

International Commission for the History of Nautical Science and Hydrography

Francisco Contente Domingues
Universidade de Lisboa
fcdomingues@netcabo.pt

The first International Conference on the History of Nautical Science took place in Coimbra in 1968, resulting from the coming together of two quite distinct processes that nonetheless met on this occasion to open up a new thematic area for research.

On the one hand, the 1950s had witnessed the birth of one of the main scientific research projects in this area in Portugal, culminating in the publication of the *Portugaliae Monumenta Cartographica* (Cortêsão; Mota 1960-2). Armando Cortêsão was already one of the leading names in the history of cartography, with a reputation that had been firmly established through the publication of two monumental volumes entitled *Cartografia e Cartógrafos Portugueses dos Séculos XV e XVI* (Cortêsão 1935), and of subsequent works in English that had been given international exposure due to his years in exile and his connections with the Hakluyt Society. On his return to Portugal, he met Avelino Teixeira da Mota, a naval officer who had written hugely important works on Guinea (Valentim, undated), but who was increasingly interested in the history of nautical science and cartography. In turn, the collaboration between these two authors on the above-mentioned research project gave rise to the creation of the Ancient Cartography Studies Group of the Overseas Research Board, initially divided into two sections: the Lisbon section headed by Teixeira da Mota, and the Coimbra section headed by Armando Cortêsão.

The Coimbra section was joined by a university professor who was to play a fundamental role in later years: Luís de Albuquerque (Guerreiro 1998). Being interested from early on in the scientific component of the history of the Discoveries, he later devoted himself, in the early 1960s, to following a tradition that had already borne fruit with the works of Luciano Pereira da Silva and Duarte Leite Pereira da Silva, both of them full professors of mathematics at the same university. Luciano Pereira da Silva was responsible for such fundamental contributions as the biographies of the two Doctors Pedro Nunes, studies on 16th-century astronomy, and the dismantling of the myth of the School of Sagres. This theme as well as related topics were later worked on by Duarte Leite, who perhaps exaggerated in his spirit of criticism, and entered into a keen controversy with Jaime Cortêsão. Jaime Cortêsão was a remarkable historian and the scholar responsible for drawing attention to the important question of the technical and scientific component of the voyages of the Discoveries, even though he was occasionally prone to an overly free imagination, as when he developed his theory of the existence of a policy of secrecy.

The institutional framework provided by the Overseas Research Board, which provided this group with important publishing resources, made it possible to begin two series of publications that were very soon to achieve great prestige: *Memórias*, in which Luís de Albuquerque published several books on seamanship in elegantly presented editions with excellent introductory studies; and the so-called *Separatas Verdes* (Green Offprints), in which articles and conference papers were kept apart and disseminated in this way.

The work of Cortêsão and Albuquerque in Coimbra, as well as that of Teixeira da Mota in Lisbon, operating in close collaboration with the others, was in itself sufficient to guarantee the relaunching of the history of nautical science in Portugal. But the 1968 meeting certainly gave this process a fresh impetus.

The second factor to which we referred above had to do with the fact that maritime historiography did not give due importance to this type of inquiry, namely in the *Colloques d'Histoire Maritime* that had been started by Michel Mollat du Jourdin in the 1950s; these conferences were a forum for the discussion of the aspects most closely connected with the economic component of maritime trade, with some occasional contributions about ships and routes, but without any reference to the art of navigation, as has always traditionally been the case under the heading of "Maritime History". And even with an identical subject of study, the different approaches can reflect widely varying points of view. This is clearly shown by the study of the ship: the historian of economics seeks to investigate tonnages and cargo capacities, or crew-cargo ratios, in order to estimate freight costs or profitability margins; the historian of nautical science (in the broad sense) studies morphology or functionality, when not actually reconstructing the vessel's geometrical design.

These were complementary perspectives, but ones that required their own spaces for development. Whilst one was relatively common, the other still remained on the fringes of the preferred themes of historiographic discourse. And it was the realisation of this fact that led Cortesão and Albuquerque to decide on the 1968 conference, chaired by the former but, in his own words, largely indebted to the latter:

"I must, however, say in all fairness that, although the convenience and possibility of holding the meeting arose during the many conversations that I naturally had with Professor Luís de Albuquerque on these matters, the original idea came from him more than it did from me. In fact, much of the good that has perhaps been done in this Section [of Ancient Cartography] is due to the astounding intellectual activity of this exceptional man" (Cortesão 1971: 4).

A brief look at the book of Proceedings¹ immediately highlights the fact that the organisers succeeded in bringing together the cream of the crop of specialists in the subject at that time, many of whom later maintained contacts that helped to give a structure to the meetings. Leaving aside the Portuguese authors, one may highlight (if, indeed, anyone should be highlighted in particular) the names of Guy Beaujouan, Emmanuel Poule, Ursula Lamb, Ernst Crone, Marcel Destombes, Wilcomb Washburn, G. R. Tibbetts, David Waters, R. A. Skelton, Max Justo Guedes, Reyer Hooykaas, or Rolando Laguarda Trías. It might be said that nobody was missing: all the top names were at the Coimbra conference in 1968.

This is clearly shown by the works presented: O. Viator² reported on the existence of the oldest signed and dated Portuguese chart, Jorge de Aguiar's nautical chart of 1492; Marcel Destombes referred to two nautical astrolabes from the early 17th century, both of them unknown, just like Diogo Homem's chart of 1566, which was the subject of a second paper; Teixeira da Mota presented an overview of the evolution of Portuguese sailing directions in the 16th century; Ursula Lamb presented a pioneering study on Alonso de Chaves; Luís de Albuquerque spoke of terrestrial magnetism, Martins Barata of Vasco da Gama's ship, and Maria Emília Madeira Santos of the India Line.

The list could go on, but it is not worth the trouble, because the papers that have already been mentioned exemplify the future themes of the conferences, grouped around five main areas, with the core subjects being nautical science and the art of navigation, astronomy and scientific instruments; nautical cartography; naval architecture and shipbuilding; the history of science (in its broadest sense, which later on naturally spread to the history of scientific ideas), and voyages and voyagers, with shipping routes and navigational resources being included here, although from a more technical standpoint than usual.

Continuity was not numbered amongst the goals of the meeting, but it was decided upon from the outset, being linked to events that might facilitate funding by future organisers: the model was biased towards this point of view, since the sponsoring body paid the full expenses of those attending the conference. This is why it was not easy to guarantee the holding of new conferences other than on

¹ *I Reunião Internacional de História da Náutica e da Hidrografia (23-26 de Outubro, 1968). Discursos e Comunicações*, Coimbra, Universidade de Coimbra –Estudos de Cartografia Antiga, 1970; and also in *Revista da Universidade de Coimbra*, Vol. XXIV, Coimbra, 1971, pp. 1-614.

² Who was not there personally, so that his paper had to be read aloud at the meeting.

specific occasions, normally connected with commemorative cycles, which is when official institutions tend to have more substantial material resources available.

The definition of the group of participants also continued to follow the example of Coimbra, oscillating in general between a direct invitation addressed to them all or one addressed to a significant majority (responsible for the so-called basic papers). In some cases, this allowed the programme to be completed with papers presented on open themes, although these were allotted less time for their exposition. At some of the meetings, namely those organised by Luís de Albuquerque, the themes of the basic papers were specifically requested from guest speakers to ensure that there was a suitable coverage of the general theme right from the outset.

Other important aspects that distinguished these meetings from traditional conferences: the number of participants was generally around thirty (ranging between a minimum of twenty-two and a maximum of forty-five). They met in plenary sessions, which, together with the concentration of papers on the same themes, generally led to discussions of the highest level.

Although it was decided to promote new conferences, it was another eight years before the second one was organised. It was held in Brazil in 1976, with the central theme being extended to include hydrography; in other words, also dealing with the navigation of large rivers. This was followed by the third meeting held at Greenwich, which, unlike the previous two, covered a much wider time span, reaching well into the 19th century, and, in the 1980s, three more conferences were held in quick succession: Sagres-Lagos in 1983; Rio de Janeiro in 1984; and once again Sagres in 1987. The principle was established that meetings would not be held on a regular basis and that they should be linked to commemorative events, for the reasons invoked above. And from the fourth meeting onwards, albeit timidly at first, but increasingly so thereafter, there was a clear opening up of the central themes, achieved through the efforts of scholars from related areas, or, more precisely, from quite distinct areas but engaged in related research projects: the reports of voyages, for example, ceased to be analysed solely as if they were reservoirs of information about the techniques of navigation and were subjected to approaches that were more characteristic of literary or cultural studies. Collections of documents were made known, whilst the production and circulation of information about the Discoveries – in the broadest possible sense – in the world of that time became a relatively common theme. In other words, the 1980s recentred the preferred time span of the meetings (15th–17th centuries, occasionally the 18th century), simultaneously expanding the scope of the themes that were dealt with therein.

The scientific interest of such a choice does not need to be commented on, but looking back more than twenty years later, it should be asked whether this was really an option rather than an imposition. In fact, it would have been very difficult to again bring together a group of scholars such as the one that met in Coimbra: the history of nautical science had not become unfashionable, but the chronological scope of the meetings was not a very popular one.

In naval and maritime history, there is a preponderance of Anglo-Saxon historiography, whose chosen field is the golden age of sailing vessels, from the mid-seventeenth century to the early nineteenth century. In other words, the period when the mastery of the seas was disputed between the Dutch, English and French, after the Iberian powers had been reduced to the status of minor actors on the world's naval stage. This is why French historiography concentrates most of its attentions on this period. In this latter case, the reading of academic dissertations that consider Richelieu's navy as an introduction to or even the first part of the history of the French navy is sufficiently revealing. In the case of Anglo-Saxon historiography, the chronology is (even today) determined by Alfred Mahan's *The Influence of Sea Power Upon History* (Mahan 1890): Sea power has been a historical problem since 1660 (Domingues 2004).

Navigation in the 15th and 16th centuries became a particular area of interest for historians writing in Portuguese and Spanish, but for very few others. Despite the limitations of simplifications of this type, such a separation is undeniable, as can be seen precisely in the case of nautical science. This period is considered by some as the formative period or even as the very beginning, since they see in it the establishment of the most important procedures and techniques. Others, however, see it as no more

than a preliminary phase before the period of technical perfection, which ranged from the production of printed nautical charts to the rigorous determination of longitude.

Underlying this question is a cultural problem. The study of the origins of nautical science is given scant attention in a historiography that has produced an immense wealth of studies, both in qualitative or simply quantitative terms, but whose authors are far too often incapable of reading Portuguese and Spanish authors – who traditionally publish very little in English – and much less so the sources. There are exceptions, as is proven by the undeniable standard work of reference written by David Waters (Waters 1978), or the cartographic works of Armando Cortesão in his time. More than anything else, however, such works are precisely that – exceptions. But there are too many studies on European nautical science that show the lack of knowledge of their authors about the matters dealt with in the books on Portuguese seamanship published by Luís de Albuquerque, to name but one example.

This situation has been manifest at the meetings on the history of nautical science, as can be easily seen by consulting the contents of the respective Proceedings (Domingues 1992; undated), with Anglo-Saxon historians most evidently writing about the more recent period and the Iberian historians writing about more distant times.

At the same time, however, it can be seen that although the popularity of the history of nautical science has not diminished, as has been said, it has not grown either, even in those countries where one might have expected this to happen. The conferences also reflect this, namely those that were held in the 1990s (Manaus, 1992, Viana do Castelo, 1994, Aveiro, 1998): once again, there has been an enriching diversity of themes spreading into marginal areas, with the impact of the specific theme becoming diluted over time, even though there has remained a strong bias towards different sectors, as can be seen by the excellent set of papers on naval architecture and shipbuilding in the 1998 Proceedings, to again give just one example.

Diversification of the themes and the recentring of the time span, with a certain tendency for this to be stretched on occasions, these then seem to be the lines of force emerging from the period surrounding the 1968 conference in Coimbra. Basically, they marked out what had already been done, since, in the final analysis, Coimbra was almost an exception in terms of the compact density of the themes and the period that was dealt with. The most recent meetings have confirmed this tendency, which will undoubtedly become the hallmark of the future. But it is also already possible to detect the emergence of new generations of historians whose work is focused on nautical science (continuing to use the term in a broad sense). In Portugal, several academic dissertations in this area are being prepared or have been presented in recent years³, whereas these were rare occurrences in earlier years, contrary to what might have been expected. It is hoped that old subjects may be given an entirely new treatment and analysis, or that new problems may emerge.

On a very informal basis, the participants at the first conferences joined together to form an International Committee for the History of Nautical Science and Hydrography, chaired by Luís de Albuquerque. In 1987, he was succeeded by Max Justo Guedes, followed in 2000 by Inácio Guerreiro. As the need was felt to strengthen the links between the group of possible participants in the intervals between scientific meetings, and there was also a clear advantage in promoting other initiatives that might lead to the promotion of this research area, a formal proposal was made to this effect at Greenwich, which was unanimously approved but unfortunately had no immediate consequences.

Since 1998, the Committee has had its own website, where some information is made available about the founders and the contents of the books of Proceedings. The committee's organisational process was initiated by the current president, Inácio Guerreiro, with the appointment of a Secretary General, a Board of Directors, and National Delegates (two per country). An organisational and scientific support group was set up for conferences, the holding of which is the committee's main aim.

³ A list of academic theses in naval and maritime history defended at Portuguese universities is being prepared and will be placed on our webpage "Portuguese Naval and Maritime History 1400-1800", which is currently being redesigned. It is due to be moved to a different address from the current one, which can be located by normal search engines.

The recent creation of a permanent headquarters (which has been in operation at the Portuguese Naval School since 2002) has made it possible to organise a permanent centre of documentation and logistics.

Conferences have continued to be organised in the same tried and true fashion. It is normally decided at each meeting where the next one is to be held, who will be responsible for its organisation and scientific programme, and what measures will have to be taken in the future. Judging by what has happened in recent years, such measures include the maintenance of a certain regularity (every two years) along pre-existing lines, with roughly thirty papers being presented at the plenary session and occasional papers at parallel sessions. A balance should continue to be found between ensuring the openness of both the themes and the time span covered, and reinforcing the study of the technical component of the navigations, which is, after all, what has ensured the scientific specificity of these meetings. Today it seems more possible to guarantee this specificity than it was, let us say, ten years ago, without prejudice to the need to approach old themes from new perspectives and with new focuses – which is, at the same time, an essential condition for a renewal of the historiographical discourse.

The completion of the Committee's organisational process should be the main step in a development that must open up in new directions, especially with regard to the elimination of one evident lacuna, the lack of a specialized scientific journal, an essential vehicle for publishing studies in this area, together with the development of contents for the webpage, making (at least) the earliest conference proceedings available online. These Proceedings contain works that are still considered to be essential references today. In this way, we will be able to continue along the paths leading to an indispensable renewal.

References

- Cortesão, Armando (1935). *Cartografia e Cartógrafos Portugueses dos Séculos XV e XVI*, 2 vols. Lisboa: Seara Nova.
- Cortesão, Armando; Mota, A. Teixeira da (1960-2). *Portugaliae Monumenta Cartographica*, 6 vols. Lisboa: Comissão para a Comemoração do V Centenário da Morte do Infante D. Henrique. 2nd ed.: 1987. Lisboa: Imprensa Nacional-Casa da Moeda.
- Cortesão, Armando (1971). "Discurso...". *Revista da Universidade de Coimbra*, XXIV: 4-7.
- Domingues, Francisco Contente (1992). *História da náutica e da hidrografia. Bibliografia das reuniões internacionais (I-VI)*. *Studia*, 51: 191-218.
- Domingues, Francisco Contente (2004). "A guerra no mar". In Manuel Themudo Barata e Nuno Severiano Teixeira / António Manuel Hespánha (eds.), *Nova História Militar de Portugal*, vol. II. Lisboa: Círculo de Leitores, 151-169.
- Domingues, Francisco Contente (s/d). Participantes. <http://www.ars-nautica.org/Participantes.html>
- Guerreiro, Inácio (1998), *Introd. Luís de Albuquerque Historiador e Matemático. Homenagem de Amizade a um Homem de Ciência*. Lisboa: Chaves Ferreira – Publicações.
- Mahan, Alfred T. (1890). *The Influence of Sea Power Upon History 1660-1783*. London: Sampson Low, Marston & Company.
- Valentim, Carlos (s/d). Avelino Teixeira da Mota (1920-1982). <http://www.ars-nautica.org/Biog/Mota.html>
- Waters, David W. (1978) [1959]. *The art of navigation in England in Elizabethan and early Stuart times*. Greenwich: National Maritime Museum.