

# INTRODUCTION

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FRANCISCO CONTENTE DOMINGUES

The history of humankind is inseparable from the understanding of the specific ways human societies connect with the sea. Since ancient times, the sea and the water-courses in general have been a means of obtaining food resources, especially for the riverside populations and, for the last five centuries, the main route for long-distance travel, transport and trade. In other words, since that time maritime routes have connected different global areas, boosting commercial, but also cultural and human exchanges, in a movement whose enormous importance led it to be known as the «opening of the world» (or other similar expressions). This «opening» was nothing more than a game of connections between continents, cultures, people, economic and scientific complexes, via the oceans. In the long term, the development of navigation techniques, naval architecture and naval industries were crucial factors to this equation. In our time, maritime transport is one of the most dynamic economic sectors, essential to the movement of large volumes of goods and of a growing number of travelers (increasingly synonymous with tourists — as seen in the huge development of the cruise industry) with lower costs and lower environmental impacts. From an economic point of view, *containerization* revolutionized a sector that, however, has faced advances and *substantial transformations* during the last five centuries, as studied by numerous specialists.

Shipbuilding became a strict prerequisite to these achievements, from the past to the present, and it forms the main focus of this book. This volume aims to put together,

and into dialogue with each other, different approaches to this phenomenon, from the point of view of history, naval archaeology, heritage or even tourism — new areas that the 20th and the 21st centuries elected as crucial focal points of interest.

Historiographical tradition (national and international) seems to have been paying little attention to the possibilities of intersection between worlds apparently so diverse. Naval archaeology of small fishing ships or of those used in cabotage or river navigation frequently ends up in an ethnographic approach, and the study of transoceanic ships is self-centered, as if other vessels did not exist. Ship historians distinguish (unconsciously?) between the work of artisans and the work of engineers, without taking into account that the precariousness of the knowledge of the latter was for a long time closer to the first than it might seem, which is very much noticeable in the 16th and 17th centuries. In fact, we can only speak of shipbuilding engineers from the 18th century onwards, with one notable exception: the Portuguese João Baptista Lavanha (c. 1555-1624), author of *Livro primeiro de architectural naval*, written around 1600.

In recent historiography, Octávio Lixa Filgueiras (1922-1996), stands out as a leading figure in the international field of studies on traditional watercrafts. In a study of great scientific value and rigor, he showed how unfounded judgement can be if based more on *localisms* than on actual knowledge on the subject.

Once again, this book aims at overtaking this constraint, attempting a global, comparative and multifocal approach on shipbuilding, within the framework of a specific challenge that brought together experts in such diverse, however complementary, areas as maritime history, naval architecture, naval archeology, heritage and memory preservation.

This goes also for the project *Vila do Conde: um porto para o mundo (Vila do Conde: a Harbor to the World)*<sup>1</sup>, that links the past with the future, as looking back helps to understand the conditions of some extinction processes and to enhance heritage preservation, when still possible. This is a community project which includes the recovery of spaces, techniques and social experiences associated with shipbuilding. It included, in an act of political intelligence, the unprecedented bid of having traditional wood-shipbuilding included in UNESCO'S Intangible Cultural Heritage list.

The project aims to gather the conditions for the survival of a technical knowledge in risk of extinction but also to start thinking the articulation of traditional techniques with those used in the building of ocean-going sailing ships such as the carrack or the galleon that crossed the seas of the world. Those articulations are only known, even if in very broad lines only, thanks to technical treatises elaborated during the 16th and 17th centuries.

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<sup>1</sup> <https://www.cm-viladoconde.pt/pages/771>.

During the development of the project it became clear that multiple questions connected to practical problems posed by the work at the shipyards required clarification. These became clear along the reconstitution of a 16th century carrack (Urban Pilot Project *Viagem à Rosa dos Ventos*, now concluded, supported by European funds). The construction of this replica (the carrack *Vila do Conde*, nowadays) required contributions from the traditional crafts used in the production of sailing ships, putting in evidence the continuity of solutions from past to present, when facing similar technical problems.

The highest technological transformations occur closer to the large urban centers when compared to small towns, as in the case of Vila do Conde, where traditional knowledge persists. With a port and shipyard of secular tradition based on the construction of small ships, despite ups and downs across time, Vila do Conde became a place of choice for observing and recording this craft. This was largely due to the intelligent understanding of the cultural, material and immaterial importance of this unique and irreplaceable activity which faces a fatal threat in the (very) short future: the disappearance of the keepers of a technical knowledge remarkably complex and impenetrable to outsiders. Other artisanal activities face the same challenge, but shipbuilding differs due to its complexity and the persistent and extreme difficulty of ensuring its generational transmission.

In the context of this strategy and of the project previously mentioned, a group of experts on naval architecture and shipbuilding convened in Vila do Conde in May 2016. The results of their work were already published through the respective proceedings<sup>2</sup>. The overall aims of the International Congress were achieved: ships and traditional shipbuilding were studied under different perspectives, which were not devoted exclusively to anthropology or to the history of techniques. The proposed themes *Wood Shipbuilding — techniques and naval architecture; Social Memories and Community; Social uses of Memory, Heritage and Tourism* ensured a set of dynamic relations between past and present and its social uses.

After an exemplary work of preservation of historical memory, resulting in the reconstruction of the 16th century carrack, the recovery of the *Alfândega Régia* (the Customs House) and the Casa do Barco (the Boat House), Vila do Conde takes its place in the roadmap of congresses on this subject, with exceptional conditions and a favorable public policy framework, thanks to the investment made by its Town Council and Mayor, Dr. Elisa Ferraz.

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<sup>2</sup> POLÓNIA, Amélia; MIRANDA, Marta, eds. (2018) — *Construção Naval em Madeira. Arte, Técnica e Património. Atas do Congresso Internacional. 23-25 de maio/2016*. Vila do Conde: Câmara Municipal de Vila do Conde.

CITCEM — the University of Porto Transdisciplinary Research Centre Culture, Space and Memory has as one of its missions the study, preservation and dissemination of heritage. It therefore decided to follow up on this initiative, inviting some of the authors present at the congress, and other specialists, to submit texts that consubstantiate the goals previously set forth. This initiative fulfills another of CITCEM's strategies: the collaboration with local and regional entities, in particular those from the North of Portugal, generating a notable policy of transference of knowledge through initiatives developed in collaboration.

This book is the result of this partnership. It is divided into three parts: Part I deals with *Learning from Archaeology and Literature*; Part II focuses on *Business and Knowledge* and Part III debates issues related to *Shipbuilding Heritage and Social Awareness*.

Eric Rieth, Olivia Hulot and Marine Jaouen dedicate their attention to the wreck of a mid-17th century coaster from *Erquy-Les-Hôpitaux*. Discovered and assessed in 2002, the wreck is situated on the beach of the town of *Erquy-Les-Hôpitaux* (Côtes d'Armor, North Brittany). The vessel rescued is a coaster of less than 10 meters length, loaded with a cargo of limestone, whose construction can be dated by dendrochronology to the middle of the first half of the 17th century. This boat is seen as possessing a series of unusual architectural characteristics. Those, and notably the «floating» frames and the very heavy structure of the hull, raise questions about the principle and the methods of construction of this boat, perhaps originally from Southern Brittany. Besides the methodological problem of the role of the archaeological sources in relation to the written ones, the *Erquy-les-Hôpitaux* wreck raises the central question of its interpretation from the point of view of the history of naval architecture in the nautical region of the Eastern Atlantic seaboard, a meeting point of many ancient techniques from the Mediterranean and the North, with its own history of pre-Roman sea-going shipping.

Francisco Alves submits a revision of the archaeography of the preserved structures of *Ria de Aveiro A*, a mid-15th century Portuguese shipwreck. In this context, the author lists and analyses some historical, literary and iconographical references concerning the cog in relation with Portugal, taking as his starting point the article of Octávio Lixa Filgueiras *A nave esculpida numa torre da Sé do Porto* (1982), where the cog theme in relation with Portugal was evoked for the first time. Again, technical connections and *longue durée* approaches inform this contribution of one of Portugal's leading naval archaeologists.

António José do Carmo is an expert and practitioner of wooden shipbuilding in direct contact with Vila do Conde shipyards. Based on the building process of the ship *Novo Rosa Clara*, the last wooden vessel built in Portugal for inshore fishing, at the Samuel e Filhos Lda. Shipyard in Azurara, Vila do Conde, from April 2005 to July 2007, the author debates how the techniques used were based on project elements and the traditional techniques used in the mold loft. In doing so, the author brings to light

an original analysis and technical projections of the oldest elements represented in drawings, dating from sometime between the turn of the 16th century and the dawn of the 17th century by focusing on naval literature from this period. This chapter aims at demonstrating not only how advanced shipbuilding was at that time period, but also at giving evidence that, at its core, this craft did not undergo any major changes during these last 400 years regarding wooden shipbuilding.

Within another layer, now dealing with *Business and Knowledge*, David Plouviez discusses public and private contributions in contracting French naval vessels in the 17th and 18th centuries. The author shows how the process of amassing a navy in the 17th century forced European states to collect substantial funds, build port infrastructure, organize supply networks and have a large and skilled labor force. As no power was able to take on the construction and maintenance of its war fleet by itself, outsourcing was frequent. The chapter contributions are evident, since in the French context this process remains quite unknown, while leading to a crucial flow of nautical knowledge and of workers between military and civilian seaports. The chapter contextualizes this phenomenon both at a European level and from the perspective of French naval policy, also considering the technical aspects and the stakeholders' performances.

Following the same path, but focusing on a different political territory, María Amparo López Arandia deals with *Timber Supplying in the South Spanish Dockyards During the 18th Century*. The author argues that the Bourbon takeover of the Spanish Crown 18th century meant a great deal for the development of naval industries. Different naval dockyards, such as Puntales or La Carraca, were established in the south of Spain, near Cádiz, which became a key location for the maritime trading during this century, after the move of the *Casa de Contratación* (House of Trade), from Seville to Cádiz in 1717. This led to the logistical and environmental implications dealt with in this chapter. The deforestation of areas located around these dockyards and the increased wood demand led managers of the maritime department of Cádiz to explore the possibilities of harvesting the forests of some inland areas, as those of Segura de la Sierra and its surrounding lands, located at the source of the River Guadalquivir. The pieces of wood from the forests of Segura were floated down the River Guadalquivir and received by the dockyards located in Cádiz, some months later. The focus of the chapter is, precisely on these complex processes of timber supplying for the naval construction.

On the following chapter, Richard Unger writes on *Portuguese shipbuilding & Low Countries practices*, by debating Iberian influences in the Dutch Golden Age. The author starts from the assumption that 16th century Portuguese and Dutch shipbuilders were known as the best in Europe and possibly the world. The products of their yards looked different and were mostly built for very different uses. Despite the obvious change in dominance in naval architecture and the divergence in practice, Unger hypothesizes that there were connections between shipbuilding in Iberia and the Low Countries. In

both the learned and the practical traditions, Dutch writers and practitioners borrowed from their Portuguese counterparts. Evidence from the increasing body of archeological evidence generated in many parts of the world indicates similarities in shipbuilding methods and how Low Countries naval architects slowly and carefully shifted from traditional northern Europe ways to the superior designs from southern Europe — so the author states. Evidence from written works on shipbuilding which began to appear in the late 17th century in the Dutch Republic showed, according to this chapter, a similar borrowing from Iberia and then greater independence and novelty in both how ships were built and how shipbuilders thought about what they were doing.

The third section of the book — *Shipbuilding Heritage and Social Awareness* — puts together two main contributions. Filipe de Castro targets some crucial issues concerning politics and the Portuguese underwater cultural heritage. He states that most people care about the past, and understand its importance, but the cultural, economic, and strategic importance of the maritime cultural heritage is seldom clearly understood by politicians, journalists, intellectuals, and the general public. This chapter includes the debate on why, with a long seafaring tradition, Portugal has struggled so long with the study and preservation of its submerged cultural heritage in order to explain why, in spite of some efforts of both central and local authorities, the Portuguese submerged cultural heritage, in the country and abroad, is largely unknown worldwide.

Giving evidence of quite a different approach, based on an on-going project, Vladimir Martus presents the project to build and sail a magnificent replica of what is considered, in this chapter, as the most beautiful sailing clipper ship — the *Cutty Sark/Ferreira*. The chapter presents a practical example for how one can bring to life a floating heritage, explaining that the *Cutty Sark* will be built and sailed in a traditional way, as a living memorial to the Great Era of Sailing Ships, with the mission to promote sail as a way to empower shipping as an environmentally friendly alternative. By planning to use the exceptional knowledge in wooden shipbuilding, which still exists in Portugal, and bring in young volunteers, sharing with them the traditional skills, the project promises to perform as a vivid experience of replicating and promoting shipping and shipbuilding heritage.

The chapter explains that this requires rich experience in building replica-ships, and running large sailing vessels, which was achieved, in this instance, by building two replicas — the schooner *St. Peter*, and the sailing frigate *Shtandart* under the same project director, Vladimir Martus, mostly by using traditional tools and methods. Large teams of volunteers have taken part in those two shipbuilding projects. This contribution does not circumvent the difficult challenges to face: the *Cutty Sark 2* will have to meet modern safety standards without compromising the historic aspects of the original ship.

With this variety of contributions, combining the experience of scholars, underwater archaeologists, shipbuilding technicians and naval captains, this book will promote

the concept of wooden shipbuilding as an important, and so far underestimated, factor of historical development. Now it is up to the political powers and a new generation of researchers to bring added value to the contents, the proposals and the testimonies of this collective book.

