective cross sections.

3.1. RED, YELLOW, ORANGE, AND BROWNISH HUES

Table II. – Summary of the results of colorimetry in the Vis, h-EDXRF and µ-FTIR analysis carried out on 19 red, yellow, orange, and brownish paint layers of both working palettes.

Sample ref.	Colour	CIE chr coordi			h-EDXRF (major elements for pigments identification in bold)	μ-FTIR	Pigments attribution hypothesis
		L*	a*	b*	-		
A10	Light pink	72.11	7.11	11.46	Ca, Al, Fe , K, Mn, Rb, S, Si, Sr, Ti, Zr		Ochre/ Mars pigment
A18	Light red	57.53	33.52	17.11	Ca, Cd , Al, Fe , K, Mn, Rb, S, Se ,Si, Sr, Ti, Zr		Ochre/Mars pigment + Cadmium red
A19	Greyish purple	53.17	6.55	6.13	Ca, Al, Cu , Fe , K, Mn, Pb , Rb, S, Si, Sr, Ti, Zr, Zn		Ochre/Mars pigment + Pb-based pigment?

A22	Pink	67.09	21.08	13.41	Ca, Cd , Al, Fe , K, Mn, Rb, S, Se , Si, Sr, Ti, Zr		Ochre/Mars pigment + Cadmium red
A24	Orange	69.26	16.90	21.61	Ca, Cd, Al, Fe, K, Mn, Rb, S, Se, Si, Sr, Ti, Zr		Ochre/Mars pigment + Cadmium orange/red
B4	Yellow-orange	75.34	6.22	22.89	Ca, Al, Fe , K, Mn, Rb, S, Si, Sr, Ti, Zr	Aluminosilicate; calcite	Ochre/Mars pigment
B5	Yellow	77.60	3.10	17.78	Ca, Cd , Al, Fe , K , Mn, Rb, S, Si, Sr, Ti, Zr	Otavite, calcite; sulfate	Ochre/Mars pigment? + Cadmium yellow
В6	Yellow	79.49	1.53	15.86	Ca, Cd , Al, Fe , K , Mn, Rb, S, Si, Sr, Ti, Zr	Inorganic compound; calcite	Ochre/Mars pigment? + Cadmium yellow
В7	Light yellow	80.55	1.19	10.40	Ca, Cd , Al, Fe , K , Mn, Rb, S, Si, Sr, Ti, Zr	Otavite; calcite	Cadmium yellow + Ochre/Mars pigment?
B10	Light red	71.63	17.91	12.77	Ca, Cd , Al, Fe , K, Mn, Rb, S, Se , Si, Sr, Ti, Zr	Calcite; gypsum	Ochre/Mars pigment + Cadmium red
B11	Light pink	76.61	9.76	9.43	Ca, Cd , Al, Fe , K, M n , Rb, S, Se , Si, Sr, Ti, Zr	Aluminosilicate; calcite; sulfate	Ochre/Mars pigment + Cadmium red
B12	Light red	59.66	29.72	16.45	Ca, Cd , Al, Fe , K , Mn, Rb, S, Se , Si, Sr, Ti, Zr	Aluminosilicate; calcite	Cadmium red + Ochre/Mars pigment?
A4	Greenish light brown	62.71	2.36	15.94	Ca, Al, Ba, Fe , K , Mn, Rb, S, Si, Sr, Ti, Zr		Fe-based pigment (ochre and green earth?)
A25	Orange-brown	71.32	10.41	20.17	Ca, Cd , Al, Fe , K , Mn , Rb, S, Se , Si, Sr, Ti, Zr		Ochre/Mars pigment + Cadmium pigments
A26	Brown	61.56	14.00	17.16	Ca, Cd , Al, Co , Fe , K , Mn , Rb, S, Se , Si, Sr, Ti, Zr		Ochre/Mars pigment + Cadmium red + Cobalt blue
B2	Reddish brown	60.08	10.61	11.53	Ca, Al, Fe , K, Mn, Rb, S, Si, Sr, Ti, Zr		Ochre/Mars pigment
B15	Reddish brown	63.12	12.79	11.05	Ca, Cd, Al, Fe, K, Mn, Rb, S, Se, Si, Sr, Ti, Zr	Aluminosilicate; quartz; calcite	Ochre/Mars pigment + Cadmium red
B16	Brown	69.43	7.91	15.69	Ca, Al, Fe , K , Mn, Rb, S, Si, Sr, Ti, Zr		Ochre/Mars pigment
B18	Dark brown	55.44	3.88	6.18	Ca, Al, Fe, K, Mn, Rb, S, Si, Sr, Ti, Zr		Ochre/Mars pigment

The combined use of h-EDXRF and spectrophotometry revealed the use of two different kinds of pigments—iron (Fe) based and cadmium (Cd) based—to produce the red, yellow, orange, and brown hues present in both working palettes (Table II and Fig.2a/b).

In the pigments in powder form that were analysed, Fe is the major element in the pigments labelled as earth pigments (ochres, umbers, and sienna), while Cd is the predominant element in the pigments labelled as cadmium

yellows and reds (Table I). The difference found in the paint layers is not so obvious. As already reported in Gil et al. 2021, Cd was identified along with Fe by h-EDXRF in paint layers B5 to B7; in the orange A24; in all the reds and pinks (except for A10); in the green paint layers A2, A3, A6, A8, B33, B34 and B36, and, finally, in small to trace amounts in the brownish layers A26 and B15 (Table II). The concomitant finding of cadmium and sulphur, and of sulphur and selenide, indicate the use of yellow cadmium sulphides (CdS) and orange and red cadmium sulphoselenide [Cd (S, Se)].

The presence of iron as a major element in all the paint layers analysed could be due to mixtures of pigments. Still, it can also be related to biotite minerals (of generic formula $K(Mg,Fe)_3(AlSi_3O_{10})(F,OH)_2)$ identified as aggregates in the underneath mortar substrate (Gil et al. 2021, 4582). Zinc identified in minor, or trace amounts, by h-EDXRF in both working palettes and in the cadmium powder pigments can be associated to the raw materials and by-products of the manufacturing process of Cd pigments (Fiedler 1986: 64,66,70) (Tables I and II). Zinc was often added to CdS to produce lighter hues, as well as otavite, a calcium carbonate identified by μ -FTIR in the yellow paint layers B5 and B7, and by XRD on powdered pigments LF3 and LF25 (Tables I and II).

According to Fiedler (1986), otavite was one of the raw materials originally used to produce CdS using the dry method. Nevertheless, it could also be used to attain lighter shades of yellow that, according to the same author, were chemically unstable, especially in an alkaline medium, leading to a fast fading of the colour (Fiedler 1986: 71,72). This technical concern would have been taken very seriously among artists since there was a need in the early twentieth century, to ensure the solidity of these colours when used with a fresco painting technique. Paul Baudouin expresses an example of this concern in his book *La fresque - sa Technique - ses applications*, published in 1914 in Paris, which was found among Almada Negreiros' estate. Paul Bedouin taught a course in fresco painting at the École des Beaux-Arts in Paris and was one of the principal artists responsible for reviving the fresco technique of that time in France. The following excerpt was found as a footnote in the chapter on the colours suitable for this category of paintings.

'1. Je donne ici une liste des couleurs pouvant encore être employées à fresque. Le chemiste de la maison LeFranc à Paris en certifie la complete solidité: jaune de cadmiam citron, jaune de cadmium orangé, ...' (Paul Baudouin, 1914:27, footnote 1)

It should be stressed that, at the time, cadmium pigments were a relatively recent addition to artists' palettes. The yellow compound cadmium sulphide was first recommended as a pigment in 1818. However, its use on a reasonably wide scale only took place after its commercialisation, which began in the mid-1840's (Fiedler, 1986: 65). Cadmium orange and cadmium red were created in the early 20th century and, like the cadmium yellows, were popular among artists due to their increased permanence, range of bright hues, high opacity, and

high tinting strength even when laid down diluted, or mixed with slaked lime, as seen in the paint layers B10 to B12 in Fig.2a; B5 to B7 and B18 in Fig.2b (Fiedler 1986: 68,71,73; Barnett e al, 2006:452).

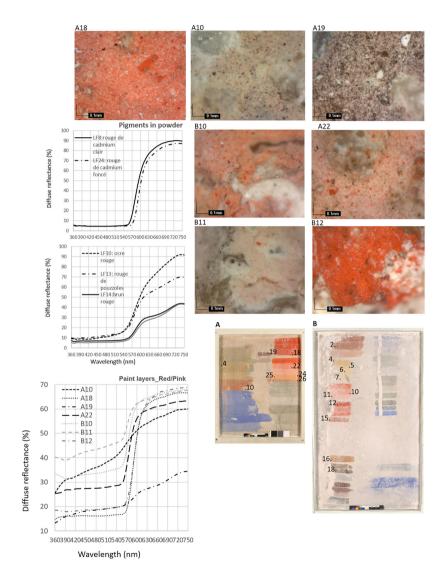


Fig. 2a. Handheld optical microscopy of red, yellow, orange, and brownish paint layers and respectively reflectance spectral curves in the visible range (360-750 nm).

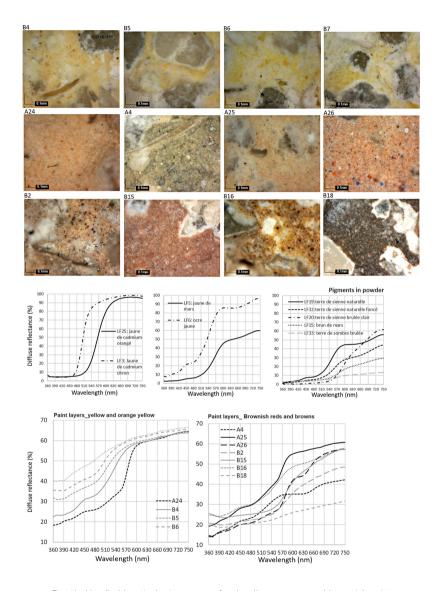


Fig. 2b. Handheld optical microscopy of red, yellow, orange, and brownish paint layers and respectively reflectance spectral curves in the visible range (360-750 nm).

The physical and optical characteristics of Cd pigments, along with its rather simple chemical composition — when compared to the more complex ones of the traditional earth pigments — explain the higher values of a* and b* chromatic coordinates in Fig.3 and the typical diffuse reflectance spectral curves in the visible range with a very sharp slope at 460 nm (yellows) and 560 nm

(reds) (Fig.2a and Fig.2b). These features are clearly seen in the reference powder pigments LF3, LF25, LF8 and LF24, as reported in Table I and in Fig.2a/b, but less distinctive in paint layers B5 to B7, B10 and B11, due to the interference of lime and the presence of other earth compounds in their composition.

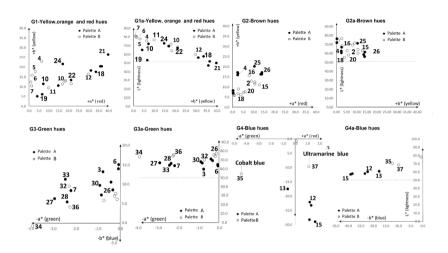


Fig. 3. Projection in the bidimensional CIEa*b* and CIEa*L* colour space of the paint layers of both working palettes by colours: G1/Gla-yellow, orange and red hues; G2/G2a-brown hues; G3/G3a-blue hues and G4/G4a-green hues. The numbers identified the 35 paint layers discussed and illustrated in this section.

Unlike Cd pigments, Fe-based pigments include a broader array of natural, artificial, and synthetic substances, as well as compounds resulting from the mixture of substances of all types (Nicola et al. 2016, 545; Gil et al. 2007, 51-53). Iron (III) oxides are the main components of earth pigments, the largest and historically most important group of natural pigments, which includes several compounds with different chemical compositions depending on the geological source (Gil et al. 2008, 728-731). From prehistory to the present, their use has been widespread in all types of painting techniques due to their abundance in natural environments, their relatively simple preparation, and the combination of characteristics such as durability and covering power with low toxicity and low cost (Nicola et al. 2016, 545).

Moreover, earth pigments, such as ochres, sienna and umbers, were the main pigments historically used in fresco mural paintings due to their chemical stability in an alkaline environment. Almada Negreiros was, without a doubt, aware of this fact, given the variety of earth pigments in powder form retrieved from his studio (e.g., LF6, LF10, LF13, LF14, LF15, LF19, LF20, LF32, LF33). However, earth pigments were not the only Fe-based pigments in powder form found among the artist's belongings. Others, labelled as Mars pigments (e.g., LF5, LF12 and LF15), were also present and were synthetic Fe-based

products developed in the eighteenth and nineteenth centuries (Barnett 2006: 451; Nicola et al. 2016, 549). As in the case of the natural earth pigments, Mars colours were available in a wide range of hues, including reds, browns, yellows, and black, and Almada Negreiros appears to have bought all of them.

Mars pigments were manufactured from iron (III) sulfide mixed with alumen (a potassium aluminium sulfate) and precipitated with alkaline substances, such as lime (CaCO₃), caustic soda (NaOH), or potash (K-based compounds) (Nicola et al. 2016, 549). Mars yellow was the first pigment produced by the aqueous precipitation of iron salts, which could then be further calcined to produce other hues. The final colour depended on the amount of moisture and heat used (Barnett 2006, 451).

Other iron salts, such as iron chloride, iron nitrate, and iron acetate, could also be used in the process (Nicola et al. 2016, 549-550). The resulting pigment could additionally be mixed with gypsum, barite, aluminium oxides, and, occasionally, with other pigments (inorganic and organic) (Nicola et al. 2016, 550). The advantage of Mars colours over the naturally occurring equivalents was their alleged higher chemical purity and fine-grained nature while retaining high tinting strength.

The manufacturing process of the Mars pigments found in Almada's studio is still unknown but was most likely very similar to the one reported above, thus accounting for the presence of quartz, clay/micas and gypsum found by XRD on powder pigments LF5, LF12 and LF15 (Table I).

Almada Negreiros probably used both types of Fe-based pigments in the working palettes. In both cases, the colour differences are mainly due to the type and proportion of the chromophores present. Fe-based pigments are normally made up of varying amounts of iron oxides and iron hydroxides, usually found as hematite (Fe_2O_3) and goethite (FeOOH) (Elias 2006:70). The first mineral is responsible for the red hues. In contrast, goethite is associated with shades of yellow, as evidenced by the powder pigments analysed by XRD (Table I).

In the analysis carried out in loco in the paint layers, the presence and amount of hematite and goethite (and eventually other iron-based chromophores) are reflected in the colorimetry results i.e., in the +a*(reds) and +b* (yellow) values of Fig.3G1/G2.

Hematite is usually expected to be the dominant chromophore phase (> a* values) in the reds, whereas in the yellows, goethite prevails (> b* values). The results show that both cases may occur but also a higher variability of chromophore contents across the red and yellow domains since all the paint layers show +a* and +b* contributions (Tables I and II, Fig.3G1/G2).

The diffuse reflectance spectral curves of the paint layers enabled the distinction of pigments used (Fig. 2a/b). Coloured pigments give rise to selected scattering and absorption bands that can be very characteristic, allowing for their first identification in loco. In the case of Fe-based oxides, pure hematite can be characterised by the presence of a sharp positive slope at wavelengths higher than 560 nm, whereas for goethite the first slope is around 450 nm,

followed by a sharp peak at around 500 nm and secondary minimum observed around 660 nm (Gil et al. 2009, 1005). The diffuse reflectance spectral curves of both the earth and the Mars powdered pigments found in Almada's studio and of the Fe-based paint layers in Fig.2a/b exhibit the same characteristics, although more diluted due to the presence of other compounds in their composition (Tables I and II).

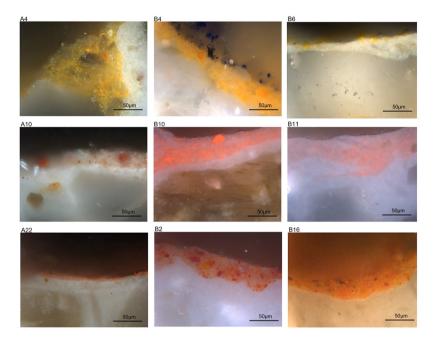


Fig. 4. Optical microscopy in the visible range of red, yellow, orange, and brownish paint layers cross sections A4, B4, B6, A10, B10, B11, A22, B2 and B16.

As expected, paint layers yellow, orange B4 and orange A24 exhibit spectral features common to both hematite and goethite. In the brown and brownish red and yellow paint layers A4, A25, A26, B2, B15, B16 and B18, the contribution of manganese (most likely in the form of oxides) identified by h-EDXRF is responsible for the visible decrease of the reflectance percentage (Fig.2b). The impact of this brownish contribution is, however, less noticeable in the lightness parameter (L*) due to the interference of the white reflective mortar substrate, which is clearly seen in most paint layer surfaces of Fig.2a/b and the cross sections of Fig.4.

All the red, yellow, orange, and brown paint layers analysed by colorimetry show L* values from 50 to 80, indicating a bright chromatic palette (Fig.3Gla and G2a). The L* parameter and the diffuse reflectance (R%) are influenced by the interference of the underneath lime mortar but also by the degree of pigment concentration and dispersion within the paint layer (Fig.4). This is

the case of paint layers red B12, light red B10 and pink B11, in which Almada Negreiros played with the amount of calcium hydroxide and pigment concentrations to produce three gradations of red hues (Fig.2a, Fig.3G1/1a and Fig.4).

3.2. GREEN PAINT LAYERS

According to h-EDXRF analysis and h-OM images, the green hues in both working palettes were achieved in two different ways (Table III, Fig.5, and Fig.6).

Table III. Summary results of colorimetry in the Vis, h-EDXRF and XRD analysis carried out on 11 green paint layers analysed of both working palettes.

Sample ref.	Colour	CIE chromatic coordinates		h-EDXRF (major elements for	μ-FTIR	Pigments attribution	
		L*	a*	b*	pigments identification in bold)		hypothesis
A3	Green	59.93	-0.77	13.24	Ca, Ba, Al, Cd, Cr , Fe , K, Mn, Rb, S, Si, Sr, Ti, Zr	Aluminosilicate; gypsum; calcite	Fe-based pigment (green earth) + Cd-based pigment + Cr-based pigment
A6	Olive green	63.56	-0.07	15.06	Ca, Ba, Al, Cd, Cr, Fe , K, Mn, Rb, S, Si, Sr, Ti, Zr	Aluminosilicate; gypsum; calcite	Fe-based pigment (green earth) + Cd-based pigment + Cr-based pigment
A7	Bluish green	63.77	-2.20	8.42	Ca, Ba, Cd , Al, Co , Fe , K, Mn, Rb, S, Si, Sr, Ti, Zr		Cadmium yellow + Cobalt blue + Fe- based pigment?
A27	Green	66.98	-2.93	6.35	Ca, Al, Fe , K, Mn, Rb, S, Si, Sr, Ti, Zr		Fe-based pigment (green earth?)
A28	Green	66.28	-2.37	5.51	Ca, Al, Fe , K, M n , Rb, S, Si, Sr, Ti, Zr		Fe-based pigment (green earth?)
A30	Dark green	68.07	-0.91	9.74	Ca, Ba, Al, Fe , K, M n , Rb, S, Si, Sr, Ti, Zr		Fe-based pigment (green earth?)
A33	Green	64.20	-2.45	11.30	Ca, Ba, Cd , Al, Co , Fe , K, Mn, Rb, S, Si, Sr, Ti, Zr		Cadmium yellow + Cobalt blue + Fe- based pigment (Ochre/Mars pigment?)
B26	Light green	75.86	-0.26	6.99	Ca, Al, Fe , K, Mn, Rb, S, Si, Sr, Ti, Zr		Fe-based pigment (green earth?)
B32	Green	74.50	-2.28	9.55	Ca, Al,Cl, Cr,Cu, Fe , K, Mn, Rb, S,Si, Sr,Ti, Zr	Celadonite; kaolinite; calcite	Fe-based pigment (green earth?)
B34	Dark bluish green	73.52	-3.92	-0.70	Ca, Cd , Al, Co , Fe , K, Mn, Rb, S, Si, Sr, Ti, Zr	Aluminosilicate; quartz; gypsum; calcite	Cadmium yellow + Cobalt blue + Fe- based pigment (Ochre/Mars pigment?)
B36	Green (eroded)	75.90	-2.24	4.20	Ca, Cd , Al, Co , Fe , K, Mn, Rb, S, Si, Sr, Ti, Zr		Cadmium yellow + Cobalt blue + Fe- based pigment (Ochre/Mars pigment?)

The first method used a single type of pigment, as observed in the paint surfaces of A27, A28, A30, B26, and B32 in Fig. 5. In these paint layers, Fe is the main chromophore element found by h-EDXRF, along with small amounts of Mn (Table II). As previously stated, the presence of manganese is often associated with Mn oxides in earth pigments and can explain the brownish green hue of A30 (Fig. 5).

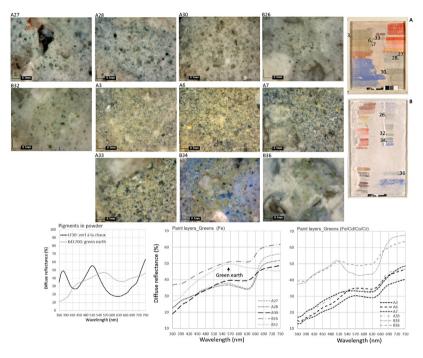


Fig. 5. On top, handheld optical microscopy of green paint layers; on the bottom, the corresponding diffuse reflectance spectral curves on the visible range.

Celedonite, a characteristic clay mineral of green earth, was identified by $\mu\text{-FTIR}$ in paint layer B32 (Table II). Green earths are mixtures of green silicates of aluminium, iron, magnesium, and potassium (Nicola et al. 2016, 549). Celedonite $(KMg_{0.8}Fe^{2+}_{0.2}Fe^{3+}_{0.9}Al_{0.1}Si_4O_{10}(OH)_2$ and glauconite (K,Na) $((Fe^{3+},Al,Mg)_2$ (Si,Al)_4O_10 (OH)_2 are the most common clay minerals found. Still, it may also be composed of other clay minerals such as montmorillonite, chlorite and kaolinite (Grissom 1986: 141). From dull greyish or brownish green to green, these green earth pigments have been widely used by artists since antiquity and were the most used ones in mediaeval times for flesh undertones in easel and mural paintings (Grissom, C.A. 1986, 141, Mora 1983, 112).

The spectral curve of green earth, as shown by the reference pigment in Fig. 5, is characterised by a broad central peak with a slight shoulder on the

short wavelength side, with the percentage reflectance slightly higher at the blue end of the spectrum (400 nm) and also at the end (700 nm) (Grissom, C.A. 1986, 144). These features can be seen in paint layer B32, although slightly attenuated by the interference of lime from the paint layer and the underneath mortar, as shown by h-OM in Fig. 5 and by the cross-section in Fig. 6.

The identification of the green pigments is still uncertain in paint layers A27, A28, A30 and B26 (Fig. 5). They all exhibit green to brownish green particles on the surface, as in B32, but the spectral curves obtained are distinct and suggest the presence of more than one Fe rich chromophore due the presence of a sharp slope at 650 nm (in the red region). This last feature is accentuated in A27 and A28. It can be explained by the presence of a small amount of bright red particles on the paint surface, which are clearly seen by h-OM on the surface of A27 (Fig. 5). These green paint layers were laid down just after the red and brown A25 and A26, and thus could have been an intentional addition or just a simple brushstroke contamination (Fig. 2b and Fig. 5).

The second method used by Almada to produce vivid green hues was apparently by mixing several kinds of pigments (Table III, Fig.3G4 and Fig.5). Paint layers A7, A33, B34 and B36 are enriched in both Co and Cd, but also have variable amounts of Fe (Table III). The different yellow and blue coloured particles are visible in the paint surface in Fig. 5, in the cross-sections of A7 and B34 in Fig. 6. On the other hand, in the green and olive-green paint layers A3 and A6, the presence of Cr in small amounts also suggests the addition of a Cr based pigment to the mixture (Table III). H-EDXRF also found chromium in the powdered pigments LF30 and O1 recovered from Almada's studio and labelled as 'vert à la chaux' and viridian, respectively (Table I).

Chromium oxide $(\mathrm{Cr_2O_3})$, and hydrated chromium oxide $(\mathrm{Cr_2O_3.2H_2O})$ are, according to historical records, the only common Cr-based green pigments (Newman, 1997, 273). Both were synthesised during the first half of the nineteenth century and present a distinctive optical appearance. Chromium oxide is dull, opaque olive green, while hydrated chromium oxide is more intense, transparent, and sometimes bluish green (Newman, 1997, 273). The last optical features are visible by optical microscopy in transmitted light mode on the green pigment particles of O1 and a few bright green particles from paint layer A3 and A6, suggesting that a hydrated chromium oxide could have been used by Almada Negreiros (Fig. 6).

Hydrated chromium oxide, commercially known as viridian, was first prepared by the colour maker Pannetier and his assistant Binet in Paris around 1839 (Newman, 1997, 275). However, the pigment was so expensive at that time that it could not often be used in painting. Only after 1859, when the French chemist Charles Ernest Guignet patented a method for manufacturing the pigment, would veridian become more affordable (Newman, 1997, 275). The high price of this pigment was still an issue for artists in the early twentieth century and can explain why it was parsimoniously used in the two paint layers.

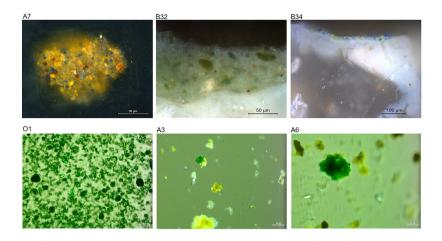


Fig. 6. On top, optical microscopy of green paint layers cross sections A7, B32 e B34. On the bottom, polarized light microscopy of pigment in powder viridian O1 and of green paint layers A3 and A6.

3.2. BLUE PAINT LAYERS

As already reported in a previous study, Almada Negreiros used two types of nineteenth-century synthetic blue pigments (Gil et al. 2021, 4588):

cobalt blue, a cobalt (II) oxide-aluminium oxide (CoO. Al_2O_3) in paint layer B35;

and ultramarine blue, a complex sulphur-containing sodium aluminium silicate of chemical formula $\mathrm{Na_{8-10}\,Al_cSi_cO_{24}S_{2-4}}$ in paint layers A12 to A15 and B37.

Fig. 7 clearly distinguishes the two pigments by their diffuse reflectance spectral curves in the visible range. Ultramarine blue has a dominant wavelength around 459 nm and a characteristic rising reflectance in the red. In contrast, cobalt blue shows a broad, strong reflectance with a peak around 430-450 nm, a smaller, sharper peak centred at 495 nm, low reflectance around 520 and 650 nm, and a strong rising (red) reflectance above 660 nm.

Cobalt was also found in paint layer B35 and powdered pigment LF29 by h-EDXRF whereas ultramarine blue was confirmed by μ -FTIR in paint layer B37 (Table IV).

Given the results obtained, it is interesting that Almada has preferred ultramarine over cobalt blue for the blue paint layers while reserving the last for the mixtures with Cd and Fe-based pigments to produce the vivid green hues. It is unclear whether it was a deliberate choice of the artist, motivated by technical reasons, or a selection associated with economic motives. Compared to ultramarine blue, Cobalt blue is, still today, as it was in the past, among the most expensive pigments when supplied with genuine cobalt pigments rather than a mixture representing its hue. However, both pigments have very similar blue hues (Fig.8), although ultramarine is considered warmer than the colder

cobalt blue (Roy 2007, 152). In the paint layers analysed by colorimetry, the subtle differences in blue hues are reflected in the a* chromatic values (Fig. 3G4).

Table IV. – Summary of the results of colorimetry in the Vis, h-EDXRF and μ -FTIR analysis carried out on 6 blue paint layers of both working palettes.

Sample ref.	Colour	CIE chr coordii	omatic nates		h-EDXRF (major elements for pigments identification in bold)	μ-FTIR	Pigments attribution hypothesis
		L*	a*	b*			
A12	Blue	58.05	1.30	-23.21	Ca, Al, Fe , K, Mn, Rb, S, Si, Sr, Ti, Zn		Ultramarine blue
A13	Blue	60.81	-0.61	-17.49	Ca, Al, Fe , K, Mn, Rb, S, Si, Sr, Ti, Zn		Ultramarine blue
A14	Blue	57.96	1.16	-28.21	Ca, Al, Fe , K, Mn, Rb, S, Si, Sr, Ti, Zn		Ultramarine blue
A15	Light blue	57.06	1.62	-28.91	Ca, Al, Fe , K, Mn, Rb, S, Si, Sr, Ti, Zn		Ultramarine blue
B35	Blue	70.33	-4.39	-12.23	Ca, Ba, Al, Co , Fe , K, Mn, Rb, S, Si, Sr, Ti, Zn	Inorganic compound; calcite	Cobalt blue
B37	Dark blue (eroded)	68.74	1.11	-9.66	Ca, Ba, Al, Fe , K, Mn, Rb, S, Si, Sr, Ti, Zn	Ultramarine blue; calcite; gypsum	Ultramarine blue

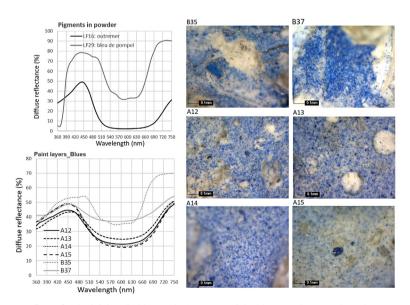


Fig. 7. On the left,handheld optical microscopy of the blue paint layers and, on the right, the corresponding diffuse reflectance spectral curve in the visible range.

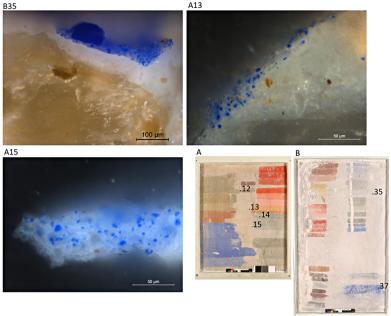


Fig. 8. Overview of the two working palettes with the indication of the blue paint layers analysed and cross sections of the blues three paint layers made with cobalt blue (B35) and with ultramarine blue pigment (A13 and A15).

FINAL NOTES

The undertaken research reveals that Almada Negreiros used traditional pigments commonly found in fresco mural paintings, such as earth pigments. However, as a twentieth-century artist, he also experimented with a range of modern synthetic pigments, including Cd pigments, Cr green pigments, cobalt blue, ultramarine blue, and most likely Mars colours.

All these pigments were found in powder form in the artist's studio, showing that Almada Negreiros was acquainted with the colour innovations of the nineteenth century available to artists. In the two working palettes, the pigments were used alone and in mixtures with lime and other pigments to broaden the range of hues, as in the greens and the pinks. The colorimetry analysis also showed that both working palettes are characterised by light colours (L* parameter >50), even in the darkest pigments, which could have been intentional or a consequence of the fresco technique used. Another important aspect highlighted by this work is the correlation and cross-linking of the scientific data with historical-artistic information, which provides context and a deeper understanding of the results and simultaneously raises new hypotheses about the use of pigments for further comparative analytical studies to be carried out at the DN building.

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MATERIALISATION AND MATERIALITY IN ALMADA'S GEOMETRY. THREE CASE STUDIES IN MURAL WORKS

Simão Palmeirim Instituto de Estudos de Literatura e Tradição, NOVA FCSH ORCID 0000-0002-1404-7665;

Pedro Jorge Santos Freitas Centro Interuniversitário de História e Filosofia das Ciências e Faculdade de Ciências, Universidade de Lisboa ORCID 0000-0003-1206-0257

ABSTRACT

From an early age, Almada Negreiros developed a fascination for geometry that became manifest in several ways: as a tool for understanding and making art, as a subject for creation and even as the basis for a theory about art. Pervading most of his later work, Geometry is also key to some of his large-scale mural works. With this chapter, we intend to show examples of how the author materialised geometrical concerns and propositions in three mural works: the façades at Cidade Universitária in Lisbon, the Edifício das Matemáticas in Coimbra, and the panel Começar at the Gulbenkian Foundation in Lisbon. Based on recently discovered documentation in the author's estate, with new data, we also aim to clarify some relevant material aspects of these works.

KEYWORDS

Geometry, Murals, Cidade Universitária, Edifício das Matemáticas, Começar panel

Simão Palmeirim

completed an BFA Painting at the Faculty of Fine Arts of the University of Lisbon (FBAUL) (2007), an MFA at Central Saint Martins in London (2009) and a PhD in Art Sciences at FBAUL (2016). As a researcher at IELT (NOVAFCSH) he explores the relations between theory and artistic practice in geometrical abstractionism in Portugal, with a particular focus on the work of Almada Negreiros. He works as an independent curator and is responsible for several scientific production and dissemination actions. He is currently a member of the Scientific Committee at CEDANSA (Almada Negreiros – Sarah Affonso Research and Documentation Center).

Pedro Freitas

has a PhD in mathematics and is Assistant Professor in the Department of History and Philosophy of Sciences at the Faculty of Sciences of the University of Lisbon and a member of the Inter-university Center for the History of Sciences and Technology.

His teaching and research are mainly related to the history of mathematics, recreational mathematics and relations between mathematics and art - in particular, he has been collaborating for some years in the study of the geometric work of Almada Negreiros. He is also involved in mathematical outreach

INTRODUCTION

During his lifetime, Almada Negreiros (1893-1970) published several texts, held conferences and produced countless artworks referring to geometry, through a number of different approaches such as a tool for understanding art (as in the research on Portuguese fifteenth-century painting), a tool for making art (e.g., in the four 1957 abstract paintings, see for instance Palmeirim 2013), a metaphor (as in the text K4, O quadrado azul, see Negreiros 1917), or even as the main subject of his own artwork (e.g., the panel Começar). This latter example is the author's last testimony of his lifelong work on geometry. It is a 12,87 x 2,31m mural, consisting mainly of geometrical tracings, that sums up many of his concerns and references, serving both as a homage to the art that inspired him and as a challenge for the generations that followed. This constituted a problem since he published nothing about Começar, leaving it open to interpretation and research for coming years (Freitas 1977, Coelho 1994 or the website https://gulbenkian.pt/almada-comecar, created in 2018). The panel was made in 1968. Before his death two years later, Almada was still able to project two large murals for the Edifício das Matemáticas (Mathematics Building) at Coimbra University, although, as we will show, with very different characteristics. Another case of mural art with prolific geometrical references occurred several years before these examples (1957-1961): the design for multiple panels of the façades at Cidade Universitária (Lisbon University Campus). These three sites are the focus of this chapter. One could try to detect relevant geometrical references in earlier work, namely the frescoes of the Maritime Stations, but there is no documentation to support this and, as established (Palmeirim and Freitas 2020), it is only in the 1950s that Almada intensified his studies on geometry and consequently his art production.

In a previously unpublished manuscript (ANSA-L-234), Almada describes how his collaboration with architects for large-scale murals affected his approach to composition:

It is precisely due to the collaboration with architects that the large mural spaces to be decorated demanded a different mode of composition than that of the easel. Transporting one to the other, the studies in which I had proposed to speculate on the creation of Art, together with the studies on Vision, took on such proportions that it became clear there was no change in composition mode from easel to mural, and all that happened was that the simple transposition from easel to mural made the system of composition clearer.²

¹ The website modernismo.pt is a result of the Project MODERN!SMO - Virtual archive of the Orpheu generation, and the nomenclature ANSA stands for documentation on the website from the estate of Almada Negreiros and Sarah Affonso. The same for the nomenclature MB AN.

² "Precisamente por a colaboração ser com arquitectos, os grandes espaços murais a decorar exigiam outro modo de composição que o de cavalete. Ao transportar

Following this statement, in which we understand how the mural projects helped Almada to clarify his composition system, he comments on how they were also relevant for his research on Portuguese fifteenth-century painting, which occupied him intensely for decades (Palmeirim and Freitas 2021).

If Almada himself refers to how the materiality of large-sized mural works influenced his own art practice and theories, we also claim that his personal projects on the importance of geometry were transposed to these same murals, materialising his conceptual interests. This is particularly relevant as geometry progressively permeates the author's concerns and his creative processes for two decades (1950-1970). We will present three cases of this mutual shift of influence in an attempt to display its positive impact on Almada's body of work.

THE FAÇADES AT CIDADE UNIVERSITÁRIA

In 1952 architect Porfírio Pardal Monteiro was commissioned to plan and design an ensemble of three buildings for the University of Lisbon: the Rectory, the Faculdade de Letras (Humanities) and the Faculdade de Direito (Law). For this project, the architect worked with sixteen artists, including Almada Negreiros who designed the murals for the façades of the three buildings. Almada received an invitation to produce this work in 1957, the same year that he presented his four abstract black and white paintings that consisted exclusively of geometric figures and caused great controversy at the time (Oliveira 2013). He completed the work in 1961 (França 1974, 169).

It is in the 1950s that the artist's research on the relationship between mathematics and art began to take a new path, with a new dynamic, in which geometric constructions with circles, rectangles and squares predominate, as already materialised in the previously mentioned four abstract paintings of 1957. However, as we shall see, the contents of the incised engravings that Almada chose for these façades are still representative of an earlier period of this research and are similar to those presented in the publication *Mito-Alegoria-Símbolo* (1948). In this earlier phase, which essentially takes place during the 1940s, the mathematical contents incorporated by Almada in his research have a numerological tone. They play out as games with numbers and figures, sometimes arithmetical, sometimes geometrical, involving symmetries and simple calculations, accompanied by somewhat cryptic texts and quotations from classical authors.

este para aquele, os estudos nos quais me havia proposto a especulação acerca de criação de Arte juntamente com os estudos da Visão tomaram tal proporção que se via não ter afinal mudado de modo de composição do cavalete para o mural, e acontecia apenas que a simples transposição do cavalete para o muro tornava mais lúcido o sistema da composição." Text recently found alongside a draft for the speech Almada gave in homage to the architect Carlos Ramos in 1967, at the Hotel Tivoli (Negreiros 2006, 297).

On the west façade of the Rectory, we find several incised figures, representing students of the university, as well as two characters from classical mythology, Apollo and Athena. Figure 1 shows preparatory drawings for these images: Apollo appears with a rooster, Athena with an owl, in a reference to the day/night duality.

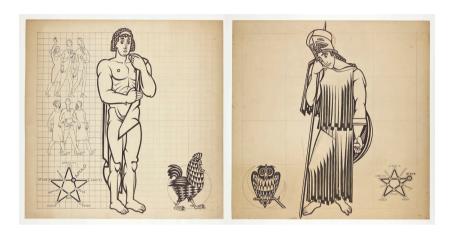


Fig. 1. Almada Negreiros, preparatory drawings of Apollo and Athena for *Cidade Universitária*, 1957-1961. Graphite and Indian ink on paper. ANSA-A-474 and ANSA-A-81, CEDANSA – NOVA FCSH / © Herdeiros de José de Almada Negreiros.

Next to Apollo and Athena, we find pentagonal stars, with the ten digits marked at the intersections of the sides and names taken from Greek and Roman mythology. This star and these numbers also appear in the publication *Mito-Alegoria-Símbolo*, accompanied by some simple calculations. Figure 2 shows the page from *Mito-Alegoria-Símbolo* where this can be seen. This page highlights the following property: if you successively place the digits on the vertices of the star, going clockwise from the lower left vertex, the sum of the symmetrically placed digits is 10. The pentagonal star will very often reappear in Almada's work, but this numerical play with numbers, involving arithmetic and geometry, is more specific to the 1940s.

OS DEZ LUGARES DA COLECÇÃO DO NÚMERO

As linhas do pentagrama cruzam-se em dez pontos. A numeração d'estes dez pontos com o zero e os nove algarismos tem «simetria de meio e metades»



os algarismos na mesma horizontal perpendicular à linha que una zero e cinco, e d'ela equidistantes, somam dez unidades

$$4+6=10$$

 $3+7=10$
 $2+8=10$
 $1+9=10$

e a linha zero-cinco será meio entre duas metades, cada uma de quatro algarismos consecutivos, com a soma dos extremos igual à dos médios.

Como zero é contíguo de um e de nove, tanto pode começar como terminar os dez lugares da colecção formada pelo zero e os nove algarismos; e apesar de zero não ser algarismo, os dez lugares da colecção são consecutivos: a colecção recomeça sempre até infinito

- 2I -

Fig. 2. Almada Negreiros, Mito-Alegoria-Símbolo, 1948, page 21.

For the portico of the Faculdade de Letras, Almada's commission was to represent various characters from famous Portuguese and foreign literary works. This initial assignment did not include the engraving for the space above the entrance door, which would be concluded at a later date. The theme for this space was the nymph Tethys showing Vasco da Gama³ the Machina Mundi (World Machine): i.e. a representation of the Ptolemaic astronomical system,

³ Portuguese explorer (1469-1524) and the first European to reach India by sea.

consisting of various concentric spheres placed around the earth, used to describe the movement of the stars and the planets. It is thus an illustration of ancient scientific knowledge, without any Almadian speculation.

For the façade of the Faculdade de Direito, the initial programme was similar: i.e. to present national and international references to Law in the portico. However, there is an exception: one of the figures represented is Pythagoras (Figure 3), who appears with a right triangle measuring 3-4-5, next to his feet. This geometric figure would be widely used by Almada in his visual work (namely, in the 1957 abstract paintings and the panel Começar). Once again, the commission did not include engravings for the space over the door, and, in this case, the decision of the subject to be represented here is shrouded in doubt.

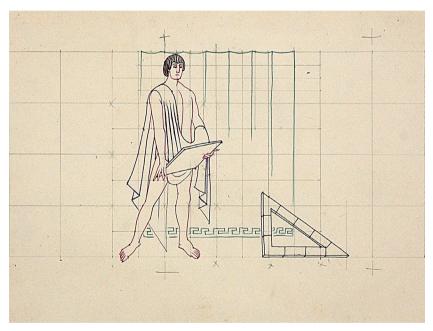


Fig. 3. Almada Negreiros, detail of preparatory drawing for Pythagoras in Cidade Universitária, 1957-1961. Graphite, ballpoint and felt-tip pen on paper. MB_AN_147, CEDANSA – NOVA FCSH / © Herdeiros de José de Almada Negreiros.

In Almada's estate, there are fragments of correspondence sent to Franz-Paul Langhans,⁴ with requests concerning the theme to be applied onto the space above the main entrance door of the *Faculdade de Direito* (ANSA-COR-718, ANSA-L-258, ANSA-L-265 and ANSA-COR-696). The initial motif suggested

⁴ Franz-Paul de Almeida Langhans (1908-1986), a legal historian, was Salazar's private secretary from 1951 to 1961.

was abandoned and Almada asked Langhans to provide another. The new themes that appear in the correspondence and that gave rise to some of Almada's sketches are "Lei-Justiça-Direito" (a reference to Law and Justice) and "A espada e a balança" (The sword and the scale). Almada mentions (ANSA-L-265) that he produced a card based on the first theme, which was approved by the Rector of the university, possibly the one represented in Figure 4.

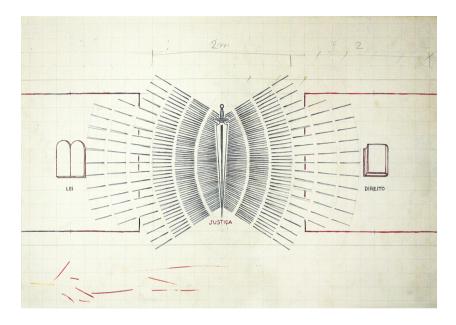


Fig. 4. Almada Negreiros, preparatory drawing for *Lei-Justiça-Direito*, undated. Graphite and ballpoint pen on paper. MB_AN_151, CEDANSA – NOVA FCSH / © Herdeiros de José de Almada Negreiros.

However, today we see that this space on the façade is empty, without any engravings. Upon receiving the *Diário de Notícias* prize in 1966, Almada said that in that space he would have liked to have included two expressions that were dear to him and central to his research on geometry and art: "9/10 Relation" and "Paint the seven", but he was prevented from doing so:

There is no explanation for the State itself removing the expressions "9/10 Relation" and "Paint the seven" on panels commissioned by and intended for the Nation, and whose signs are themselves on our coins and on the latest ones now minted, and on the signet that repositions the "fifteen panels" and its place, and even on our own national coat of arms.⁵

⁵ "Não se explica que o Estado corte ele mesmo as expressões 'relação 9/10' e 'pintar o sete' em painéis encomendados e que se destinam à Nação, e cujos sinais estão eles mesmos nas nossas moedas e nas últimas agora cunhadas, e na sigla que faz a

This episode is described in (Pascoal 2010), which also presents the quotation from *Diário de Notícias*. Our analysis of the panels of the Mathematics Building in Coimbra will clarify the relation of his geometric ideas with Portuguese coins and the national coat of arms.

In any case, at this point, it is not yet clear how the two expressions would articulate with the theme given by Langhans. Perhaps, as in the case of the inclusion of the figure of Pythagoras amid others more central to Law, Almada wanted to include these written expressions, also unrelated to Law, together with the illustration of Langhans' theme. However, we have not yet found sketches or texts that allow us to conclude that such a composition was intended for this space. We do know, however, what the final result was: there is no decoration above the door of the *Faculdade de Direito*.

At this point, Almada was convinced that there was a geometrical background to all art, in all times and places, a set of geometrical constructions which he came to call "The Canon" (Palmeirim, Freitas 2015). One of the elements of this Canon was precisely the 9/10 Relation, the belief that there was a close tie between these two numbers - we just showed, exhibiting the engravings for the Rectory, the special place Almada afforded to the number 10. According to Almada, this tie can be manifested arithmetically or geometrically and found in architecture, painting or other cultural manifestations. Along with nine and ten, the number seven played another special role, as the manifestation of the Portuguese incarnation of this Canon. In the interviews given to *Diário de Notícias* in 1960, Almada states: "If 'Paint the seven' is a Portuguese proverb and there is no similar one at least of other peoples of Europe, it signifies our interpretation of the knowledge of the number".6

Later in the same text, Almada says that the 9/10 Relation and the expression "Paint the seven" are one and the same — meaning, they are both materialisations of this Canon, the second one having a Portuguese sense.

THE EDIFÍCIO DAS MATEMÁTICAS IN COIMBRA

It was in 1966 that Almada was commissioned for two murals at the portico of the newly built *Edificio das Matemáticas* in Coimbra. In August 1969, the project was concluded, its execution carried out by students of the *Escola técnico-profissional Brotero* (a professional-technical secondary school in Coimbra).

There was an explicit programme for each of the murals: the one on the left should illustrate important historical moments and authors of Portuguese

reposição de 'quinze painéis' e o seu lugar, e ainda no nosso próprio escudo de nacionalidade", *Prémio 'Diário de Notícias'. Almada Negreiros recebeu ontem o galardão* in Diário de Notícias, 22/3/1966.

6 "Se 'pintar o sete' é provérbio português sem similar pelo menos noutro povo europeu, significa interpretação nossa do conhecimento do número", Almada Negreiros reconstituiu a obra-prima da Pintura Primitiva Portuguesa na Capela do Fundador do Mosteiro da Batalha, in Diário de Notícias, 30/6/1960. The Portuguese expression has a similar meaning to the English expression "Paint the town red", we chose to use a word-by-word translation.

mathematics, and the other should address universal mathematics. The programme for the contents was conceived and put in writing by José Bayolo Pacheco de Amorim, Full Professor at *Faculdade de Ciências*, in Coimbra. Before detailing the contents, Amorim summarises the topics to be included in each of the panels. The left panel would contemplate "Portuguese mathematics at the service of the national epic": the Sagres School; Pedro Nunes; Astronomy; Navy; Knowledge of Earth; Fernão de Magalhães.

The right panel would consider "Mathematics since the Chaldeans and Egyptians until today": The arabs' encounter in the peninsula; Newton's discovery of the world; the mathematisation of knowledge; the mathematical vision of the modern world; the electronic and mechanical calculus. These expressions were included, verbatim, in the two panels, along with illustrations of each expression.

There are several relevant documents on this subject in the author's estate," namely regarding technical execution, budgets, or how Almada interprets Amorim's programme. One particular manuscript, a descriptive memory, attests to Almada's active take on the subjects, and to how he was able to incorporate some of his concerns into the panels. He writes "My lack of Mathematical knowledge served, after all, to put all my ability for rigour exclusively in the admirable detailing elements, and with them, compose the mural unity of the panel's painting: a continuity of circles (...) guiding the history of Mathematics (...)". Almada's connection to Mathematics is fundamentally through Geometry and, while admitting a general lack of knowledge on the broader scale, he claims this was useful so he could focus on what mattered to him: geometrical composition. He continues "In the other panel the theme is familiar. But for its composition to match that of the other, it was now necessary to propose (...) the numerical signs with which Portugal commences, that is, the 'dinheiro' (...) and the first 'morabitino', budgets, or how Almada interprets and to how he was able to incorpose the mural unity of the other, it was now necessary to propose (...) the numerical signs with which Portugal commences, that is, the 'dinheiro' (...) and the first 'morabitino', budgets, or how Almada interprets and to how he was able to how he was able

Personal communication by Prof. Carlota Simões, of the University of Coimbra.

⁸ A nautical school, believed to have existed in Algarve in the 15th century.

⁹ Portuguese mathematician (1502-1578) with relevant work in geometry of the sphere, cartography and navigation, and new technical measuring instruments, such as the nonius (Nónio, in Portuguese). Almada assimilates the name of this instrument for angular measurements - Nónio - as the name of his own publishing company. This company is never formalised but Almada uses it in many graphic arrangements of his workbooks.

¹⁰ Portuguese navigator (1480-1521), responsible for the first circumnavigation of the globe (1519-1522).

Documents and correspondence between Almada and Amorim are included in: ANSA-COR-740, ANSA-COR-761, ANSA-COR-757, ANSA-COR-758 and ANSA-COR-759.

[&]quot;O meu desconhecimento da Matemática serviu afinal para pôr toda a minha capacidade de rigor exclusivamente em tão admiráveis elementos de pormenorização, e com estes compor a unidade mural da pintura do painel: uma continuidade de círculos (...) acompanhando o histórico da Matemática (...)" (ANSA-COR-757).

Dinheiro and Morabitino are names of coins issued by D. Afonso Henriques (c.1110-1185), Portugal's first king.

(...)".¹⁴ He then states that Amorim immediately agreed with the proposition, but also that the first person to whom he had shown the draft for the panels was Cristino da Silva, ¹⁵ who was also satisfied. This shows it was not a one-way commission, but a project with several parties involved and in apparent consonance.

We will analyse the "numerical signs" Almada proposed to incorporate on the top of the left panel (see Figure 5). These are significant as they were his own authorial addition, particularly because they are also incorporated in the panel *Começar*, entailing a vast number of preparatory drawings.

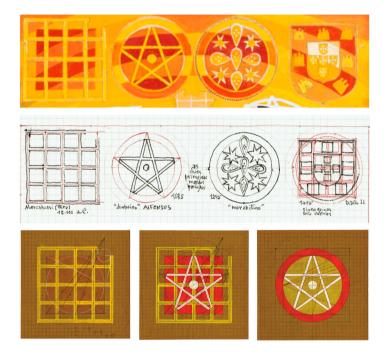


Fig. 5. Almada Negreiros: Top: detail of the top frieze of the left panel in *Edificio das Matemáticas*, Coimbra, 1969. Middle: preparatory drawing for the work that includes text with each referenced element, c. 1969; mixed media on paper, ANSA-C-257. Bottom: three geometrical studies of two of the elements above, undated elements, undated; mixed media on paper, ANSA-A-659, ANSA-A-661 and ANSA-A-664. CEDANSA – NOVA FCSH / © Herdeiros de José de Almada Negreiros.

[&]quot;No outro painel o tema é familiar. Mas para que a composição neste correspondesse à do outro, cabia propor agora (...) os sinais numéricos com os quais se inicia Portugal, ou sejam, o 'dinheiro' (...) e o primeiro 'morabitino', ambos de D. Afonso Henriques (...)" (ANSA-COR-757).

¹⁵ Luís Cristino da Silva (1896-1976) was one of the pioneers of Portuguese modernist architecture. Having contributed to the architectural canons of the Portuguese political regime, in 1948 he was named chief-architect for the Coimbra University Campus, naturally overseeing Almada's proposals for the decorations.

The element on the left, a grid of 4x4 squares, has no connection whatsoever to the other three, apart from Almada's approach: he either overlaps it with the pentagonal star, or with the five escutcheons and seven castles present in Portugal's coat of arms. The first arrangement is visible in the centre of the panel *Começar*, so it is natural that he would propose this same connection in Coimbra, despite separating the two elements; the second arrangement overlaps in several studies but is also separated in the final version for Coimbra.

The 4 x 4 grid is carved in stone in the Marcahuasi Plateau, Peru. Almada first came across a picture of it in "The Mysterious Science of the Ancients, General Culture Booklets" (Centeno and Faria 1963) and found a reference to it in "The Masma Culture" (Ruzo 1954). Almada owned both these publications (Palmeirim and Freitas 2020, 289).

We believe his attempt to relate it with the Portuguese national symbols is in tune with his idea of a transcultural Canon that permeates distinct times and geographies. It is an exclusively geometrically based relationship.

Regarding the pentagonal star - D. Afonso Henriques' "dinheiro" - some recently discovered material in the author's estate allows us to establish new information. A manuscript draft for a letter addressed to Pedro Batalha Reis reads:16

In the numismatic section of "Diário de Lisboa" [you] published a geometrical shape that I believe was in regard to the Portuguese "morabitinos" (...) I cut your contribution from the newspaper, kept it very well kept and can't seem to find it among my papers. (...) Can you tell me if this specific pentagram is to be considered ours, Portuguese?¹⁷

Pedro Batalha Reis published several articles in *Diário de Notícias* and *Diário de Lisboa*, at least since the 1940s. There are two, in particular, that may have been instrumental in the development of Almada's interest in these two coins, one from 1946, ¹⁸ and another from 1950. ¹⁹ These two articles contain images of the two coins that correspond to the images in the Coimbra frieze.

The manuscript by Almada contains other interesting statements, relating these coins to other topics in Almada's research: "(...) in my studies [I] concluded the restitution of the fifteen panels of D. João I in Batalha in which

¹⁶ Pedro Batalha Reis (1906-1966) was a philosopher, historian, and a numismatic enthusiast with several publications on the subject.

[&]quot;Publicou na secção de numismática no 'Diário de Lisboa' uma figura geométrica a qual creio vir a propósito de morabitinos portugueses (...) Recortei do jornal esta sua colaboração, guardei-a muito bem guardada, e não há meio de a encontrar entre os meus papéis. (...) Sabe dizer-me se este determinado pentagrama deve ser considerado nosso, português?" (ANSA-COR-698).

¹⁸ Foi encontrada uma segunda moeda conhecida do tempo de D. Afonso Henriques, in Diário de Notícias, 14/1/1946.

¹⁹ Ao cavar a terra descobriu-se um Morabitino desconhecido do tempo de D. Sancho II, in Diário de Lisboa, 8/12/1950.

the same geometrical shape had been fundamental and decisive (...)".²⁰ In his research on geometry and painting Almada often finds elements that serve as "proof" for previous advances. Finding the pentagram in Reis' publication probably boosted his confidence in what he had proposed concerning the altarpiece he imagined for *Mosteiro da Batalha* and published in *Diário de Notícias* in 1960 (Valdemar 2015).

"(...) The establishment by D. João II of the Portuguese coat-of-arms in the five escutcheons and seven castles is the definitive reminiscence of the pentagram. (...) That is, the first step towards Portuguese universality had been taken: its nationality."²¹

For Almada, if the two coins by D. Afonso Henriques - represented together in the centre of Coimbra's frieze - mark the beginning of the nation's identity, the last element of the frieze illustrates the nation's universality. Next to it, in the draft of Figure 5, Almada writes "1495, five escutcheons, seven castles, D. João II" in consonance with the manuscript.

Similarly to the use of the expression "Paint the seven", with these examples Almada tries to show how the Portuguese cultural heritage is embedded with a specific type of intuition, or even knowledge, of geometrical nature.

COMEÇAR

In 1968, the building of the Calouste Gulbenkian Foundation's headquarters was being completed and Almada was commissioned to create a panel in incised limestone for the atrium of the main building, which he accepted in a letter dated May 15 of the same year. ²² Unlike the Coimbra case, Almada was not given a description or a theme to follow, he had complete freedom with this commission, which reflects his very high status in the Portuguese art milieu at the time. Almada took full advantage of this possibility by using the space to present a summary of his investigations in geometry, focusing mostly on later studies, from the 1950s onwards.

This proximity between the artist and the contents of the mural is reflected in the way Almada followed the actual production of the incisions: he

²⁰ "(...) concluí nos meus estudos a reposição dos quinze paineis de D. João I na Batalha na qual já fora também fundamental e decisiva a mesma figura geométrica (...)" (ANSA-COR-698), with the phrase underlined in the original text.

²¹ "A fixação por D. João II do escudo português nas cinco quinas e sete castelos é a reminiscência definitiva do determinado pentagrama. (...) Isto é, o primeiro passo para a universalidade portuguesa fora dado: a sua nacionalidade." (ANSA-COR-698)

²² See https://gulbenkian.pt/almada-comecar/galeria/

accompanied the works in Lisbon and participated in the production of the mural.²³ Nevertheless, the temporal closeness to the Coimbra murals is reflected in the proximity of themes. Two elements that appear in Coimbra end up taking a predominant position at the centre of the mural *Começar*: the Marcahuasi grid and the 5-point star — there are two overlapping grids in the panel, one is placed orthogonally and the other at 45 degrees. One of the grids serves as a basis for the geometrical construction of the star.

Most of the geometrical tracings that compose this mural have been objects of analysis,²⁴ as have their historical, philosophical and artistic references. Let us focus on some of the material aspects of the work that haven't been referred to so far: colour, nomenclature, and corrections.

Each incised inscription is coloured according to a specific code. There are only six colours in total. Three colours correspond to the order in which the geometrical tracings are drawn, as if different layers could be identified, and the other three colours have specific associations with different intentions. The general composition is layered in the following order: first, the ochre or dark yellow, the closest colour to the limestone background, followed by both the dark red and the light red, complementing each other without an apparent order but distinguishing different elements of the same "layer".

The remaining colours have two different applications: 1) black and white are used to bring forth the principal immediately recognizable elements (such as the central *Dinheiro*); 2) light blue is used to represent any tracings that are related to the golden ratio, golden rectangle or golden angle.²⁵ Curiously, this last colour is also used for the author's signature and date, but we would not advance any considerations as to why.

Besides numerals and some text, a few basic elements constitute Almada's vocabulary for Começar. The Greek letter ϕ , denoting the golden ratio, is depicted in several places, as well as derivations such as $\sqrt{\phi}$ or ϕ^2 . Just like other numbers, these are often placed over certain lines, and are related to their slope. Another reference to this ratio is indicated by the many occurrences of the letters m and M, that relate, respectively, to the small and large dimensions that are in the aforementioned proportion (of different lines for example).

A less common nomenclature is \odot , the representation of a circle with a concentric point, often placed over a small horizontal line (symbolising a fraction) under which we find a number (see for instance Figure 7). This combination indicates that Almada is referring to the division of the circle into a number

 $^{^{23}\,\,}$ There are photos of this activity, see http://gulbenkian.pt/almada-comecar/galeria/

²⁴ See https://gulbenkian.pt/almada-comecar

²⁵ Since the 19th century it has become common to refer to a ratio of 1 to $(\sqrt{5}+1)$ / 2, as the golden ratio (approximately 1,618), a golden rectangle has its smaller and bigger sides in that same proportion, and the golden angle corresponds to the division of the circle's 360 degrees in that proportion, producing two angles: 137,5° and 222,5° (Freitas and Palmeirim 2018).

of equal parts. We believe Almada assimilated this representation from Ernest Mössel via the books of Matila Ghyka (Palmeirim and Freitas 2020, 287-288).

In only one place, near the top right corner of the mural, we find $\frac{1}{2} \approx 1.2$. As we understand it, 1.2 is the author's way of denoting the proportion of a rectangle. Over an oblique line, we can see (for example) 7.9, that is to say it represents the diagonal of a rectangle with the proportions 7 to 9. The symbol $\frac{1}{2}$ is not so common in Almada's notation. According to some sketches, namely ANSA-A-774 (Figure 6), it seems to denote a half square, whereas 1.2 denotes a rectangle composed of two squares.

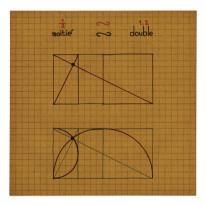


Fig. 6. Almada Negreiros, an explanation of the symbol ∞, undated. ANSA-A-774, CEDANSA – NOVA FCSH / © Herdeiros de José de Almada Negreiros.

Therefore, we believe that " $\frac{1}{2}$ \approx 1.2" is the author's way of indicating that a rectangle obtained by halving a square is similar to the one obtained by doubling the same square. In fact, they are proportional.



Fig. 7. Almada Negreiros, detail of the panel Começar at Fundação Calouste Gulbenkian in Lisbon, 1968. Ink on carved stone. Photograph by the authors.

Figure 7 illustrates another interesting isolated case of nomenclature, encompassing several examples we have mentioned. In the bottom left corner, we can see "2 (\bigcirc /6)", and next to it an arch that acts as a bracket for listing three equivalences. Geometrically, the side of any hexagon (\bigcirc /6) is equal to the radius of the circle used to construct it. So " \bigcirc /6" also can represent the radius. Multiplying a radius by 2 we get a diameter. This means that when Almada inscribes "2 (\bigcirc /6)" he is referring to a "diameter", and the three expressions that follow the bracket are ways to decompose a diameter regarding the division of a circle in equal parts. All these propositions are approximations that can be ascertained arithmetically using basic trigonometry, which Almada never did; he tried to verify everything through geometrical constructions (Palmeirim and Freitas 2015a, 2015b).

During the few months of exhaustive bas-relief markings of the intricate linework, a few mistakes were bound to have taken place, but the author's close accompaniment of the project ensured most of the necessary corrections (Figure 8).

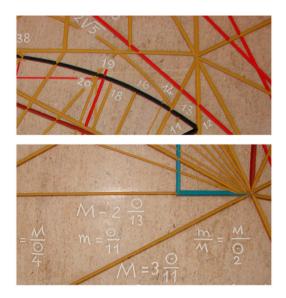


Fig. 8. Almada Negreiros, details of the panel Começar at Fundação Calouste Gulbenkian in Lisbon, 1968. Ink on carved stone. Photograph by the authors.

In the first case a few horizontal lines were carved, and then carefully covered up with what we believe to be stone dust mortar. The second case refers to the markings "M - 2 ①/13". Here, a pencil marking remains uncarved, just above the "-", which would make it "=", in consonance with the surrounding markings.

In other cases, a certain line or nomenclature is wrongly marked or coloured, but the fact that there are so few mistakes serves as a testimony of the

author's dedication and attention to the work during its completion; lest we forget, Almada was 76 years old, an artist not a mathematician, almost single-handedly projecting, drawing, carving and painting an impressive nearly 30 square metres stone mural.

CONCLUSION

Almada's studies in Geometry are well known, especially through the interviews given to Diário de Notícias in 1960. However, we have seen that it is possible to accompany the author's progress in these studies through the materialisation of his ideas in the murals we have considered. One can follow the evolution of Almada's theories on Geometry by a chronological consideration of their application in murals, sometimes in small details or parts of the work, such as in Cidade Universitária or Coimbra, and sometimes in the entire work, as in the panel Começar. The large-scale scope of these murals, as well as their presence in public spaces, afford a very special materiality to these theories. In these cases, Almada's abstract geometrical propositions become theory materialised in monumental works of art.

Notes:

All translations of citations were made by the authors.

Acknowledgements:

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ALMADA NEGREIROS' DECORATION FOR THE UNIVERSITY CAMPUS IN LISBON

Ana Mehnert Pascoal Centro de Estudos sobre a Mudança Socioeconómica e o Território, Iscte – Instituto Universitário de Lisboa

ORCID: 0000-0001-6928-4265

ABSTRACT

Giving continuity to a long collaboration with architect Porfírio Pardal Monteiro, José de Almada Negreiros was invited to decorate the porticos of three buildings integrating the University campus in Lisbon: the Rectorate (1961) and the Faculties of Law (1957) and of Humanities (1958). This chapter explores the State commissions for public buildings and their decoration during the Portuguese Estado Novo regime (1933-1974), focusing on the case of the aforementioned university buildings. Specific attention is given to the analysis of the themes represented. Drawing on a MA thesis, this chapter benefited from additional research encompassing previously unavailable academic archives, as well as sources from the estate of Almada Negreiros, particularly his drawings and written notes. Therefore, this chapter confirms the involvement of professors and the University of Lisbon's rector in defining the decoration themes while acknowledging Almada's working methods and the modifications made throughout the process, which also involved approval by official entities.

KEYWORDS

University, Knowledge, Identity, Decoration, Murals

Ana Mehnert Pascoal

holds a PhD in Art History from the School of Arts and Humanities, University of Lisbon (2023), with the thesis 'The Palaces of 'National Representation'. Identity and Power in the Government buildings during the Estado Novo dictatorship', funded by the Portuguese Foundation for Science and Technology (SFRH/BD/139172/2018).

She is currently an integrated researcher at DINÂMIA'CET-Iscte, Centre for Socioeconomic and Territorial Studies, and a member of the Arquitectura Aqui team, collaborating in the project 'ReARQ.IB – Built Environment Knowledge for Resilient, Sustainable Communities: Understanding Everyday Modern Architecture and Urban Design in the Iberian Peninsula (1939-1985)' (ERC Starting Grant 949686). She has been a research fellow in funded research projects and has worked at the National Museum of Natural History and Science of the University of Lisbon (2011-2017). Her main research interests encompass architectural history, architecture and bureaucracy, and the built and artistic heritage of twentieth-century dictatorships.

INTRODUCTION

Mural decoration for public buildings became an essential feature in state-promoted public buildings during the Portuguese *Estado Novo* (1933-1974). In line with other university *campi* built up to the 50s, such as those in Rome or Mexico City, the first buildings planned for the University campus in Lisbon (Cidade Universitária de Lisboa) were profusely decorated due to the contribution of several artists. The participation of José de Almada Negreiros (1893-1970) in the decoration of these buildings is one of his manifold collaborations with architect Porfírio Pardal Monteiro (1897-1957).

This text seeks to explore the State's commission of the drawings incised in the porticos of the Faculties of Law and Humanities as well as in the Rectorate of the University of Lisbon. It draws on the MA dissertation completed in 2011 (Pascoal 2012), presenting new conclusions resulting from additional research, particularly enhanced by the diverse material from the estate of Almada Negreiros.

The text begins with a brief introduction about the construction of the campus within the wider context of universities under the Portuguese dictatorship. In addition, the process of commissioning and evaluating artworks for public buildings during the *Estado Novo* is addressed. The following sections relate to the decoration designed by Almada Negreiros for the university campus in Lisbon, presenting an iconographic description. These sections integrate an analysis of the commission: identifying agents involved in the definition of subjects, observing Almada's working strategy, and the distinct stages prior to the final version of the drawings incised in the walls. Finally, the considerations on this commission and the represented themes act as a conclusion.

THE PROTRACTED CONSTRUCTION OF THE UNIVERSITY CAMPUS OF LISBON

The establishment of the University of Lisbon in 1911 led to the occupation of pre-existing buildings spread across the city, soon considered inadequate for academic functions. Following some years of unsuccessful demands by the academic staff, in 1934, the *Estado Novo* dictatorship (1933-1974) implemented the Committee for New University Buildings (CANEU: *Comissão para os Novos Edifícios Universitários*) in the Ministry for Public Works in order to solve the situation by constructing new buildings, including academic housing and sports facilities, in a developing area of the city. Foreign campus examples, such as those in Madrid, Paris and Milan, reinforced this concentrating solution (Pacheco 1934). The gradual increase in the number of students – who were perceived by the regime as the future political elite – also justified the need for new buildings: according to Jorge Ramos do Ó (2011, 138-139), 3,733 students were enrolled in the University of Lisbon in 1940, while in 1960 the number rose to 7,232.

The regime perceived the university as an organic corporation. Since 1926, when the military dictatorship preceding the *Estado Novo* was implemented, the university had progressively lost its autonomy, and control over professors and students increased (Torgal 1999, 88-95, 211-214). Indoctrination and repression of academia was a reality, as demonstrated by the purges of teaching staff initiated in 1935 and intensified after the Second World War (Carvalho 2008, 751-753, 783-784; Rosas and Sizifredo 2013). As Professor João da Silva Correia (1891-1937) explained in a public conference in 1934, uniting the faculties in a delimited location would support surveillance and eradicate disturbances (Correia 1936, 19). Nonetheless, the university never ceased to be a stage for political confrontations and opposition to the dictatorship, particularly after 1945 (Nóvoa 1992, 495-496; Torgal 1999, 215-240).

Architect Porfírio Pardal Monteiro was commissioned in 1935 to plan buildings for the Rectorate and the Faculties of Law and Humanities near Campo Grande. The area had been selected after the acquisition of grounds for the Faculties of Medicine and Pharmacy in the early 20s. Pardal Monteiro was a prolific architect in Lisbon: he had recently planned modern buildings for the Instituto Superior Técnico (Higher Technical Institute) and the Instituto Nacional de Estatística (National Institute of Statistics), both inaugurated in 1935. He was also acquainted with the Minister of Public Works, Duarte Pacheco (1900-1943). Despite delivering the first preliminary projects since 1937 and introducing alterations to accommodate the tight budget, financial and material constraints in the 40s led to the postponement of the construction of the university buildings. Moreover, some intrigues were apparently harming the architect's reputation. The situation became so critical that Pardal Monteiro wrote to the President of the Council of Ministers, António de Oliveira Salazar (1889-1970), expressing concerns regarding his ability to maintain his atelier open as well as the eventuality of abandoning the profession. Major commissions for public works, including the projects for the University campus in Lisbon, had been put on hold.

The projects would only be resumed in 1952, under José Frederico Ulrich (1905-1982), Minister of Public Works, with certain alterations to the previous projects. At this point, Pardal Monteiro suggested a group of artists to decorate the buildings, who were approved by the Ministry of Public Works (Pascoal 2012, 156). Most of them frequently collaborated in public buildings, such as sculptor Leopoldo de Almeida, painter Lino António, ceramist Jorge Barradas or Guilherme Camarinha, known for his designs for mural tapestries. It is noteworthy that the architect had already positioned artworks on the façades in the projects of the 30s. Architect António Pardal Monteiro (1928-2012), Porfírio's nephew, would become assistant to the construction of the Faculties of Law (1957) and Humanities (1958) and supervised the finishing of the Rectorate (1961). António Pardal Monteiro proposed additional younger artists to participate in the decoration of the latter (Monteiro 2012, 286-287),

Arquivo Nacional da Torre do Tombo (ANTT): AOS, CO/CP-184, 5.2.9., p. 6.

namely colleagues from the School of Fine Arts and some artists acknowledged for their dissidence towards the regime. Collaboration between architects and artists relied on informal and personal contacts, surpassing the imposition by official entities.



Fig. 1. Faculty of Law. Photograph Estúdio Horácio Novais, ca. 1958. FCG | Biblioteca de Arte e Arquivos, CFT.164.161187

The decoration of public buildings was relevant for the promoters and perceived as a way of enhancing architecture and conveying messages to emphasise official ideology. The three buildings of the University campus included bas-reliefs, statues, ceramic-tile panels, mural tapestries and mural paintings, estimated in the general budget, and all according to figurative guidelines. Iconography aimed to dignify the University as an institution by recalling its historical origins and praising the distinct academic subjects taught in the different faculties. The definition of the themes to be represented in the artworks involved professors, as substantiated by transcripts from meetings of the University Senate and School Councils as well as other documents and oral statements. However, the artists were allowed a certain level of autonomy. For example, the topics for the decoration of the Rectorate were proposed by Rector Marcello Caetano (1906-1980), with comments and approval by a group of professors - Vitorino Nemésio (Humanities), Paulo Cunha (Law) and Eduardo Coelho (Medicine) – in a session of the University Senate in 1960 (Universidade de Lisboa 1960, 7). Painter Querubim Lapa, the author of a ceramic tile panel for that building, corroborated the role of the rector in an interview, recalling that Caetano also observed and gave his opinion on the preliminary studies made by the artists (Pascoal 2012, 161). An undated note from Almada Negreiros to his collaborator José Manuel confirms that Marcello Caetano went to the artist's workspace to analyse the cartoons for the Rectorate.² In addition, the evolution of the artworks – i.e., from the first maquette to the final version – was supervised by an official organism, the 1st subsection of the 6th section of the *Junta Nacional de Educação* (JNE, National Council of Education). Within the Ministry of National Education, this body was a consultant in matters of artworks, museums, and monuments. The mentioned subsection was, among other tasks, in charge of issuing aesthetic assessments on the adequacy of the proposals for public buildings (Law-Decree nr. 26611, 19.05.1936), therefore visiting the artists in their workspace and communicating their observations during the plenary sessions of the board. In addition, the Minister of Public Works was also aware of the progress of the artworks.

SPREADING A MESSAGE OF KNOWLEDGE AND ACADEMIC UNION

José de Almada Negreiros collaborated extensively with Pardal Monteiro, using different techniques to decorate the façades and interiors of public buildings, from mural painting to stained-glass windows. Although Almada had a rather individual and unique artistic trajectory and opposed the instrumentalisation of artists led by the dictatorship, collaboration with official commissions became a necessity to subsist and provide for his family (Vasconcelos 2017; Santos 2020).

For the University buildings, Almada was entrusted with decorating the inner façades of the porticos that framed the main entrance, using incisions to apply drawings to the stone walls. The location and the surface material presumably dictated this choice, as the fragility associated with mural painting could compromise the enduring conservation in the outdoor setting. This technique was later repeated at the *Hotel Ritz* (1959) and in the panel *Começar* (1969) that Almada executed for the headquarters of the Gulbenkian Foundation. As shall be presented in the upcoming paragraphs, Almada created compositions integrating a variety of individual scenes covering the walls in both faculties. As the centrepiece of the University buildings, the Rectorate has decorations on both entrances.

The decoration for these buildings sought to represent themes related to knowledge and to serve as an inspiration for the academic community. Even though some examples mention specific aspects and honour figures connected to the history of the faculties and the ancestry of the university in the capital of Portugal, the general spirit relates to an appraisal of knowledge and wisdom inspired by universal values. The proposals presented by Almada can be integrated into the latter.

² ANSA-COR-731.

THE FACULTY OF LAW: A JOURNEY THROUGH

The Faculty of Law was the first building to be completed. Almada's drawings were engraved in 1957 after construction works were finished.

The design statement signed by Almada clarifies that he contacted Franz-Paul de Almeida Langhans, a legal historian who by then was a personal secretary to Salazar, to define the depicted figures.³ Langhans had been suggested by several academics when Almada was looking for an "author of a subject for decorating the portico".⁴ Almada's composition was based on Langhans' introduction in his book on law studies published that year (Langhans 1957), presenting a historical vision of the discipline; the sequences of figures engraved in the portico are mentioned in the text. Each of the walls relates to a topic within the field of History of Law analysed by Langhans: from the origins and transcendent concepts of Law to the Roman construction of the subject. The last wall is dedicated to significant actors in Portuguese Law, not mentioned by the historian. Most of the written sources mentioned in Langhans' text are part of the *Compêndio de História da Filosofia do Direito*, a publication compilating lectures given by Antonio Truyol y Serra at the Faculty of Law in the academic year of 1950-1951.

The design statement also sheds light on the inspiration for the drawings: Almada mentions that the figures were "largely and mostly copies from iconographic documents". For example, he asked the Musée du Louvre to send him a photograph of the Hammurabi Code for guidance. Thus, Almada admits that his work consisted mainly on simplifying the available visual sources. The schematic bi-dimensional figures hold attributes and are identifiable by inscriptions. Each individual scene was complemented by captions written in the respective language: cuneiform writing for Hammurabi, Hebraic characters for Moses, ancient Greek for Pythagoras, and so forth. The large captions in Portuguese in the first proposals would be questioned and considered excessive by painter Armando de Lucena, who positively evaluated the drawings on behalf of the subsection from JNE. The Director of the Faculty also received the drawings for appreciation. Although I could not identify the

Memória Descritiva para a decoração do pórtico da Faculdade de Direito na Cidade Universitária pelo pintor José de Almada Negreiros, 02.01.1957. Arquivo Histórico da Faculdade de Direito da Universidade de Lisboa (AHFDUL), document without archival reference, kindly shared by Professor Gonçalo Sampaio e Mello.

lbid. "autor de um assunto para a decoração do pórtico" (translation by the author).

⁵ Ibid. "[as ilustrações] são na sua grande maioria e quase totalidade decalques de documentos iconográficos, e assim me proponho que todos sejam (...)" (translation by the author).

⁶ Atas das Sessões da 1.ª Subsecção da 6.ª Secção, Livro 101: Ata da 242.ª sessão, 11.01.1957, ff.3v-4. ANTT, Fundo Junta Nacional da Educação.

⁷ Letter from Ignácio Oom do Vale to the Director of the Faculty of Law. AHFDUL, document without archival reference, kindly shared by Professor Gonçalo Sampaio e Mello.

Director's opinion, the final version engraved in situ proves that those extensive quotations were eliminated.

The drawings take the observer on a journey through the history of Law, as written by Langhans. The origins are marked by the scene inspired by the stela of the Code of Hammurabi: Hammurabi receives the symbols of royal power (sceptre and ring) from Shamash, the sun god, who sits on a throne; near the scene are cuneiform inscriptions. The following scene depicts the flight from Egypt, with a large-scale Moses in the centre, accompanied by stylised tablets of law, leading the Hebrews through the desert. Almada's estate includes several drawings of Moses that evidence experiments on the solution for the long beard or the facial expression. These sketches are quite different from a version that is presumably the one presented to JNE, given the extensive quotations incorporated: there, Moses has an imposing stature and emanates thunderbolts from his head, surrounded by a large passage from Exodus (20, 1-17). In addition to multiple preliminary drawings, Almada relied on literature and photographs to support his proposals: his library includes a book with annotations on the Hebrew alphabet inscribed on the boards.



Fig. 2. Almada Negreiros, study drawing for Moses, c. 1957. Graphite and Indian ink on tracing paper. ANSA-A-1425, CEDANSA – NOVA FCSH / © Herdeiros de José de Almada Negreiros

⁸ ANSA-A-1366, ANSA-A-1425, ANSA-A-1426, ANSA-A-1427, ANSA-A-1428.

⁹ Photographaccessibleat: https://www.flickr.com/photos/biblarte/19193985958/in/photostream/ (accessed 20.12.2023).

¹⁰ Simão Palmeirim kindly shared this information.

Langhans mentioned the Pythagorean arithmetical justice: "the compensations should be proportional to the damage" (Langhans 1957, 13) – hence, Almada drew Pythagoras holding a chart, standing near a triangle, with a fragment by the Pythagorean Philolaus of Croton inscribed in Greek completing the scene." The bottom of this wall received a fragment in Greek – "it is not possible to step twice into the same river" – attributed to Heraclitus of Ephesus, positioned in front of a river drawn using dotted lines. Almada's first idea was to include two distinct quotes concerning Logos attributed to this philosopher, as Langhans had referred to this aspect in his text.

The next wall is dedicated to the transcendent conception of Law. The two scenes at the top are inspired by Greek thinkers. The first includes a bust of Socrates surrounded by his disciples Plato and Aristotle wearing togas, and a passage in Greek of Plato's Crito (54b-d) – one of the preliminary versions included Socrates in human form, reclining on top of the scene, 12 as well as long quotations for each of the philosophers. The next depicts Antigone standing in front of Creon sitting on a stool, stating the subjugation of human laws to the immutable laws of the gods, inscribed in Greek.14 Cicero, wearing a toga and sandals and raising his right arm, stands near a square alluding to his De Officiis; in addition, Almada included two passages in Latin, one from De Legibus¹⁵ and the other from De Republica. ¹⁶ The final scene includes the Epistle to the Romans by Apostle Paul, who holds a sword, and Saint Augustine with a book, accompanied by inscriptions relating to his writings: Lex Aeterna, De Civitate Dei, De Ordine, De Libero Arbitrio. Both lost the halos from the preliminary drawings and are represented as modest Romans; Saint Augustine especially is rather different from Almada's initial intentions of representing him as Doctor of the church with mitre and crosier.17

The third wall follows Langhans' deliberations on the Roman construction of Law. It begins with the legendary origins of Rome, represented by Romulus

¹¹ The inscription corresponds to fragment 4: "Actually, everything that can be known has a Number; for it is impossible to grasp anything with the mind or to recognize it without this [Number]". Reproduced in Freeman 1948, 74.

¹² MB AN 150.

¹³ A passage from *Crito* for Socrates, two sentences referring to justice for Plato, and an extract from Aristotle's *Nichomachean Ethics*.

The citation corresponds to vv. 449-457 from Sophocles' Antigone.

¹⁵ Cio. Leg. 1.17: "for Law (say they) is the highest reason, implanted in nature, which prescribes those things which ought to be done, and forbids the contrary". Text accessible at: https://topostext.org/work/752# (accessed 05.12.2023).

De Republica 3.22.33: "True law is right reason in agreement with nature, it is of universal application, unchanging and everlasting; it summons to duty by its commands, and averts from wrongdoing by its prohibitions." Text accessible at: https://www.atta-lus.org/cicero/republic3.html (accessed 05.12.2023).

¹⁷ Photograph accessible at: https://www.flickr.com/photos/biblarte/19193987118/in/photostream/ (accessed 20.12.2023).

and Remus suckling the she-wolf according to the statue in the Capitoline Museums. The scene is completed by Servius Tullius, the sixth king of Rome, to whom a significant constitutional reform that laid the foundations of the Republic is credited. Below, a group of ten men stands under the caption "Lex Duodecim Tabularum", i.e. the Law of the Twelve Tables, which was the first anthology of written laws, thus supporting the foundation of Roman Law. The men are the ten legislators who were members of the first Decemvirate, a board led by Appius Claudius, who is identified by an inscription – although Applies Claudius blends in with the remaining legislators, he stood out in the preliminary drawing.¹⁸ The caption "SPQR", standing for Senatus Populesque Romanus, refers to the Roman Republic. The following scene depicts five jurisconsults from the second and third centuries whose activity was relevant in developing jurisprudence in the Empire, with captions identifying their work: Gaius (Institutiones), Domitius Ulpianus (Regulae), Paulus (Sententiae), Papinian (Questiones et Responsa) and Modestinus (Pandectae), all wearing togas and holding manuscripts. Finally, Justinian I, Byzantine emperor, is represented according to the mosaic in the Basilica of San Vitale in Ravenna, embellished with golden ornaments and holding a basket; inscriptions on his oeuvre - Institutiones, Digesta, Codex, Novellae Constitutiones - complete the scene.

The fourth wall alludes to Portuguese Law through major characters. A plan by Almada Negreiros distributes, in each row, six figures and their significant works. The narration begins in the Middle Ages with Saint Isidore of Seville (Etimologiae), followed by four Visigoth kings responsible for legislative codex: Euric (Codex Euricianus), Alaric II (Breviary), Leovigild (without caption) and Receswinth (Lex Visigothorum). Saint Martin of Braga, figured as a bishop, as in the case of Saint Isidore, completes this section. The second section includes individualised figures; initially, Almada intended to incorporate twelve characters, which were presumably eliminated to achieve a more coherent composition. The preliminary drawing did not consider Saint Thomas Aquinas and Bartolus of Sassoferrato. The Portuguese figures are presided over by João das Regras, alluding to the Courts of 1385. The three actors intervening in the setting out of the kingdom's ordinances are: Ruy Fernandes (Ordenações Afonsinas), Ruy da Grã (Ordenações Manuelinas), Pedro Barbosa (Ordenações Filipinas).

Some of the figures initially predicted for this group were placed in the section below, namely Jorge Cabedo (*Leis e Ordenações*), Domingos de Portugal (*De Donationibus*), and Francisco Suarez (*Tractatus de Legibus ad Deo Legislatores*). The Marquis de Pombal is in the centre with the "Law of the good reason" (*Lei da Boa Razão*), followed by two jurists involved in a debate at the *Junta de Censura e Revisão*: Pascoal José de Melo Freire dos Reis, author of the *Novo Código do Direito Público*, and António Ribeiro dos Santos, who

¹⁸ ANSA-A-1390.

⁹ ANSA-L-229-1.1.

²⁰ Photographaccessible at: https://www.flickr.com/photos/biblarte/19381563635/in/photostream/ (accessed 20.12.2023).

annotated that code. The composition ends with nineteenth-century men: Mousinho da Silveira and the administrative and judicial reforms; Coelho da Rocha, lecturer and author of *Instituições do Direito Civil* and *Ensaios sobre Formas de Governo em Portugal*; Manuel Fernandes Thomaz and Levy Maria Jordão, who commented on the penal code; the Civil Code by Visconde de Seabra, and Vicente Ferrer Netto Paiva, prominent in the field of Natural Law. Written notes in Almada's estate showcase other aspects of his working methods, namely annotations on the works of each figure²¹ and plans to figure out their positioning in the composition.²²

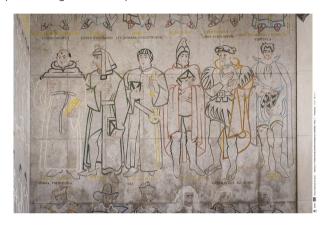


Fig. 3. Detail of the wall at the Faculty of Law dedicated to Portuguese figures. Photograph by José Vicente, 2013. Arquivo Municipal de Lisboa, PT/AMLSB/CMLSBAH/PCSP/004/LPC/118/005443

The initial commission did not include the panel above the main entrance door. However, there was interest in completing the decoration, so Almada once again contacted Franz-Paul Langhans for guidance. The proposed topic, "the sword and the scale" (A espada e a balança), is found in a drawing in Almada's estate; the cartoon was approved by the Rector of the University of Lisbon, Marcello Caetano, a former professor at the Faculty of Law. Apparently, Langhans had previously presented a suggestion, which should be replaced by a simpler composition. The project was not included in the budget, and financial constraints might be the reason for its not being executed.

²¹ ANSA-L-229-2.

²² ANSA-L-229-1: ANSA-L-229-3.

²³ ANSA-L-258.

²⁴ MB AN 151.

²⁵ ANSA-L-265.

²⁶ ANSA-COR-718.

THE FACULTY OF HUMANITIES: A HISTORY OF LITERATURE

The walls of the Faculty of Humanities correspond to a "history of literature", which, according to Almada's notes, was presented by Professors António Augusto Gonçalves Rodrigues,²⁷ Director of the Faculty who played a decisive part in accomplishing the new building,²⁸ and Joaquim Monteiro Grilo, Professor of English Literature. The composition includes remarkable characters and episodes from both universal and Portuguese literature and was completed in 1961, three years after the inauguration of the building. The two professors accompanied the progress of Almada's preliminary drawings. They approved the final cartoon, as confirmed by the changes in certain scenes and the above-mentioned note from the artist's estate. Although no reference in the transcripts of the School Council was identified regarding this decoration, it was presumably analysed by this board since it sanctioned other artworks for the building.

The biblical expulsion from Paradise marks the beginning of the literary promenade: the serpent holds a torch illuminating the path to be followed by the ashamed Adam and Eve, expelled by the angel whose wings are covered with eyes, as an allusion to divine omnipresence. The rest of the wall is dedicated to Greek and Roman classics. Representing the tragedy *Prometheus Bound*, attributed to Aeschylus, Prometheus has his back to the observer and lies with his hands and feet chained, his vital organs being attacked every day by the eagle - "the winged hound of Zeus" – as a punishment to his protection of mankind.²⁹ The *Odyssey* is mentioned by an encounter between Odysseus, holding his arch, and Poseidon, who stands in the water covered with a fishing net and holding his trident. The final scene includes a reference to Virgil's *Aeneid*: Palinurus, coxswain of Aeneas' ship, fell overboard due to the god of Sleep, and Almada drew him holding on to the helm, the only remains of the sunken ship (5, 835-871) – the other part of the ship incorporated in the preliminary drawing was eliminated.³⁰

The next wall begins with Saint Anthony of Padua, a Franciscan friar holding the Christ child sitting on a book in one hand and, in the other hand, a lily. A note indicates a connection to his Sermons.³¹ An earlier draft reveals different intentions for this space:³² The *City of God* by Saint Augustine and

²⁷ ANSA-L-258.

²⁸ Actas do Conselho Escolar, 03.04.1947-30.10.1957, sessão 20.12.1956, f. 154. Historical Archive of the Faculty of Arts and Humanities of the University of Lisbon (AHFLUL), Fundo Orgânico-Funcional da Faculdade de Letras da Universidade de Lisboa: UI A4.

²⁹ Lines 1020-1025. Text accessible at: https://www.perseus.tufts.edu/hopper/text2doc=Perseus%3Atext%3A1999.01.0010%3Acard%3D1007 (accessed 17.12.2023).

³⁰ MB-AN-127.

³¹ ANSA-I -258.

³² ANSA-A-113.

Saint Hieronymus by Albrecht Dürer, the latter perhaps referring to the painting from the National Museum of Ancient Art collection. Saint Anthony was suggested for the next section, alongside Saint Thomas Aguinas (Summa Theologiae) who is represented in the Faculty of Law, and Pope John XXI. However, instead, we see Dante Alighieri holding the Divine Comedy, a scene undoubtedly inspired by Domenico di Michelino's fifteenth-century painting for the cathedral of Santa Maria del Fiore in Florence. The open book held by Dante differs from the original as it presents the Greek letter Phi, corresponding to the golden ratio that Almada Negreiros highly regarded. This scene includes the sinners descending into hell, the mountain of purgatory and the heavenly paradise. Two identical figures, Todo-o-Mundo and Ninguém, a rich merchant and a poor man, here only distinguished by the colour of their garments, report to Auto da Lusitânia, a play by Portuguese Renaissance playwright Gil Vicente. The end of the wall pictures D. Quijote de la Mancha on his horse Rocinante, accompanied by his loyal squire Sancho Panza, alluding to Miguel de Cervantes' work.

Contrary to the Faculty of Law, the space above the main entrance of this building was decorated. The panel was not included in the initial budget. Faculty members decided its execution according to prerequisites from the Minister of Public Works.³³ The scene refers to *Os Lusiadas*, an iconic Portuguese epic poem by Luís Vaz de Camões published in 1572: the goddess Thetis presents to Vasco da Gama the Ptolemaic system, the *Machina Mundi*, which consists in a globe of ten circumferences encircling the four elements - fire, earth, air and water (Canto X, 74-91).



Fig. 4. Almada Negreiros, study drawing for Montaigne, 1957-1961. Graphite and ballpoint pen on paper. ANSA-A-1313, CEDANSA – NOVA FCSH / @ Herdeiros de José de Almada Negreiros

³³ ANSA-L-258.002

According to the chronological thread, the third wall starts with sixteenth-century literature. A glance through the window in Montaigne's tower replaced the original intention of incorporating the "mode of representing a battle" from the *Codex Atlanticus* by Leonardo da Vinci.³⁴ One can observe a pair of hands holding a book on a four-poster bed in front of a wall covered with bookshelves, alluding to the moment when Michel Eyquem retired to his tower to dedicate his life to writing.

A reference to chapter 136 of *Peregrinação* (Pilgrimage), written by Fernão Mendes Pinto (intended to be included in the second wall), is next: while Pinto sleeps, Arichandono, son of the Japanese emperor, loads one of four shotguns and injures himself.³⁵ Underneath this scene is a depiction of William Shakespeare's tragedy *Hamlet*, specifically the gravedigger scene: the blonde prince of Denmark holds the skull of Yorick, accompanied by Horatio and the gravedigger (Act V, Scene I). Finally, Faust's laboratory as described by Johann Wolfgang von Goethe: Almada represents the moment when Faust, surrounded by scientific instruments and leaning over a large book with a magnifying glass, signs the contract with Mephistopheles, who, disguised as Faust, talks to the student.

Analogous to the last wall in the Faculty of Law, Portuguese references predominate in the final wall.

However, the first scene relates to Fyodor Dostoevsky: beneath a starlit sky, a horse jumping causes the fall of a man, possibly an allusion to Raskolnikov's decline in Crime and Punishment. The next section includes two references. On the left, two characters from Alexandre Herculano's historic novel Eurico, o Presbítero (1844) - Hermengarda, daughter of Visigoth king Favil, stands near Euric, his back to the observer and figured as a priest, since he converted to Christianism after being rejected by his beloved. The other scene includes Friar Dinis, holding a crucifix, and Joaninha, "the girl of the nightingales", found in Almeida Garrett's Viagens na Minha Terra (Travels in my Homeland). Antero de Quental is evoked by the Sonnet to the Virgin (Soneto à Virgem), standing with her feet on a half moon and holding her hands in prayer. Next is a reference to Eca de Queirós, distinct from the initial proposal to showcase a scene from the novel Primo Basílio. 36 Instead, the author himself stands next to Fradique Mendes, marking the counterpoint between reality and fiction: the slim and dispirited Eça with the characteristic monocle contrasts with the vitality emanating from Fradique. Intentions to include Oliveira Martins in this section were abandoned. The final section is dedicated to Fernando Pessoa: three heteronyms are individualised – Alberto Caeiro, Ricardo Reis and Álvaro

³⁴ ANSA-L-258.

Although Begoña Farré Torres and Mariana Pinto dos Santos (Santos 2017, 239) refer *Teppo-ki*, a sixteenth century book on the introduction of firearms in Japan by the Portuguese, as the source for this scene, we doubt this interpretation, since the sketch approved by the professors from the Faculty of Humanities and other drafts found in Almada's estate explicitly mention Fernão Mendes Pinto and his *Peregrinação*.

³⁶ ANSA-A-475.

de Campos, alongside the depiction of the character mentioned in the poem *O Menino de Sua Mãe* (His Mother's Little Boy):37 "Run through by bullets (...) / Lies dead, and cools. / (...) Fallen from his pocket / A small cigarette box" – as suggested elsewhere, a possible insinuation regarding the wars which, by then, were starting in the Portuguese colonies in Africa (Pinto 2017, 239).



Fig. 5. Almada Negreiros, study drawing for the fourth wall of the Faculty of Letters, 1957-1961. Indian ink and gouache on cardboard. ANSA-A-475, CEDANSA – NOVA FCSH / © Herdeiros de José de Almada Negreiros

Accessible at: http://arquivopessoa.net/textos/2052 (accessed 17.12.2023).

CLASSICAL INSPIRATION AND ACADEMIC COOPERATION AT THE RECTORATE BUILDING

The Rectorate building has two entrances, both decorated by Almada and approved by JNE in 1960 (Pascoal 2012, 206). The entrance facing the central square received a composition that covers the portico, consisting of an allegory to the city of Lisbon, the "metropolis of the world that the Portuguese created in the burning tropics around the globe" (MOP/CANEU 1961), marked by the coastline filled with dwellings and ships arriving. Underneath is a representation of the Zodiac – Aries, Taurus, Gemini, Cancer, Leo, Virgo, Libra, Scorpius, Sagittarius, Capricorn, Aquarius, and Pisces – placed over a geographical grid including coordinates and parallels of the hemispheres.



Fig. 6. Detail of the Zodiac at the Rectorate building. Photograph by José Vicente, 2013. Arquivo Municipal de Lisboa, PT/AMLSB/CMLSBAH/PCSP/004/ LPC/120/005473

The building was completed in 1961, the same year as the so-called "Colonial Wars" in Africa began. The Rector, Marcello Caetano, who provided the topics for the artworks in this building, was a former Minister of Colonies and supported the maintenance of the colonised territories. This can aid in understanding the imagery in this portico.

The opposite entrance includes two compositions marked by two largesized figures: Apollo, practically naked near the rooster, referring to his connection to the Sun; Athena, wearing an elm with a spear and shield; and the owl of wisdom in front of the moon.



Fig. 7. Study drawing for Appolo. Almada Negreiros, 1957-1961. Graphite, watercolour and ballpoint pen on cardboard. ANSA-A-80, CEDANSA – NOVA FCSH / © Herdeiros de José de Almada Negreiros



Fig. 8. Study drawing for Athena. Almada Negreiros, 1957. Graphite on paper. ANSA-A-59, CEDANSA - NOVA FCSH / @ Herdeiros de José de Almada Negreiros

In addition, Apollo and Athena stand near a pentagonal star with the intersection of the sides being marked by ten digits referring to gods and characters from Greek mythology, 38 a symbol corresponding to the relations of the 'anthropomorphism-number' that Almada published in Mito-Alegoria-Símbolo in 1948. Each deity is surrounded by a group of students and professors dressed according to the time of its execution by Almada. Since Caetano provided the subjects for the decoration, these compositions appear to reflect the humanistic conceptions the rector attributed to the university and exposed in his speeches. Caetano idealised the university as an organic corporation and a collective for exchange between masters and students, capable of generating a feeling of common identification. The University of Lisbon was tasked with the role of "seeking, in the confused tumult of emotions and aspirations that each wave of youth brings with it, to represent that serene and clear smile of Minerva that translates the order of thought, the framework of mental discipline and the solid foundation of creative audacity" (Caetano 1974, 12).39 Thus, these decorations act as an enhancement of the values ascribed to the University of Lisbon, aiming to forge a sense of collective identity among its members, supported by classical values.

CONCLUDING REMARKS

Commissions for public buildings during the *Estado Novo* were a significant work opportunity for architects and artists. As Joana Brites (2015) explained, focusing on state sponsorship of architecture during the regime, the State assumed an inclusive logic of compromise and prevention of radicalisation by integrating architects and artists from distinct political backgrounds. However, as the case of the University campus in Lisbon illustrates, artistic freedom was bound to certain constraints – although this does not mean that artists blindly conformed to the State's directives.

Some years after the controversy caused by the murals for the maritime stations in Lisbon (Santos 2020), Almada Negreiros continued collaborating with Porfírio Pardal Monteiro on a major state project. The aesthetic harmony desired for the three university buildings was not confined to the architectonic language, as the different integrated artworks by distinct artists should be coherent. Almada played a prominent part in this project since he decorated the three buildings, and his drawings were placed at the entrance, a privileged location accessible to everyone approaching. Nonetheless, Almada had to follow requirements regarding the represented themes suggested by professors and the rector, which were also reformulated according to their indications. Complete artistic freedom was further hindered by the opinions

³⁸ 1. Psique, 2. Zeus, 3. Carites, 4. Apolo, 5. Afrodite, 6. Hermes, 7. Atena, 8. Dionisos, 9. Musas. 10. Eros.

³⁹ Translation by the author.

stated by official evaluation boards, as the omission of the extensive citations for the Faculty of Law and consecutive changes in certain characters illustrate. However, no direct act of censorship, namely regarding stylistic proposals, was detected in the archival material that documents this commission.

Almada disclosed his inspirations, assuming the use of a vast selection of visual sources, from paintings to mosaics, that was the starting point for the schematic and quite expressive scenes. The substantial material existing in his estate allows for a wider comprehension of the artist's inspirations and working methods. Though individualised, the scenes contribute to narrating a broader and evolving story. Technical aspects of the incision in stone possibly contributed to the adopted solution, as this technique does not allow for the obtainment of detailed compositions such as those achieved with mural painting.

The decoration for the university buildings in Lisbon should encourage the reunion of the academic community in a circumscribed area. Similar to the function ascribed to this specific architecture, the decoration should underline the identity of the University of Lisbon and stimulate feelings of communal identity and belonging to a specific collective. Given the stipulation of themes by the rector, there was even the possibility to incorporate official ideology in Almada's drawings, given the concealed reference to the Portuguese empire in one of the entrances of the Rectorate. On the other hand, the drawings for the faculties constitute an illustration of the contents of the subjects taught at the time and support the appraisal of knowledge and higher education, eventually acting as an inspiration to moral conduct for the academic community.

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DEFYING THE DICTATORPSHIP: THE MURAL PAINTINGS OF ALMADA NEGREIROS AT THE MARITIME STATION ROCHA DO CONDE DE ÓBIDOS. NEW ART HISTORICAL READINGS

Mariana Pinto dos Santos Art History Institute – NOVA FCSH / IN2PAST ORCID 0000-0001-7289-1875

ABSTRACT

This chapter seeks to add new insights on the mural paintings by the Portuguese visual artist José de Almada Negreiros (1893-1970) at Rocha do Conde de Óbidos based on their historical context, together with a thorough review of sources and an unprecedented close-up observation made possible by the recent scaffolding erected for its restoration work. This text analyses the available sources and documents on the mural paintings for Rocha do Conde de Óbidos, both those previously referred to by art historians (including my own previous work on the subject) and others that have been neglected. The essay also discusses for the first time an unpublished manuscript from the artist's estate which sheds light on the context of state commissions during the dictatorship as well as the artist's relation with his peers. Based on this research, this study revisits and reinterprets the main art historical accounts of the mural paintings at Rocha do Conde de Óbidos and also discusses the controversy that surrounded both the commission and its unveiling, which put the murals at risk of being destroyed. It finally analyses the paintings in light of new observations on the technique and preparatory drafts associating them with the themes and characters depicted, which include the representation of black people in a previously unseen in public commissions dignified manner, and also in relation to the historical contexts of emigration and the aftermath of the Second World War.

KEYWORDS

Art historiography, mural painting, state-commission, emigration, monumentalisation.

Mariana Pinto dos Santos

Senior researcher at the Art History Institute (IHA), Faculty of Social Sciences and Humanities at Universidade NOVA (Lisbon) / IN2PAST - Associated Laboratory for Research and Innovation in Heritage, Arts, Sustainability and Territory, and invited lecturer also at NOVA. She is also an independent curator, and, among others, she curated the show *J. de Almada Negreiros: A Way of Being Modern* for the Gulbenkian Foundation in 2017. She has published essays, exhibition catalogues and books on modernisms and the circulation of the avant-garde, aesthetics and politics, as well as on theory and art historiography. Her latest book, co-edited with Joana Cunha Leal, is *The Primitivist Imaginary in Iberian and Transatlantic Modernisms* (Routledge / Taylor & Francis, 2024). She is the general editor of *A Cultural History of the Avant-Garde in the Iberian Peninsula* (Brill) in preparation. She coordinates the Almada Negreiros-Sarah Affonso Archive (NOVA FCSH). She is co-owner of the publishing house Edições do Saguão.

JOSÉ-AUGUSTO FRANÇA'S ACCOUNT OF ALMADA'S PAINTINGS FOR ROCHA DO CONDE DE ÓBIDOS

José de Almada Negreiros (1893-1970) (hereafter referred to as Almada, as he signed his visual work) painted two sets of mural panels for two shipping terminals in Lisbon, or Maritime Stations (in a more direct translation of the Portuguese "Gares Marítimas"). The buildings were designed by the architect Porfírio Pardal Monteiro, with whom Almada had worked before twice (Church Nossa Senhora de Fátima in Lisbon, finished in 1938; Diário de Notícias, a newspaper building in Lisbon, finished in 1940). The first set of mural paintings for the first station comprised two triptychs (six panels) plus two isolated panels, with 6.2×3.5 metres each, and was completed in 1945. The second, with two triptychs, each panel 7.2×3.8 metres, was completed in 1949. In this essay I will focus on the second set of mural paintings.

José-Augusto França (1922-2021), the prominent Portuguese art historian who first studied Almada's work, wrote the most cited words on these murals in his first monograph on the artist, published in 1963!: "They are the deliberate paintings of our solitude." (França 1963, 11). He would repeat it in his second monograph on the artist, published in 1974 (França 2020 [1974], 279), and in his survey on twentieth-century art in Portugal (França 1991 [1974], 333), adding that they responded to the fifteenth-century paintings known as the Saint Vicent Panels³ and further stating that: "They are the only serious mural paintings, thought out and painted beyond decorative functions, in public palaces, that have been done in Portugal. (...) With the Rocha frescoes, and above all with the Emigrants composition, Almada created the masterpiece of Portuguese painting in the first half of the century" (França 2020 [1974], 279-280).

França described the subjects depicted in the Rocha murals in more detail in his second monograph on Almada. It is relevant to point out that what was then highlighted by França would be enshrined as the most accurate and thorough analysis of the paintings, without any significant differences in subsequent approaches by other art historians. In his usual literary style, França paid attention to the formal composition and, at the same time, conveyed the characters within a psychological portrait. One of the triptychs, he writes, is organised as if seen from the river, showing Sunday scenes of "modest sadness"

¹ França read this to Almada before publishing it. See "Entrevista a José-Augusto França (2016)" (Pinto dos Santos 2022).

² "São estas as propositadas pinturas da nossa solidão." All translations are mine except otherwise stated or quoted by other authors.

³ "Painéis de São Vicente" (c. 1445-1480) are a total of six panels attributed to the painter Nuno Gonçalves and praised for the "realism" of its portraits. They were said to be the prime example of national painting, especially during the Estado Novo dictatorship.

⁴ "São as únicas pinturas murais sérias, pensadas e pintadas para além de funções decorativas, em palácios públicos, que em Portugal se fizeram. [...] Com os frescos da Rocha, e sobretudo com a composição dos Emigrantes, Almada realizou a obra-prima da pintura portuguesa da primeira metade do século."

(França 2020 [1974], 273). (Fig. 1 A) The panels are not sequenced, yet they depict scenes at the shore, all of them showing small wooden boats ("batéis"), each with different characters, in the lower half. The left panel shows a family of nine, packed in a boat. França mentions the oval shape formed by them, and describes each character by assuming their familiar relations, and mentioning the boy with the fish net as a dreamer. The middle panel has another boat paddled by a girl while a boy holds a fish net in the water; França considers this scene the centre of the composition. And finally, a third boat in the right panel shows three "clowns resting" although they are part of the show that other circus performers are presenting at the shore, in the upper part of the panel.





Fig. 1 A and B. Mural paintings at Rocha do Conde de Óbidos. Triptychs Domingo Lisboeta (A Sunday in Lisbon) and Partida de Emigrantes (Departure of Emigrants). Centro de Documentação e Arquivo da Administração do Porto de Lisboa. Photographs by Guta de Carvalho. 2024

The upper parts of the three panels are also described by França. The left panel has a window opening to show a bourgeois interior, in a "geometric construction following cubist principles revitalised by post-war French painting" (França 1991 [1974], 333), and he notices the couple looking at the landscape from above (França 2020 [1974], 275). The middle panel shows two women sellers whom he calls "hideous statues of labour without salvation" (França 1991 [1974], 333) and above them, a boat under construction with eyes painted at the bow. The right panel shows circus performers, "saltimbancos", a juggler, contortionists, and a trapeze artist, "whose meager body is little more than the arabesque of her function." (França 2020 [1974], 276)

The other triptych (Fig. 1B) has a narrative continuity, and França writes that one single scene is depicted in the three panels: a departure of emigrants that have just boarded a ship (the stairs are being removed) while a crowd waves goodbye from the balcony. Again, Franca combines formal description and psychological analysis. He mentions the details of the ship elements in "an obsessive rhythm that the colour variation resolves, in bluish whites and ochres that the shadows turn earthy, and the sun makes red" (França 2020 [1974], 276). He notices the wood knots that are like eyes everywhere in the scaffold where a man "looking as if he was made of wood himself" carries "sand". He notices that the people bidding farewell in the balcony have different social origins: a family composed of father, mother (with a "low bottom, as Portuguese women have") and daughter, a woman with an "incredible hat with a stuffed bird and a net" as if it was a "caricature"; behind them, two women, which he identifies as mother and daughter, are holding each other, wearing their shawls, the mother consoling the daughter perhaps because, he writes, her fiancée or husband is going away — they are working women and "represent the tragedy of the departure" (França 2020 [1974], 279). And then there are the ones who part, leaning over the ship's rail, a "suffering and resigned flock". França describes several of the faces, the white lines on the forehead of one of them, the stared eyes that "look at nothing", and he lingers on the figure of a woman he presumes to be old, alone, as if "in an abyss" and "wrapped in a dark shawl, her old chin and sharp nose drawn in the shadow that divides her head, standing at the level of the rail, and above it a hand that advances, hesitantly, coming out of the fringe of the shawl like a foreign object that doesn't even dare to grasp that wooden railing, over the coldness of the iron."8 (França 2020 [1974], 279)

⁵ "estátuas hediondas de trabalho sem salvação."

⁶ "cujo corpo mesquinho é pouco mais do que o arabesco da sua função."

 $^{^7\,\,}$ "ritmo obsessivo que a variação do colorido resolve, em brancos-azulados e em ocres que as sombras põem cor de terra e o sol vermelha."

Embiocada" is the old-fashioned Portuguese word he uses, referring to the use of "bioco", a traditional cloak used to cover a woman's head and face for modesty; however, these women are using shawls, not cloaks. "Esta mulher embiocada num xaile escuro, o queixo velho, e o nariz agudo, desenhado na sombra que partilha a cabeça, postos à altura da amurada, e sobre esta uma mão que avança, hesitante, saindo da

Faithful to the modernist evolutionary narrative he developed in several of his studies, França's formal analysis of the murals focuses on how this work represented the final stage of the older generation of modernists in Portugal. Franca sees Almada as reaching the most mature stage of his generation laving claim as the natural heir of the cubist legacy, and at the same time closing that legacy and proving that the younger generation should not dwell in neo-cubist experimentations. Franca nevertheless points out that Almada had a unique approach in the murals that was contrary to Picasso's, consisting in the "treatment of the line" as a "characterising note" and "surrounding continuity" giving a unique quality to his paintings (Franca 2020 [1974], 280), Lastly, França sees Almada's murals as being parallel to the neo-realism proposed by a younger generation of artists that opposed the dictatorship and proclaimed a socially engaged art, stating that Almada actually surpassed them by expressing the condition of the humble emigrant like no other and by painting a "Portuguese portrait" (França 1963, 11). França sees the cubist vocabulary as a generational asset for Almada, who thereby marked out his superior, leading position in relation to the younger generation.¹⁰

I have recently proposed another approach that challenges this modernist narrative: the inverse relation occurred, because it was Almada who responded to the neo-realist artists and, far from closing a cycle from the past, he sought to enter their contemporary aesthetic preoccupations, renewing his art because he was affected by the younger generation and their defence of mural painting as socially engaged art. As an older modernist, Almada made use of such a commission for mural painting that would be unavailable to them, aiming at a renewal of his artistic position by catching up with the younger generation (Pinto dos Santos 2020).

Two earlier texts by José-Augusto França have not hitherto been considered. The first one was published in 12 January 1954 in a newspaper in Porto and deals with the "absence of mural painting in Portugal". França speaks of the necessity of a "collective agreement" and that no one will allow painting about a "society in crisis" in official walls. He mentions *Guernica*, which he had never seen, as an anti-official painting that, not being a mural, was in fact a "free", "universal" painting. Regarding Portugal, he refers to the 1947 paintings by Júlio Pomar at Cinema Batalha, Porto, that were ordered to be covered in 1948, which amounts to, "even for Portugal, an exaggerated stupidity". He

franja do xaile como um objecto estranho, que não ousa sequer agarrar aquele corrimão de madeira, sobre a frialdade do ferro."

^{9 &}quot;apontamento caracterizante" and "continuidade envolvente".

[&]quot;Nenhuma outra pintura portuguesa tão profundamente expressou a condição do emigrante humilde — em imagens paralelas àquelas que o jovem neo-realismo então propunha, com uma definição ideológica que não era, de modo algum, a de Almada, mas que ficava aquém da sua matura, experimentada sinceridade." (França 1991 [1974], 333).

¹¹ José-Augusto França, "Da não existência de pintura mural em Portugal". *O Comércio do Porto*, 12 January 1954, p. 6. I thank Sónia Moura for this reference.

finds the real mural painting, the one meant "to decorate, but also *being*, and representing our space, our time" in Almada's work at the Maritime Stations: "Their authenticity is measured by the fright they provoked". França writes that they speak of the "emigrant's homesickness" not being able to disclose fully that Almada depicted emigration, due to the risk of censorship. It was in this same text that he firstly referred to them as "the deliberate paintings of our solitude", a sentence he would repeat several times in subsequent texts, for decades. But it is interesting to notice that it was first written in a text about the absence of mural painting and therefore its original context had to do with being a solitary example of mural painting in Portugal.

The other earlier text is dated 24 November 1963, published in Brazil and kept as a newspaper clipping by Almada himself. The text is about the initial wish and the bureaucratic impossibility of showing Almada's work at the São Paulo Biennale, and the intention of getting the artist to travel to Brazil. França highlights the work for the Maritime Stations as the artist's best and he repeats that these are the only true mural paintings in Portugal. It is in this text that França, writing more freely because he was getting published in a Brazilian newspaper, refers to the paintings firstly as depicting emigrants and a Sunday in Lisbon. The woman with the shawl ("embiocada") is already worthy of a thorough description as the most dramatic and moving symbol of departure and solitude. We owe José-Augusto França the titles for which the triptychs are now known, and they were consecrated in his first texts about the artist, probably benefiting from Almada's own first-hand accounts.

ART HISTORICAL APPROACHES TO THE MURALS AFTER JOSÉ-AUGUSTO FRANÇA

Some art historians writing about the murals repeated, albeit more synthetically, José-Augusto França's analysis and point of view. Frequently, as was already the case with França, the authors' own critical view of the times of dictatorship was projected into their analysis of the murals, combined with the dominant modernist view of art-as-progress and the consequent relegation of Portuguese art to a place of belatedness associated with the dictatorship's isolationist politics. The tropes about the dictatorial era—the solitude, an indetermined absence, the failed idea of glory—are often projected into Almada's paintings. For instance, Margarida Acciaiuoli wrote in 1991: "Developing in his own name, and in the name of those who tried a journey without reach, he explored in the memory of time the construction of spaces that are the

¹² "A sua autenticidade mede-se pelo susto que provocou e que só dificilmente se deixou acalmar num consentimento desconfiado." Idem.

¹³ José-Augusto França, "Almada Negreiros e a Bienal". Suplemento Literário do Jornal do Estado de São Paulo, 24 November 1963. ANSA-COR-469-002. CEDANSA – NOVA FCSH / © Herdeiros de José de Almada Negreiros.

mirror of others (...)." (Acciaiuoli 1991, 747). The art historian repeated França's ideas about the closure of a cycle of "an unresolved pictorial practice" with a "neo-cubist system", while emphasising Almada's individual artistic path. 14

A few years before, in 1986, Rui Mário Gonçalves had a somehow different approach to the murals, making a more formalist analysis, yet also very much within the modernist narrative framework. He focussed on the "lines that command the composition and enhance the constructivism that always interested Almada" (Gonçalves 1986, 14), adding that the paintings in Rocha do Conde de Óbidos were a progressive step towards the "abstractionism" the artist would embrace in the late fifties. Rui Mário Gonçalves further considered that Almada "was not interested in making art as a means of critical action as the neo-realists or the surrealists" and that his interest in Picasso was not in his political side, but his cubist legacy (Gonçalves 1986, 16). In short, for Gonçalves, Almada was pursuing a pictorial evolution in direction to abstraction with no political readings implicated.

In 1995, Raquel Henriques da Silva, in a necessarily short reference (as part of a multi-authored survey on Portuguese art from the Baroque to the twentieth century) also quoted França and underlined the idea that Almada surpassed the neo-realist artists, because of "the impact of [the murals'] dimension and their implantation in a public space" where "the silent scream of the emigrants' anguish contaminates the Sunday joy" of the opposite triptych (Henriques da Silva in Pereira [coor.] 1995, 404).

In a more recent text, Raquel Henriques da Silva returned to the topic, always following França's original study closely, but adding new insights. Henriques da Silva pays attention to the depicted emigration, stating briefly that the emigrants were probably leaving for the then colonies (Henriques da Silva 2018, 72). Furthermore, noting that the murals were threatened with destruction shortly after their creation (to which I will come back later), she writes that that circumstance meant that Almada was seen to be as dangerous as the young communist painter Júlio Pomar, whose murals for a private building

[&]quot;Desenvolvendo em seu nome e em nome dos que tentaram uma gesta sem alcance, ele explorou na memória do tempo a construção de espaços que são o espelho de outros [...]." (Acciaiuoli 1991, 747). In her PhD dissertation about the 1940s art in Portugal, Almada's murals are briefly approached (in two pages, 746 and 747) without new research or interpretation. At the 1984 catalogue of the major anthological exhibition that she curated for the Gulbenkian Foundation the murals are very briefly approached in her text, "O Pintor" (Acciaiuoli [coor.] 1984) and again in Fernando de Azevedo's text "O Decorador" (Azevedo in Acciaiuoli [coor.] 1984), who, like França before him, relates Almada's paintings with Renaissance frescos such as Piero della Francesca's and Luca Signorelli's (to whom the artist pays homage in a 1942 painting). In 1994, António Quadros Ferreira published a book with the title *Painéis das Gares Marítimas de Lisboa. Análise e Recepção da Modernidade em Almada Negreiros*. However, the book is about all of Almada's artistic production (not only the murals) and, when addressing the murals, attempts at a semiotic reading which nevertheless is based on previous research and interpretations (published by Fund. Eng. António de Almeida).

This had previously been noted briefly by Paula Lobo (2014, 351).

(cinema Batalha, Porto) were painted over in 1948 by pressure of the State.¹⁶ However, in that same essay, Raguel Henriques da Silva uses the adjective "decorative" three times to describe the mural paintings of Rocha do Conde de Óbidos, a classification that seems intended to dilute the critical potential in Almada's paintings. Its "exuberant palette" and the "resonance of synthetic cubism" are allies of his "taste for decoration" (Henriques da Silva 2018, 71). The art historian believes that Almada's murals cannot be incorporated in the "international muralist conjuncture", because in this work the artist "fulfils a personal journey" (Henriques da Silva 2018, 70), which appears to indicate that she does not attribute his murals a sufficient political stance akin to the one found in the "international muralist conjuncture". Henriques da Silva further writes that, although Almada probably saw the painting Café by Portinari exhibited in 1940 in the Portuguese World Exhibition (a nationalist propaganda show promoted by the dictatorship) and that "perhaps" he knew about other muralists, "I am convinced that at no moment they influenced his work" (idem). In Henriques da Silva's essay, the isolationist trope is projected back into the older artist, as if his age and the restrictions of the dictatorship both contributed to a singularly isolated path immune to external contact. This idea that the artist worked alone without considering his contemporaries or wanting to be part of the contemporary art scene is contradicted by the work itself, by Almada's writings, by how he responded to interviews¹⁷ and paid attention to younger artists. 18 Almada's murals clearly show an awareness of the role and expectations about mural painting nationally and internationally, which, moreover, were discussed by neorealists and promoted in their publications.¹⁹

¹⁶ These were recently recovered from beneath several layers of paint. In another text, Raquel Henriques da Silva cautiously relates the murals of Rocha do Conde de Óbidos with neo-realism. (Henriques da Silva 2007, 201)

¹⁷ The most significant of all would be: "— A sua opinião sobre a pintura conhecida como 'realismo social'.

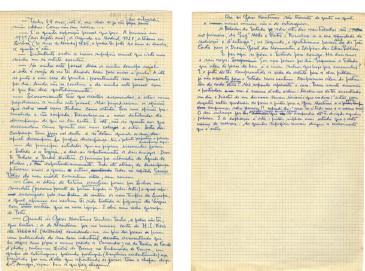
[—] O 'realismo social' será uma das metamorfoses em arte, terá o interesse das pessoas que o vivam como arte, e sem ser um adepto, todo o artista, todo o artista faz conscientemente 'realismo social'.» ("—Your opinion on the painting known as 'social realism'. /— 'Social realism' will be one of the metamorphoses in art, it will be of interest to people who experience it as art, and without being a fan, every artist, every artist consciously does 'social realism'". Interview "Diga-nos a verdade Almada Negreiros", *Diário de Lisboa*, 28 January 1953.

Such as Júlio Pomar, Querubim Lapa, António Dacosta, Mário Cesariny, Lourdes Castro, René Bértholo, Nikias Skapinakis, Ernesto de Sousa. He was the first one to buy a Júlio Pomar painting and a Querubim Lapa drawing, when they were still students at the António Arroio Art School. This is well documented in the writings and testimonies of these artists in several different situations, as well as by other artists, such as Hein Semke in his diary (Semke 2016).

¹⁹ The first images of works by Mexican muralists were published in Portugal before 1940. The first one was in 1935: Diego Rivera's mural *El Ingenio*. Caldeira, Heliodoro, "A pintura mural mexicana: Rivera e Siqueiros" in: *O Diabo* 74, 24 November 1935. *Apud* Santos, Luísa Duarte, "Portinari: a descoberta do pintor d'além Atlântico", in: Nova Síntese 8, 2015. See also Júlio Pomar's 1940s texts defending mural painting (Pomar 2014).

Raquel Henriques da Silva also writes that Almada was one of the artists who received more state commissions. Yet, this supposition should require caution, in that Almada's works for the state were not only mainly owing to the intervention of architect Porfírio Pardal Monteiro, but also, a number of other artists had far more commissions (for instance, Guilherme Camarinha, Jorge Barradas, Leopoldo de Almeida, Lino António, not to mention architects such as Pardal Monteiro himself). It is, however, true that Almada created Portugal's largest surface of mural painting in the twentieth century in the Maritime Stations, as he himself stated in a manuscript drafted in 1952 and still unpublished to this day. ²⁰ (Fig. 2)

ALMADA'S UNPUBLISHED MANUSCRIPT OF 1952



a Negreiros' manuscript, unpublished. CSH / © Herdeiros de José de Almada

Fig. 2. Draft "Tenho 58 anos...". Almada Negreiros' manuscript, unpublished. ANSA-L-9, CEDANSA – NOVA FCSH / © Herdeiros de José de Almada Negreiros

Other scholars have mentioned Almada's works, but without focusing on them. For instance, Inês Beleza Barreiros discusses the condition of exile related to a series of references including Almada's murals and its ties to an imperial mythology. She refers to Almada's triptych on emigration as the "counter-image" of the dictatorship (Barreiros 2009, 142) and mentions Ângela Ferreira's artwork *Emigração* (1994), which employs a manipulated reproduction of the triptych *Departure of Emigrants* by Almada. In fact, it erases Almada's paintings and leaves the architectural space destined to the murals. Ana Balona de Oliveira, in turn, thoroughly analyses the same Ângela Ferreira's work. Balona de Oliveira shows that Ferreira refers to Almada's paintings by showing the emptied architectural space without the paintings, while at the same time recovering echoes of its elements, such as the mobile stairs to embark on the departing ship, or the bricks depicted in the original painting (Oliveira 2012).

We can infer the date of the manuscript as the artist states his age at the beginning, 58 years old. His 58th birthday was on April 7th, 1951, but the year must have already been 1952, because Almada mentions his fourth individual exhibition, for which this text appears to have been written. Actually, it was Almada's seventh individual exhibition. He makes a mistake, saying his first was in 1911, when in fact it was 1913, then he omits the second in 1920, he mentions his third in 1927, omits the fifth (1933) and mentions the sixth in 1936 when in fact it was in 1941 ("30 anos de Desenho", which was an official exhibition promoted by the Secretariado Nacional da Propaganda (National Bureau for Propaganda)). The seventh show (presented as fourth) was no less than the one promoted by José-Augusto França for the opening of his art gallery, Galeria de Março, in 1952. It is quite likely that this text was written as a speech for the opening and was never meant to be printed. Therefore, the artist allowed himself to say things that he probably would have to keep from censorship if published. Almada writes in the beginning: "I've filled the largest mural surface a single artist has created in half a century [in Portugal]." He goes on to state that his work has been acclaimed by foreigners, but not in Portugal. The information contained in the whole document is very significant, but I highlight three passages. The first one:

"Economically, I've had to accept commissions, and these have never jeopardised my personal art. But they did jeopardise people's opinion of me as an artist. It was a prejudiced and untrustworthy opinion. I see myself as the greatest dealer of mistrust that I know. And this applies to my commissioners as well as to my colleagues and others. This mistrust is excessive and only stops when they also mistrust their own mistrust. So, the word mistrust is not pejorative here."²¹

These words show that Almada was very much aware that the younger anti-fascist generation of artists and intellectuals (and França was himself an anti-fascist) had somehow been disappointed by his acceptance of state commissions. However, he also makes a point of stating that those who commission him also mistrust him, clearly alluding to the controversy sparked by the paintings at the Maritime Station. He nevertheless sees a positive side in being mistrusted by both sides. It can be inferred that that meant that he could keep his distance from the dictatorship and that even if mistrusted by younger artists, he could perhaps still surprise them with his work under commission. His words show how much Almada was aware and cared about how

²¹ "Economicamente tive de aceitar encomendas, e estas nunca prejudicaram a minha arte pessoal. Mas prejudicaram a opinião que sobre mim tinham como artista. Era uma opinião preconcebida e não confiada. Reconheço-me o maior distribuidor de desconfiança de que me dou conta. E isto, não só quanto aos que encomendam como quanto aos meus colegas e outros. Esta desconfiança toma freio nos dentes e só se detém quando afinal desconfiam também da própria desconfiança. Não é portanto pejorativa a palavra desconfiança aqui."

his work was being perceived by younger artists and cultural agents who opposed the dictatorial regime. He took the opportunity of staging a solo exhibition in a context of opposition, promoted by the young critic and art historian José-Augusto França, who shortly after proclaimed his murals in the Rocha do Conde de Óbidos as the masterpiece of the twentieth century in Portugal, to justify the fact that he had to accept commissions for economic reasons but, at the same time, that he was provoking distrust from the State. His following words, and my second highlight, support this:

"The main organisations that commissioned me were the State and the Church, and I owe them respectively to two friends: Duarte Pacheco and Pardal Monteiro. The first through Águedo de Oliveira, the second spontaneously. All this under suspicions, some picturesque and others serious, all in the Public Service section of my unpublished resumé, without resentment."

In these lines Almada makes clear that there were specific intermediaries facilitating these commissions: the architect Porfírio Pardal Monteiro, as already mentioned, and Duarte Pacheco, the Minister of Public Works and Communications between 1933 and 1936, and again in 1938, combined with the role of Mayor of Lisbon, until his death in 1943. Both Duarte Pacheco and Pardal Monteiro were responsible for the mural commission for the Maritime Station. However, Almada mentions a name never taken into account before, Águedo de Oliveira. Artur Águedo de Oliveira was a lawyer who worked closely with the dictator António de Oliveira Salazar, and one of the regime's ideologues, as well as its Minister of Finance between 1950 and 1955.23 Like Almada, he studied at Colégio de Campolide at the time a Jesuit boarding school. Born in 1894 and Almada in 1893, they were most likely colleagues. This underlines something that has received little attention: the aristocratic upbringing of Almada in a boarding school²⁴ provided him with an environment in which he grew up alongside figures who would become prominent in the dictatorship's political elite and who, as seems to be the case, would protect him. Moreover, Águedo de Oliveira was the Minister of Finance when Almada was writing those words, so perhaps it wasn't just an acknowledgement of gratitude, but a subtle appeal for his work to be recognised by the state by naming his ally in the government.

[&]quot;As principais entidades que me fizeram encomendas foram o Estado e a Igreja, e devo-as respectivamente a dois amigos: Duarte Pacheco e Pardal Monteiro. O primeiro por intermédio de Águedo de Oliveira, o segundo expontaneissimamente [sic]. Tudo isto através de desconfianças pitorescas umas graves outras, todas no capítulo Serviço Público do meu inédito curriculum vitae, sem rancor."

²³ (Afonso dos Santos 2011).

He arrived as an intern at around the age of six or seven, and his brother António joined him. After the death of their mother in 1896, his father became an absent figure and the only family contact was with his mother's relatives, grandfather, step grandmother, aunts and uncles.

In addition, if any agent of the political police (PIDE – International and State Defence Police) was present at the opening of the exhibition (which was extremely likely) and heard him, the reference to the minister's proximity would also mitigate the controversial statements made in his speech.

My third highlight is the following:

"Is the State forgetting that, as well as being a well-off person, he is the only gentleman who is commissioning work today? And the fact that it has committed the artist's life to the public work no longer entails any commitment for the state beyond the private one of each work already realised?"²⁵

The artist writes, in Portuguese, "pessoa de bem", which I have translated as "well-off person" – though it also reads literally as "good person" – as I believe that in this context Almada is saying that the State is the only entity with financial capacity to sustain artistic activity. But immediately after he states that even if the State has forced artists to work on commission ("it has committed the artist's life to the public work") that does not imply any further commitment — or endorsement — of the State by the artist besides delivering the work. In other words, the State must not interfere with artistic creation nor does the artist need ideological affinities with the State.²⁶

REVISITING THE COMMISSION AND THE CONTROVERSY

In 1946, Almada started working on the drafts of the mural paintings for the Rocha do Conde de Óbidos Maritime Station. The commission of this set of mural paintings was a troubled process, because while Almada had already done a first set of murals for the neighbouring Alcântara maritime station (inaugurated in 1943, painted by Almada in 1944-45), that set of murals had already displeased the authorities. What is more, the Minister for Public Works, Duarte Pacheco, who had only made a verbal agreement with Almada to commission the murals for both stations, had passed away. There was nothing written about Almada getting the second one. José-Augusto França had already mentioned how the mural paintings caused controversy and were then under threat (França 1954; 1991 [1974], 334; 2020 [1974], 280), demanding the intervention of the National Museum of Ancient Art director, João Couto, who wrote a report defending them and thus preventing their destruction.

[&]quot;Esquecerá o Estado que além de pessoa de bem é o único senhor que hoje faz encomendas? E o facto de ter comprometido a vida do artista para a obra pública já não acarreta para o Estado mais nenhum compromisso além do particular de cada obra já realizada?"

²⁶ In 1936 Almada had already written an unpublished document expressing these ideas in which he confronts António Ferro, the National Propaganda Secretary, for wanting to control the arts through commissions (Almada Negreiros; Pinto dos Santos 2015).

Almada himself had implied so in an interview in 1953. Answering the journalist's question "how do you see those paintings today?", referring to the Rocha do Conde de Óbidos Maritime Station paintings, he said: "As a stranger. And if I can see them today, I owe it to the report that prevented the last of them from being chopped off on the Rocha do Conde de Óbidos. I don't think I've ever done better, or done work that was more my own."²⁷

Years later, his wife and painter Sarah Affonso, interviewed in 1983 by her daughter-in-law, recalled that the late Duarte Pacheco was succeeded by José Frederico Ulrich who did not like Almada's work in Alcântara, and did not want to honour the verbal agreement of his predecessor. This was actually incorrect, since Duarte Pacheco was succeeded by Augusto Cancela de Abreu, Minister for Public Works and Communication between 1944 and 1947; Ulrich was then the Minister's Secretary, only replacing him as Minister in February 1947. Sarah Affonso's memory mix-up nevertheless reveals that it was probably Ulrich, one of the most conservative members of government, who lobbied the most against giving the second commission to Almada. She narrates that Ulrich's secretary, who had also been Duarte Pacheco's secretary and knew of the agreement, threatened Ulrich to go public if he did not proceed with the commission to Almada and that was the reason why he finally had it confirmed.²⁸

Sarah Affonso further told that in the end the paintings caused scandal, and confirmed that they were nearly destroyed, "because people thought that they were crazy, they even had circus performers!". (Negreiros; Affonso 1983, 71). She also indicated that a committee of influential people (though no names were named) lodged a complaint to the dictator Salazar, asking for its destruction. Salazar mentioned the case to a "Fine Arts Committee" (in fact, the 6th Section of Junta Nacional de Educação [National Council for Education]) over which the aforementioned João Couto "presided", she says (he was in fact, only a member), though he ended up saving the mural paintings. She further states that if the murals had been destroyed, the artist would have to return all the payment he had received for them: "This would be a terrible problem for an artist, because, not only would the work be destroyed and the commission given over to someone else, but there was also the financial problem. Usually, the work is paid in three parts, the first two are almost always just to pay the cost of the materials and the accumulated debts - the worries of those with little money." (Negreiros; Affonso 1983, 72)

[&]quot;Como um estranho. E se os vejo, devo-o ao parecer que evitou serem picados os últimos na Rocha do Conde de Óbidos. Creio não haver antes cumprido melhor, nem feito obra que fosse mais minha." Almada Negreiros, interview, "Diga-nos a verdade, Almada Negreiros", *Diário de Lisboa*, 28 January 1953, p. 9.

There is, again, some confusion in Sarah Affonso's account. Duarte Pacheco's subsecretary for Public Works and Communications was the Engineer Roberto Espregueira Mendes but he left the position in 1944. In 1947, when Ulrich became minister, Mendes was appointed General Director of the Portuguese Railway. Two subsecretaries were then nominated: Luís José de Avelar Machado Veiga da Cunha and José Augusto Correia de Barros (Decree 36130, *Diário da República*, 4 February 1947), and none had worked with Duarte Pacheco. I cannot be sure which one was Sarah referring to.

Other art historians repeated França's narrative about the imminent destruction, which he probably heard from the artist over their many conversations (and he also read and quoted what the artist left half-said in interviews), without further documental research, but Sarah Affonso's account was neglected. I will come back to it further on.

In her doctoral thesis about Duarte Pacheco, Sandra Marques de Almeida attributes the 1946 request for an opinion from the 6th Section of the National Council for Education to purely budgetary reasons (Almeida 2009, 330). Her work reveals that the construction of the Stations attracted negative opinions regarding its costs, and Pardal Monteiro was unable to materialise several elements of his project due to budgetary restraints. According to the sources, Almada's budget was 500,000 escudos (today, around 2500 €) and in the end it was decided to pay him 450,000 escudos.²⁹ Yet, these cannot be taken as the only reasons behind the reluctance to give the work to Almada if one reads between the lines of the documents produced under conditions of dictatorship and censorship. Furthermore, Sarah Affonso's account, although with some natural confusions about events occurred forty years before, indicates that there were thematic issues.

In fact, there were two rounds of requests for reports to the 6th Section of the National Council for Education before the commission was fully approved. The first scholar to analyse several of the most important documents regarding this controversy was Paula Ribeiro Lobo in the article "Almada and the maritime stations: the portrait of Portugal that the dictatorship wanted to erase" (Lobo 2014). Lobo read copies of João Couto's reports as a member of the 6th

The documents about the negotiation of Almada's budget are archived as Processo Rocha do Conde de Óbidos (IPA.0007086), SIPA, National Archive at Forte de Sacavém, Arquivo DGEMN, Instituto da Habilitação e Reabilitação Urbana. See "Request for advice on Almada's budget to Architect Baltazar da Silva Castro", dated 11 November 1946, by Direcção Geral dos Edifícios e Monumentos Nacionais - secção Administrativa; "Parecer sobre a proposta para a decoração da 'Gare' marítima da Rocha do Conde de Óbidos", dated 16 December 1946, stating the budget should be reduced to 336,000 escudos, by Direcção Geral dos Edifícios e Monumentos Nacionais - Repartição de Obras de Edifícios: Advice from Architect Baltazar da Silva Castro, dated 19 December 1946, stating that the cost of labour and materials increased since the work done in Alcântara, and thus 450,000 escudos would be a fair amount to pay. Documents 578901 to 578906. Also referred by Paula Lobo (2014, 348) and Raquel Henriques da Silva (2018), via Sandra Marques de Almeida (2009). In addition to these documents there is an official handwritten letter from Almada Negreiros justifying the value of 500.000 escudos by referring to the "oral agreement" with Duarte Pacheco that could not be proven because he had died in 1943. Namely stating that he had asked for 500,000 escudos for Alcântara and that the then Minister had said that the first set of murals had to have a lower budget, to be compensated in the second one: ""To begin with, it can only be this way now, but you'll never be short of work from the state again!" This underlining was His Excellency's verbal declaration, which determined the contract and the trust in the work of those who have a family." ("'Para começar não pode agora deixar de ser desta maneira, mas nunca mais lhe faltará trabalho do Estado! Este sublinhado ficou declaração verbal de S. Exa, determinou o contrato e a confiança no trabalho de quem tem família constituída."). Letter from 7 September 1946 to Engineer Gomes da Silva, General Director of National Monuments and Buildings.

Section of the National Council for Education kept at his estate.³⁰ The first report by João Couto, dated 11 April 1946, was commissioned to the 6th Section, she argues, by Minister Cancela de Abreu to resolve the doubts about trusting Almada with the second set of mural paintings at Rocha do Conde de Óbidos.³¹ In it, Couto praised Almada's paintings in Alcântara and claimed he was the best choice. But, as Paula Lobo notices, he also "recalled the discussion generated by the paintings of the Brazilian Cândido Portinari in the Hispanic Foundation of the Library of Congress in Washington, to assure that this 'was not', and 'would not', be the case of the Portuguese maritime stations." (Couto *apud* Lobo 2014, 347). Paula Lobo clarifies that the reference to Portinari "revealed what was at stake: in the previous year Portinari had been candidate for federal deputy for the Brazilian Communist Party, and his work inspired the social themes' painting of Portuguese Neo-Realism, the artistic movement of opposition to the regime that by then had gained force." (Lobo 2014, 347).

Lobo's argument that political fear of social realism in state commissions was the reason for Couto's assurance that Almada's would not be such a case is certainly to take into consideration. But it can be added that the paintings by Portinari at the Hispanic Foundation in the Library of Congress in Washington were mentioned by Couto because he also had to produce a report on them. He writes: "As I write this report I have before my eyes the reproductions of the panels painted by the Brazilian Cândido Portinari in the magnificent new rooms of the Hispanic Foundation of the Library of Congress in Washington. It could be a cause for discussion there to relate the work of the modern artist to the decorative expression of the rooms they have received. However, this is not the case with the Alcântara Maritime Station, nor will it be the case with the Rocha do Conde de Óbidos Station." As I have argued elsewhere

The commission was then presided by engineer Henrique Gomes da Silva and had as members architects Porfírio Pardal Monteiro, Raul Lino and Paulino Montez; the director of Museu Nacional de Arte Antiga, João Couto, and the director of Museu Nacional Soares dos Reis, Vasco Rebelo Valente; the sculptor Diogo de Macedo; the painters Varela Aldemira, Albano Portocarrero de Almeida Coutinho and Armando de Lucena, and brigadier Manuel Silveira e Castro (Lobo 2014, 345: footnote 11).

Paula Lobo states that the hesitations grew because the Alcântara murals displeased Duarte Pacheco and that it was the praise of António Ferro (he was the official National Secretary for Propaganda since 1933, who promoted a controlled version of modernism to renew the image of the State in public works or national and international exhibitions, and with whom Almada had several disagreements) that appeased the dictator Salazar. She quotes Ferro's wife's memoir, the writer Fernanda de Castro. But there are inconsistencies in this story, because Duarte Pacheco died in 1943 and never saw the Alcântara murals, only finished in 1945. Sarah Affonso, in turn, says that Almada anticipated any instructions as to what subject he should paint, telling Duarte Pacheco beforehand what he had decided to paint and finding no objection from him (Negreiros; Affonso 1983, 69). The documentation, in turn, shows that Salazar asked for the reports from 6th Section of the National Council for Education, despite any potential interference from António Ferro. I will return to this subject in a forthcoming article on Alcântara's mural paintings.

³² "Ao dar este parecer tenho diante dos olhos as reproduções dos painéis pintados pelo brasileiro Cândido Portinari nas novas e magníficas salas da Fundação Hispânica

(Pinto dos Santos, 2020), Portinari's paintings at the Library of Congress in Washington depicted the so-called "discovery" of America in a way that was unflattering to Portugal. The commission specifically asked to represent the Portuguese-speaking community of America, as opposed to the extant homage to the "Spanish contribution to American History" in the Hispanic Foundation depicting Columbus. In the *Discovery of the Land* panel, instead of celebrating Pedro Álvares Cabral, Portinari represented the common sailors working with bare large feet and hands, among the twisting lines of the ship's rigging and ladders. Such a choice of theme caused controversy among the Portuguese government. The same happened with Almada in Alcântara: instead of celebrating national heroes, he depicted the common sailors by referring to a poem from the oral tradition about the hardships of sea life in the sixteenth century ("Nau Catrineta").

Portinari's murals were inaugurated in 1942, and it is unclear but not unlikely that Almada knew about them, as he was quite aware of the models favoured by a younger generation of left-wing artists and probably heard about the controversy surrounding those paintings. Portinari was indeed a reference for the Portuguese neo-realists which opposed the dictatorship³⁴ and was then close to the Communist Party, but he had also worked for the Brazilian dictatorship of Getúlio Vargas (also called Estado Novo [New State], as in Portugal) that ran from 1937 to 1946, and it was the Brazilian ambassador, together with Nelson Rockefeller,³⁵ who inaugurated the murals at the Library of Congress. Thus, his politics were not the main reason. The main problem at Alcântara that triggered doubts about keeping the second commission and the reports from the National Council for Education (aside from the budget argument) was, therefore, the absence of a nationalist and imperialist narrative that the Portuguese dictatorship promoted and expected in public works. ³⁶ It was key to assure the same would not happen in the second commission. Two dispatches dated 11

da Biblioteca do Congresso de Washington. Pode ali ser motivo de discussão o associar-se a obra do moderno artista à expressão decorativa das salas que receberam. Não é, porém, o caso da Gare Marítima de Alcântara, nem será o da Gare da Rocha do Conde de Óbidos." Estate João Couto, MNAA Library, Lisbon, Folder 57 (Pareceres da Junta Nacional de Educação/ Projectos de Decoração em Edifícios do Estado [Reports from the National Council for Education / Decoration Projects in State Buildings]), Museu Nacional de Arte Antiga, Lisbon.

- ³³ "Hispanic Reading Room", Library of Congress, Washington. https://www.loc.gov/rr//hispanic/portinari.html
- About the relation of Almada's mural painting with neorealism and Mexican muralists, as well as the confrontation of the different conception of the role of the artist in society by Almada and the younger generation of artists, see my essay "State-commission in modern times. Realism and modernism in the mural paintings of the artist Almada Negreiros (1893-1970)" (Pinto dos Santos, 2020).
 - 35 Idem.
- Paula Lobo states that "subjects initially considered for the Alcântara decorations were the city of Lisbon and the Portuguese colonies" quoting the Master dissertations by Ana Assis Pacheco *Porfírio Pardal Monteiro: 1897-1957. A obra do arquitecto* (MA Dissertation in Contemporary Art History, FCSH-Universidade Nova de Lisboa, 1998).

and 14 May 1946 state that the minister (Cancela de Abreu) ordered that the commission should be handed to Almada, on the basis of the 6th Section reports.³⁷ There is a handwritten informal letter from Almada to Pardal Monteiro dated 17 May 1946 celebrating that he got the commission approved.³⁸ Thus, the first round of reports worked, at least João Couto's (which is the only one I had access to).

Nevertheless, the controversy arose again when he asked for 500,000 escudos, stating that amount had been verbally promised to him by Duarte Pacheco,³⁹ with a request for a second round of reports considering the budget only. Pardal Monteiro, also a member at the 6th Section of the National Council for Education, writes in his report dated 21 November 1946 that the price Almada was asking for his work was fair, since the painter "will be a slave to his work and will hardly be able to dedicate himself to other projects" while conceiving the murals. And further stating that the work would give "contemporary Portuguese art a greater universal projection", while comparing him to great international artists such as De Chirico, Vásquez Díaz, Portinari, and Léger, and praising his previous work in the buildings he projected.⁴⁰ João Couto was also summoned to give his opinion on the budget,⁴¹ to which he replied that he had

However, in all surviving preparatory drafts by Almada for the Alcântara murals there is no indication that the colonies were ever considered as a theme.

- ³⁷ Doc. n. 528 (11 May 1946) and Doc. n. 4325 (14 May 1946), Processo Rocha do Conde de Óbidos (IPA.0007086), SIPA, National Archive at Forte de Sacavém, Arquivo DGEMN Instituto da Habilitação e Reabilitação Urbana.
- ³⁸ "Sua Ex^a o Ministro das Obras Públicas manda entregar ao pintor Almada Negreiros a decoração dos frescos da Nova Gare Marítima da Rocha do Conde d'Óbidos, almada com um beijo ao Pardal. PARABÉNS" (Pardal Monteiro 2012, vol II, 342).
- ³⁹ Handwritten letter by Almada dated 7 September 1946 to Engineer Gomes da Silva, General Director of National Monuments and Buildings (previously mentioned in note 27). This letter seems to confirm that there were in fact only verbal agreements with the previous Minister, therefore explaining the absence of documents regarding Alcântara. Processo Rocha do Conde de Óbidos (IPA.0007086), SIPA, National Archive at Forte de Sacavém, Arquivo DGEMN Instituto da Habilitação e Reabilitação Urbana.
- ⁴⁰ "A obra realizada pelo pintor Almada Negreiros será, segundo creio, da que dará maior projecção universal à arte portuguesa dos nossos dias, pois conhecendo bastante obras a fresco executadas em muitos países por artistas de grande renome como por exemplo, os italianos Chirico e Achille Funni, os espanhóis Sert, Arteta e Vásquez Díaz, o brasileiro Portinari, os franceses Maurice Denis e Fernand Léger e tantos outros que em consequência de circunstâncias muito favoráveis são mundialmente conhecidos, vejo na obra de Almada Negreiros motivos que me levam a considerar que Portugal tem hoje um dos maiores pintores decoradores do mundo.

À obra realizada por este artista na Igreja de N.S. de Fátima, no edifício do Diário de Notícias e na Estação Marítima de Alcântara, tenho ouvido referências de pessoas de incontestável autoridade como artistas e como críticos que reforçam a minha opinião acerca do valor deste artista português." Parecer acerca dos painéis pintados por Almada Negreiros. [Documento dactilografado do Espólio PMA], 21 November 1946 (Pardal Monteiro 2012, vol. II, 343-346).

⁴¹ Letter to João Couto from the General Director of Nacional Buildings and Monuments, n. 11254, 11 November 1946. Estate João Couto, MNAA Library, Lisbon, Folder

nothing to oppose the price the artist asked for, and that it was a fair price considering the running prices of artists such as Portinari or Sert. 42 Other reports, such as Engineer Mariano Pires', were unfavourable to Almada, but the final decision agreed on 450,000 escudos, considering that the same amount had been paid previously to another painter for a less extensive work. 43

Thanks to both rounds of reports, and probably some other internal interference that prevented more conservative forces from prevailing (according to Sarah Affonso's story about Ulrich's secretary, and what the artist said about Águedo de Oliveira in the 1952 manuscript previously analysed), Almada got the second commission.⁴⁴ The contract was signed on 19 February 1947, just after José Frederico Ulrich was appointed Minister of Public Works. Even

57 (Pareceres da Junta Nacional de Educação/ Projectos de Decoração em Edifícios do Estado [Reports from the National Council for Education / Decoration Projects in State Buildings]), Museu Nacional de Arte Antiga, Lisbon.

- "Uma obra original da extensão e complexidade daquela que se deseja encomendar, paga-se cara em todos os países. E o preço pedido talvez seja modesto em relação àqueles por que se fazem retribuir os pintores estrangeiros, um Portinari ou um Sert, por exemplo. Convenho que o preço pode em Portugal parecer excessivo, mas devo chamar a atenção de V. Exª para as remunerações exíguas com que é costume recompensar o trabalho dos nossos artistas que não são piores nem menos capazes que os das outras nações. Peço a V. Exª para reparar nas quantias, aliás justificadíssimas, que pedem modernos artistas portugueses que têm trabalho no estrangeiro e estão habituados aos preços ali estabelecidos. Cito, por exemplo, o ilustre pintor [Henrique] Medina." Copy of report by João Couto, 12 December 1946 Estate João Couto, MNAA Library, Lisbon, Folder 57 (Pareceres da Junta Nacional de Educação/ Projectos de Decoração em Edifícios do Estado [Reports from the National Council for Education / Decoration Projects in State Buildings]), Museu Nacional de Arte Antiga, Lisbon. Also referred to by (Lobo 2014, 348).
- Engineer Mariano Pires report dated 16 December 1946 suggested the budget should be 336,000 escudos. The final decision dated 27 December 1946 and signed by The General Director of National Monuments and Public Buildings, Gomes da Silva, was that the budget should be 450,000 escudos considering that the amount allocated to Adriano de Sousa Lopes for the decoration of the Noble Hall of the National Assembly in 1937, which had an smaller area than Rocha do Conde de Óbidos, had been 459.000 escudos. Processo Rocha do Conde de Óbidos (IPA.0007086), SIPA, National Archive at Forte de Sacavém. Arquivo DGEMN Instituto da Habilitação e Reabilitação Urbana.
- In a 1950 interview Almada states: "[they thought it was expensive]. Cancela de Abreu, Minister of Public Works at the time, then asked the 6th section for its opinion. It was favourable. It's up to me now to show that I haven't forgotten the justice done to me by engineer Gomes da Silva, Dr. João Couto, architect Pardal Monteiro and, finally, by engineer Cancela de Abreu himself. I can say that I owe it to all of them to have had the opportunity to devote myself to a job that sincerely interests me." And he admits he had known that later his work had caused controversy. ("O eng. Cancela de Abreu, nessa altura ministro das Obras Públicas, perguntou então à 6.º secção o seu parecer. Este foi favorável. Cabe-me agora aqui mostrar que não esqueci a justiça que me foi feita pelo eng.º Gomes da Silva, pelo dr. João Couto, pelo arquitecto Pardal Monteiro e, por último, pelo próprio eng.º Cancela de Abreu. Posso dizer que a todos devo o poder ter tido a oportunidade de me entregar a um trabalho que sinceramente me interessa.") "Almada, «aquele» que não se confunde com nenhum «outro» fala-nos das suas últimas obras", Diário de Lisboa, 22 March 1950.

so, another dispatch issued in March 1947 requested that the work was to be monitored. 45

There is no record of any kind of prior proposals having ever been submitted to the authorities regarding the theme that Almada had decided to paint on the Rocha do Conde de Óbidos was mentioned. Yet, a drawing in Almada's estate shows a very different composition from the one he ultimately delivered (Fig. 3).



Fig. 3. José de Almada Negreiros, study, graphite on paper. Private collection. © Paulo Costa, Gulbenkian Modern Art Centre.

In the first panel, one recognises the boat with the family and the boy who drops his hat into the river and tries to catch it, the only element seen in the final painting. In this drawing, the central panel would include references to Ulysses being seduced by the sirens, and the abduction of Europa with the bull and the figure of a woman with her face resting on her hand representing Europe. Sarah Affonso says that the theme "was initially supposed to be Europe, that is why there are so many drawings around here of the bull with Europe on its back" (Negreiros; Affonso 1983, 72). 46 On the third panel a sailor

Contract signed 19 February 1947 between painter José Almada Negreiros and the general Director of National Monuments and Buildings, Engineer Henrique Gomes da Silva; Service Order n. 2172, Direcção Geral dos Edifício e Monumentos Nacionais, 19 de Março de 1947, doc. 578900, Processo Rocha do Conde de Óbidos (IPA.0007086), SIPA, National Archive at Forte de Sacavém, Arquivo DGEMN Instituto da Habilitação e Reabilitação Urbana.

⁴⁶ "Primeiro era para ser a Europa, por isso é que há para aí muitos desenhos do touro com a Europa às costas." In fact, Almada was also planning to do an illustrated version of Fernando Pessoa's book *Mensagem* from 1934, and one of the drawings

pilots a caravel with the stone pillars ("padrões") used to mark "discovered" land, with the names of national heroes engraved: Diogo Cão, Vasco da Gama, Bartolomeu Dias, and even the name of Pedro Álvares Cabral, though mostly covered. Therefore, there was a moment when a much more conventional theme, more attuned to the State expectations, was considered. There is no information about whether this drawing was ever shown to government officials. What is certain is that it was abandoned.⁴⁷

As already mentioned, the final version caused controversy. Other than Sarah Affonso and Almada's testimonies, no official documentation has been dug up attesting to complaints or pressure for destroying the murals. It may still surface, as Salazar's estate is yet to be fully catalogued and researched. Most likely, however, there is no written account of such an order, because this kind of denunciation was often done verbally, by meeting with the dictator personally, especially if the pressure was coming from his closest advisors, as was the case with Frederico José Ulrich. What does exist is a third wave of reports from the 6th Section of the National Council for Education, including, again, Pardal Monteiro's and João Couto's, which are obvious indicators of the need to defend the work.⁴⁸ Paula Lobo also analysed these reports, mentioning that a first short letter from Pardal Monteiro dated 1 November 1948 to the head of Direcção Geral dos Edifícios e Monumentos Nacionais (General Directorate of National Buildings and Monuments) approving Almada's composition already "hinted that the frescoes were controversial" (Lobo 2014, 349).49 Yet. Pardal Monteiro writes that the artist had just concluded the "works for the expansion of the second triptych, entitled Pier". This letter was registered 13 November 1948 and was followed by a dispatch dated 16 November 1948 from an officer at the Directorate National Monuments and Buildings to its General Director Engineer Gomes da Silva, stating that the "Director has confirmed in the artist Almada Negreiros' studio the composition and conception for

mentioned by Sarah Affonso has written on its back a verse from the poem "O dos Castelos", "O olhar com que fita é Portugal" (The look with which she stares is Portugal). That means that the face of the female figure is to be read as Portugal, the southwest corner of Europe. The drawing is in the estate of the couple. ANSA-A-1364 CEDANSA – NOVA FCSH / © Herdeiros de José de Almada Negreiros.

⁴⁷ I have previously mentioned this drawing (2018, 68), (2020, 449-450).

⁴⁸ I disagree with Raquel Henriques da Silva when she writes in a footnote, referencing Paula Lobo's article, that a justification is still missing for the 1949 João Couto report. The justification is clear in the report itself, as Lobo had already analysed.

⁴⁹ Letter from Porfírio Pardal Monteiro to the General Director of National Buildings and Monuments, dated 1 November 1948: "Declaro que o pintor Sr. José de Almada Negreiros concluiu os trabalhos de ampliação do 2º tríptico, intitulado 'Cais', destinado ao 'Hall' da Estação Marítima da Rocha do Conde de Óbidos, e que estes trabalhos pela sua composição e concepção se harmonizam com a composição geral e merecem, portanto, aprovação." Doc. 578907, Processo Rocha do Conde de Óbidos (IPA.0007086), SIPA, National Archive at Forte de Sacavém, Arquivo DGEMN, Instituto da Habilitação e Reabilitação Urbana.

expanding the second triptych 'Pier' and that it should be approved." Hence, these documents refer to the approval of the composition, not the final work. It is therefore plausible to consider that this officer visiting Almada's studio saw a different composition than the one Almada decided to paint in the end. Perhaps he saw the drawing previously mentioned with Ulysses and Europe. These documents also attest to the monitoring of the artist that had been required previously (as mentioned earlier).

Almada dates his work "1946-49" (Fig. 4).Indeed, he was not only referring to the amount of time it took him to conceive the whole composition plus the execution in loco, which took around four weeks (Negreiros; Affonso 1983, 72), 51 but also to the time the work involved, including its controversies, both the one regarding the confirmation of the commission, the budget and the one that erupted in its aftermath. Nevertheless, he did finish the work in early 1949, since the composition was being approved by mid-November 1948. When he finished, the controversy began and two important surviving copies of reports by Pardal Monteiro and João Couto from November 1949 attest to it. These documents were most likely determinant for saving the murals.



Fig. 4. Tryptich A Sunday in Lisbon (detail). Photographed by the author. 2024

[&]quot;Em cumprimento do despacho de V. Exª exarado na carta do Arquitecto Porfírio Pardal Monteiro, que junto devolvo, tenho a honra de informar V. Exª de que tendo verificado no atelier do Artista Almada Negreiros a composição e concepção dos trabalhos de ampliação do 2º tríptico 'Cais' a que se refere a carta, a julgo nas condições de merecer aprovação de V. Exª." Doc. 578908, Processo Rocha do Conde de Óbidos (IPA.0007086), SIPA, National Archive at Forte de Sacavém, Arquivo DGEMN, Instituto da Habilitação e Reabilitação Urbana. It follows that there are two documents dated December 1948 that prove that the application of lime paster to receive paint was only made in December 1948. Letter by Almada 9 December 1948, in the same archive.

João Couto mentions that it took him 30 days to conclude the paintings in his report dated 10 November 1949. Estate João Couto, MNAA Library, Lisbon, Folder 57 (Pareceres da Junta Nacional de Educação/ Projectos de Decoração em Edifícios do Estado [Reports from the National Council for Education / Decoration Projects in State Buildings]), Museu Nacional de Arte Antiga, Lisbon. Also referred by (Lobo 2014, 350).

Paula Lobo already underlined that both Pardal Monteiro and João Couto name the two triptychs by different titles than those later adopted. *Domingo Lisboeta* (A Sunday in Lisbon) is named *Litoral* (Coastline) and *Partida de Emigrantes* (Departure of Emigrants) is referred to as *Cais* (Pier). The titles used were as neutral as possible in order not to indicate any sort of misrepresentation in the paintings, although they were nevertheless far from the obvious titles of supposed past glories, such as "The discovery of Brasil" or "Infante D. Henrique" which were common in other public commissions. Lobo quotes João Couto's praise of Almada in his 1949 report to defend him, stating that he had surpassed his previous work in Alcântara and that "the triptych *Pier* impresses me beyond imagination and pleases me without restrictions" (Lobo 2014, 350). She does not mention a further report by Pardal Monteiro, in which he also acknowledges how this murals outshone his previous work and how he had "enriched the nation with an artwork of the highest level".⁵²

Yet, I will highlight another passage from João Couto that Lobo does not quote, stating that: "[He solved] the problem of introducing the bow of the great ocean liner into the space available to him and found a way, apparently simple but in reality so difficult, of solving the bow into the scaffolding on the far right-hand wall. The nation and the city of Lisbon can and should be proud of this new artwork produced by one of its most glorious artists. And it's a good thing that it appeared at the Rocha Maritime Station, the anchorage for the boats that come from the ports of Europe and America. When our visitors see it, they will make a proper judgement of us [...]."⁵³

João Couto perceived Almada's figuration as the depiction of an arriving ship, a transatlantic. By emphasising the pier of Rocha as the arriving spot for European and American boats he conveyed the idea that this harbour was the

Porfírio Pardal Monteiro, "Parecer sobre os Frescos de Almada Negreiros. [Manuscript in the PMA Estate], 16 November 1949 (Pardal Monteiro 2012, 358-359). Both Pardal Monteiro's and João Couto's 1949 repports only exist as copies in their respective estates. The sent originals and any further 1949 documentation regarding the need to defend the murals is absent from the offical archives. It could have been destroyed, maybe by Ulrich's order, or it simply disappeared.

o tríptico denominado *Cais* me impressione sobremaneira e me agrade sem restrições. Não sei que mais poderia obter um artista ao obrigar-se a solucionar o problema de introduzir a proa do grande transatlântico no espaço de que dispunha e a resolver a proa na aparência tão simples mas na realidade tão difícil e tão acertadamente achada, do andaime na parede extrema da direita. A nação e a cidade de Lisboa podem e devem orgulhar-se desta nova obra de arte produzida por um dos seus mais gloriosos artistas. E bem foi que ela precisamente aparecesse na Estação Marítima da Rocha, ancoradoiro dos barcos que vêm dos portos da Europa e da América. Os nossos visitantes, ao vê-la, hão de fazer de nós condigno juízo, o juízo de que estamos ao par das novas e grandes mensagens artísticas e não apenas debruçados sobre um passado que não renegamos, mas que não se repete." report dated 10 November 1949. Estate João Couto, MNAA Library, Lisbon, Folder 57 (Pareceres da Junta Nacional de Educação/ Projectos de Decoração em Edifícios do Estado [Reports from the National Council for Education / Decoration Projects in State Buildings]), Museu Nacional de Arte Antiga, Lisbon.

destination spot from prestigious places. Then, obviously, the depicted theme was not, and could not be, a departure. He therefore described what was not there in what can only be understood as a deliberate manipulation of the authorities' perception of the paintings to try to convince them that they were not confronting the state.⁵⁴ And he apparently succeeded.

THE FIRST TRYPTICH: A SUNDAY IN LISBON. THE DEPICTION OF BLACK PEOPLE IN A PUBLIC BUILDING DURING THE DICTATORSHIP

I have mentioned how Almada (himself mixed-race, grandson of an Angolan black woman) paints African fishmonger women in the Rocha Station, as well as scenes of poverty and an emigrants' departure with a graphic vocabulary, applying a synthetic and geometric character to the depiction of bodies, referring to the Cubist appropriation of African masks to depict faces both in front and in profile, and leaving aside all the picturesque references to Lisbon seen in the first murals in Alcântara (Pinto dos Santos 2018, 13, 67; 2020, 450).

The depiction shows the exact place where it stands, the point of departure of ships and the actual balcony of the building designed by Pardal Monteiro. And it brings everything up front, to occupy not a hypothetical fantasised pictorial space, but the exact space where the observer is. They are part of the life at the pier. The homage to Picasso is clear, and a more direct one lies in the figuration of the young girl held by arguably her older brother in the first panel, which is quite evocative of Picasso's painted portraits of his daughter Maya. On a side note, it is curious that Almada's homage to Picasso implied in these murals has more affinities to the pictorial vocabulary that the latter used in the late 1940s and early 1950s — that is, at exactly the same time — and not to his previous work.

In her testimony, Sarah Affonso intimated that she was the one assisting her husband so as to avoid hiring an external helper and thus keep the entire

⁵⁴ I had already briefly mentioned this in Pinto dos Santos 2020, 450.

Almada had a large-scale reproduction of Picasso's *Guernica* in his studio, and it has long been known that Picasso remained his major reference since the 1910s. It was extremely difficult to get hold of a reproduction of *Guernica* in Portugal, since Picasso was then a communist, and therefore considered subversive by the dictatorship. In 1946 he stated that Picasso's art "shows pain. His art does not attack the programs that His art does not attack the programmes that bring pain to humanity. Picasso doesn't waste his time. In his paintings, he shows us what he sees: he only sees pain. To show pain is to call everyone to themselves, and that's the main thing: that everyone is in themselves and not in the programmes." ("Picasso é a pura coerência do seu próprio caso pessoal. A sua obra é amor. A sua arte é dar a ver a dor. A sua arte não ataca os programas que trazem a dor à humanidade. Picasso não perde o seu tempo. Em pintura, dá-nos a ver o que vê: só vê a dor. Dar a ver a dor é chamar cada um a si-mesmos. E é o principal: que cada um esteja em si-mesmo e não nos programas.") *Diário de Lisboa*, 16 May 1946 (Almada Negreiros 2006, 319). We can infer that Almada was also talking about his own art.

budget for painting the murals within the family. Both she and Almada always refer to the murals in the Maritime Stations as frescoes. In 2017, the restorer-conservator Teresa Sarsfield Cabral, part of the first restoration campaign of the murals in 1971, shared the information that the technique used by Almada could not be fresco, since he used pigments inconsistent with that technique (as some shades of green) and, moreover, the different textures and patches of glossy surfaces betray the use of combined materials that must have been applied in secco. Also, the sort of problems these paintings suffered from, like flaking, would not happen in a fresco painting. This information was recently confirmed by a thorough scientific analysis by the team led by Milene Gil, which concluded that he used fresco and secco techniques and unusual materials (Gil et al. 2024).56 Sarah Affonso described to her daughter-in-law the process of transferring the drawing: "There was a small-scale model and then he would make the drawings, and I would enlarge them. The enlargement was very well thought out, it was done with two gauges, one small for the original, the other large for the enlargement. I would take the sizes and then make the enlarged drawings in dotted lines. Then the dotted lines led to a line and the drawing came out. All this on the floor here in the room [...]!" (Negreiros: Affonso 1983, 72).57

The recent chemical analysis of the green pigments confirms the use of different tones: emerald, Sheele green and viridian (Valadas et al., 2024). The experimental use of unusual materials by Almada might be tied to a wish for a predominant green, a self-referential colour (emerald-green, in particular), that appears abundantly in his avant-garde short stories and poems, not to mention that he signed some of his early texts and poems simply as "Green",

The team recently published articles sharing this information, and details about technique and pigments, showing a great deal of experimentation with organic and inorganic materials, some not appropriate for fresco painting. For instance, they came to the conclusion that the artist resorted to "the synthetic ultramarine blue and cadmium-based pigments, as well as the exotic but toxic copper (II)-acetoarsenite, commonly known as emerald-green. These pigments were used pure, mixed, and overlayed. [...] the use of emerald-green, a very bright but very toxic green pigment [...], according to the technical literature, was not advised to be used in fresco paintings." (Gil et al. 2024, 3325, 3329).

⁵⁷ She continues: "Then the drawing is perforated along the lines, then placed against the wall in its final position, hit with a pounce pad full of colour that goes through the little holes and leaves the perforation marks in the fresh mortar on the wall. Then, with the handle of a brush, the dots are joined and colour is applied." (Negreiros; Affonso 1983, 72). ("Havia uma maquete em tamanho pequeno e depois ele ia fazendo os desenhos e eu aumentava-os. O aumentar estava muito bem pensado, era feito com duas bitolas, uma pequena para o original, outra grande para a ampliação. Eu tirava os tamanhos e ia fazendo o desenho aumentado em picotado. Depois o ponteado juntava-se com um risco e saía o desenho. Tudo isto aqui no chão da sala, calculas como estava ao fim do dial [...] Fui eu que montei os painéis mas estava tudo tão arrumado, tudo tão lógico, que eu que não estava metida no assunto, armei tudo sem nenhuma dificuldade. [...] A seguir o desenho é furado ao longo dos riscos, depois encostado na parede na posição definitiva, bate-se com uma boneca de trapo cheia de cor que atravessa os buraquinhos e deixa as marcas do picotado na massa fresca na parede. Depois com o cabo do pincel unem-se os pontos e aplica-se a cor.")

instead of as Almada. ⁵⁸ Other self-references in this triptych are the allusions to two of his literary texts, *A Invenção do Dia Claro* [The Invention of the Bright Day] from 1921, and *Saltimbancos* (contrastes simultâneos) [Circus acrobats (simultaneous contrasts)] from 1916. The first one is alluded to in the stage-like architecture, in which an unnaturalistic window is seen through the wall with a table and a vase of strange flowers. When he wrote the 1921 prose-poem, Almada made some related drawings employing this same motif, the window, the table, the vase, which are also structural elements of several canonical Cubist paintings. As for *Saltimbancos*, his unpunctuated and breathless short story published in the magazine *Portugal Futurista* in 1917, it is clear that the poverty, the ragged costumes and bare feet described in the avant-garde text are reenacted in the painting (Pinto dos Santos 2019, 39). A surviving sketch for the juggler depicts a tattooed naked woman on his arm and chest hair that the artist abandoned in the final version (Fig. 5), but it demonstrates how Almada was keen on working to show a poor marginalised reality.



Fig. 5. José de Almada Negreiros, study, graphite and gouache on paper. Private Collection. Photograph © Paulo Costa, Gulbenkian Modern Art Centre.

The colour *green* is always self-referential in Almada, even in later years when he is working under commission. The colour emerald-green appears in his 1917 short story *A Engomadeira* in a very explicit and erotic way and he also wrote autobiographical stories titled "História Verde", "História verde (autêntica)" and "Verde", dated 1920 and 1921. These and other stories or poems were often written in green ink, as is the case of the poem "O Menino d'Olhos de Gigante", also from 1921. It is also the colour of the cover of his book *A Invenção do Dia Claro*, which he designed, published by Fernando Pessoa in 1921. In 1916 Almada drew a green Christ, causing scandal, for the cover of the periodical *A Ideia Nacional* of 20 April 1916. When Almada worked for the first time with the architect Pardal Monteiro in 1938 in the church Nossa Senhora de Fátima in Lisbon, he depicted in a stained-glass window for the mortuary chapel a greenish crucified Christ, recovering, in a way that was unknown both to the commissioning body and the religious public, the self-referentiality of the colour green. Other works also show a dominance of green. For full source references and explanation see Pinto dos Santos 2015; 2017; 2019.

Considering the upper part of the first panel, one can notice that Almada depicted a couple standing in a balcony underneath a stripped awning, watching the whole scene developing in both triptychs. One might posit the hypothesis that this is a self-portrait of him and his wife, considering that the other depictions Almada made of Sarah would show her with her elbow resting vertically, her hand holding her face —the same position of his depictions of the female figure of Europe. This figure is flanked by a man whose oval-shaped face, head and hairline have some affinities with a few of Almada's self-portraits. The colour of the couple's skin is dubious, with a shadow-light playing of dark brown and lighter surfaces, but the woman's skin is lighter than the man's. It is possible, therefore, that this image is a portrait of Almada, with his darker skin, and Sarah, who echoes the figure of Europe from his first studies for this triptych.



Fig. 6. First panel of tryptic A Sunday in Lisbon (detail). Photograph by the author.

The second panel of this triptych is, nevertheless, the most striking one, since the central figure of the panel and of the whole three-part composition is a monumental African fishmonger sitting down. The central panel shows two working-class women that have been elevated to monuments: strong, powerful, barefoot women. It is very clear that the seated woman is black, but it is more ambiguous if the one standing is too. Almada fills the "white of the eye" with blue, as if indicating the eye colour there instead of the eyeball, which is black. It could however be a pictorial device to associate the woman with the sea. A sketch for this character shows that, at least at an earlier stage, Almada first thought of portraying her as a black woman too. (Fig. 7)



Fig. 7. José de Almada Negreiros, study, gouache, Indian ink and graphite on paper. Private collection. © Paulo Costa, Gulbenkian Modern Art Centre.

What is unquestionable is that the centre of the triptych is occupied by a black fishmonger sitting down. There is no other painting, public or private, that elevates such a figure to a central monumental position like this one. Moreover, she rests her head in her arm, also recovering the position of the figure of Europe in the sketch previously shown (Fig. 3), which was meant for this same panel. One cannot know the motivations of the artist and there is no document that attests to this, but this extraordinary idea of transforming the figure of Europe into a black powerful fishmonger could not but displease the authorities.

Yet, nothing is mentioned about her, not in official documents, interviews, testimonies, or art historical accounts. ⁵⁹ Neither José-Augusto França nor any other art historian mentioned that this woman was black. Furthermore, using the primitivist trope of the mask, Almada leaves the skin colour ambiguous in several other characters in the murals. It is even more ambiguous because some characters are clearly depicted as white, contrasting with the darker skin tones and the play of contrast light/shadow.

Since 1954 and until 2017, white scholars writing about the murals did not mention black people depicted in a dignified way in both triptychs. Was it because they could not see what was not supposed to be in official commissions,

⁵⁹ The first mention is by Pinto dos Santos 2017, 19, 328.

even in a singularly provocative case as this one? Or were they accustomed to not see them? The central woman was not supposed to be a subject either of painting or of a modernist art history analysis and therefore it was not noticed that she was there, depicted as a monument.



Fig. 8. Central panel of triptych A Sunday in Lisbon (detail). Photograph by the author. 2024

THE SECOND TRIPTYCH: WHO ARE THE EMIGRANTS AND WHERE ARE THEY GOING?

In the second triptych there are class differences in the people depicted. Several of the characters on the balcony in the left panel are middle-class, including a family seen from the back, already described by José-Augusto França who derogatorily mentioned a "low bottom" that he believed to identify the woman as Portuguese. Although their skin colour is, again, ambiguous, especially in contrast with other characters who are indeed white, the darker skin tones in this case are probably cast by the shadow provided by their umbrellas.

A man with a hat waves a handkerchief in the left corner of the central panel, a clear indication that the ship was departing, adding to the single man depicted in the right panel carrying coal (and not "sand" as França described) to the ship's engine. Also signalling the situation of parting of loved ones are the two women hugging behind the people on the first row of the balcony next to the ship. This means they are closer to the viewer's sight, and they too become monumentalised, comforting each other over the departure of loved ones in an embrace of shawls and covered heads, signs of their lower social condition.

A white woman wears an absurd hat with a bird covered by a net that França described as if it was a "caricature"; however, the bird is in fact a caged white dove which opens the possibility of a symbolic meaning — a white dove was for long a Christian symbol for peace and freedom, and it became a laicised one when Picasso made a lithograph in January 1949 that would be used in the Paris Peace Congress promoted by the French Communist Party in that same year. In Almada's estate there is a set of lined sketches from one of the stages of augmentation and transfer of the design — in other words, they are already very close to the final decisions put on the wall. The one corresponding to the central panel shows that Almada had not drawn the bird and net yet, although the hat was already strangely shaped. (Fig. 9 and 10).

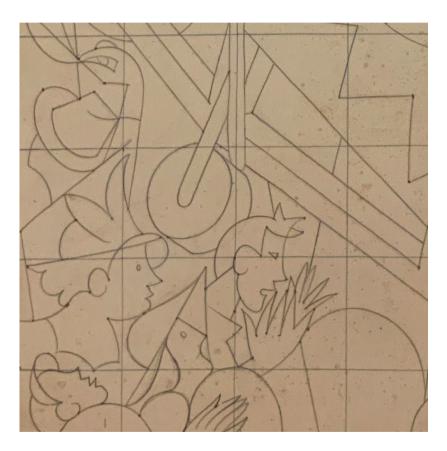


Fig. 9. Lined sketch for central panel of the triptych Departure of Emigrants. (Detail) ANSA-A-1362-1, CEDANSA – NOVA FCSH / © Herdeiros de José de Almada Negreiros

 $^{^{60}\,\,}$ This was first suggested to me by a visitor to whom I made a guided tour in 2017. I am thankful for that suggestion.



Fig. 10. Central panel of the triptych Departure of Emigrants. (Detail). Photograph by the author. 2024

A caged symbol for "peace and freedom" cannot but echo the political context in Portugal. In 1945, pressured by the outcome of the war and the international situation, the dictator Salazar had made a discourse signalling a "democratic opening" with the promise of free elections. But the opposition was rapidly controlled, and the threat of several coups since just before the end of the war was debunked (namely by the UK, with a vested interest in maintaining the Portuguese colonial regime). The conditions for free elections were never met, and in 1949 the opposition candidate Norton de Matos was forced to withdraw for fear of falsified results (Rosas 2013, 221-235). It is also worth signalling that Portugal was one of the few countries that did not sign the Universal Declaration of Human Rights proclaimed by the United Nations in 1948. It is therefore plausible to consider this strange hat as a commentary on the political situation after the war and the false promises of freedom.

The group of people depicted already embarked in the lower part of the ship are obviously from a lower social status. They travelled third class, looking anguished, and their faces are portrayed as masks — this primitivist trope I mentioned earlier (the mask) was not present in Almada's visual works before the murals or after. It is relevant to point out that Almada participated in a modest, albeit very important show promoted by young oppositional art critic Ernesto de Sousa in 1946 comparing African and modern art⁶¹ (Pinto dos Santos 2017, 18), and it was probably then he gained a more vivid awareness of

⁶¹ The exhibition took place at the Colonial School, where administration people for the then colonies were educated. For more information see (Pinto dos Santos; Dias Ramos 2023, 162-169).

the graphic characteristics of using the mask as a pictorial device, as well as its expressive potential for depicting poverty and distress (Fig. 11).

Almada also plays with the shadow / light contrasts, fostering ambiguity about the skin colour of the ship's crew, depicting two sailors completely black (the details cannot be seen other than in close-up view) (Fig. 12) as well as a couple of passengers highlighted only by the contour of their profile in red and yellow (Fig. 13), the contours of the woman's breasts being almost undistinguishable when seen from the ground. Another example are the two figures that emerge from a window of the ship, the one in the back a black shadow whose expression can only be detected up close. (Fig. 14)



Fig. 11, 12, 13. Central panel of the triptych Departure of Emigrants. (Details). Photographs by the author. 2024



Fig. 14. Left panel of the triptych Departure of Emigrants. (Detail). Photograph by the author, 2024

Yet, the most striking figure hides in the left edge of the left panel, barely noticeable if seen from the ground. He emerges from behind an undoubtedly

white (female?)⁶² figure and stares right into the viewer with eyes wide open and a curly Afro hair, his nose and features highlighted in red contours (Fig. 15). The matching sketch strongly underlines African features (Fig. 16), but the final figure depicted is quite different; his features changed from the sketch version and now resemble Almada himself and some of his earlier self-portraits. There are no dots marking a transferred drawing, thus the final version of this figure was decided right there on the spot. The similarity is striking, suggesting that this might be a second self-portrait of Almada in these mural paintings (considering the first one to be in the opposite triptych alongside maybe Sarah Affonso, which nevertheless cannot be proven). This hypothesis leads to consider that Almada portrayed himself as one of the emigrants, forced to leave due to the vexations and constraints he faced as an artist in his own country, or the dark inside of the boat from where he stares back serving as metaphor for that same condition. Almada had left the country to live in Madrid for five years before he was married and had children but would not leave again. Nevertheless, despite the changes between the sketch and the final version, the character is depicted as a black person, unambiguously, expressing his helpless condition by staring outside the painting.



Fig. 15. Left panel of the triptych Departure of Emigrants. (Detail). Photograph by the author. 2024

⁶² The sketch marks the breasts of this figure, and they are still defined, but more discretely, in the final version. But the hat points to a masculine figure. It is a rather strange androgynous character.

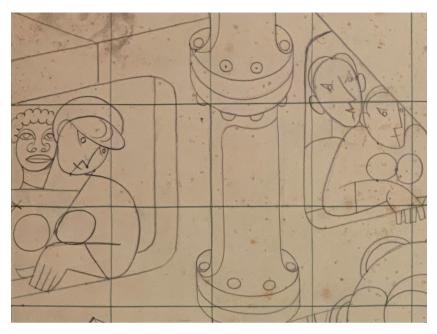


Fig. 16. Lined sketch for central panel of the triptych Departure of Emigrants (Detail).

ANSA-A-1361-1, CEDANSA – NOVA FCSH / @ Herdeiros de José de Almada Negreiros

The emigrants on the Rocha do Conde de Óbidos mural paintings are probably departing for the then colonies, mostly Angola but also Mozambique, as well as for Latin America. Before the Second World War, the overseas destination of emigration was mostly Brazil, and during the war, especially in the first two years, a vast number of refugees crossed the Atlantic through Lisbon to reach the United States and other countries in America. That number was residual by the time the first Maritime Station became operative in 1943, and the migration numbers also dropped during the war period. After the war, emigration rose immensely with 5000 people leaving the country legally already in 1945 (illegal emigration also occurred) (Santos 2023, 99). Just after the Second World War and before Rocha do Conde de Óbidos was inaugurated on 19 June 1948, the most popular destinations were Brazil and Venezuela, but soon the dictatorship's political police, PIDE, imposed restrictions to reduce the migration to those countries. In 1947 the Minister of Internal Affairs, Augusto Cancela de Abreu (who had already asked for reports on Almada's murals when he was Minister of Public Works, between 1944 and February 1947), temporarily suspended all migration to foreign destinations to instead promote migration to the then African colonies (which was not considered migration, since the territory was seen as part of the nation). The Junta de Emigração (Emigration Board) was created in October 1947 to control this exodus, and to manage migration according to national needs, including labour necessities and white colonisation in Africa to secure territories in face of international pressure and the debates on the autonomy of African peoples (Santos 2023, 108 and ff). The colonisation exodus increased in 1947, and decreased again, in 1948, the year Almada was painting the triptych *Departures of Emigrants*, when 4984 people departed for the colonies and 10322 to Brazil, Venezuela and Argentina (Santos 2023, 110).

Almada painted migration at a time when all efforts were made to increase a white colonisation of Angola and Mozambique, and when a Board was created to manage emigration as a tool to "relieve tensions and balance socio-economical needs" (Santos 2023, 98), even though the desire to emigrate to Latin America continued to increase. In fact, when the liberation wars broke in Africa in 1961, there were more Portuguese in Argentina and Venezuela alone than in all the colonised African territory (Teixeira 2001, 32).63

EPILOGUE: MASS CULTURE AND CUBIST TECHNIQUES TO MONUMENTALISE COMMON PEOPLE

José-Augusto França had already noted that Almada works the "line" differently from Picasso: as a "characterising note" and "surrounding continuity", which I take to be a very insightful point. But I would go further, benefitting from the close look enabled by the scaffolding.

Almada, in fact, used the graphic design strategies that he mastered — by then he had produced hundreds of book covers, promotional pamphlets, publicity illustrations, posters, comic strips, and so on, in Portugal and Spain — aiming to enhance production and expression, and emphasise a visual message. These were therefore publicity or information techniques used in mass visual culture that were not only transferred to mural painting (supposedly a "high" art) but in fact blown up by Almada to their fullest potential. The line is used as a substitute for tridimensional illusion, eschewing any trace of naturalistic representation, and its effect is exaggerated by repeating the contours in different colours. This intensifies the proximity and the presence of the depicted figures. Although static, they are given a transient quality — the reverberation of light via the coloured contours is momentary, and it has the effect of a poster that needs to vibrate so as to capture one's attention, for a short period of time. But here, the temporary becomes permanent.

Moreover, Almada used techniques foreign to fresco and mural painting that were actually Cubist, such as the mixing of sand to produce textures, which can easily be observed on a close-up look, and boldness of contours and fillings, contrasting with smooth surfaces with colour overlaying of different tonalities obtained by more or less diluted paint.⁶⁴ These kinds of tech-

⁶³ Many thanks to Afonso Dias Ramos for this reference.

Milene Gil's team described "the use of textured, opaque, and transparent paint layers" and their variants in the different panels, also providing information about the granulated surface: "the paint layers, particularly the backgrounds, are generally very textured, and grains of aggregates can often be seen through the paint and even

niques are invisible when seen from the ground, but they add up to a visual effect of colour reverberation and monumental impact. In addition, the depicted scenes gain this immediate quality by being fragmented into geometrical figures and depicted through angular and curved lines that are almost always closed to give a finished shape to every element, even those such as the waving water where the boats stand (Fig. 17).





Fig. 17 A and B. Central panel of the triptych A Sunday in Lisbon (details). Photographed by the author. 2024

Although the strong black contours can also evoke the delimitations required for the composition of stained-glass — that Almada experimented with when working for the first time with Pardal Monteiro, in the Our Lady of Fátima Church (1938) — the fact is that here the contours are duplicated, triplicated or even quadruplicated. Hence, there is a multiplied intensification impossible to achieve in the rigidity demanded by the stained-glass technique.

For instance, the face of the seated fishmonger supported by her hand is emphasised by the juxtaposition of pale yellow, black thick lines and dark brown and ochre/brown filling (Fig. 18 A), while her arm is marked with a sharp and bright red line (Fig. 18 B) right next to a black continuous contour that defines the hand base. The black lines also seem to bear some component that makes them shine — which is not possible in fresco painting. Although a conclusion as to whether the artist mixed something with the black pigment to make it glossy, or if this effect was a reaction to a previous and urgent intervention of restauration in the 1970s (that covered the surface with a vinylic substance to stabilise it) was not reached, ⁶⁵ I believe this was a deliberate decision by the artist.

on the paint surface. In addition to the texture conferred by the granulometry of the top plaster and pigments used, it is possible that grains of calcium carbonates and sands were occasionally added to the paints." (Gil et al. 2024, 3310 and 3322).

Milene Gil's team analysed the presence of oil paints and PVA in the binders, not being able to affirm for sure which were the artist's choice, and which were the remains of past interventions (Gil et al. 2024, 3325-3326).





Fig. 18 A and B. Central panel of the triptych A Sunday in Lisbon (details). Photographed by the author. 2024

Other examples can be seen in the red, blue, brown, black and light yellow used in the hand of the standing fishmonger (Fig. 19), the red contour in the arm of the juggler (Fig. 20) or the blue contour emphasizing the face of one embracing woman at the balcony (Fig. 21) and more, such as in the previously mentioned face of the staring (perhaps) self-portrait inside the ship (Fig. 15).



Fig. 19. Central panel of the Triptych A Sunday in Lisbon (detail). Photographed by the author. 2024



Fig. 20. Right panel of the Triptych A Sunday in Lisbon (detail). Photographed by the author. 2024



Fig. 21. Left panel of the triptych Departure of Emigrants. (Detail). Photograph by the author. 2024

Overall, the result of these combined techniques produced a proximity of the depicted subjects to the viewer and a visual communication akin to the language of advertising design. Thus, the monumental figures do not have the distance of monuments, but the proximity seen in common people, part and parcel of everyday life, including the ones that crossed that station to emigrate.

In 1969 someone who inhabited that part of Lisbon, the son of a fishmonger himself, testified: "All those people had my mother's face, my grandmother's, my uncle's and also mine, in a way. I mean, I walked along the river, my mother sold fish, she worked at the fish market, so that's where I grew up, right? So, when I arrived at the panels of the Rocha do Conde de Óbidos, I looked at those faces, they were my faces, you know, the faces of my people, and the people I dealt with."

[&]quot;Aquela gente toda tinha a cara da minha mãe, da minha avó e do meu tio e também a minha, de certo modo. Quer dizer, eu andei ali pela ribeira, a minha mãe vendia peixe, trabalhava na lota, e portanto foi ali que eu cresci, não é? De modo que quando eu chego aos painéis da Rocha do Conde de Óbidos, olho para aquelas caras, eram as minhas caras, pá, as caras dos meus, e da gente com quem eu lidava." Vitor Silva Tavares, interview to José de Almada Negreiros, 1969, transcribed recording, dactyloscript, Ernesto de Sousa estate. Previoulsy referred in (Pinto dos Santos 2017, 328).

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On mural painting – Almada Negreiros, Spain and dictatorships.

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PEER REVIEWERS:

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Maria Aguiar (Escola das Artes, Universidade Católica
do Porto

Mariana Pinto dos Santos (IHA-NOVA FCSH/IN2PAST) Milene Gil (Lab HERCULES, Universidade de Évora) Simão Palmeirim (IELT-NOVA FCSH)

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